

BULLETIN
OF THE
ARCHAEOLOGICAL
SOCIETY OF
DELAWARE



VOLUME VI NUMBER I

APRIL 1954

BULLETIN
OF THE
ARCHAEOLOGICAL
SOCIETY OF
DELAWARE

VOLUME VI NUMBER I

APRIL 1954

Officers

President	Elwood S. Wilkins
Vice Pres.—New Castle County	L. P. Alexander
Vice Pres.—Kent County	H. V. Holloway
Vice Pres.—Sussex County	Rodger Vandergrift
Recording Secretary	Arthur Volkman
Corresponding Secretary	Irwin J. Capps
Treasurer	H. V. Lang
Museum Advisor	Elwood S. Wilkins
Editor	Dr. A. G. Schiek
Board of Directors	Leon de Valinger
	C. A. Weslager
	Seal T. Brooks
	John Swientochowski
	Dr. J. Alden Mason

Index

More Light on Catenamon

A. R. Dunlap

Excavation at a Colonial Log Cabin Near Wilmington, Del.

Clinton Alfred Weslager

Ritter Site Investigations

Henri Geiger Omwake

Contributors



A. R. Dunlap

A. R. Dunlap—Associate Professor of English, University of Delaware. Co-author—*Indian Place Names in Delaware*. He is a charter member of the Delaware Folklore Society.

in Near Wilmington, Del.

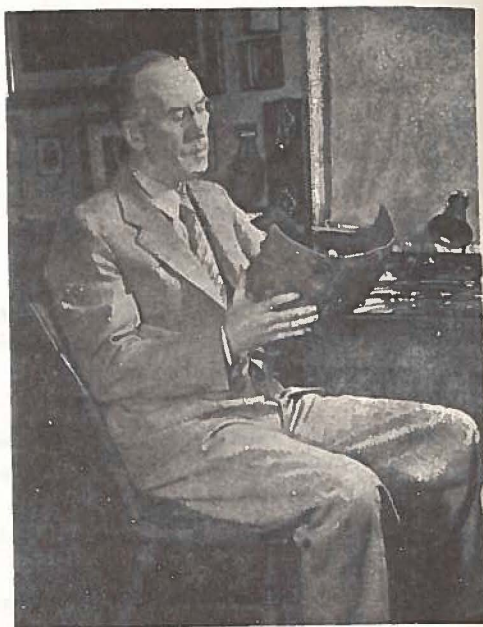
Clinton Alfred Weslager

Clinton Alfred Weslager—University of Pennsylvania, A.B. Past president of Archeological Society, Delaware. Books include: *Delaware Forgotten Past*, *Brandywine Springs*, *History of Nanticoke Indians* etc. Many articles on archeology. Employed by Du Pont Co.

Henri Geiger Omwake

Henri Geiger Omwake—Graduated Franklin Marshall College. Master of Education, Duke University. Founder of Sussex Archeological Association. Written many articles for the *Bulletin*, Principal of Greenwood School and conducted explorations.





ARCHIBALD CROZIER May 27, 1878 - February 25, 1954

Things bygone are the only things that last,
The present is mere grass, quick mown away,
The past is stone, and stands for ever fast.





R May 27, 1878 - February 25, 1954

are the only things that last,
mere grass, quick mown away,
ne, and stands for ever fast.



ARCHIBALD CROZIER

With the passing of Arch Crozier to the Great Beyond, Delaware archaeology has lost one of its wisest yet most enthusiastic advocates. Devoted all his life to the study of nature and her aboriginal American children, Arch gave constant leadership to constructive planning by which the study of the pre-historic peoples of the Delmarva Peninsula could be advanced.

Arch was among the small group of persons who first met together in the library of the Dover High School more than twenty years ago and made the plans which bore fruition in the founding of the Archaeological Society of Delaware. During the early years he gave outstanding leadership, as president of the Society and served it faithfully later on as its Treasurer.

Arch, originally and always a student as well as a collector, enthusiastically became a participant in the excavations at Slaughter Creed, among the first real below-the-surface inquiries ever to be undertaken in Delaware. Careful workman, competent observer, keen reporter, eager student, he advocated dissemination of the knowledge he had gained so that others might also be benefited by his experiences and frequently during the years he contributed articles of lasting significance to the Bulletin of the Society and to the publications of other similar organizations.

Held in the highest respect by all who knew him, whether archaeologist, nature lover, collector of Delawarianana, or just plain friend, Arch will continue to live on in the love his fellow men bore for him and in the constructive contributions to knowledge which he has left behind for those who will follow the paths he helped pioneer.

H. G. Omwake

MORE LIGHT ON CATENAMON

A. R. Dunlap

☞ On page 49 of *Indian Place-Names in Delaware*,¹ in the section on names of doubtful origin, appears the entry below:

CATENAMON Pond. In a survey--Public Archives, Dover--made for Timothy Long in 1732, there is reference to a pond called Catenamon "which lyeth near the south east side of the head of a branch of Mispillion Creek called Cyprus Branch." Catenamon is conceivably of Indian origin.

This is the only recording so far discovered of a name long out of use.

The suggestion has been made by Mr. William B. Marye, of Baltimore that *catenamon* is a variant of Powhatan *ocoughtanamnis*, *cuttymnions*, *curtenemons* -- a possibility which deserves careful consideration. Mr. Marye's letter referred to the following occurrences of these apparently related forms:

1607 - 1609 Captain John Smith's *Travels and Works* (Arber-Bradley edition, Edinburgh, 1910), page 58 (cf. p. 354):

In the wat(e)ry valleyes groweth a berry, which they call *Ocoughtanamnis*, very much like unto Capers. These they dry in sommer. When they will eat them, they boile them neare halfe a day; for otherwise they differ not much from *poysen*.

1661/2 W. W. Hening, *The Statutes at Large, Being a Collection of All the Laws of Virginia* (New York, 1823), 11, 140:

And be it further enacted that for the better releife of the poore Indians whom the seating of the English hath forced from their wonted conveniences of oystering, fishing, and gathering tuckahoe, *cuttymnions*² or other wild fruites by which they were wonted for a great part of the year to subsist....

1670 Land Commissioner's Office, Annapolis, Md., Patent Liber 15, folio 605 (cf. Patent Liber 20, folio 87):

Thomas Homewood, his certificate, 635 acres, Homewoods Towne, surveyed 20 April, 1670, lying and being in Anne Arundell County adjacent to the land of Paul Dorrill called Dorrills Inheritance, beginning at a bounded red oak of the said Dorrill standing on the south east side of the Bodkin Creek and bounding on the said land south east by east 270 perches to a bounded chestnut tree standing by Chesapeake Bay lying down south and by west 75 perches to the south side of a pond called *Cuttanamon*³ pond....

1705 *Acts of the Virginia Assembly, 1661-1768* (Williamsburg, 1769), p. 54:

And be it further enacted... that the Indians tributary to this Government shall have and enjoy their wonted Conveniences of oystering and fishing, and of gathering on the Lands belonging to the *English* Tuckaho, Curtenemons, wild Oats, Rushes, Puckoon, or other Things not useful to the *English*....

* This list of references may be extended by the following additions:

1677 Treaty between Virginia and the Indians (*Virginia Magazine of History and Biography*, XIV, 292):

That the said Indians have and enjoy their wonted conveniences of Oystering, fishing, and gathering Tuccahoe, Curtenemmons, wild oats, rushes, Puckoone, or any thing else for their natural Support not useful to the English...

1705 Robert Beverley, *The History and Present State of Virginia, in Four Parts* (London, 1705), III, 15:

They make Food of another Fruit called *Cuttanimmons*, the Fruit of a kind of Arum, growing in the marshes: They are Boyl'd like Peas, or Capers to look on, but of an insipid earthy taste. Captain Smith in his History of *Virginia* calls them *Ocoughtanamnis*, and Theod. de Bry in his Translation, *Sacquenummener*.

The last word in the above quotation comes ultimately from Thomas Hariot, *A Briefe and True Report of the New Found Land of Virginia* (London, 1588) page 37 (in the edition of Henry Stevens):

Sacquenummener a kinde of berries almost like unto capres but somewhat greater which grow together in clusters upon a plant or herb that is found in shalow waters: being boiled eight or nine hours according to their kind are very good meate and holesome, otherwise if they be eaten they will make a man for the time franticke or extremely sicke.

With this description, it will be observed, the one in Smith agrees rather closely.

As yet, no mention of *ocoughtanamnis*, etc., has been found in documents later than the ones cited here, but the word has come in for a share of attention in ethnological publications of our own era. Frank G. Speck for example, in *Chapters on the Ethnology of the Powhatan Tribes of Virginia* (New York, 1928), p. 238, with reference to the treaty of 1677 guaranteeing the Indians their right to gather various foods "not useful to the English," says that "curtenemons" refers to the dock-plant growing on the river, and adds that in Chickahominy the name is cutlemon-- "an interesting dialectic variation, if the word is not perchance a derivation from English 'cut-lemon', which it actually resembles." And David I. Bushnell, Jr., in *Indian Sites Below the Falls of the Rappahannock, Virginia* (Smithsonian Miscellaneous Collections, Washington, 1937. vol. 96, no. 4) pp. 5-6, with reference to the quotation dated 1661/2 above, observes that

sembly, 1661-1768 (Williamsburg, 1769), p. 54:

...that the Indians tributary to this Govern-
ment enjoy their wonted Conveniences of oystering
fishing on the Lands belonging to the English
wild Oats, Rushes, Puckoon, or other Things
h....

may be extended by the following additions:

and the Indians (*Virginia Magazine of History*
2):

have and enjoy their wonted conveniences of
gathering Tuccahoe, Curtenemmons, wild oats,
any thing else for their natural Support not

History and Present State of Virginia, in Four
:

another Fruit called *Cuttanimmons*, the Fruit
growing in the marshes: They are Boyl'd like
k on, but of an insipid earthy taste. Captain
of Virginia calls them *Ocoughtanannis*, and
translation, *Sacquennumener*.

otation comes ultimately from Thomas Hariot,
a *New Found Land if Virginia* (London, 1588)
nry Stevens):

of berries almost like unto capres but some-
w together in clusters upon a plant or herb
w waters: being boiled eight or nine hours
are very good meate and holesome, otherwise
will make a man for the time franticke or

be observed, the one in Smith agrees rather

f *ocoughtanannis*, etc., has been found in
cited here, but the word has come in for a
ical publications of our own era. Frank G.
rs on the *Ethnology of the Powhatan Tribes*
p. 238, with reference to the treaty of 1677
right to gather various foods "not useful to
tenemmons" refers to the dock-plant growing
Chickahominy the name is cutlemon-- "an
, if the word is not perchance a derivation
it actually resembles." And David I. Bush-
w the *Falls of the Rappahannock, Virginia*
ollections, Washington, 1937. vol. 96, no. 4)
quotation dated 1661/2 above, observes that

the "wild fruit to which the name *cuttyemmons* was applied has not been
identified, but the etymology of the word has been determined by John P.
Harrington, of the Bureau of American Ethnology."

