

Debitage :
Fire-cracked Rock:

Ceramics: None

Soapstone: 1 fragment

Artifact Analysis

Orientation and Methods

The recovered artifacts were divided into several broad categories and analyzed separately. Projectile point morphology has been of use in the temporal placement of sites and directly associated artifact complexes. Research throughout the East has shown the projectile point style has changed very complexly throughout the course of prehistory. Certain styles have very restricted time and space ranges while others have considerably broader distributions in both dimensions. The certainty and preciseness of the temporal placement of a given point and associated artifacts will accordingly vary with the type(s) in question. An additional cause of imprecision in lieu of direct dating is that few styles with which this study must deal have been C-14 dated on the Delmarva Peninsula. Those which have will be noted in the description of each type. The remaining types have been assigned a temporal range based on their morphological similarities to projectile points found in dated contexts elsewhere in the Middle Atlantic. The inherent danger of assuming that distant morphological "look-alikes" occupy similar time ranges can not in most cases be avoided at the present time. Projectile point associations with other artifact categories such as ceramics, may lead to alternate conclusions.

The above typological exercise is designed to elucidate the diachronic history of the Dover Bypass Corridor. Other stone tools will be viewed in primarily a functional context and as temporal markers where appropriate (e.g. ground stone tools). The goal of the lithic section will be to establish functional/temporal categories of stone tools that will aide in the historical interpretation of the Dover Bypass Corridor. Non-tool lithics are dealt with in broad categories.

Fire-cracked rock from excavations and controlled surface collections are counted and weighed by catalog number in order to construct a rough comparative measure of occupation intensity and function. Unutilized debitage was similarly handled. Distributional plots of these categories can then be compared to the distribution of the lithic and ceramic categories in order to illuminate functional/temporal relationships. These can be compared within and between sites.

The ceramic categories are handled in a manner similar to projectile points. In order to analyze this data and present it in a manner which could be useful both in the restricted area of the Dover Bypass Survey and in a regional context, the pottery was not typed in the usual archaeological method, that is, the ceramics, were not, at the first analytical level, grouped into categories based on published types. In Delaware and for that matter the Delmarva Peninsula, little is known of the many pottery styles or types in a chronological or contextual framework. Thus to come to grips with the temporal nature of this data in a restricted area (the Dover Bypass Corridor), it is, for the present, necessary to consult and rely upon published ceramic types from the entire Middle Atlantic Province. Archaeologists have learned, much to their dismay in recent years, that the diffusion of ceramic trait assemblages over large geographic areas do not occur equally in all areas nor necessarily at the same time levels. Therefore, some reservation and a great deal of care must be taken when comparing the archaeological context along the Murderkill River Drainage in Delaware with the archaeological context of the Potomac River Drainage, Delaware River Drainage, and Susquehanna River Drainage. However, to remedy this plight to some degree, the individual potsherds will not initially be compared with established pottery types but will be organized into a construct based upon the analysis of grouped ceramic attributes (termed a "Lot"). These "Lots" as defined archaeological units are then compared to the established descriptive ceramic types in the literature. To accomplish

this, the individual sherds are analyzed in terms of attribute classes such as temper, surface treatment (interior as well as exterior) and thickness. Such attributes as color and paste are not considered except in terms of distinguishing temper, as they are deemed too variable to be reliable even in intra site study.

CHIPPED STONE ARTIFACTS

Projectile Point Typology with Functional Attributes

Group Definitions:

Group I (N=13)

Triangular bifacial implements, outlines range from equilateral to isosceles. The proximal zone of juncture of the blade and base elements forms an acute angle. Bases range from straight to concave, with and without grinding. Basal width ranges from 1.3 cm - 3.3 cm.

The earliest dated contexts for points of this form on the Delmarva Peninsula are found at the Island Field Site, at South Bowers. Grave associations containing triangular, pentagonal and corner-notched points date to 700 A.D. The triangular form of projectile point apparently was used continually from that time through the remainder of aboriginal prehistory in Delaware. Elsewhere, in the Northeast and Middle Atlantic, triangular forms have been reported from late Paleo sites such as the Thunderbird Site (Gardner 1974:37-38) and from late Archaic sites

of coastal New York (Ritchie 1969: 141). On the Delmarva, however, the association to date indicates a post 700 A.D. introduction of this tool form as defined above, though the lack of datable early contexts on the Peninsula might be borne in mind in this interpretation.

Group II (N=3)

Bifurcate base, bifacial implement. Blades triangular exhibiting different degrees of wear. The angle formed between the distal zone of juncture of the blade to the tang is 90°.

Members of this group have been found throughout the Mid-Atlantic and into southern New England. Bifurcate base points have been firmly dated at the St. Albans site in West Virginia. These dates range from 6900 B.C. to 6300 B.C. (Broyles 1971:49) These relate to Broyles St. Albans Side-Notched, LeCroy and perhaps MacCorkle Stemmed.

