

III. PREHISTORIC OVERVIEW OF THE MIDDLE ATLANTIC REGION WITH AN EMPHASIS ON THE DELMARVA PENINSULA

PALEOINDIAN PERIOD (15,000 – 10,000 B.P.)

The Paleoindian period encompasses the earliest securely documented evidence of human occupation within the Middle Atlantic region and North America. This period overlaps the final days of the Late Pleistocene and early part of the Holocene climatic episodes. At the beginning of this chronological period, the Laurentide ice sheet had retreated north of the Delaware River's headwaters, but still had an effect on the Delmarva Peninsula's weather patterns (Ogden 1977). The further withdrawal of the Laurentide ice sheet north of the Great Lakes mostly mitigated these effects by the end of the Paleoindian period.

Dated Paleoindian archaeological sites in the Middle Atlantic and the Northeast range from 11,200 to 10,000 years B.P., the oldest dating to around 11,400 years B.P. Kraft reviews most of these dates and their associations (2001:57 – 59). Some of these dated sites include the Vail Site in Maine, the Whipple Site in New Hampshire, and the Templeton Site in Connecticut. The Vail Site dated to around 10,500 B.P., the Whipple Site to around 10,300 B.P., and the Templeton Site to approximately 10,190 B.P. (Dent 1995). While the above evidence seems to point towards an initial occupation of the Middle Atlantic/Northeast region around 10,500 years ago, evidence for a possibly older human habitation was uncovered at Meadowcroft Rockshelter in Western Pennsylvania. Radiocarbon dates obtained from deep, stratified contexts ranged from circa 10,850 B.P. to circa 17,650 B.P. Although initially controversial, these dates have since gained general acceptance, and Meadowcroft Rockshelter is considered to be at least 12,000 years old (Custer 1996). Even though this site is located in Western Pennsylvania, it probably indicates that similarly aged Paleoindian sites are present in Eastern Pennsylvania (and the Delmarva Peninsula), dating to before 12,000 years B.P.

Paleoindian societies were probably organized into small groups or bands (Service 1959) that operated in ways similar to those employed by modern-day hunter/gatherers. While contemporary hunter/gatherers may actually derive the bulk of their protein from gathering plant resources, the preponderance of lithic tools designed for hunting and processing game animals recovered from Paleoindian sites seems to indicate the reverse for these prehistoric bands (Gardner 1974; Dent 1995). Therefore, the stone tools that made up their overall toolkit probably represent the most important possession of the roving Paleoindian hunter/gatherer bands.

Due to the importance of these toolkits, Paleoindians probably employed a cyclical settlement pattern centered on the quarries necessary to construct the proper lithic items (Gardner 1974, 1980). Paleoindians did not so much seasonally follow a specific resource, be it plant or animal, as occupy an area until its resources could no longer support them. In this way, a quarry-centered settlement pattern included larger base camps situated in close proximity to sources of high-quality cryptocrystalline lithic raw materials. The group or band would occupy these base camps, exploit the lithic resources, and use them to construct/maintain their toolkits, but only as long as the local food resources could sustain them. Smaller exploitative or hunting sites are also

found at varying distance from the quarry-centered base camp (Gardner 1980). The extreme curation or reworking of the blade element exhibited by many stray point finds, especially examples from localities that do not possess high-quality lithic resources, is a strong argument supporting the quarry-based camp settlement model. Gardner has argued that once a tool kit has been curated to its usable limit, a return to the quarry-tied base camp would be made in order to replenish raw materials (Gardner 1974). The lithic technologies made possible through this settlement pattern were utilized to successfully obtain and process local game animals, such as white-tailed deer, caribou, or elk. While the Paleoindian association with megafauna is well documented in the western United States, no megafaunal remains have been found in any eastern Paleoindian assemblages. These lithic technologies, described below, are the defining characteristics of the Paleoindian period.

The fluted projectile point is considered the hallmark lithic tool of the Paleoindian period. Based on work at sites comprising the Flint Run Complex, Gardner identified three distinct subphases within the larger fluted point phase (Gardner 1974). The well-known fluted Clovis point marks the oldest of these subphases. The Middle Paleo subphase, defined by smaller fluted points, follows this subperiod. Gardner equated the smaller fluted points of this subperiod with the classic Folsom points known from the Western United States (Gardner 1974). The Dalton-Hardaway subphase is the final one of the period, characterized by the minimally fluted Dalton and Hardaway projectile points. Various other tools are associated with these projectile points; these tools usually cannot be taken by themselves as diagnostic Paleoindian indicators. Examples of such stone tools include end or side scrapers, bifaces, blades, and spokeshaves, all associated with the hunting and processing of game animals. The Paleoindian archaeological record rarely contains stone tools specifically designed for processing plant material, such as manos, metates, hammerstones, or grinders. This lack does not indicate that the gathering of plant resources was not important, just that a larger emphasis was placed on hunting versus gathering. For instance, carbonized plant materials have been found in Paleoindian contexts. The remains of acalypha, blackberry, hackberry, hawthorn plum, and grape were recovered from a hearth in the Paleoindian portion of the Shawnee-Minisink Site (Dent 1991).