Bushnell quotes Harrington as follows: "The name '*cuttyemmons*'
evidently refers to some small black or dark-colored berry, the species of
which has not been determined. The name is to be analyzed as follows:
cutty-, black, phonetically *kate* or *makate*; *-min*, berry of any kind: *-an* or
-in, suffix denoting plural of inanimate objects, pluralizing the element *-min*.
The name therefore means small black colored fruits or berries." Of the
soundness of this interpretation there can be no doubt. The element *-min*
is well known to students of the Lenape and Powhatan branches of Algon-
kin; and the first element of the word turns up, in its full form *macata*,
in the first half of the Powhatan word for "black" as given by Strachey:
mahcatawaiuwah.⁴ Observe that in most forms of the word we are considering
here the element *cata-* is the only one to be reflected, but that in the form
recorded by Smith the elements (*m*) *ah-* and *cata-* both appear. The element
sacque- in Hariot's recording of the name is cognate with *sukeu*, the more
usual Lenape word for "black"; thus the existence of Powhatan *sacquen-*
ummener serves to confirm Harrington's interpretation.

From Hariot we learn that the *sacquennumener* was found in shallow
waters in Virginia (by which was meant a larger territory than the Virginia
of today), and that its caper-like berries, which grew in clusters, were made
palatable by thorough boiling. Smith gives similar information about the
ocoughtanannis, omitting, however, any mention of clusters, but adding the
important detail that the Indians dried the berries in summer.

Beverley calls the *cuttanimmons* "a kind of *Arum*" -- and not without
justification. But which member of the *arum* family, is the question. Recent-
ly the editor of *A Dictionary of Americanisms*⁵ ventured the opinion that
it was "probably *Peltandra virginica*," but another member of the family
Orontium aquaticum, seems to fit the description about as well.⁶

The following quotations from *Peter Kalm's Travels in North America*
are pertinent:

The Virginian wake-robin, or *Arum Virginicum* (another name for *Pel-*
tandra virginica), grows in wet places. Mr. Bartram told me that the
savages boiled the spadix and the berries of this flower and devoured
them as a great delicacy. When the berries are fresh they have a harsh
pungent taste, which they lose in great measure upon boiling.

Golden Club. *Taw-Kee* is another plant, so named by the Indians
who eat it... The Indians pluck the seeds, and keep them for eating.
They cannot be eaten fresh or raw, but must be dried. The Indians
were forced to boil them repeatedly in water, before they were fit
for use; and then they ate them like peas... The *Taw-Kee* is the
Orontium aquaticum.⁸

Since Kalm makes such a point, in the second quotation, about the drying
of the fruit, we are tempted to infer that *Orontium aquaticum* was the plant
being described by Smith (the writer who mentions the drying of the berries

in summer); but the possibility must not be overlooked that the seeds of *Peltandra virginica* may have been dried too. In the end, we are forced to admit that there is nothing in Hariot, Smith, Beverley, or Kalm to tip the scales one way or the other.

This difficulty of identification, however--arising as it does from our tendency, in this an age of science, to think that there must necessarily have been a distinctive name for each plant--is more apparent than real; for, as Harrington's interpretation shows, we are dealing here with a name for a dark colored berry, and it is quite likely that the Indians applied this name to the fruit of more than one plant, just as they applied the name "tuckahoe" to more than one plant having globular roots. (By coincidence, both *Orontium aquaticum* and *Peltandra virginica*, since they had roots of this type, were also called tuckahoe).⁹ It is perhaps fair to say, then, that if no distinction was intended, none can now be made.

Speck observed the use of the plant-name "cut-lemon" among the Chickahominy survivors. In order to determine the nature of the plant so named, I drove, last June, to Windsor Shades, Virginia,¹⁰ and talked to two of these survivors: James Jefferson and Robert Bradby. Each independently answered my query by pointing to a plant with a blue flower which grows along the edge of the Chickahominy River. A specimen of this plant was later identified for me by Professor J. T. Baldwin, Jr., of William and Mary as *Pontederia cordata*. Since this plant bears no fruit of the kind described by Hariot and Smith, one can only conclude that if "cut-lemon" is an etymologizing of curtenemons, the name has for one reason or another--perhaps because of certain superficial resemblances--been transferred. For the benefit of any to whom this name appeals as a good example of popular etymology, I might add that Robert Bradby expressed doubt about the correctness of Speck's suggestion of similarity between an unspecified feature of the "cut-lemon" plant and a lemon in section. Finally, if Speck is accurate in his statement that curtenemons currently refers to the dock-plant growing on the river, this is further example of name transfer.

To return, in conclusion, to the first element in the geographical name Catenamon Pond, we may now say that it is unquestionably an Indian word, that it means dark-colored berry, and that it was probably used to refer to the fruit of two plants of the arum family: *Orontium aquaticum* and *Peltandra virginica*.



* 1648 *A Description of the Province of New Albion*, as reprinted in Peter Force, *Tracts*, 8 (no. 7), 25 (cf. 29): ...and roots are had as in all the huge long Meads and Marshes, sweet seg roots, ground nuts, Tucaho, and Cuttinamon roots....

ity must not be overlooked that the seeds of been dried too. In the end, we are forced to a Harriot, Smith, Beverley, or Kalm to tip the

ification, however--arising as it does from f science, to think that there must necessarily for each plant--is more apparent than real; ation shows, we are dealing here with a name it is quite likely that the Indians applied this an one plant, just as they applied the name plant having globular roots. (By coincidence, *Peltandra virginica*, since they had roots of tuckahoe).⁹ It is perhaps fair to say, then, ended, none can now be made.

se of the plant-name "cut-lemon" among the rder to determine the nature of the plant so o Windsor Shades, Virginia,¹⁰ and talked to Jefferson and Robert Bradby. Each independ- pointing to a plant with a blue flower which Chickahominy River. A specimen of this plant Professor J. T. Baldwin, Jr., of William and Since this plant bears no fruit of the kind h, one can only conclude that if "cut-lemon" mons, the name has for one reason or another-- superficial resemblances--been transferred. For is name appeals as a good example of popular obert Bradby expressed doubt about the correct- f similarity between an unspecified feature of lemon in section. Finally, if Speck is accurate ions currently refers to the dock-plant growing ample of name transfer.

tion, to the first element in the geographical y now say that it is unquestionably an Indian ored berry, and that it was probably used to s of the arum family: *Orontium aquaticum* and

1. A. R. Dunlap and C. A. Weslager, Wilmington, 1950
2. Hening, *loc. cit.*, gives "Cortenions" as the reading in Purvis--a work not available to me. According to Philip A. Bruce (*Institutional History of Virginia*, New York, 1910, II, 509), the collection of statutes known as "Purvis's Laws" was printed sometime previous to 1684.
3. For evidence that this name was used as late as 1771, see the depositions of Robert Gray and Joshua Gray in Anne Arundel County Records, Land Commissions, 1766-1794, folio 128.
4. William Strachey, *The Historie of Travaile into Virginia Britannia* (ed. R. H. Major, Hakluyt Society, 1849), p. 184.
5. M. M. Mathews, Chicago, 1951, s. v. cuttaninmons.
6. Cf. H. A. Gleason, *The New Britton and Brown Illustrated Flora of the Northeastern United States*, 1952, I, 368-70; Asa Gray, *Manual of Botany*, 8th. ed., 1950, pp. 383-85; R. R. Tatnall, *Flora of Delaware and the Eastern Shore*, 1946, p. 74; E. Yanovsky, *Food Plants of the North American Indians*, U. S. Dept. of Agriculture, Miscellaneous Publication No. 237 (July, 1936), pp. 10-11.
7. Ed. A. B. Benson, New York, 1937, p. 67. p. 260.
8. *Ibid.*, pp. 261-62
9. *Handbook of American Indians*, ed. F. W. Hodge, Washington, 1912 p. 711.
10. Thanks are due the Research Committee of the University of Delaware for making this trip possible. I should also like to thank C. A. Weslager and my colleague Professor Jeannette E. Graustein for their generous help.

rovince of New Albion, as reprinted in Peter
1, 25 (cf. 29):...and roots are had as in all the
marshes, sweet seg roots, ground nuts, Tuckahoe,
..



JOSH'S CABIN

THE EXCAVATION OF A COLONIAL LOG CABIN NEAR WILMINGTON, DELAWARE

C. A. Weslager



JOSH'S CABIN

✿ The Delaware River valley is an important area in the history of the log cabin, for it was here in the Swedish settlements that log residences first made their American appearance. In another paper, the writer has emphasized that the 17th. century English colonists from Newfoundland to Virginia did not build their first American residences of logs nor did the Dutch settlers at New Amsterdam. (1) However, following the landing of the Swedes at Wilmington in 1638 the log complex became manifest in the architectural pattern of New Sweden, which included not only residences, but churches, barns, bathhouses, mills, storehouses, and blockhouses.

Thus, the starting point in any history of the development of the log cabin in America is logically the Delaware valley, and any existing structures in this area are worthy of more than casual examination. There are many log houses and cabins still standing, although the majority of them have been modified, usually by covering the logs with sheathing or clapboards. Some of them have the original logs exposed, but as the years go by these cabins become fewer, and it is extremely important that all available data be collected while the opportunity still exists.