Group III (N=4)

Broad haft, square stemmed bifaces. The medial-medial width is the widest point on the blade. The proximal zone of juncture between the tang and the base is near 90°. The zone of juncture between the proximal blade element and the haft is an obtuse angle. Basal widths range from 2.0 to 2.2 cm.

Points of group three commonly known in the Mid-Atlantic as Fox Creek stemmed points. Radiocarbon dates from New York place this group in a range from 360 A.D. - 450 A.D. (Funk 1968). Wright (1973:29) reports such forms at 580 A.D. for the Selby Bay Phase on the western shore of Maryland at the Luce Creek Site. Dated Woodland contexts on the Delmarva Peninsula prior to 300 A.D. (Carey Complex) and post dating 700 A.D. (Webb Phase and Slaughter Creek Phase) do not contain such forms leading to the conclusion that these dates bracket the Fox Creek use.

Group IV (N=5)

Side-notched, straight to concave based bifaces. All bases are heavily ground.

The angle between the upper sub-element of the haft and the lower sub-element of the blade is nearly 90° or slightly less. The angle between the lower sub-element of the haft and the intermediate sub-element of the tang is 90° and that between the intermediate sub-element of the tang and the base is 90°. The medial zone of juncture is a U-shaped arc. Basal widths range from 1.8 cm to 2.1 cm.

Three specimens of group IV (72/42A, 72/42 and 72/62/89) seem to fit the description of the Archaic Brewerton Earred Notched and Side Notched points that date from 3200 B.C. to 2000 B.C. (Kinsey 1972). The major difference between these three points and the remaining two is that these display concave bases while the others are straight. Specimens numbered 72/37 and 72/39 fit the description of Early Woodland Meadowood points as described by Kinsey (1972) though the Dover Bypass examples are generally smaller in all dimensions. The acceptable range for Meadowood in New York is 1000 B.C. to approximately 550 B.C. (Kinsey 1972:435) There is considerable confusion on the attribute(s) that may separate these types outside of datable contexts so both ranges are presented. They have never been found in such contexts on the Delmarva and presumably should predate 200 B.C. as the post 200 B.C. period is relatively well known.

Group V (N=9)¹⁰

Corner notched bifaces; all specimens where weathering is not extreme exhibit basal and haft grinding. Bases are all concave. The angle formed between the lower sub-element of the haft and the base is always acute. The angle formed between the upper sub-element of the haft and the lower sub-element of the blade is always obtuse. The zone of juncture between the upper and lower sub-elements of the haft is always a wide U-shaped arc. Basal widths range from 1 cm to 2.4 cm.

Specimens in group V are assignable to the late Archaic to Early Woodland "fishtail tradition" of Kinsey 1972:430 and the terminal Archaic Broad spear tradition. The temporal placement for the group as a whole ranges from 1700 B.C. - 800 B.C.

Specimen # 72/37 fits the description of a Perkiomen Broadspear (1720 B.C. - 1500 B.C.) while the remaining specimens may be placed in the Susquehanna Broadspear-Dry Brook-Orient Fishtail continuum with an approximate time range of 1650 B.C. to 800 B.C.

Group VI (N=3)

Bifurcate stemmed points that are basically straight tanged but with a wide V-shaped notch removed from the base of the tang. The angle formed between the lower sub-element of the blade and the upper tang is always obtuse. The tang has parallelsides, which are parallel to the long axis of the point and form an acute to nearly perpendicular angle to the base. Basal widths range from 1.1 cm to 1.2 cm.

It appears that this group represents a Delmarva version of Orient Fishtail as described by Kinsey (1972) with a radiocarbon range of 1200 B.C. - 800 B.C. The sloping shoulders of specimens 72/40 and 72/40A match most closely the Orient descriptions. Specimen #72/37 may be related to the Kanawha Stemmed dated at St. Albans at 6210 B.C.(Broyles1971:58-59)It was included in this group because of similar tang form with an indented base.

Group VII (N=3)

Corner notched points with convex or concave bases. The broadest portion of the point is the distal-distal width. The angle formed between the base and the lower sub-element of the haft is acute to nearly right angle while that between the lower sub-element of the blade and the upper sub-element of the haft is acute. The zone of juncture between the upper and lower sub-elements is a U-shaped arc. Basal widths range from 1.4 cm to 1.9 cm.

Specimens in this group most resemble the description of the Archaic Vosburg and Brewerton Corner Notched Points on the upper Delaware River and New York. Acceptable radiocarbon ranges from this complex of types is from 2980 B.C. to 1723 B.C. (Kinsey 1972: 402-405). Specimen #72/78 resembles a Kirk corner-notched type

dated ca. 6900 B.C. in West Virginia (Broyles 1971: 62-65).