Survey work and analysis of extant Paleoindian point collections has provided some insight into the distribution of sites dating to this period. Custer has identified three major concentrations of Paleoindian sites with fluted projectile points in the northern part of the Delmarva Peninsula (Custer 1986, 1989, and 1996). These concentrations roughly divided the peninsula into upper, lower, and middle portions. The first (and upper) consists of northeastern Cecil County, Maryland and northwestern New Castle County, Delaware. It occupies the same general area as the Delaware Chalcedony Complex, which is a large outcrop of high-quality cryptocrystalline lithic material. The Delaware Chalcedony Complex consists of a series of chalcedony, jasper, and chert outcrops in northeastern Maryland, northwestern Delaware, and southeastern Pennsylvania (Custer et al. 1986). Tools manufactured from these types of lithic materials were desired for their durability, sharpness, and ease of maintenance. Most of the fluted points found in this area are made from local materials occurring as smaller outcrops of this large primary source, such as the jasper outcrops at Iron Hill in northern Delaware. No Paleoindian artifacts have been recovered from any quarry sites near these outcrops, as only the initial quarrying was actually done at these locations. Instead, these artifacts are found at reduction areas and hunting camps adjacent or near to the quarries. Examples of possible small hunting camps include the

Everett Site (7NC-D-21) and the Mitchell Farm Site (7NC-A-2). Both are near former, poorly drained sinkholes that would have been prime watering sources for large mammals and contained Paleo-aged artifacts from surface contexts. A radiocarbon date of around 11,530 B.P. was obtained from the latter site, but no fluted points were found in the context from which the carbon sample was obtained (Custer 1989).

This first concentration is the lightest of the three; no Paleoindian base camps have been found in this area, which seems strange in light of the readily available, high-quality lithic material. This absence is probably due to poor conditions for game animals at the time (i.e., less watering holes) relative to those found towards the center of the peninsula. Similar conditions existed in the southern (lower) portion of the peninsula, near the mouths of the Choptank and Nanticoke Rivers on the Chesapeake Bay (Custer 1989). Again, the Late Pleistocene conditions in this area were not particularly suited to large quantities of game animals: sea level was lower, the Chesapeake was not in its present location, and these areas were then headlands overlooking the confluence of the prehistoric Susquehanna, Potomac, Choptank, and Nanticoke Rivers. These headlands apparently could not sustain enough game animals to completely support roving bands of Paleoindian hunter-gatherers. Of course, such bands frequented these headlands for a reason: readily available supply of high-quality cryptocrystalline lithic resources. These resources consisted of large amounts of cobbles forming gravel point bar deposits in the confluence of the ancestral rivers noted above (Custer 1986, 1989, 1996).

The largest concentration of fluted projectile points occurs in the middle portion of the Delmarva Peninsula, on what is more properly known as the Mid-Peninsular Drainage Divide. This area marks the drainage divide between the present-day Chesapeake and Delaware Bays. During the Late Pleistocene, the divide consisted of a mixture of well and poorly drained areas especially suitable for both game animals. Specifically, many swamps, basins, and small bays containing fresh water existed in this area; the Paleoindian inhabitants in the area occupied the dry knolls and terraces overlooking these terrain features in order to exploit convenient game animal gathering places. For example, the base of a fluted point was found at the Snapp Site (7NC-G-101) in southern New Castle County, Delaware. This site occupied a once well-drained bluff surrounded by poorly drained freshwater woodlands and an embayed estuary (Custer and Silber 1995).

While the environment in this area is ideally suited to the proliferation of game animals—and thusly the procurement of said animals—lithic resources are scarce in the Mid-Peninsular Drainage Divide. The lithic assemblages from this area are usually constructed from high-quality cryptocrystalline materials not locally available. These materials were probably obtained from either quarries in the northern part of the peninsula (the Delaware Chalcedony Complex) or the extensive cobble resources in the south of the peninsula. As the above sources for high-quality cryptocrystalline lithic materials are either distant and/or isolated, it was necessary to carefully conserve the lithic resources brought into the mid-peninsular region. Therefore, the projectile points and tools recovered from the area generally exhibit evidence of careful maintenance and heavy resharpening. The Hughes Early Man Complex in central Kent County, Delaware is typical of Paleoindian sites along the drainage divide. The Hughes Complex consists of three separate sites (7K-E-10, -24, and -33) that in turn consist of six separate surface concentrations of Paleo-aged artifacts. Each of the concentrations resides upon different small,

well-drained knolls that all overlook a large, freshwater swamp. The points, bifaces, and flake tools found at these sites were all constructed from high-quality cryptocrystalline materials, many of which exhibit signs of heavy resharpening and reworking. Additionally, multiple-use stone tools, representing another strategy of lithic-resource conservation, were documented at the Hughes Complex (Custer 1989).