It is extremely difficult to date the construction of an old log dwelling with accuracy, and this is usually due to incomplete historical data. In some cases the deed records of the property specify "dwellings" or "residences" but this can never be taken with certainty to mean a log structure that may now stand on the property. Consequently when we see an old log cabin today in the area which originally comprised New Sweden we cannot be certain either from its appearance or from the deed records of the property on which it stands that it was built during the Swedish era. Its construction may date to a later period when, for a time, people of several nationalities built and occupied log houses, following architectural styles set by the Pennsylvania Germans beginning about 1710.

Recently, an early log structure was located by Leon de Valinger, Jr., Delaware's State Archivist, who observed that what appeared to be a commonplace frame shack near the junction of old State Road and the Dupont Highway south of Wilmington was actually a one-room log dwelling. Covered with clapboards, enlarged by the addition of a frame lean-to, the original character of the structure had been concealed for many years. As the clapboards, weathered by exposure, rotted and fell away, the log walls of the cabin again became visible. The cabin had not been occupied for perhaps 25 or 30 years, and its last known resident was an aged colored man, in whose honor nearby residents knew the place as "Josh's Cabin". (2) At de Val-

inger's behest, the owner, Roswell Schaeffer, agreed to give the cabin to the state for historical purposes, and its parts are now in storage on the State Museum at Dover where they will eventually be assembled, and the reconstructed cabin will serve as a museum exhibit. (3)

Having found what appeared to be an early type cabin, de Valinger approached the Archaeological Society of Delaware requesting that the cabin site be explored through archaeological techniques to obtain artifactual material representative of the occupants, which might be displayed with it, and to develop any data which might be useful in dating the time of its construction. Incidentally, the Archives Department also inaugurated a deed search at the same time to learn if the documents held any useful information. Although this search succeeded in establishing a succession of owners of the land, it did not produce specific reference to the log dwelling.

The archaeological work was started October 9, 1951 and continued intermittently, as time and weather permitted, until January 1952, when the project was completed. The cabin was subsequently dismantled and removed.

The cabin was approximately 18 feet wide by 14 feet deep, having three small windows and one door. The walls consisted of white oak logs hewn on two sides, caulked with clay, plastered on the interior. The corner notching was very crude, as shown in the accompanying sketch. There was a stone foundation on which the four walls rested, but there was no cellar. The floor was laid on log joists, and the saddle, or ridge roof was covered with cedar shingles. There was a loft which made a shelf-like sleeping quarter and was apparently reached by ladder.

The chimney was of brick, and there was a brick fireplace, measuring five feet, seven inches, built against the inside wall on the south side. The cabin fronted east, facing the road.

Initial test pitting revealed that the humus mantle surrounding the cabin varied in depth from one to two feet, and beneath it was a layer of hard, undisturbed yellow clay. (4) The humus had been thoroughly disturbed through successive occupations of the site and it became immediately apparent that the position *in situ* of culture had no stratigraphic importance nor cultural significance. The most modern materials, such as corroded spark plugs, flashlight battery, beverage caps, auto license plate reflector, etc., were found in the lowest level of the humus whereas historically older material, e.g., white clay pipe fragments, crockery, metal buttons, etc. were found overlying the more recent material. This general disturbance doubtless resulted from gardening and other excavation, rodent burrowings and the rootings of domestic and farm animals, as well as natural weathering. It became immediately apparent to us that the typology of the excavated material and the architectural features of the cabin would represent the only valid dating criteria.

Thus, the principal technique consisted of carefully removing and sieving the humus for its contents, and then examining the yellow subsoil.

Roswell Schaeffer, agreed to give the ical purposes, and its parts are now in at Dover where they will eventually be tructed cabin will serve as a museum

ed to be an early type cabin, de Valinger l Society of Delaware requesting that the h archaeological techniques to obtain arti- of the occupants, which might be displayed ta which might be useful in dating the time the Archives Department also inaugurated e to learn if the documents held any useful ch succeeded in establishing a succession not produce specific reference to the log

was started October 9, 1951 and continued ther permitted, until January 1952, when the abin was subsequently dismantled and re-

ely 18 feet wide by 14 feet deep, having oor. The walls consisted of white oak logs h clay, plastered on the interior. The corner own in the accompanying sketch. There was : four walls rested, but there was no cellar. , and the saddle, or ridge roof was covered is a loft which made a shelf-like sleeping hed by ladder.

and there was a brick fireplace, measuring against the inside wall on the south side. the road.

d that the humus mantle surrounding the to two feet, and beneath it was a layer of 4) The humus had been throughly disturbed s of the site and it became immediately t of culture had no stratigraphic importance most modern materials, such as corroded beverage caps, auto license plate reflec- st level of the humus whereas historically ipe fragments, crockery, metal buttons, etc. ecent material. This general disturbance g and other excavation, rodent burrowings d farm animals, as well as natural weather rent to us that the typology of the excava- ral features of the cabin would represent

que consisted of carefully removing and ts, and then examining the yellow subsoil.

In excavating the fireplace, trowel and brush were used to expose its sub- surface features.

Procedure

Bushes and other vegetation were removed from the area immediately surrounding the cabin. Modern trash---whiskey bottles, soft drink bottles, old auto tires, tin cans and the like---were cleared away. A north south line was laid in front of the structure, and stakes placed at five foot inter- vals---a corner stake served as a bench mark.

Exploratory trench "A" was dug in front of the cabin, extending its full length and butting against the stone foundation. The trench produced quantities of broken glass, the result of successive breakage of the panes in the little front window. A number of clay marbles, a broken slate pencil, and fragments of a toy china doll were found in this area, where it appears the children may have played.

Excavating this trench brought to light a large stone stoop, which had previously been covered with earth at the outside of the front door. A corroded iron axe head and whetting stone were found in the soil near the stoop. Approximately six feet away from the house, the humus ceased to, be productive of artifacts.

Trench "B" was then dug along the southern side of the cabin, also butting the stone foundation and extending the full dimension of this side. This trench was actually within the frame lean-to which had been attached to the log structure in recent years. To reach the soil level, the wood flooring was removed from the lean-to. Since this addition served as a kitchen for the more recent occupants, some of their properties were unearthed. This trench was, of course, outside the original south wall of the cabin proper.

Artifacts found in this area included modern dishware fragments, modern forks, spoons, kitchen knives, child's toy pistol, buttons, U. S. coins, and a variety of other 20th. century objects. Although recent ma- terial predominated, there was a scattering of some earlier items, also mixed with the new.

This phase of the work permitted through examination of the stone foundation of the original cabin, as well as the outside chimney foundation, and the door on the south side which connected the cabin proper to the frame addition. Study of the foundation walls revealed that some of the stones had been removed when the doorway was cut through. Most of these stones were later found under the floor of the cabin proper where they had apparently been thrown by the workers who built the lean-to. Sections of the original logs had been removed when the doorway was constructed.

Excavation "C" consisted of the entire area immediately beneath the floor of the cabin proper. The floor boards were removed from the six roughly hewn and notched log joists to permit access to the soil beneath This soil had been enriched with decayed organic matter and was leavy, loose and black. Animals had burrowed into it, and the skeletal remains

of rats were uncovered. This black soil varied in depth from 10 to 24 inches and was completely removed and sieved. Much of this work was carried on when there was snow outside the building, but the excavators were well protected from the weather.

In excavating section "C" small blocks of earth were removed at a time, and a verticle face retained on the next block to be removed. It was hoped there might be separate artifactual layers, but as in the previous trenches, material from older and more recent periods were all commonly associated.

The hard yellow clay beneath the black soil was thoroughly examined for possible disturbances, indications of an earlier earthen floor, or other unusual features. It proved to be undisturbed and devoid of cultural materials. We are certain that there was not an earlier floor level, and that the existing six log joists represented the original floor support.

* * *

The fireplace, as we found it, was choked with rubble, broken bottles, ashes and charred wood. After this superficial debris was removed, the fireplace was excavated horizontally, and as the digging proceeded, we found that the fire pit held a large, flat hearth stone, but bricks had been laid on top of it. The front of the hearth was paved with bricks set on their long ends. The hearth was on the same plane as the log joists, slightly below the level of the floor boards. The joist immediately in front of the fireplace has been cut to permit a close fit. Nothing of significance was found in the fire bed. Apparently, it had been cleaned out by the occupants at regular intervals.

Although the chimney and fireplace were both of red brick, the structure rested on a stone foundation, built at right angles to the stone foundation walls. The complete chimney-fireplace unit was within the cabin and not attached to the exterior walls as is the case with cabins of other types. Yet a square section of the back wall of the fireplace was visible from the exterior of the cabin, the logs having been shortened to fit around it. This is characteristic of certain other cabins in the Delaware valley and may prove to be a useful device in dating the time of construction. (5)

* * *

In completing the study of the cabin, test pits were dug on both the northern and western sides, and a few tests made a short distance in the rear of the dwelling in an unsuccessful attempt to locate a refuse dump or midden.

* * *

It seemed almost impossible to us that such a small excavation could produce such a large quantity of cultural material. It was a basic lesson in archaeology; namely, that wherever man lives he inevitably leaves behind the evidences of his presence in the soil. Approximately 75% to 80% of the material was found in the soil beneath the floor of the cabin--a tiny area of approximately 15 x 11 feet. How it got there is a question which we will leave for speculation.

lack soil varied in depth from 10 to 24 inches and sieved. Much of this work was carried on the building, but the excavators were well

small blocks of earth were removed at a ed on the next block to be removed. It was tifactual layers, but as in the previous tren- l more recent periods were all commonly

ath the black soil was throughly examined ations of an earlier earthen floor, or other be undisturbed and devoid of cultural ma- re was not an earlier floor level, and that esented the original floor support.

* * *

it, was choked with rubble, broken bottles, this superficial debris was removed, the ntally, and as the digging proceeded, we rge, flat hearth stone, but bricks had been ie hearth was paved with bricks set on their the same plane as the log joists, slightly ards. The joist immediately in front of the it a close fit. Nothing of significance was y, it had been cleaned out by the occupants

replace were both of red brick, the structure uilt at right angles to the stone foundation replace unit was within the cabin and not as is the case with cabins of other types. k wall of the fireplace was visible from the having been shortened to fit around it. This er cabins in the Delaware valley and may dating the time of construction. (5)

* *

f the cabin, test pits were dug on both the ad a few tests made a short distance in the successful attempt to locate a refuse dump

* * *

le to us that such a small excavation could of cultural material. It was a basic lesson wherever man lives he inevitably leaves presence in the soil. Approximately 75% to in the soil beneath the floor of the cabin-- .5 x 11 feet. How it got there is a question lation.