Group VIII (N=13)

Shallow side to corner notched bifaces. Bases range from convex through slightly concave. The angle of the tang edges produces an expanding stem. The angle between the lower sub-element of the haft and the base is acute to almost 90°. The angle between the upper sub-element of the haft and the lower sub-element of the blade is always obtuse and the zone of juncture between the upper and lower sub-element of the haft is a wide U-shaped arc that is always obtuse. Basal widths range from 1.6 cm to 2.2 cm.

This category is a temporal catch-all. It is conceivable that two or more separate types may be distinguished in this group. Specimens 72/37B and 72/48/58 most resemble in form though somewhat smaller than, the Normanskill-like points of the upper Delaware which have a dated range of 2030 B.C. to 1440 B.C. (Kinsey 1972: 415). Gardner (1972:17) reports a shallow side-notched point phase ca. 5000 B.C. The remaining types have a probable temporal range from 5000 B.C. to approximately 500 A.D. though some very similar forms have been found in Late Woodland Complexes of the Delmarva. Points of this group could fit into a number of known types such as the Vernon of the Potomac, Normanskill, Lamoka-like and the catch-all generalized side-notched categories. Points of this form have been dated on the Delmarva to 200 B.C. (St. Jones) and 200 A.D. (Carey Complex). Both earlier and later dates are expected however.

Group IX (N=16)

Trianguloid, generally isosceles, bifaces with convex to concave bases; sometimes referred to as lanceolates. The lower sub-element of the blade meets the base in angles that range from highly acute to obtuse with an approximate range of 10° on either side of perpendicular. Basal widths range from 1.6 cm to 2.2 cm.

In the Mid-Atlantic certain lanceolate to pentagonal blade forms such as these certainly date from the Early and Middle Woodland periods. In the Delmarva Peninsula such forms have consistently occurred in late Middle Woodland contexts dated at the Island Field Site to 700 A.D. On the Chesapeake (Accokeek Phase and Selby Bay of Wright, 1973) and in New York (Middlesex and Meadowood Phases of Ritchie, 1969) such forms may also occur as early as 800 B.C. Therefore the suggested range for these forms is from 800 B.C. to 800 A.D. with specimens #72/36/31, 72/62/42, 72/62/81, 72/48/13, 72/48/42, 72/62/75, and 72/47/21 most resembling those at the most recent end of the range dated at the Island Field Site to 700 A.D.

Group X (N=7)

Contracting stem with a flat base. The tang element meets the base with an angle that is always obtuse while the angle at the distal zone of juncture between the blade and the tang ranges from nearly perpendicular to acute to obtuse. Basal widths range from 1 cm to 2.5 cm.

Specimens in Group X fall into the several Broadspear Traditions of the Late Archaic-Transitional time frame with an approximate range of 2200 B.C. to 1700 B.C. Specimens #72/47/27, 72/48/22, 72/48 and 72/42 look most like the Lehigh/Koens-Crispin broad spears dating around 1720 B.C. at the Miller Field Site (Kraft 1970:55). The remaining specimens relate to a broad category of Late Archaic contracting stem, flat base points that fall into a similar though slightly earlier time frame that is reported from many pre-steatite sites in the Mid-Atlantic. None of this category has been dated on the Delmarva.

Group XI (N=23)

Contracting stem points that converge to a V-shaped or sharply rounded base. The angle formed between the base and tang edges is obtuse and that between the tang and the base is obtuse. Several of the specimens (noted on lab sheet) have a distinct contour break in the form of a projection at the

proximal zone of juncture of the tang with the blade. All specimens have a contracting stem with a rounded to V-shaped base. The major variations as mentioned above, occur on the blade portion and at the proximal zone of juncture.

Members of this group fall into one of several named types: Rossville (500 - 100 B.C.), Piscataway (ca. 2000 B.C.), a diamond shaped Piedmont Tradition point (ca. 2210 B.C., Kinsey 1972) and Squibnocket Stemmed (2190 B.C.). The expected maximum time range is 2200 B.C. to 100 B.C. though there seems to be a temporal gap between 1700 B.C. (?) to 600 B.C. Many Poplar Island specimens may also be assignable to this group though Kinsey 1972:337 suggests a time placement as early as 3000 B.C. Specimens 72/42A, 72/41A and 72/48 look most like this latter type. None of these styles have been found in datable contexts on the Delmarva Peninsula.

Group XII (N=25)

• Straight to slightly contracting stemmed bifaces with straight to gently rounded bases. The angle formed between the tang edges and the base ranges from perpendicular to slightly obtuse while the angle between the upper tang and the lower sub-element of the blade is always obtuse. Several specimens have pebble cortex on the base. Basal widths range from 1 cm to 1.5 cm.

This group of narrow stemmed points corresponds to Kinsey's (1972:408) description of the Piedmont Tradition. Members of this group could, with proper context, be assigned to any one of the following named types: Bare Island (ca. 2000 B.C.), Lamoka (ca. 2500 B.C.), Wading River (2190 B.C.), Lackawaxen stemmed (ca. 3200 - 1700 B.C.) and a single Gennessee-like specimen #72/42x (Ca. 2000 B.C. - 1250 B.C.). Additionally, several specimens of these stemmed forms fit the published descriptions of Lagoon points (600 B.C. - 100 B.C.) from the upper Delaware thus extending the acceptable time range of this group from ca. 2500 B.C. to 100 B.C. with an apparent gap between 750 B.C. and 1200 B.C.