EARLY ARCHAIC PERIOD (10,000 – 9000 B.P.)

It is generally accepted that the Early Archaic period of the Archaic stage coincides with the Late Pleistocene-to-Holocene transition. During this transition, climatic events included the decline of open grasslands and the rise of closed boreal forests throughout the Middle Atlantic region. The decline and extinction of Pleistocene megafauna generally accompanied the reduction of open grasslands. With the melting of the continental ice sheets, sea level began a long-term rise (terminating in modern levels around 4000 B.P.), a trend that led to an increase in the number of poorly drained and swampy biomes by the onset of the Late Archaic period. These water-rich areas became the gathering points for modern large mammals, such as white-tailed deer, elk, and moose. Again, as in the Paleoindian period, humans were drawn to these wet biomes for the excellent hunting afforded by their concentration of game animals. This reliance on procuring game from the same general environments is why both the Paleoindian and Early Archaic chronological periods are subsumed within the Hunter-Gatherer I cultural period in Custer's scheme.

The switch from fluting to notching is generally considered to mark the end of the Paleoindian and the beginning of the Archaic period. Examples of Early Archaic point types found within the Delmarva Peninsula include Amos corner notched, Kirk and Palmer notched, and Kirk stemmed varieties (cf. Broyles 1971 and Coe 1964 for original type descriptions of these points). Serration can be found on both the Kirk and Palmer notched varieties. Gardner has demonstrated that while corner-notched and side-notched points show a stylistic change from the earlier fluted varieties, they all occurred within a single cultural tradition, or technological continuum (Gardner 1974). The transition from fluting to notching may not have been an abrupt change (as it appears archaeologically), but more of a gradual technological shift. The distinctive hallmark of fluting, nearly absent during the Dalton-Hardaway subphase, is not present on corner-notched Early Archaic points. Serration is also added to many, but not all, of these types; indeed, in some cases, serration appears to be a distinctive attribute of corner-notched points.

The materials (jasper and related cryptocrystalline materials) used in point manufacture and manufacturing techniques all remained mostly unchanged throughout the Paleoindian to Early Archaic periods. As suggested by Gardner, a probable reason for the change in hafting is tied to the introduction of the spearthrower, or atlatl. The fluted forms may have been utilized mainly as thrusting tools, while the notched forms may have been fixed onto smaller lances with detachable shafts. These point types are considered members of the same cultural tradition (Gardner 1974). As in the earlier Paleoindian period, stone tools designed for the processing of plant materials are rare in the Early Archaic period. All of the above is further evidence for including the Paleoindian and Early Archaic chronological periods within a single technological continuum.

The Early Archaic sites containing examples of the diagnostic corner-notched projectile points follow some of the same general distribution patterns as fluted-point sites. Most of these sites are located along the (assumed to be) game-rich Mid-Peninsular Drainage Divide; lesser numbers are located in the northern and southern parts of the peninsula. The differences involve the larger number of Early Archaic sites, and where exactly in the north and south these sites cluster. Larger numbers of notched versus fluted-point sites are found throughout the peninsula, and a much larger number of notched-point sites occur along the drainage divide (Custer 1989). The greater distribution of Early Archaic sites compared to Paleoindian sites may be a reflection of an adaptive pattern tied to dispersed game species inhabiting the gradually spreading boreal forest. This greater distribution is also a testament to an increasing population over that evident during the Paleoindian period. Examples of sites on the Delmarva Peninsula with Early Archaic components along or near the drainage divide include the Leipsic Site (7K-C-194A), the Snapp Site (7NC-G-101), and the Dover Downs Site, Hill A (7K-C-365A) (Custer et al. 1996; Custer and Silber 1995; Riley et al. 1994).

Although one notched point has been found at a site (7NC-D-3) within three kilometers of the jasper quarries in northern Delaware that comprise the Delaware Chalcedony Complex (Custer 1986), the notched point sites in the northern part of the peninsula are not concentrated near the Delaware Chalcedony Complex. Instead, they cluster near Wilmington, Delaware, along the Fall Line. This area had freshwater swamps not unlike the drainage divide that would have provided adequate hunting for Early Archaic groups. The concentrations of Early Archaic sites in the southern portion of the peninsula also occur near freshwater swamps, located along the coast of the Delaware Bay. These northern and southern freshwater swamps formed in the early Holocene as a result of rising sea levels.

MIDDLE ARCHAIC PERIOD (9000 – 5000 B.P.)