The material is discussed below in various categories. Only that which is of datable significance is presented in detail.

Metal Objects (6)

The metal objects weighed 74 pounds, and this included 21 pounds of nails and spikes, 28 pounds of other readily identifiable objects, and 25 pounds of miscellaneous objects, most of which are not easily identifiable. All the metal objects showed various degrees of deterioration, the iron objects in most cases being badly oxidized. The nails came in every size and shape, including the early four-sided tapering form in general use in the Delaware valley from 1796-1827. There were also examples of the two-sided tapering nail of 1800 and after, as well as the modern wire-drawn types.

The metal toys included one jack, a small shovel, three small cups, a wheel from a toy vehicle, an aeroplane propeller, and a series of five toy pistols. The latter are extremely interesting, ranging from an imitative flint-lock type to a modern automatic. Tools included two pair of pliers, a garden trowel, a brass comb, four screw drivers, two axes, one hoe, one clothes iron. There were also eleven knives, eight spoons, and six forks, two buttonhooks, two thimbles, a conductor's ticket punch, and a small section of iron rail which may possibly have been from the New Castle-Frenchtown R. R. which crossed near here.

Bones (7)

There were 17 pounds of animal bones recovered, predominant among which were pig and cow, doubtless food remains. There was also a boar tusk, fowl bones, rooster spur, snapping turtle shell, ground hog skull, horse teeth, muskrat and small dog bones, and seven rat skulls.

Glass and Ceramic Material (8)

A number of 20th. century bottles were uncovered, principally whiskey bottles. One small medicine vial, bearing a pointille mark on the bottom, is apparently of late 19th. century origin. Another small bottle of greenish glass, constricted at the waist, is embossed with these words: "By the King's Royal Patent Granted Robert Turlington for his Invented Balsam of Life." Only one bottle could be traced to its manufacturer. It bore the maker's initials "W. T. & Co., "referring to Witall, Tatam & Co. of Millvale, N. J., who were in business between 1822 and 1880.

Apart from bottles, the glassware assortment consisted of 217 fragmentary and complete objects. Those readily identifiable were:

- 4 bottle stoppers
- 5 vials
- 4 fragments from 4 lamp chimneys
- 1 watch crystal
- 2 lenses from eyeglasses
- 2 Christmas tree ornaments

- 2 toy dishes
- 2 Mason jar tops
- 1 salt shaker fragment
- 1 mirror fragment
- 1 vase fragment

A total of 114 *complete* or fragmentary ceramic objects were unearthed. The following items were included:

- 32 jug fragments
- 25 fragments of glazed red clay pottery
- 1 door knob
- 39 ornamented dinnerware fragments
- 3 dolls head fragments
- 2 doll legs
- 1 doll arm
- 2 doll body fragments
- 1 cream pitches
- 2 bottle stoppers
- 1 shaving mug
- 1 piece of Japanese origin
- 2 sugar bowl fragments

Coins

Perhaps the most reliable dating criteria possible is a series of coins, and we were fortunate to uncover 35 coins at the site. These can be enumerated as follows:

- 2 Buffalo nickels (one dated 1926; other indecipherable)
- 9 Lincoln Pennies, dating from 1912 to 1930
- Indian head pennies bearing the following dates:

1902
1898
1897
1893
1888
1888
1881
1879
1879
1872
1872
1864

one indecipherable

- Large Liberty head pennies bearing the following dates:

1840
1840
1837
1826
1819

or fragmentary ceramic objects were un-
ere included:

red clay pottery

are fragments

s

rigin

s

ating criteria possible is a series of coins,
er 35 coins at the site. These can be enu-

26; other indecipherable)

1912 to 1930

following dates:

1902

1898

1897

1893

1888

1883

1881

1879

1879

1872

1872

1864

one indecipherable

aring the following dates:

1840

1840

1837

1826

1819

In addition, one $\frac{1}{2}$ silver dime was found and one 3 cent silver coin. Although neither is dated, the time of coinage of these pieces was between 1851-1873.

Perhaps the earliest coin found was an English penny bearing the head of George III. It was worn smooth and the date obliterated. This coin belongs to the period from 1760 to 1820. Two other coins were worn smooth so that not even the country of origin could be established. The general contour of one indicates that it may be a second George III penny.

A Cracker Jack President coin completes the list. This was a child's "prize" packed in a box of Cracker Jack.

Buttons (9)

Although not as exact in their datability as coins, buttons are very useful chronological aids, and the excavation produced 244 buttons of the "every day" type made of pearl, bone, horn, wood, glass, and hard rubber. The majority represented types in use during the last 50 years, having from two to four holes, and ranging in size from the tiny forms used on children's garments to large coat buttons.

From the lot, the following slightly older types were segregated. The dates shown are approximations:

1 Calico button (1840-1870)

6 Ringers (1840-1880)

1 Pie Crust (1840-1880)

1 Black Glass, commonly called jet (1860-1920)

7 buttons each perforated with 5 holes (made of bone or horn)

1 Ornamented pearl (1850 to the present)

4 Goodyear (1851-1872)

The four Goodyear buttons are of compressed rubber, each having two holes. One is embossed "N. R. Co., Goodyear's Pt.," measuring 9/16 in diameter; another "I. R. Co., 1851 Goodyear," measuring 9/16 another "N. R. Co., Goodyears O-T 1851," measuring 15/16", and the fourth, "N. R. Co., Goodyear P-T 1851," measuring 1".

The Goodyear button is a unique American specimen made under a patent issued to Nelson Goodyear May 6, 1851, later reissued, and in force until 1872. The back-marks would indicate that the four specimens fall within this time period. (10)

Seventy-five metal buttons were found, the majority of which were so badly corroded that no identification could be made.

Among those in good condition, there are ten having embossed designs on the face--such as butterfly, flowers, moon and grapes. These all have metal shanks on the reverse side or scars where shanks have been broken off. They have no back-marks. One, apparently of pewter, has a faint intaglio design of a 12 pointed star on the face.

Ten metal buttons all have back-marks, although all are not completely decipherable. (11) Those which are legible can be enumerated as follows.

The words italicized below actually appear on the backs of the buttons:

Double Gilt (scrolled flower design also on back)

Double Gilt (smaller than the above)

Warranted Fine Gold Surface (two marked like this)

Gilt

Gold Colour (scrolled design also on back)

Stanley London

E. T. M. - Extra Rich

R and W Robinson Extra Rich

Metal buttons also included a trainman's uniform button embossed PWB (Philadelphia, Wilmington, Baltimore R.R.) and a brass button, apparently from a military uniform bearing the Delaware state coat of arms. (12)

White Clay Pipes (13)

Approximately 50 fragments of clay smoking pipes were uncovered, including broken stems and portions of bowls. Practically all of the bowls are charred on the interior, and it is obvious that they were used by the cabin's occupants for smoking tobacco.

One complete bowl, having a glazed exterior, brown in color, has a short obtuse-angled stem intended to receive a hollow wood stem. There is one half of another bowl of this type and two smaller fragments. These represent very recent types, probably manufactured in the early 1900's.

With the exception of four other specimens (discussed below) the balance of the pipe fragments, all of white clay, doubtless date from the latter part of the 19th. century. The bottoms of the bowls have the characteristic "spurs" of this later period, fluted edcorations on the lower portions of the bowls, with some decorations on a few stems. These pipes were apparently all of American manufacture.

The four specimens, which are unquestionably older than the others, consist of two bowl fragments and two stem fragments. The two stems, from the thickness and texture of the clay, scraping to remove the mould marks, and the holes off-center belong to the period from 1750-1800. They may be of English manufacture.

The first bowl fragment bears the maker's imprint, a small circular impress containing a raised design resembling a scroll, although this cannot be clearly deciphered. The bowl is ornamented around the top with a roulette design, impressed in the soft clay after the pipe had been moulded. This, too, is contemporary with the other two stems.

The second bowl, which is fragmentary but more complete than the first, bears the initials "ID" on the front of the bowl facing the smoker. Although the stem is broken, it was moulded to the pipe at a slightly obtuse angle. The bowl has a small spur. The maker's initials "ID" suggest that this pipe was of English origin, and at least four pipe makers bore these initials: John Daltin, Hull, 1724, John Davis, Bristol, 1722, Isaac Dennis, Bristol, 1739, Johathan Dark, Bristol, 1812.

usually appear on the backs of the buttons:
sign also on back)
bove)
o marked like this)
so on back)

a trainman's uniform button embossed PWB
imore R.R.) and a brass button, apparently
the Delaware state coat of arms. (12)

s of clay smoking pipes were uncovered,
tions of bowls. Practically all of the bowls
d it is obvious that they were used by the
tobacco.

g a glazed exterior, brown in color, has a
led to receive a hollow wood stem. There is
his type and two smaller fragments. These
obably manufactured in the early 1900's.

her specimens (discussed below) the balance
ite clay, doubtless date from the latter part
oms of the bowls have the characteristic
sted edcorations on the lower portions of the
n a few stems. These pipes were apparently

are unquestionably older than the others,
nd two stem fragments. The two stems, from
clay, scraping to remove the mould marks,
to the period from 1750-1800. They may be

rs the maker's imprint, a small circular im-
n resembling a scroll, although this cannot
is ornamented around the top with a roulette
lay after the pipe had been moulded. This,
ther two stems.

is fragmentary but more complete than
ID" on the front of the bowl facing the
broken, it was moulded to the pipe at
bowl has a small spur. The maker's
his pipe was of English origin, and at
hese initials: John Daltin, Hull, 1724,
Isaac Dennis, Bristol, 1739, Johathan

The general characteristics of this bowl also fit into the period
of from 1800-1850, which suggests that of the above names Jonathan
Dark is the most logical.