None of this group has been found in datable contexts on the Delmarva Peninsula although the style is well-represented by surface finds.

Group XIII (N=42)

The members of this group consist of fragmentary blade portions of projectile points. Little or none of the haft portion remain. The primary reason for the formation of this group is to list the functional information that these specimens exhibit.

Non-"Projectile Points"

Artifacts in the following groups share the common attributes of the chipped stone manufacturing technique. Hafted stone tools, that is, those commonly known as projectile points are dealt with in the preceding section designed primarily to group these on their stylistic attributes. Functional attributes were recorded and these will be discussed in the appropriate functional categories. The non-projectile point chipped stone tools are grouped initially on the basis of their overall morphology with functional attributes of each specimen recorded.

The first division is made along the lines of method of manufacture and/or use whether unifacial or bifacial. Additionally, because a single object can serve more than one function, as will be discussed in the section on battered and battering tools, each functional edge will be discussed separately and counted as a separate tool. The defined groups within the major bifacial or unifacial categories are defined on the basis of the shape in plan views and position of the functional edges. Within each of the defined morphological classes there may be variations sufficient to warrant further functional subdivision based on edge angle and type of wear. The degree to which functional edge morphology correlates with functional classes, based on wear and edge angle attributes, is a question requiring further data analysis which is beyond the scope of this preliminary report.

Unifacial Classes

The unifacial classes all display attributes of unifacial manufacture and/or use. In several cases bifacially formed artifacts display one or more areas of unifacial use and these will be tabulated in the appropriate groups in both major classes. The unifacial classes are designed entirely to illuminate functional differences and similarities within and between sites. They cannot be temporally placed except when in direct association with datable contexts. The following chart defines the unifacial morphological classes on the basis of functional edge position and plan view shape. Edge angle, type of wear, stone type, functional edge view and metrical data of the length of the functional edge and overall tool size is recorded for each of the classes.

UNIFACIAL CLASSES

POSITION/PLAN	CONCAVE N	CONVEX N	STRAIGHT N	IRREGULAR N	N
TRANSVERSE	GROUP I 3	II 15	III 22	IV 3	43
OBLIQUE	V 4	VI 15	VII 13	VIII 2	34
LATERAL	IX 25	X 15	XI 25	XII 10	75
POINT	XIII 1	XIV 0	XV 1	XVI 0	2
N	33	45	61	15	154

Bifacial Tool Classes

The bifacial classes exhibit attributes of bifacial manufacture and/or use. The bifacial classes, like the unifacial classes previously defined, cannot be used as temporal markers due to their stylistic homogeneity. They may be placed temporally only when in directly datable contexts or when found in direct association with artifact styles of known temporal position. The bifacial classes are designed as an organizing device useful in the discussion of intra and inter site functional variability. The bifacial classes as follows in chart form, were defined using the same criteria of edge plan shape and functional edge position. As previously stated, all of the specimens in the projectile point groups may also be placed in the following classes. Most of the points could be assigned

to the four lateral position classes depending on the blade outline exhibited for each specimen.

BIFACIAL CLASSES

POSITION/PLAN	CONCAVE	N	CONVEX	N	STRAIGHT	N	IRREGULAR	N	N
TRANSVERSE	GROUP I	0	II	2	III	3	IV	0	5
OBLIQUE	V	0	VI	4	VII	1	VIII	0	5
LATERAL	IX	0	X	25	XI	13	VII	20	58
TUBULAR	XIII	0	XIV	0	XV	8	XVI	0	8
N		0		31		25		20	76

GROUND STONE ARTIFACTS

These are items that exhibit a combination of pecking and/or grinding attributes that indicate the method of tool manufacture and/or use. This category may be further subdivided into bitted and non-bitted groups. Bitted tools are those which display (or may have displayed in the case of broken items) a single ground working edge formed by the intersection of two stone surfaces. Such objects as celts, grooved axes, adzes, and gouges make up this category. Non-bitted stone items are gorgets, pendants, atlatl weights and ground pestles. Other items of non-bitted ground stone tools exhibit grinding attributes through manufacture and use.

Bitted Tools

Group I (N=2)

This group consists of bitted ground stone tools that do not exhibit a groove for hafting. They are commonly known as celts, adzes or gouges; the difference is exhibited in the profile of the functional edge.

Group II (N=3)

This group consists of bitted ground stone tools that exhibit a groove, either 3/4 or full, for hafting purposes. They are commonly known as grooved axes.

Group III (N=5)

These are ground stone bitted tools where only the bit portion remains. There seems to be no way to differentiate these into grooved and ungrooved categories but

are useful for functional analysis of sites.