The Middle Archaic chronological period is generally accepted to coincide with the appearance of full Holocene environments. The further growth of deciduous forests, rising sea levels, and warm, moist conditions mark the Holocene. Some of these trends began in the Early Archaic, at the close of the Pleistocene. Such events led to the spread of modern, temperate floral assemblages (such as mesic hemlock and oak forests), modern faunal assemblages, and seasonal continental climates. The advent of a seasonal climate allowed for the development of predictable resource bases within annual cycles. Several implications for settlement are associated with this period. Base-camp type settlements were no longer situated near specific lithic sources; more frequently they were placed to exploit a range of seasonally available plants and, likely, other resources. This gradual development of a seasonal round also led to an increase in the number and kinds of exploited environmental zones. Pollen evidence from the Delmarva Peninsula points to dense mesic forests of oak, hemlock, and pine. The moist conditions favored the spread of swamps and bogs throughout poorly drained areas like floodplains, bays, or basins. Modern faunal species spread throughout the various biomes of the Delmarva Peninsula, but their distributions differed relative to modern observations. The prevalent species included deer, turkey, and smaller mammal (Custer 1989, 1996). As far as the inhabitants of the Middle Archaic are concerned, a noticeable increase in population, observable

via the sheer number of uncovered sites (and initially indicated in the common occurrence of bifurcate points found on a variety of site settings), occurred throughout the Middle Atlantic.

The shift between the Early and Middle Archaic periods is generally recognized in the introduction of bifurcate-based projectile points. The common LeCroy type (originally defined by Lewis and Kneberg [1955]) and its variants epitomize these projectile points; a related—though slightly earlier—type known as St. Alban's Side-Notched (defined at the St. Alban's Site in West Virginia [Broyles 1966, 1971; Chapman 1975; Gardner 1982]) also typifies such points. Several other marked changes occur along with the onset of the bifurcate points. Ground-stone tools (such as axes, gouges, and grinding stones) and plant-processing tools were introduced (or at least more commonly used) in early Middle Archaic contexts, and have been found in excellent contexts with bifurcate points at some sites (Chapman 1975; Custer 1989; Ebright 1992). Ground-stone tool categories mark a technology designed to process vegetable/plant resources; also, a shift to the use of locally available lithic raw material, beginning during the closing phases of the Early Archaic, is clearly manifest in the advent of bifurcate phases. Bifurcate points do not occur throughout the Middle Archaic; they date to the earlier portion of the period and disappear somewhere between 8000 – 7000 years B.P. (Carr 1998; Custer 1989, 1996, 2001; Dent 1995; see also summary in Broyles 1971). A Middle Archaic bifurcate occupation at the Sandts Eddy Site (36NM12) in Northampton County, Pennsylvania, furnished a bifurcate point and a radiocarbon date of around 7330 B.P. (Bergman et al. 1998).

The major stemmed varieties of projectile point following the bifurcate forms and typifying the middle portion of the Middle Archaic include the Stanly, Morrow Mountain I, and Morrow Mountain II varieties. Joffre Coe first documented this classic sequence in the Carolina Piedmont (1952, 1964). Stanly points were recovered in stratigraphic contexts below those containing Morrow Mountain types at the Doerschuk Site, situated along the Yadkin River in the North Carolina Piedmont (Coe 1964:54). In New England, a similar sequence of point types was reported at the Neville Site in New Hampshire (Dincauze 1976). In Virginia, Geier reported a comparable sequence from the Slade Site (Geier 1990). The Neville Site, located far from the Carolina Piedmont, furnished three new point types (Neville, Stark, and Merrimack) that can be considered as northern cognates of the Stanly-to-Morrow Mountain sequence first documented from the Doerschuk Site; the Neville Site also provided similar radiocarbon dates. The projectile point sequence from the Slade Site essentially duplicated that of the Doerschuk Site. Excavations at the Clifton Site, located in Charles County, Maryland, also demonstrated that a comparable sequence is present in the Middle Atlantic Coastal Plain (Barse 1994). By extrapolation, it would seem that a similar chronology, as applied to stemmed Middle Archaic projectile points, exists on the Delmarva Peninsula. Dincauze (1976) has suggested such a chronology, comprising an Archaic “Atlantic Slope” culture area that would certainly include the Delmarva Peninsula.

The projectile points marking the latter portion of the Middle Archaic period are the lanceolot-shaped Guilford type (associated with a poorly understood geographic distribution) and Halifax points, along with other related side-notched point varieties (Coe 1964; Custer 2001; Dent 1995). Guilford points were found stratified above Morrow Mountain and Stanly points at the Doerschuk Site (Coe 1964:54); Halifax side-notched points were found above Guilford types at the Gaston Site (Coe 1964:118 – 119). This sequence was also duplicated at the Slade Site (Dent

1995). Vernon points, common at the Accokeek Creek Site in Prince George's County, Maryland, are considered to be local variants of Halifax points (McNett and Gardner 1975:9). These points have been found stratified below Savannah River/Holmes points at the Fraser Site (McNett and Gardner 1975:10), essentially duplicating the Halifax-Savannah River sequence reported by Coe (1964). Additionally, a single example was found stratified below levels containing Savannah River points at the above-noted Clifton Site (Barse 1994). Side-notched point varieties related to Halifax and Brewerton are considered to represent the closing phase of the Middle Archaic period in the Eastern United States. These points date just prior to the widespread riverine and estuarine adaptations associated with the onset of Late Archaic phases typified by Savannah River (and related) projectile points.