In summation, therefore, the clay pipe fragments unearthed at the
cabin date from the early part of the present century back to the 1750
-1800 period.

Miscellaneous

Some miscellaneous objects which do not fit into any of the
above categories, but which are worthy of inclusion are as follows:

- 14 Clay marbles
- 10 glass "shooters"
- 1 iron ball (shot?)
- 4 pieces of tile, 1" square, 1/4" thick, yellow in color having
a raised circular design on the top surface.
- 1 gold engagement ring--stone missing
- 1 child's gold ring
- 1 fragment ivory comb
- 16 beads of green, red, blue and black glass
- 1 wood bottle stopper
- 2 slate pencils
- 1 argillite arrowhead
- 1 puzzle of twisted nails
- 1 bowl of Briar pipe
- 1 circular ornament from horse bridle, ornamented with letter
"R"
- 1 "agate" pipe stem
- 1 small conch shell ornament
- 1 rusted key
- 1 tiny clay doll, marked "Made in Germany"

All of the material recovered during the cabin excavation was
presented to the State Archives Department at a meeting of the
Archaeological Society of Delaware on June 7, 1952. It is now in
storage at the State Museum and will be used for display purposes
when the cabin is reconstructed.

Conclusions

Since this cabin was the first ever to be excavated in the Dela-
ware valley, we are given an unrepresented opportunity to make a
close study of the architectural features and the method of construc-
tion. Also we learned that the most prolific implement-bearing area
of this type dwelling was in the earth directly beneath the floor.

The typology of the artifacts recovered clearly reflect the time
sequence during which the cabin was occupied, starting with very
recent iron, glass, buttons and coins used by modern residents and
continuing down through earlier forms, representative of the original
occupants.

The earliest dated coin we recovered was 1819, but the undated coin may be earlier--but not earlier than 1760. The oldest metal buttons doubtless belong in the period from 1750-1800 and are contemporary with the aforementioned four oldest pipe fragments. The fireplace bricks could conceivably be of the same age.

The original mortar used in the stone foundation (recently touched up with cement) was found to contain sand and lime made from pulverized shell, but no cement. Although such mortar was used as early as the 17th. century in Delaware, it also persisted in rural areas well into the 19th. century. The mud chinking between the logs had been tempered with rye or oat hulls, indicative of early practices. Some of the plaster on the interior log walls was studied microscopically and found to be composed of 55 different laminations, some still tinted from the paint that had been applied to them. Assuming that a fresh coat of whitewash were applied every three or four years, the time span represented by the laminations would range from 150 to 200 years.

All things considered, we are inclined to date the cabin no earlier than 1750. Although this places it in the colonial period, well past the era of the Swedish occupation of Delaware, it may be assumed that it reflects Scandinavian influences.



- (1) C. A. Weslager, "Log Structures in New Sweden During the Seventeenth Century," *Delaware History*, Vol. 5 No. 2, Sept. 1952, pp. 77-79.
- (2) The writer is indebted to Mr. and Mrs. Chas. Hamilton for this information and also for the traditional name of the little stream crossing the cabin property, i.e. "Thundergust Creek."
- (3) The owner of the property, Roswell Schaeffer, told the writer that in former years there was a second log cabin, approximately 100 feet south, which burned down. There was still a third log cabin not far distant, and, like the other two, facing on old State Road.
- (4) Members of the Archaeological Society of Delaware participating in the work were A. G. Volkman, L. T. Alexander, H. V. Lang, A. Crozier, David Martens, Bruce Trickey, Irwin Kappes, Ronald Finch, Francis Toy, Elwood Wilkins, Jr., and the writer.
- (5) Joseph Sickler of Salem, N.J., took the writer to see several old cabins in Salem County, N. J., which had this identical feature.
- (6) This is a summary of a report prepared by Dr. Bruce Trickey and read before the Archaeological Society of Delaware. Dr. Trickey also made a microscopic analysis of the plaster on the cabin wall.

re recovered was 1819, but the undated
t earlier than 1760. The oldest metal
the period from 1750-1800 and are con-
ditioned four oldest pipe fragments. The
vably be of the same age.

in the stone foundation (recently touch-
ed to contain sand and lime made from
ent. Although such mortar was used as
n Delaware, it also persisted in rural
entury. The mud chinking between the
rye or oat hulls, indicative of early
r on the interior log walls was studied
to be composed of 55 different lamin-
the paint that had been applied to them.
of whitewash were applied every three
represented by the laminations would

are inclined to date the cabin no earlier
ces it in the colonial period, well past
pation of Delaware, it may be assumed
influences.



Structures in New Sweden During the
Delaware History, Vol. 5 No. 2, Sept.

o Mr. and Mrs. Chas. Hamilton for this
the traditional name of the little stream
rty, i.e. "Thundergust Creek."

rty, Roswell Schaeffer, told the writer
e was a second log cabin, approximately
urned down. There was still a third log
d, like the other two, facing on old State

ogical Society of Delaware participating
Volkman, L. T. Alexander, H. V. Lang,
is, Bruce Trickey, Irwin Kappes, Ronald
ood Wilkins, Jr., and the writer.

i, N. J., took the writer to see several
ounty, N. J., which had this identical

i report prepared by Dr. Bruce Trickey
chaeological Society of Delaware. Dr.
microscopic analysis of the plaster on

- (7) This is a condensation of a report made by Elwood Wilkins, Jr., who also analyzed the mortar which is referred to under Conclusions.
- (8) This is summary of a report prepared by Irwin Kappes. He was assisted in sorting the glass by L. T. Alexander, A. G. Volkman, S. J. Caraher, and Mrs. Grace Lloyd Collins.
- (9) The writer gratefully acknowledges the assistance of Miss Ethelwyn Maloney of Townsend, Delaware, in identifying these buttons.
- (10) Jane F. Adams, "The Goodyear Centennial," *The National Button Bulletin*, Vol. 10, No. 5, Sept. 1951, pp. 284-289 (pub. by the National Button Society).
- (11) These types of buttons are difficult to date by an exact year. The words "double gilt," "gilt," etc. were terms of quality used by a number of American manufacturers, starting about 1800. The "R and W Robinson" button was made during the 1830-1850 period; see Doris E. Blair, "Golden Age Buttons for America," *National Button Bulletin*, Vol. 9, No. 6, Nov. 1950 pp. 343-346.
- (12) The PWB was an independent company from 1838 to 1881, when it was absorbed by the Pennsylvania R. R. system. (?)
- (13) This information is based upon an examination of these pipes by Mr. H. Greiger Omwake on Feb. 16, 1952. Mr. Omwake has made a thorough and intensive study of white clay pipes, both in American and English and Dutch sources. The names of the pipe makers mentioned above are from his MSS notes.

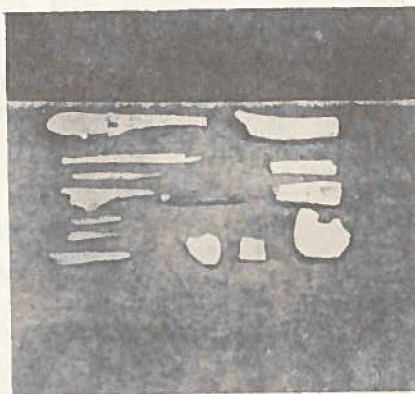




PIT No. 10



PIT No. 22



BONE CULTURE



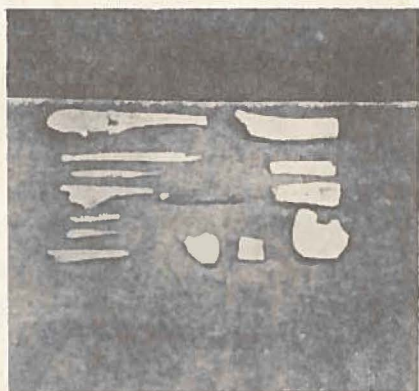
RESTORED POT



STONE CULTURE

A REPORT OF THE ARCHEOLOGICAL INVESTIGATION OF THE RITTER SITE, LEWES, DELAWARE

H. G. Omwake



BONE CULTURE



STONE CULTURE

Beginning in the mid-winter of 1951 and continuing until the spring of 1952 an archeological investigation of the site known as the Ritter Site, near Lewes, Delaware, was carried out by Roger Vandegrift, James L. Parsons and the author, assisted by Dr. and Mrs. David Marine, Miss Mary Lou Ponder, Mrs. Anthony Higgins, Mr. Pierce Coady and Mr. and Mrs. Sheldon Potter.

The investigation consisted of the excavation of a series of eighteen of a known total of twenty-six shell refuse pits, careful recovery of the cultural evidence found in them, the keeping of field notes, the photographing of the several pits, the making of a scale map, and the location of permanent markers for the site. After eighteen pits had been explored, the arrival of the growing season for the second time brought a halt to the investigation. It was felt, however, that the knowledge drawn from the eighteen pits excavated was fairly conclusive and that little additional information would be derived from pursuing the investigation of the remaining eight pits. The investigation was therefore, concluded and the remaining eight pits may be regarded as a reservoir of information should it become desirable sometime in the future to re-examine and check the conclusions drawn by the present reporter.

Location The Ritter Site is situated on property owned by Mr. Lynn Ritter and his brother William, along the eastern side of a branch of Mill Creek sometimes called Black Oak Gut. It is most easily approached by travelling west on New Road from Pilottown Road, Lewes, toward Nassau, Delaware, and turning right, off New Road, at the first crossing, onto a dirt lane which passes by the residence of Mr. Ira Brittingham and leads to the homestead of Mr. William Ritter.

Black Oak Gut joins Mill Creek approximately half a mile northwest of the Ritter homestead. Mill Creek meanders through extensive marshes and empties into the larger Broadkill Creek, which, in turn, flows into the Delaware Bay through the old inlet southeast of Broadkill Beach and through the Lewes-Rehoboth Canal and the Roosevelt Inlet.

Description The site ranges widely over many acres along Black Oak Gut and is known to encompass not only that part of the Ritter property which borders the stream but also a portion of the Brittingham lands adjoining to the south.

The soil is of the composition designated as Sassafras Loam by the Bureau of Soils, United States Department of Agriculture.