Group IV (N=4)

Cylindrical pecked and ground stone objects with hemispherical ends commonly known as pestle make up this group. These are unbitted tools. Wear on the hemispherical ends consists of a combination of striations, pecking and smoothing.

Group V (N=1)

Ground stone, unbitted objects with a central cylindrical hole running through the center of the object. These are commonly referred to as atlatl weights.

Group VI (N=2)

Ground stone, unbitted objects with one or more holes drilled through them. Pendants and gorgets would fit in this group.

Group VII (N=11)

Objects that exhibited circular depressions on otherwise flat surfaces formed by a combination of pitting and grinding. In a few cases, grinding is sufficiently complete to show polish. These objects are commonly called mortars or mullers.

Group VIII (N=1)

Unbitted tools that display a combination of grinding and smoothing as a result of use of some kind form this group. These objects are generally referred to as abrading stones and shaft smoothers.

Group IX (N=1)

This group is made up of unbitted ground stone tools of slate that show one or more surfaces ground during the manufacturing process. The ulus or semi-lunar knives constitute this category.

NON-CHIPPED, NON-GROUND STONE ARTIFACTS

Battered and/or battering tools

The implements in the following groups display attributes that indicate their use in pounding on resistant surfaces. The attributes of edge crushing and surface pitting are shared by all specimens.

Group I (N=60)

Specimens in this category display crushing and pitting attributes on the ends or margins of a cobble in the case of cobbles with fairly large curved or flat surfaces and on all or any portion of the surface of spherical cobbles. These objects are generally known as hammerstones. Many of the specimens apparently had multiple functions based on other recorded attributes and are accordingly counted and catalogued in other groups where appropriate.

Group II (N=13)

Specimens in this group exhibit random pitting and/or crushing wear on relatively flat surfaces. Pitting is not concentrated in any one particular place so as to produce a single or a few circular depressions. These objects are commonly known as a type of anvil stone.

Group III (N=23)

The objects exhibit concentrated pitting or crushing on one or more relatively flat surfaces so as to produce pronounced circular depressions. These are usually much smaller than the depressions formed by the pitting and/or grinding type of wear seen of Group VII of the ground stone tool category. These objects are known commonly as pitted stones and are a specialized case of the broader category of anvil stones.

SOAPSTONE AND CERAMIC ARTIFACTS

As stated in the methodology discussion, sherds are not placed individually in published ceramic types but are analyzed and placed in defined lots or ceramic groups, which are then compared with published ceramic types. The analysis includes 49 soapstone sherds, 617 classifiable ceramic sherds (these are sherds for which all attributes could be analyzed) and 550 unclassifiable sherds. The analysis of the classifiable ceramic sherds is tabulated in chart form and the distribution of the unclassifiable sherds is shown in Appendix C. In order to discuss temporal and distributional data, a summary is presented of a published ceramic type and then

the individual lot(s) which the authors believe are related are discussed.

Soapstone

Soapstone is a soft white, greenish-gray to black secondary mineral with a greasy feel that can be easily cut or carved (hardness 1 Mohs). It has been quarried historically and prehistorically from Vermont to Georgia. The prehistoric spacial distribution of bowls made from soapstone is the Appalachians from Vermont to Georgia and onto the Atlantic Coastal Plain. This artifact does not occur west of the Appalachians. The temporal distribution, though few dates are known, appears to be from 1700 - 1000 B.C. (Ritchie 1969: 175-6), (Kraft 1970: 130-137) and (Witthoft 1953: 4-31).

Forty-nine sherds (3 rims, 1 lug and 45 wall or basal sherds) are recorded from the Dover Bypass. The exterior walls range from rough to smooth with no chiseling marks present and the interior walls also range from rough to smooth. Soapstone occurs at the following sites: Robbins #3 7K-F-49 (2 sherds), Sipple #3 7K-F-55 (14 sherds), Sipple #1 7K-F-45 (10 sherds), Robbins #1 7K-F-12 (3 sherds), Strahle 7K-F-53 (1 sherd), Somy Landing 7K-F-46 (5 sherds), and Foxhall 7K-C-71 (1 sherd).

Marcey Creek Plain

Marcey Creek Plain is characterized by soapy texture and feel, crushed steatite temper, even to uneven smooth surfaces and distinctive vessel and rim shapes similar to those of the earlier soapstone vessels. Wall thickness ranges from 7 -14 mm. Marcey Creek Plain is distributed over the Middle Atlantic from Virginia to the Upper Delaware River. Temporal placement is in the Early Woodland circa 1200 - 900 B.C. (Evans 1955:54-56, Stephenson 1963:89-92, Kraft 1970: 113-117).

The single sherd from Lot 1 is soapstone tempered, with smooth even surfaces, and a wall thickness of 9 mm. This lot occurs at the following site: Somy Landing 7K-F-46.