Middle Archaic archaeological sites occur throughout the Delmarva Peninsula and tend to cluster near the many poorly drained areas supporting a wide variety of animal and plant species. Interior freshwater swamps were prime locations for Middle Archaic settlement such as those found near the Fall Line in northern New Castle County. A number of sites lie within close proximity of Churchman's Marsh, a large freshwater swamp located just south of the Fall Line. Interior freshwater swamps provided more than adequate resource bases. Local cobble beds in stream terraces were readily available in such settings as well (Custer 1989). While intense occupation of such interior swamp settings began during the Middle Archaic, these locations were continually occupied into later, Woodland-era periods. Examples of Middle Archaic sites near Churchman's Swamp include 7NC-E-1, 7NC-E-4, 7NC-E-6 (the Clyde Farm Site), 7NC-E-42 (the Julian Powerline Site), and 7NC-D-67.

Other poorly drained areas that supported Middle Archaic populations include bays or basins along the Mid-Peninsular Drainage Divide, coastal swamps, the heads of small streams, or any similar area with swampy settings. Stanly and Brewerton points were recovered from features at the Leipsic Site (7K-C-194A), on the northern bank of the Leipsic River and overlooking extensive freshwater marshlands bordering the river (Custer et al. 1996). Bifurcate points were recovered from 7K-C-360, located on a knoll overlooking a freshwater marsh near Dover, Delaware. Bifurcate, Stanly, and Guilford-like points were recovered from the nearby Dover Downs Site, Hill A (7K-C- 365A), along with fragments of grinding and hammer stones (Riley et al. 1994). Bifurcate and Guilford-like points were also recovered from the Lums Pond Site (7NC-F-18), which once overlooked the headwaters of small tributaries of the St. George's Creek.

LATE ARCHAIC PERIOD (5000 – 3000 B.P.)

The Late Archaic period is characterized by an increase in population, a foraging pattern linked to dense forests and their seasonally available plant resources, and the development of an adaptation based on the exploitation of riverine and estuarine resources. Climatic conditions approached those of modern times during the Late Archaic period. Rise in sea level pushed the salinity cline upstream in tidal environments, setting of a corresponding movement of various riverine and estuarine species. Fresh-water spawning fish had to travel further upstream to spawn, fostering extensive seasonal fish runs. The development of brackish water estuaries in the greater Chesapeake area led to the spread of various shell species, such as oysters and crabs

(Gardner and Boyer 1977; Gardner 1982). Settlement during the Late Archaic period shifted from the interior swamps favored during earlier periods to embayed stream mouths and similar settings (Gardner and Curry 1977). Interior sites became minimally exploited, sustaining smaller hunting and specialized exploitative stations; all exhibited varying emphasis on procurement of locally available cobble lithic sources, such as quartz and quartzite.

The Late Archaic technological repertoire continues the emphasis on ground-stone tools. Steatite net weights and carved steatite bowls with lug handles first appear during this period. The most readily recognizable diagnostic projectile points in the Delmarva Peninsula are the broadspear forms. The types most prevalent on the peninsula include Savannah River and other related, broad, rectangular-to-contracting stem points, such as Bare Island points, which in many ways are nothing more than smaller versions of the Savannah River type defined by Coe (1964). Broadspear types—such as Lehigh/Koens Crispin, Perkiomen, and Susquehanna varieties—mark the end of the period in terms of its point-based identification. Other diagnostic points include the Poplar Island and Lackawaxan types, both of which recognized as regional variants developed in the Delaware and Susquehanna River Valleys during the Late Archaic/Transitional period. An extended discussion of the Poplar Island type and its place in regional prehistory is presented in Chapter 4 of this document.

Orient Fishtail points, evolved from the Broadspear types, straddle the transition between the Late Archaic and Early Woodland periods. Ritchie (1969) has documented numerous examples of Orient Fishtail sites in eastern New York, such as the Sugar Loaf Hill Site (circa 3000 B.P.), the Stony Brook Site (circa 2930 B.P.), the Orient Number 2 Site (circa 2900 B.P.), and the Jamesport Site (circa 2720 B.P.). Also present on the peninsula are a number of Late Archaic point types defined from the Northeast that have been documented in well-dated contexts from about 5500 to 3000 B.P., such as the Lamoka and Wading River points (Ritchie 1980).