There is almost no deviation in elevation from the ten foot contour interval and only in the heart of the site is there any indication that in former years, except for forestation, the uncultivated surface may have differed slightly from that which the site presents today. This deviation

consists of a slight depression in the Ritter field and a somewhat lower and dampish drainage westward toward an existing small branch of Black Oak Gut, suggesting that at one time a spring may have bubbled up near the center of the site and drained into the branch. At all seasons of the year the soil in this area is definitely damper than that of the surrounding field.

The site follows the winding course of Black Oak Gut for more than a thousand feet and occupies the first high land south of the marshlands through which Mill Creek and Broadkill Creek find their ways to the Delaware Bay. The area of occupation was concentrated, for the most part, immediately along Black Oak Gut. However, a group of seven refuse pits was found from two to four hundred feet east of the suspected former spring and from seven hundred to a thousand feet east of Black Oak Gut.

Black Oak Gut itself consists of a small stream of fresh water, bordered on both sides by swampy land which gives way to a fringe of underbrush and trees which forms the irregular western boundary of the site.

On the Brittingham part of the site, at the edge of the field, near pit number 18 (see accompanying map) a strong free-flowing spring bubbles out of the wooded bank and drains into Black Oak Gut. There seems to be no reason to assume that this spring was non-existent during the period of Indian occupancy of the site.

The area covered by the Ritter Site offered many features conducive to aboriginal occupancy. The land itself was of sufficiently high elevation to insure good surface drainage and reasonable dryness. Not far away were the shell fish of the Delaware Bay to which relatively easy access could be had by dugout canoe via Mill Creek and Broadkill Creek. Fresh water was available not only from Black Oak Gut itself but also from the fine, clear spring and probably from another which has since dried up. In all likelihood the surrounding country was well forested and mothered many species of wild animals which formed an important element in the aboriginal diet. That the area was chosen to be the site of Indian dwellings may be attributed to this combination of favorable natural conditions.

Mapping The irregular western boundary of the site, following the high land which fronted the Black Oak Gut, posed serious problems as to how best establish permanent markers and axes from which the location of the refuse pits could be determined and recorded. The problem was complicated by the discovery of seven refuse pits a thousand feet, more or less, removed from the area of concentrated occupation and by the fact that a hedgerow and fence separating the Brittingham land from that of the Ritter brothers ran at a diagonal from the general course of the Black Oak Gut.

Finally it was decided to establish two separate base lines running in a general northwest to southeast direction, roughly paralleling the Gut, and a third extending northwestward at right angles to the hedgerow, using the hedgerow itself as an axis from which pits on either side of it could be located.

The ends of the two baselines parallel to the Gut were marked by iron pipes securely driven into the ground several feet inside the fringe of the wooded area. These are shown as pipes A, B, C, and E on the accompanying

on in the Ritter field and a somewhat lower
d toward an existing small branch of Black
ne time a spring may have bubbled up near
ed into the branch. At all seasons of the year
nitely damper than that of the surrounding

ng course of Black Oak Gut for more than a
he first high land south of the marshlands
Broadkill Creek find their ways to the Del-
pation was concentrated, for the most part,
Gut. However, a group of seven refuse pits
dred feet east of the suspected former spring
ousand feet east of Black Oak Gut.

ts of a small stream of fresh water, bordered
l which gives way to a fringe of underbrush
egular western boundary of the site.

the site, at the edge of the field, near pit
nap) a strong free-flowing spring bubbles out
into Black Oak Gut. There seems to be no
ring was non-existent during the period of

tter Site offered many features conducive to
d itself was of sufficiently high elevation
and reasonable dryness. Not far away were
Bay to which relatively easy access could
ill Creek and Broadkill Creek. Fresh water
lack Oak Gut itself but also from the fine,
another which has since dried up. In all
ntry was well forested and mothered many
ormed an important element in the aboriginal
to be the site of Indian dwellings may be
of favorable natural conditions.

n boundary of the site, following the high
Oak Gut, posed serious problems as to how
ers and axes from which the location of the
ined and recorded. The problem was com-
ven refuse pits a thousand feet, more or less,
entration occupation and by the fact that a
the Brittingham land from that of the Ritter
n the general course of the Black Oak Gut.
establish two separate base lines running in
east direction, roughly paralleling the Gut,
tward at right angles to the hedgerow, using
s from which pits on either side of it could

nes parallel to the Gut were marked by iron
ground several feet inside the fringe of the
is pipes A, B, C, and E on the accompanying

map. Pipe D was driven into the hedgerow on the line from C to E, ninety-six
feet from the edge of the cultivated field. Pipe F was driven into the hedge-
row six hundred and seventy-five feet northwest of D, at the point from
which a baseline for the purpose of marking the location of the cluster of
seven refuse pits in the center of the field could be established at right
angles to the hedgerow. Because the field is under annual cultivation,
it was impossible to establish a permanent marker at the northern end of
this axis.

The locations of twenty-six known pits were recorded in respect to which-
ever of the four lines was most appropriate. This whole process may appear
to have been a very complicated method of locating the several refuse pits.
However, realization of the facts that the entire site was under annual
cultivation, that the investigation was twice interrupted by the arrival of
the growing season, and that the western boundary was so irregular may,
perhaps, justify the wisdom of the unusual procedures which have been
described.

As each of the pits was discovered, it was assigned a number in con-
secutive order and its location in respect to one of the baselines was
determined and recorded on a field map of the site. At a later date the map
which accompanies this report was drawn to the indicated scale by Mr.
James A. Moore, a member of the faculty of the Lewes High School. It
should be noted that the circles by which the pits are indicated on the
map are not indicative of their sizes but simply constitute symbols by
which the pits were recorded.

Procedure In general, the pits were investigated in the order in which
they were found by the persons whose names appear opposite the pit
numbers in Table 1.

It was standard practice that after the top soil covering each pit had
been removed the diameters were recorded and the general surface shape
was noted. In most cases the refuse deposit was photographed before
excavation was begun. It may be said that the usual point of entry into
each pit was along the southern perimeter, a practice which afforded the
greatest amount of sunlight directly on the face of the excavation for the
longest period of time during the day. Trowelling of the refuse was carried
forward by using a combination horizontal-vertical technique which seemed
to result in the least damage to the pottery sherds and other cultural
evidence which was encountered. Excavators carefully recorded the position
of any unusual objects or features and most of these were photographed
in situ. Notes were kept by the workers and were turned over to this
reporter after the exploration of the site had been concluded.

Observations Pit No. 1 Almost all the pottery occurred near the top of
the refuse. The excavator noted that at least six different vessels were
represented by rim sherds. None were restorable. Other cultural objects
included one deer ulna awl made from the wing bone of a bird (wild turkey ?)
one broken awl made from a bird bone, one rejected piece of worked turtle
shell, one animal bone scraper or gouge (compare No. 31, Plate 10,

An Early Site in Cayuga County, New York, Ritchie, William A.), and one convex-based triangular arrowhead. The shell refuse consisted, for the most part of oyster shells.

Pit No. 2. The top seven inches of refuse was tightly packed. This was underlain by a layer of dark, stained soil which, in turn, was underlain by loosely packed shells which extended to the bottom of the pit, suggesting that the pit had been partially filled, then abandoned for a period of time during which soil from the occupation level of the site drifted into it, then re-used and completely filled with refuse. Just off the eastern perimeter of the pit was observed a post mold six and a half inches in diameter. It had been partially destroyed when the refuse pit was originally dug by the occupants of the site. Along the southwestern perimeter approximately half of a Townsend type, incised band pottery vessel (illustrated) was recovered. Along the western perimeter a considerable portion of a Rappanhannock type, incised vessel (illustrated) was found. There was almost no other pottery in the pit.

Pit No. 3. A twelve inch thick, saucer shaped deposit of extremely badly broken oyster and clam shells was underlain by disturbed earth of unrecorded depth. From the disturbed soil were recovered most of the sherds of a large, heavy pottery vessel (illustrated) which had the general shape of Townsend type pottery and a rim treatment somewhat characteristic of the Rappanhannock types.

Pit No. 4. The most striking aspect of this pit was the character of the fill, as indicated in the accompanying diagram showing the vertical profile along the east-west axis.

On the eastern side of the bottom was a heap of shells, obviously the first deposit of refuse to be placed in the pit. This was surrounded and covered by a layer of badly burned and finely ashed shells of twelve inch maximum thickness. It was clear that fires of intense heat had been burned in the pit at this level. The upper part of the pit was filled with very loosely packed shells, almost all oysters, except that along both the eastern and western sides occurred deposits of stained, sandy soil. Capping the whole surface was a thin layer of clayish soil in which occurred scattered oyster shells.

Pit No. 5. Ninety-nine percent of the refuse in this pit consisted of oyster shells, the remaining being mussels, clams and three conch shells, all packed solidly near the top but loosely underneath. There was an unusually large number of land snails scattered throughout the refuse. Charcoal was present. Only a minor amount of animal bone wastage was encountered.

An interesting feature of the pit was a large mass of charred black walnut shells, into which were mixed a few hickory nut shells, discovered on the western side of the pit at a depth of fourteen inches. Among the

y, New York, Ritchie, William A.), and one ad. The shell refuse consisted, for the most

ches of refuse was tightly packed. This was stained soil which, in turn, was underlain by extended to the bottom of the pit, suggesting filled, then abandoned for a period of time upation level of the site drifted into it, then with refuse. Just off the eastern perimeter of old six and a half inches in diameter. It had on the refuse pit was originally dug by the g the southwestern perimeter approximately cised band pottery vessel (illustrated) was perimeter a considerable portion of a Rappan- (illustrated) was found. There was almost

thick, saucer shaped deposit of extremely shells was underlain by disturbed earth of urbed soil were recovered most of the sherds el (illustrated) which had the general shape d a rim treatment somewhat characteristic

ing aspect of this pit was the character of accompanying diagram showing the vertical is.

bottom was a heap of shells, obviously the placed in the pit. This was surrounded and rned and finely ashed shells of twelve inch ar that fires of intense heat had been burned upper part of the pit was filled with very st all oysters, except that along both the occurred deposits of stained, sandy soil. a thin layer of clayish soil in which occurred

ercent of the refuse in this pit consisted of eing mussels, clams and three conch shells, top but loosely underneath. There was an and snails scattered throughout the refuse. a minor amount of animal bone wastage was

the pit was a large mass of charred black e mixed a few hickory nut shells, discovered it at a depth of fourteen inches. Among the

hulls were found three objects which appeared to be small, charred corn cobs. Subsequently these were forwarded to the United States National Museum whose botanists confirmed their identification as nubbins of eight rowed corn.