Vinette I

Vinette I is characterized by crushed quartz temper, exterior surface vertical cording, interior surface horizontal cording, and an average wall thickness of 10 mm. Vinette I is distributed along the Atlantic Coast from New England to Maryland. Temporal placement is in the Early Woodland circa 900 - 600 B.C. (Ritchie and MacNeish 1949:100, Kinsey 1972:451-453).

Lot 2 is crushed quartz tempered, interior and exterior cord marked with similar element orientation and wall thickness range of 8 - 11 mm. This lot occurs at the following sites: Sipple #1 7K-F-45, Somy Landing 7K-F-46 and King Cole 7K-F-56; Sipple #2 7K-F-54 and Sipple #3 7K-F-55.

Early Series Exterior Corded/Interior Smooth

This type is related to Vinette I but is less coarse and more compact. Angular pieces of quartz are used for temper. Cord marking occurs over the exterior surface with the interior surface being smooth. Wall thickness ranges from 6 - 12 mm. This type is distributed over the northern Middle Atlantic from central New York south to the Delmarva Peninsula. Temporal placement is in the Early Woodland circa 900 - 400 B.C. and possibly to 200 B.C. Other similar types are Sheep Rock Corded (Michels and Smith 1967: 467-471) and Geneseo Cord Marked (Ritchie and McNeish 1949: 121), (Kinsey 1972: 454-455).

Lots 4 and 5 are both similar to the Early Series Exterior Corded/Interior Smooth ceramics. They are both crushed quartz tempered, exterior corded perpendicular to the rim with smooth interiors. The only difference being Lot 4 is uneven while Lot 5 is even; Lot 27 contains all the above characteristics except that it is not tempered. These lots occur at the following sites - Lot 4: Sipple #3 7K-F-55, King Cole 7K-F-56, Appenzeller 7K-F-52, Somy Landing 7K-F-46, Sipple #2 7K-F-54; Lot 5: Sipple #3 7K-F-55, Sipple #2 7K-F-54, King Cole 7K-F-56, Somy Landing 7K-F-46; Lot 27: King Cole 7K-F-56, Strahle 7K-F-53, Sipple #2 7K-F-54 and Somy Landing 7K-F-46.

"Accokeek" Cord Marked

Accokeek Cord Marked is sand tempered, with exterior surfaces cord impressed and interior surfaces smooth. Wall thickness ranges from 4 - 14 mm with 6 - 8 mm the average. This type is distributed in the Chesapeake Bay and its tributaries. A similar type Early Series Exterior Corded/Interior Smooth redware is found in the Upper Delaware River (Kinsey 1972: 454-455). Temporal placement is in the Early Woodland circa 800 - 500 B.C. (also Stephenson 1963: 98 - 100), (Handsman and McNett 1974: 4-5).

Lots 32 and 33 are both similar to Accokeek Cord Marked. Lot 32 is cord marked exterior and smooth, even interior, with a sandy paste. Wall thickness ranges from 6 - 11 mm. Lot 33 is smooth even interior with a sandy paste but is smoothed on the exterior. Wall thickness averages from 7-9 mm. These lots occur at the following sites: Somy Landing 7K-F-46 - Lot 32 and King Cole 7K-F-56 and Somy Landing 7K-F-46 - Lot 33.

Crushed Quartz Net Impressed

Crushed Quartz Net Impressed is crushed quartz tempered with net impressed exterior and smooth interior. The mesh size ranges from 4 - 14 mm with 8 mm the average. The wall thickness ranges from 6 - 14 mm and averages 10 mm, (Thomas, et. al. 1974: 10). Related ceramic types are Broadhead Net Impressed, Popes Creek Net Impressed, and Susquehanna Net Impressed (Kinsey 1972: 455-456), (Stephenson 1963: 92-96), (McNett & Handsman 1974: 5) and (Smith 1971: 41). Each of these four ceramic types appears to be related temporally with only minor physical variations existing locally. Broadhead Net is located in the Upper Delaware Valley, Susquehanna Net occurs in the Susquehanna Valley, Crushed Quartz/Net Impressed occurs in the Delmarva Peninsula and Popes Creek Net Impressed occurs along the Chesapeake Western Shore and the Coastal Plain Potomac River. Temporal placement is in the Early-Middle Woodland period circa 500 B.C. - 0 A.D. (Handsman and McNett 1974: 4), (Kinsey 1972: 455-456) and (Lewis 1972: 1-6).

Lots 8, 9, and 10 are varieties of Crushed Quartz/Net Impressed pottery.

Lot 8 is exterior net impressed with a smooth, even interior, Lot 9 is exterior net impressed and interior net impressed with a smooth, even interior and Lot 10 is exterior net impressed and interior net impressed. All three lots are crushed quartz tempered and range in wall thickness from 9 - 11 mm. These lots occur at the following sites: Lot 8 - Sipple #1 7K-F-45, Sipple #2 7K-F-54; Lot 9 - Somy Landing 7K-F-46, Sipple #1 7K-F-45, Sipple #3 7K-F-55 and Lot 10 - King Cole 7K-F-56.