Late Archaic sites abound on the Delmarva Peninsula and general Middle Atlantic region. As noted above, many of the same areas that were attractive during the earlier periods continued to be draw native peoples during the Late Archaic period. Indeed, such use of certain landforms intensified during this time. Some of these trends are evident at the Clyde Farm Site (7NC-E-6), which served as the basis for Custer's Clyde Farm complex spanning the Late Archaic and Early Woodland periods on the Delmarva Peninsula. The earliest portion of the complex (Clyde Farm I) is defined by Late Archaic stemmed points and steatite bowls (Custer 1994); this portion is essentially equivalent to the Late Archaic as recognized by other investigators *not* working on the Delmarva Peninsula. Areas near the developing riverine resources were particularly attractive as marshlands receded and large populations of shellfish grew. Such sites include the Leipsic Site (7K-C-194A), on the northern bank of the Leipsic River (Custer et al. 1996), and the Snapp Site (7NC-G-101), which occupied a once well-drained bluff overlooking an embayed estuary perfect for developing shellfish resources (Custer and Silber 1995). Orient Fishtail and broadspear points were found at both of these sites. Other examples include 7K-C-360, Dover Downs Sites, Hill A and Hill B (7K-C-365A and 365B), and the Lums Pond Site (7NC-F-18) (Custer et al. 1996; Custer and Silber 1995; Petraglia 1998; Riley et al. 1994).

EARLY WOODLAND PERIOD (3000 – 2000 B.P.)

Many investigators consider the Early Woodland period as a continuation of the Late Archaic when viewed from the types of subsistence practices, the nature of settlement patterns, and, perhaps, the organization of social groups. As in the Late Archaic period, base camps continued to be situated in riverine settings, especially at the junction of fresh-water/brackish-water streams. Smaller sites dating to the Early Woodland, possibly specialized exploitative camps, are found in interior drainage areas on the Delmarva Peninsula. The one realm of material culture separating the Early Woodland period from the Late Archaic, and an important one, is represented in the introduction of ceramic technology. This innovation was a direct outgrowth of a hard-container technology first seen in the well-known stone (steatite) bowls that characterize the final part of the Archaic stage from Maine to Georgia.

The Early Woodland period in Delaware has been subdivided into a group of four complexes that create more confusion than clarity in the apparent record. These complexes are as follows: 1) Clyde Farm; 2) Barker's Landing; 3) Wolfe Neck; and 4) Delmarva Adena complexes (Custer 1989). Clyde Farm includes the end of the Late Archaic and early phases of the Early Woodland period as identified via Marcey Creek and cognate wares (including Ware Plain and Dames Quarter ceramics). Barker's Landing is associated with similar wares, though this complex is characterized by the use of exotic or non-local lithic materials. Sites of this complex are centered around Churchman's Marsh. Finally, Wolfe Neck refers to an Early Woodland complex identified with Wolfe Neck and Accokeek ceramics. Wolfe Neck is actually an Eastern Shore variant of Accokeek, as originally defined (Stephenson et al. 1963), and should be viewed as such rather than as a separate entity. This complex was also defined to include a net-impressed variant considered herein as comparable to early Middle Woodland Popes Creek (see below). Since most of these complexes depend on material culture described below, they will not be discussed in any greater detail. The following section provides a more generalized view of the Early Woodland period for the region.

In the Middle Atlantic region (including the Delmarva Peninsula), ceramic wares begin with Marcey Creek (or its cognate varieties, a ware characterized by smoothed, flat-bottomed vessels tempered with crushed steatite. In areas where steatite was not available, such as on the Delmarva Peninsula, other tempering mediums were used. This distinctive ware evolved directly out of the flat-bottomed stone bowls of the Late Archaic period. Its general shape, including placement of lug handles, mirrored stone bowls rather closely. Even decoration, limited to series of small nicks on the lips of steatite bowl rims, was copied on Marcey Creek vessels. In the latter case, this technique was usually executed with fingernail impressions. Dames Quarter and Ware Plain are viewed herein as cognates of Marcey Creek, differing primarily in the use of materials other than steatite for temper. Dames Quarter was tempered with black hornblende or gneiss, and mimicked Marcey Creek's shape, construction, and surface treatment (Wise 1975). Ware Plain was also a smoothed, flat-bottomed ware, but was tempered with sand and crushed quartz instead of crushed steatite.

Early Woodland wares following Marcey Creek include Accokeek cordmarked and its Eastern Shore variant, Wolfe Neck cordmarked. Although a net-impressed Wolfe Neck ware has been identified, it is considered herein as an early Middle Woodland ware cognate to Popes Creek

ceramics. Accokeek ware and its variants are part of a Middle Atlantic horizon extending south of Trenton, east of the Allegheny Front, and north from the Cape Fear region of North Carolina. This ware has an extensive geographic distribution when all its related variants are considered; it probably marks the beginning of an increasing sedentism and development of regional ceramic systems more commonly found in the Middle Woodland period. As a probable marker for social organization, Early Woodland ceramic systems after Marcey Creek probably represent the end of a mobile hunting-gathering-incipient cultivation lifestyle.