In as much as these three pieces of corn cobs represent the total number of examples recovered from refuse pits in the southeastern Delaware area up to this time, the descriptive information submitted by Dr. T. Dale Stewart along with the confirmation of their identification might be of some interest. It follows:

" Volney H. Jones in his *Notes on Indian Maize* (Pennsylvania Archeologist, Vol. 18, nos, 1-2, pp. 23-24) refers to such nubbins and states that the smallest American Indian corn known to him is Micmac corn which has ears about one inch diameter and four inches long. However, in examining corn from archeological sites, he has frequently observed small cobs (about one inch in diameter) which he thinks must have been nubbins or abnormalities of some kind. He writes 'I have also noted in consignments of archeological corn sent to me that frequently the same association of small cobs and normal sized kernels occurs. In many of these the kernels could not possibly have been borne on the small associated cobs, and cobs of normal size are absent. I hardly know how to account for this unless the larger cobs are used for some purpose, such as fuel, and are not preserved, whereas the small nubbin cobs and abnormalities which occur in every field of corn were disposed of. These answers are a little weak but are the best I can offer.' (p. 24)".

In passing, it might be appropriate to comment that the failure of observers to note corn cobs in others of the many pits which have been explored is possibly attributable to the fact that the general dampness of the pits is not at all conducive to the preservation of vegetable matter. The survival of these three samples probably resulted from their having been charred themselves and buried in the midst of the charred walnut and hickory nut shells which absorbed most of the dampness before it reached the corn cobs. The relative scarcity of corn cobs discovered in shell refuse pits should not be taken to indicate the absence of corn from the agricultural products enjoyed by the Indians of southeastern Delaware. Rather, under

the circumstances, the preservation of just a few examples in shell refuse pits should be regarded as remarkable.

Notice should also be taken of the black walnut hulls observed in this pit. Hickory nut shells have been frequently recorded from similar pits, but to the best knowledge of this reporter, black walnuts have not previously been observed. This circumstance seems a bit unusual, in as much as black walnuts, as well as white walnuts, were native to the eastern United States and future observers might be especially careful to note and report their presence.

Cultural objects recovered from Pit No. 5 included a triangular arrowhead, a bone awl, two cut bone tubes (beads?), and a large quantity of pot sherds among which it was possible to identify (from rim sherds) six different vessels of which two may be restorable.

Pit No. 6. There was little of interest about this pit except its peculiar surface shape and its odd vertical contour along the north-south axis. The accompanying drawings illustrate these aspects. The pit contained no pottery or bone refuse and very little shell refuse.

Pit No. 7. From this pit were recovered a sufficient number of sherds of two vessels to permit their restoration. One of medium size, bore a beautiful herringbone decoration and had a typical Townsend type shape. This vessel was illustrated on the cover of the July 1951 issue of the *Archeolog*. The other vessel, the restoration of which consists more of plaster of paris than of Indian pottery, was not photographed but is in the possession of Mr. James L. Parsons, the excavator. There were no cultural objects of bone or stone in the pit.

Pit No. 8. What may or may not have been intended as a shell lining occurred in this vertically side-walled pit. The flat bottom was covered by a two inch thick layer of oyster shells which did not appear to have been intentionally placed in position. Rather they gave the impression of having been randomly scattered. Above this lining (?) was a deposit of stained, dark, sandy earth about twelve inches thick at the center, somewhat thicker at the outer edges. Into this dark earth intruded a round-bottomed deposit of loosely packed oyster and mussel shells. The surface of the deposit was covered with a thin layer of black earth packed very hard. What little pottery there was, was found in and just under this black soil. No other cultural material was recovered.

Pit No. 9. The refuse was rather loosely packed and contained a disappointingly small quantity of cultural material in spite of the unusually large size of the pit. About ten inches from the southwestern perimeter a broken pipe stem was found at a depth of two inches. Ten inches from the southern rim of the pit and at a depth of about ten inches was located a triangular arrowpoint. Near the center of the pit were found sherds of a large Townsend incised band type of pot, too brittle and crushed to permit restoration.

ation of just a few examples in shell refuse markable.

of the black walnut hulls observed in this en frequently recorded from similar pits, but eporter, black walnuts have not previously ce seems a bit unusual, in as much as black ts, were native to the eastern United States especially careful to note and report their

m Pit No. 5 included a triangular arrowhead, (beads ?), and a large quantity of pot sherds o identify (from rim sherds) six different restorable.

of interest about this pit except its peculiar rtical contour along the north-south axis. ustrate these aspects. The pit contained no very little shell refuse.

ere recovered a sufficient number of sherds restoration. One of medium size, bore a n and had a typical Townsend type shape. i the cover of the July 1951 issue of the the restoration of which consists more of pottery, was not photographed but is in the sons, the excavator. There were no cultural it.

y not have been intended as a shall lining e-walled pit. The flat bottom was covered yster shells which did not appear to have sition. Rather they gave the impression of i. Above this lining (?) was a deposit of i twelve inches thick at the center, some- s. Into this dark earth intruded a round- ked oyster and mussel shells. The surface b a thin layer of black earth packed very as, was found in and just under this black was recovered.

rather loosely packed and contained a dis- ultural material in spite of the unusually n inches from the southwestern perimeter t a depth of two inches. Ten inches from t a depth of about ten inches was located e center of the pit were found sherds of i type of pot, too brittle and crushed to

At a depth of from twenty-two to twenty-eight inches, just under the refuse burden, along the southern wall of the pit, were recovered the skeletal remains of a dog, a relatively young individual, as reported by the United States National Museum. The top of the head was oriented toward the east and the nose toward the south. The remains were in a sloping position and seemed to rest partly in the refuse area and partly in the sidewall.

Near the southeastern wall, distinctly within the refuse area, but under- neath the shell overburden, an isolated lower leg bone of a human being was found. It lay from eighteen to twenty-two inches deep and was not in any way associated with any other thing.

Pit No. 10. Perhaps the most unusual and interesting feature of the whole site was encountered in this pit. Under a thin, two inch thick cap of mixed oyster, clam and mussel shells, among which occurred fractured turtle shells and small animal bones, one broken pipe stem and scattered pottery sherds, was found an oval bed of cracked sandstone and quartzite rocks. (Illustrated) The rocks occupied an oval area hollowed into the hard clay soil which underlay them. Obviously they had been intentionally placed in position and the natural assumption was that the Indians had here prepared a bed of rocks on which to build a fire. The odd aspect was that there was an almost total absence of charcoal particles among them. Even the refuse over-burden contained little evidence of fire. It may be concluded that after the rocks had been emplaced, they were abandoned as a fire bed for some unknown reason and the usual kind of village refuse was piled over them. It has also been suggested that the fact that the rocks occupied an area hollowed out of clay subsoil, which would tend to retain water, may indicate that a sweat bath was in use before the refuse was thrown over them. This also could be a logical conclusion from the evidence which was observed. It is regretted that no effort was made to discover post molds which might have remained from a structure erected over the bed of rocks.

Pit No. 11. Only four fragments of pottery were recovered from the thin, seven inch thick deposit of oyster shells. The pit was totally un- productive.

Pit No. 15. While this was a rather large pit, it contained absolutely no cultural evidence and its excavation was abandoned as not worth the effort involved.

Pit No. 17. The excavators recorded the following notes: "The top soil over the shell was about eight inches of dark-colored loam. On re- moving the top soil, one encountered a thin layer of shells averaging about eight inches thick. Beneath was a layer of dark top soil-like loam averaging about ten inches thick and containing no shells. Below this was a second layer of shells averaging about twelve inches thick and below this was undisturbed pale yellowish orange loam (clay). The excavation was slow because of the sticky clay. The shell material was disintegrating, soft

and broken, composed of oysters (mainly), clams, scallops, and numerous conch shells. There was charcoal in all layers, including the twelve inch fill between the layers of shell. Several small fragments of shell-tempered pottery were recovered, three bone awls, and many bones of birds, small rodents, skull fragments and vertebrae of deer. One somewhat oval flinty stone of cocoanut size was found in the lower layer of shells. Most of the shell was very soft, probably due to the fires in the pit. About half the pit remains to be excavated."

Pit No. 20. The only striking feature of this pit was its tremendous length along the southeast to northwest axis, a hundred and seventeen inches. Its excavation was never completed.

Pit No. 21. The surface of this pit was exactly round. Other-wise there was nothing noteworthy about it.

Pit No. 22. The surface appearance of this pit was almost round. Near the southern perimeter, at a depth of eleven inches, lay a multiple-pitted stone. Fourteen inches from the same perimeter, but only one half inch deep, lay a triangular arrowpoint. Thirty-three inches from the southern perimeter and fifteen inches deep was a bone awl.

The shell refuse was rather loosely packed and achieved a thickness of twenty-two inches at the center. Beneath the shell overburden was a thick deposit of dark, shady soil (illustrated). In general, both the shell overburden and the dark soil beneath presented a gently rounded cross section profile. Near the center, however, the side-walls became sharply vertical and the pit achieved a depth of forty-three inches. On the bottom was encountered a layer of clam and oyster shells about two inches thick. Among these shells were many large particles of charcoal. The peculiar contour of the pit is shown on the accompanying diagram.