Coulbourne Net Impressed

Coulbourne Net Impressed exhibits no obvious temper. It is net impressed on the exterior surface. Thirty-three percent of the sherds are interior net impressed with the remainder being either scraped or smoothed. Wall thickness ranges from 7 -14 mm with 11 mm being the average (Thomas, et. al 1974: 10). Related ceramic types are the same as those for Crushed Quartz/Net Impressed pottery. The distributional and temporal data are also the same.

Lot 29 and 30 are varieties of Coulbourne Net Impressed ceramics. Both lots are net roughened on the exterior with a wall thickness ranging from 7 - 12 mm. Lot 29 is even and scraped on the interior surface and Lot 30 is uneven and smooth on the interior surface. These lots occur at the following sites: Lot 29 - Somy Landing 7K-F-46, Sipple #1 7K-F-45 and Lot 30 - Sipple #3 7K-F-55, King Cole 7K-F-56, Somy Landing 7K-F-46, Sipple #1 7K-F-45, Somy #2 7K-F-47 and Sipple #2 7K-F-54.

Mockley Cord Marked

Mockley Cord Marked is characterized by crushed shell tempering, cord marked exterior surface and smooth, even to uneven interior surface. Wall thickness ranges from 8 - 11 mm (Stephenson 1963: 105 - 107). This type is distributed throughout the Coastal Middle Atlantic especially along the Delaware Bay and Chesapeake Bay (Handsman and McNett 1974) and (Thurman and Barse, 1974), (Wright 1973:21-22). Temporal

placement is in the Middle Woodland circa 100 A.D. - 700 A.D. For Delaware, a more exacting placement is 100 A.D. to 400 A.D. (Thomas, et. al. 1974).

Lot 16 and possibly Lot 17 are Mockley Cord Marked. Both lots are exterior cord marked, shell tempered, and the interior surfaces are either smooth, uneven or scraped even. Lot 16 wall thickness is 9 - 11 mm while Lot 17 is only 7 mm thick. These lots occur at the following sites: Lot 16 - Sipple #2 7K-F-54 and Lot 17 - Somy Landing 7K-F-46.

Mockley Net Impressed

Mockley Net Impressed is characterized by crushed shell temper, net impressed exterior and smooth, even to uneven interiors. Wall thickness ranges from 8 - 11 mm (Stephenson 1963: 107-108). The distributional and temporal data are the same as Mockley Cord Marked.

Lots 18, 19 and 20 are Mockley Net Impressed. All three lots are crushed shell tempered, net impressed with wall thickness ranging from 8 - 11 mm. Lots 18 and 19 are even and scraped on the interior. Lot 20 is smooth and even. These lots occur at the following sites: Lot 18 - Somy Landing 7K-F-46; Lot 19 - King Cole 7K-F-56, Sipple 7K-F-45 and Lot 20 - Sipple #3 7K-F-55, Somy Landing 7K-F-46, Robbins #2 7K-F-44, Sipple #1 7K-F-45 and Strahle 7K-F-53.

Hell Island Cord Marked (new type)

This type was described but not named by Thomas in Delaware Archaeology, Volume 2, Number 2, 1966. The temper is crushed quartz which reaches a maximum size of 8 mm (mica is present in rare instances). The exterior surface is cord marked, interiors are smoothed. The lips are flattened, and often cord impressed. The wall thickness ranges from 6 - 9 mm. This pottery type occurs throughout Delaware especially at the Hell Island Site and at the Island Field Site which is dated at 730 A.D. Related ceramic types are Jack's Reef Corded (Ritchie 1949: 106) and Levanna Cord on Cord (Ritchie 1949: 110). These related ceramic types occur

throughout New York and into New Jersey with a temporal range of 600 A.D. to 1100 A.D. In Delaware, this temporal range is most likely 600 A.D. to 1000 A.D. possibly as early as 400 A.D.

Lot 6 and possibly Lot 26 are Hell Island Cord Marked. Lot 6 is crushed quartz tempered, cord marked exterior surface, smooth even interior surface with a wall thickness of 5 - 8 mm. Lot 26 is similar to Lot 6 in all respects except for temper. Lot 26 has no identifiable temper. These two lots occur at the following sites: Lot 6 - Somy Landing 7K-F-46, Sipple #3 7K-F-55, Strahle 7K-F-53, Sipple #1 7K-F-45, King Cole 7K-F-56 and Lot 26 - Sipple #3 7K-F-55, Somy #2 7K-F-47, Strahle 7K-F-53, Sipple #2 7K-F-54, Somy Landing 7K-F-46, King Cole 7K-F-56.