The chronological range of these two wares (Marcey Creek and Accokeek) is on the order of 500 to 600 years. Marcey Creek and its related wares likely fall within the first 200 years of the final millennium B.C., or roughly 1000 to 800 B.C. (3000 to 2800 B.P.). Radiocarbon dates for Accokeek place it between 750 B.C. to approximately 300 – 400 B.C., when it is superseded by net-impressed varieties, including Popes Creek and related wares (Gardner and McNett 1975; Mouer et al. 1978; Mounier and Cresson 1988—these authors report dates for Teardrop or Piscataway points in association with an Accokeek-like ware). McLearn reports a suite of comparable early dates for Accokeek from the 522 Bridge Site in Warren County Virginia (McLearn 1991).

Other material categories associated with Accokeek and related complexes are not yet well defined. However, the lobate-based Piscataway point is definitely associated with Accokeek pottery at a number of sites. This type was found in excellent association at both the Woodbury Annex Site and Site 28GL209 in Gloucester County, New Jersey (Mounier and Cresson 1988; Barse 1991). These points were recovered from Accokeek contexts at the West Shore Site in Anne Arundel County (Barse 1978), and has also been defined from similar Early Woodland contexts in the James River Valley sites (Mouer et al. 1978) and at the 522 Bridge Site in Warren County, along the Shenandoah River (McLearn 1991). Other researchers in the Middle Atlantic—e.g., Wesler (1983), Steponaitis (1980), and Wanser (1982)—date this type to the Late Archaic period.

The Delmarva Peninsula also has Adena-related sites dating from the Early Woodland to early Middle Woodland period. Adena side- and corner-notched bifaces manufactured from Ohio cherts are also found on the peninsula; these are part of the Delmarva Adena Complex first extensively described by Ron Thomas (Thomas 1969; 1970:56 – 87; see also Dragoo 1961 and Jones 1965). Sites of this complex are rare; most have been destroyed by construction or other activities.

MIDDLE WOODLAND PERIOD (2000 – 1000 B.P.)

The Middle Woodland period marks a gradual adaptive shift that signals a more-sedentary lifestyle, which served as a precursor to horticultural-based Late Woodland societies. Again, the Middle Woodland inhabitants of the Delmarva Peninsula preferred riverine or basin-bay environments.

Although the early part of the Middle Woodland is well represented by Popes Creek and related wares west of the Chesapeake Bay, comparable phases are not well defined in Delaware, unless one teases out net-impressed Wolfe Neck components and those marked by Colbourn ceramics. However, shell-tempered Mockley ceramics are widespread and mark a significant Middle

Woodland period presence on the Delmarva Peninsula after about 2000 years B.P. Mockley ware ceramics are tempered with large shell fragments and exhibit both cordmarked and/or net-impressed surfaces. The shell used as a tempering medium is usually oyster, but ribbed mussel shell was also used in southern Delaware (Custer 1989, 1994; Griffith 1982). Barse notes that ceramic technology during the Middle Woodland period shows marked changes from earlier periods. Vessel shapes are more varied in this period, and usually included four separate categories. Significant jumps in vessel size as measured by rim diameter are noted as well (cf. Barse 1990, 2001). These differences in vessel morphology suggest that they were used for different domestic applications than in the Early Woodland period. Additionally, data from the Potomac Valley suggest that Mockley phase sites were more common in the broader floodplain settings, not in the typical Late Archaic – Early Woodland settings. This departure is interpreted as a shift to more-sedentary village or household locales and may be the beginning of seasonal horticulture pattern.

Mockley ware is nearly universal throughout the peninsula until around halfway through the period, continuing up to about A.D. 800 or 900. Two additional wares, one related to Mockley, are also present: Claggett ware, defined by Barse and Thurman in 1974 based on collections from the Piscataway Creek drainage in Prince George's County, Maryland (Thurman and Barse 1974); and Hell Island wares (Custer 1989). Hell Island ceramics consist of conoidal cordmarked or fabric-impressed vessels tempered with crushed quartz and mica (grit) (Griffith 1982). Hell Island ware is of interest in that it may be a precursor Riggins ware. The use of crushed quartz temper, corded dowel rim impressions, and fabric-impressed surfaces are all elements that appear in Hell Island ware and define Riggins ware, as well as the related Indian Head incised in southern New Jersey, immediately across Delaware Bay. In a similar sense, Mockley is clearly the ware from which Townsend evolved.

Projectile points associated with the Middle Woodland period include broad-stemmed Selby Bay/Fox Creek points (cf. Mayr 1972; Wright 1976). Cached bifaces are also found on Middle Woodland archaeological sites. These bifaces are large, parallel-sided to pentagon-shaped forms usually found as grave goods. The large pentagonal variety was found at the Island Field Site (7K-F-17), a large cemetery site in Kent County, Delaware.