About forty inches from the northern perimeter, at a depth of fifteen inches, were encountered the widely scattered bones of a human. These were transmitted to Dr. T. Dale Stewart of the United States National Museum from which the following report was received:

"The incomplete skeleton, represented by the scattered bones in the refuse pit, is probably a female around twenty to thirty years of age. Since all of the bones have the same appearance and there are no duplications. I assume only one individual is represented. Among the parts recognized are a jaw, sacrum, scapula, vertebrae, ribs, hand and foot bones, a right clavicle, a pair of humeri, left radius, left ulna, right tibia, right femur, left fibula, and left calcaveous."

rs (mainly), clams, scallops, and numerous oal in all layers, including the twelve inch l. Several small fragments of shell-tempered bone awls, and many bones of birds, small vertebrae of deer. One somewhat oval flinty round in the lower layer of shells. Most of bly due to the fires in the pit. About half d."

iking feature of this pit was its tremendous o northwest axis, a hundred and seventeen ver completed.

e of this pit was exactly round. Other-wise about it.

ppearance of this pit was almost round. Near epth of eleven inches, lay a multiple-pitted the same perimeter, but only one half inch wpoint. Thirty-three inches from the southern deep was a bone awl.

r loosely packed and achieved a thickness enter. Beneath the shell overburden was a soil (illustrated). In general, both the shell beneath presented a gently rounded cross er, however, the side-walls became sharply a depth of forty-three inches. On the bottom m and oyster shells about two inches thick. y large particles of charcoal. The peculiar n the accompanying diagram.

ne northern perimeter, at a depth of fifteen widely scattered bones of a human. These ale Stewart of the United States National ving report was received:

skeleton, represented by the a the refuse pit, is probably a aty to thirty years of age. Since ave the same appearance and lications. I assume only one sented. Among the parts recog- acrum, scapula, vertebrae, ribs, es, a right clavicle, a pair of s, left ulna, right tibia, right and left calcaveous."

There are no clues whatsoever as to the reason why most of the parts of the skeleton, including the head, were missing, and one may conjecture that in as much as the remains were scattered over a large area, they may have represented the perversion of an originally intended nested burial, the missing parts probably interred separately in another, albeit undiscovered, pit. Although there was no evidence to support the suggestion, other than the absence of most of the skeletal remains of the individual, one ought not rule out the possibility of cannibalism as the reason for the presence of a scattered assortment of unassociated parts of the skeleton and the absence of the other parts.

Pit No. 23. This was a large oval-shaped pit containing a refuse deposit of oyster, clam and conch shells about twenty-seven inches thick. The overburden was underlain by a dark, stained soil approximately thirteen inches thick. Both shell refuse and stained soil were generally round in cross section. Near the center of the surface of the refuse was evidence of a fire. Scattered among the pulverized shells and charcoal particles were small fragments of a very thin pottery vessel, not, however enough to permit restoration. Below the fire-bed the pottery fragments were of a heavier consistency and enough of one vessel was recovered to permit its restoration. This vessel, of conventional Townsend type shape, bore an unusual decorative treatment, consisting of a series of horizontal and diagonal lines composed of sequential punctates.

On the bottom of the pit were eleven turtle shells, suggestive of a large potfull of hot turtle soup for one aboriginal dinner.

The sidewalls and the bottom of the pit appeared to be lined with a layer of clay about three inches thick, a condition not previously observed. At any point at which the clay was penetrated it was found to be imposed on yellowish sandy loam, the general type of subsoil of the entire site. The excavator definitely felt that this clay had been intentionally placed or smeared around the sidewalls and on the bottom as some sort of lining before the pit was put into use as a depository for refuse. Whatever purpose the lining was meant to serve is entirely problematical, but it has been suggested that the hard-packed clay would have made it possible to retain water in the hole for a considerable time.

Pit No. 25. Nothing about the pit was worthy of special notice except near the center a large concentration of burned and pulverized ashes of shell mixed with charcoal particles, suggestive of a very intense fire. In the refuse immediately adjacent to the fire area were noted charred hickory nut shells.

Characteristics of the pits Of the eighteen pits excavated eleven were oval in surface appearance and six were round. Only one, number six, was distinctly different (see diagram).

All but one of these pits having a round surface a ppearance were of more than six feet in diameter. Of those presenting an oval surface appearance only three had either cardinal diameter of less than six feet (in one

case measurements were not recorded). In seven instances diameters over eight feet were recorded, the longest being the north-east to south-west diameter of pit number nine, one hundred thirty seven inches. Only two pits presented diameters of less than three feet. A typical pit may be said to have varied from round to oval on the surface and have had diameters of six feet or more.

In only four instances were vertical or nearly vertical side-walls noted. Those pits having vertical sidewalls also had flat or nearly flat bottoms. All other pits, having sloping side-walls, had rounded bottoms. It did not follow that the vertical contour of the refuse, observed midway through the deposit, conformed to the vertical contours of the pits. In several instances a quantity of stained, dark, sandy earth partially filled the pits beneath the refuse deposit, which then assumed the general shape of the unfilled upper portion. For the most part, however, the cross-section profile of the refuse pits presented a half-moon like, or rounded, appearance.

The depths of the pits varied all the way from seven to fifty-four inches. Most ranged between twenty-four and forty-three inches. Refuse deposits were somewhat more shallow, ranging in thickness from two or three to thirty inches. It may be said that the greater the depth of the pit, the greater the thickness of the refuse deposit.

The general absence of shell linings intentionally placed on the floors of the pits was noteworthy. In only one instance, in pit number twenty-two, was such a lining observed. Two other pits contained two layers of refuse, the lower of which might have served as a lining. The fact could not be concluded from the disposition of the shells. The absence of linings was in contrast to their frequency at the Townsend Site.

Oyster and clam shells constituted the bulk of the refuse. Mussels, sea snails and conchs occurred in much smaller quantities. Crab claws were not abundant but were observed in many pits. Land snails, frequently encountered, were thought to have been intrusive by natural means during the time at which the pits were in use. Charcoal and fire-pulverized shell particles were observed in most of the pits, giving rise to the suggestion that fires, built right into the pits, may have served as the means by which the bi-valves were forced open. Many of the clam and oyster shells were fractured, suggesting that in addition to fire, percussion was employed to force them open.

In almost every pit were found broken deer bones, suggesting that that animal made up a substantial portion of the aboriginal diet. Broken jaw and leg bones of smaller animals such as the muskrat, racoon and opossum, were noted. Fish bones were frequently encountered and almost every pit contained broken pieces of turtle shells.

The three charred pieces of corn cob in pit number five constituted the only evidence of an agricultural economy, aside from the walnut and hickory nut shells in the same and other pits.

Evidence of the use of the pits for the interment of the dead was limited to the instances of the scattered partial remains of only one human skeleton

recorded). In seven instances diameters over longest being the north-east to south-west one hundred thirty seven inches. Only two s than three feet. A typical pit may be said oval on the surface and have had diameters

vertical or nearly vertical side-walls noted. ewalls also had flat or nearly flat bottoms. side-walls, had rounded bottoms. It did not ur of the refuse, observed midway through vertical contours of the pits. In several , dark, sandy earth partially filled the pits rich then assumed the general shape of the he most part, however, the cross-section ented a half-moon like, or rounded, appear-

d all the way from seven to fifty-four inches. our and forty-three inches. Refuse deposits ranging in thickness from two or three to that the greater the depth of the pit, the refuse deposit.

ll linings intentionally placed on the floors only one instance, in pit number twenty-two, wo other pits contained two layers of refuse, served as a lining. The fact could not be n of the shells. The a esence of linings was at the Townsend Site.

stituted the bulk of the refuse. Mussels, sea much smaller quantities. Crab claws were ved in many pits. Land snails, frequently ave been intrusive by natural means during e in use. Charcoal and fire-pulverized shell st of the pits, giving rise to the suggestion pits, may have served as the means by which a. Many of the clam and oyster shells were addition to fire, percussion was employed to

ound broken deer bones, suggesting that that portion of the aboriginal diet. Broken jaw and such as the muskrat, racoon and opossum, frequently encountered and almost every pit rtle shells.

corn cob in pit number five constituted the l economy, aside from the walnut and hickory ther pits.

pits for the interrment of the dead was limited ed partial remains of only one human skeleton

in pit number twenty-two and of the single human leg bone beneath the shell overburden in pit number nine.

Only in pit number nine did there occur the remains of a dog burial.

Conclusions 1. The refuse pits of the Ritter Site were similar to those of other sites in the Lewes area in respect to size, structure and contents.

2. The infrequency of the occurrence of intentionally placed shell linings or floors is in contrast to the frequency of their occurrence at the Townsend Site.

3. The clay lining of the bottom and side-walls of pit number twenty-three suggests, for the first time, an effort to store water.

4. The presence of three small, nubbin-like corn cobs in pit number five gives definite indication, aside from the evidence found in historical references, that the Indians of the Lewes area enjoyed a cultivated agricultural economy to some degree.

5. Faunal evidence indicated that deer supplied the most important meat aspect of the aboriginal diet, supplemented by the smaller animals of the area and by turtles.

6. Although no detailed analysis of pottery sherds is available (all specimens except those which were restored were forwarded to the United States National Museum for examination), no significant differences from the pottery recovered at the Townsend Site were noted. Many of the restored vessels, as indicated in the photographic appendix to this article, were presented to the Museum of the University of Pennsylvania. Others were retained in the possession of Mr. Parsons.

7. Stone culture, as at the Townsend Site, was poorly developed, being limited almost entirely to triangular arrowpoints and pitted stones.

8. Bone culture, in contrast to that of the Townsend Site, was poorly developed and was limited almost entirely to bone awls made from split and polished deer bones or the leg bones of birds.

9. The meagre presence of human and dog burials indicates that the site may have been occupied for a relatively short period of time by a limited number of people or may have been a sort of suburban district outlying the major Townsend Site. It may also indicate that the dead were buried, for the most part, in pits other than those used for refuse. In view, however, of the experiences at the Townsend Site and the similarity of the Ritter Site to the Townsend Site in other respects, this conclusion seems unwarranted.

10. A more accurate picture of the culture of the Ritter Site cannot be drawn until such time as it is possible to excavate the refuse pits known to be situated on that part of the site owned by Mr. Brittingham.



The writer wishes to express his appreciation to the following persons for assistance in the preparation of this report.

To the instructor and students of the Commercial Department of the Greenwood High School for the typing of this manuscript;

To Mr. James A. Moore for preparation of the map of the site;

To the Public Archives Commission of the State of Delaware for Photostatic reproductions of the map of the site;

To Dr. T. Dale Stewart, United States National Museum, for the identification of skeletal, faunal, and floral material;

To the several investigators for the keeping of accurate records and notes.

H. G. Omwake