Hell Island Fabric Impressed (new type)

This type was also described but not named in Delaware Archaeology, Volume 2, No. 2, 1966. The temper is crushed quartz. The exterior surface is fabric impressed and the interior surface is smoothed over fabric or smoothed over scraped. The rims are direct with flat lips often fabric impressed. Wall thickness ranges from 5 - 13 mm with an average of 7 - 8 mm. This pottery type occurs throughout Delaware especially at the Hell Island Site, the Mispillion Site and Island Field Site. Related ceramic types are Albemarle Fabric Impressed (Evans 1955: 41 - 43) and Riggins Fabric Impressed (Cross 1956: 150-153), (Cross 1953: 7-11). The Albemarle Fabric Impressed ceramics are distributed around the Chesapeake Bay and its tributaries while the Riggins Fabric Impressed ceramics are located in southern New Jersey. The temporal setting for Albemarle ceramics is in the Middle Woodland while in New Jersey, Riggins ceramics are considered Late Woodland. The Hell Island Fabric Impressed in Delaware appears to range in time from 500 or 600 A.D. to 1000 A.D.

Lot 12 and possibly Lot 11 are Hell Island Fabric Impressed ceramics. Lot 13 is the same as Lot 12 except that it is partially smoothed. Lot 12 is crushed quartz

tempered, fabric impressed exterior surface and smooth, even on the interior surface. Wall thickness ranges from 6 - 10 mm. Lot 11 is crushed quartz, fabric impressed exterior surface but also fabric impressed on the interior surface. Wall thickness ranges from 7 - 8 mm. These two lots occur at the following sites: Lot 12 - Somy #2 7K-F-47, Sipple #2 7K-F-54, Somy Landing 7K-F-46; Lot 11 - Sipple #2 7K-F-54 and Lot 13 - Somy Landing 7K-F-46.

Townsend Series

Townsend Series pottery is primarily shell tempered with fabric impressed exteriors and smooth, even interiors. The exterior surface is often partially smoothed at the rim prior to design application. It is sometimes smoothed and then scraped or occasionally, just smoothed. The wall thickness ranges from 5 - 10 mm with 7 mm being the average. The Townsend Series is subdivided into five types based on rim design and design location. Rappahannock Fabric Impressed has no design, Rappahannock Incised is incised beginning at the rim, Townsend Incised is incised beginning a short distance below the rim, Townsend Herring Bone is horizontally cord impressed surmounting an incised chevron or zig-zag design, and Townsend Corded Horizontal is cord impressed horizontally to the lip but often is surmounted or surmounts corded oblique or horizontal designs (Blaker 1963: 16-19), (Lopez 1961:1-38) and (Griffith and Artusy, n.d.). Townsend Series ceramics are distributed throughout the Delmarva Peninsula and along the Western Shore of the Chesapeake and its tributaries. The temporal range of the Townsend Series is Late Woodland circa 1000 A.D. - 1600 A.D. Certain types also appear to have discrete temporal ranges. Rappahannock Fabric Impressed ranges throughout the period, 1000 A.D. - 1600 A.D., the incised types (Rappahannock Incised and Townsend Incised, possibly Townsend Herringbone) seem to range from 1000 A.D. - 1300 A.D., while the Townsend Corded Horizontal appears to range from 1300 A.D. - 1600 A.D. (Griffith and Artusy, n.d.).

Lots 21, 22, 23 and 25 are Townsend Series ceramics. Lot 21 is shell tempered, fabric impressed exterior and fabric impressed interior with a wall thickness of 5 - 7 mm. Lot 22 is shell tempered, fabric impressed exterior and a smooth, even interior with a wall thickness of 6 - 9 mm. A single Rappanhannock Incised (King Cole) vessel is present in Lot 22 and a single Townsend Corded Horizontal vessel is also present (Somy Landing 7K-F-46). Lot 23 is shell tempered, scraped exterior, smooth, even interior with a wall thickness of 9 mm. Lot 25 is shell tempered, smooth exterior, smooth even interior with a wall thickness ranging from 6 - 10 mm. A single Townsend Corded Horizontal vessel is present at King Cole 7K-F-56 and an incised vessel from Sipple #3 7K-F-55. These lots are located at the following sites: Lot 21 - Somy Landing 7K-F-46; Lot 22 - Somy Landing 7K-F-46, King Cole 7K-F-56, Sipple #2 7K-F-54, Sipple #3 7K-F-55 and Lot 23 - Sipple #2 7K-F-54; Lot 25 - Sipple #1 7K-F-45.

The remaining lots 3, 7, 14, 15, 24, 28 and 31 due to various problems could not be placed in an established type. The most prevalent problem is a smooth exterior surface and smooth interior surface (Lots 14, 51, 31) as this surface treatment attribute, smoothing, is present to a small degree on nearly every ceramic type. For this reason smooth exterior surfaces in a few cases could be related to known types only where paste and other attributes are similar to other lots. Lot 3 (corded exterior and net impressed interior), Lot 7 (other crushed stone), Lot 24 attributes are not similar to any known published types.