The Middle Woodland can also be divided into major complexes that serve to carve up the archaeological record. The four complexes that more or less define this time period are the Carey, Late Carey, Webb, and Delaware Park complexes (Custer 1989, 1994, 2001). The Carey complex's diagnostic assemblage consists of Mockley wares, Fox Creek points, and Rossville-like stemmed points. This complex is nothing more than Custer's redefinition of the Selby Bay complex originally defined by Mayr in 1958 (Mayr 1958, 1972; Wright 1976; Barse 1978). It is also comparable to Fox Creek as defined for the New York region (Brennan 1967). The Selby Bay Phase/Carey complex's settlement pattern, subsistence, and site distributions are similar to those of the earlier Wolfe Neck complex. Larger riverine base camps appeared, superseding Early Woodland base camps in size; smaller, specialized exploitative sites are still found along interior drainages and smaller estuaries. Both shell midden sites and non-midden sites are present in this complex, as is rhyolite and argillite debitage. During the Carey complex, the Delmarva Adena complex mortuary-exchange center focused settlement pattern disappeared.

The Selby Bay/Carey complex exhibits participation in larger exchange networks involving the movement of lithic raw materials, such as rhyolite out of the Catoctin and South Mountain areas of Maryland, argillite from the New Jersey Fall Line (near Trenton), and, sometimes, Pennsylvania jasper from the southeastern portion of the state. These larger networks show a shift from the more-localized Delmarva Adena complex networks (i.e., centered around mortuary-exchange sites) to an expanded exchange network. More distant exchange relationships are manifest in the presence of native copper, recovered from several Mockley phase sites in the Maryland region (Barse 1978). The Carey complex enjoyed a peninsula-wide homogeneity until around 1500 years B.P., at which point it fractured into the Late Carey, Webb, and Delaware Park complexes.

The Late Carey complex's assemblage is similar to that of the Carey complex. The main difference, according to Custer (1989), is the replacement of Rossville-like stemmed points with large, triangular projectile points. Late Carey sites cluster in the southern Delmarva Peninsula and show a continuity with the earlier Carey complex that may extend into the Late Woodland/Townsend ware cultures. Webb complex sites are clustered near the center of the peninsula, and show both a technological and cultural break with Carey complex sites. The technological break involves the replacement of Mockley wares with Hell Island wares, as well as the replacement of Fox Creek points with Jack's Reef varieties. Large, triangular points were also present at this time, along with Rossville-like stemmed points. Associated artifacts also include specialized mortuary items, such as steatite platform pipes and large, pentagonal bifaces, items also found in classic Selby Bay sites. The Webb complex also exhibits a reduction in the number of macro-band base camps and a corresponding rise in the number of micro-band camps. A small Webb complex assemblage was recovered from the Leipsic Site (7K-C-194A), which may represent a micro-band camp. This change from macro- to micro-band groups may have resulted from the reappearance of "mortuary-exchange" centers, which would have been the focus of Webb complex settlement patterns (Custer 1989, 1994). An example of a "mortuary-exchange" site is the Island Field Site (7K-F-17) noted above. One hundred and twenty burials were excavated at the site; the associated grave goods included pentagonal bifaces, bone and antler flint-knapping tools, celts, projectile points, pestles, textile fragments, and the claws of an American mountain lion (Custer et al. 1990).

The Delaware Park complex encompassed the northern portion of the Delmarva Peninsula during the end of the Middle Woodland period. Its assemblage also contains Hell Island ceramics, Jack's Reef points, large, triangular points, and Rossville-like stemmed points. While generally contemporaneous with the Webb complex, the Delaware Park complex does not exhibit mortuary-exchange center focused settlement patterns. Instead, a macro-band based settlement pattern was utilized, with an emphasis on intensive food harvesting and some early domestication of plant resources (Custer 1989, 1994, 2001). This harvesting emphasis is probably the final step before the settled village life that typifies the Late Woodland period.

LATE WOODLAND PERIOD (1000 – 550 B.P.)

Sedentary village life is one of the hallmarks of the Late Woodland cultural period. The beginning of this cultural period witnessed the initial domestication of plants by small groups of

individuals, either familial groups or small bands. This shift was a continuation of the intensive gathering subsistence practices begun in the terminal Middle Woodland that eventually blossomed into full-scale agriculture. Staple crops such as corn, beans, and squash were planted in great enough quantities to allow the formation of larger communities of individuals than ever possible during earlier periods. Native peoples preferred fertile floodplains for these agricultural processes; populations shifted from estuarine, bay/basin, and upland environments to the major drainages of the peninsula. Villages could contain hundreds of individuals; these large villages were often walled or fortified. As a result of this expanded sedentism and the discontinuation of the utilization of upland environments containing these lithic resources, the large exchange networks bringing exotic argillite and rhyolite onto the peninsula disappeared.

While the above description applies to Middle Atlantic Late Woodland cultures in general, it may not apply to those of the Delmarva Peninsula. Although the ceramic and lithic technologies utilized on the peninsula are comparable to those found in the wider Middle Atlantic region, not all of the traditional Late Woodland adaptations are evident on the peninsula. Evidence of large Late Woodland villages and/or intensive agriculture is rare here, and the Late Woodland groups on the peninsula may have lagged behind the Middle Atlantic groups in general.

The major change in ceramic wares on the Delmarva Peninsula does not have anything to do with temper, vessel shape, or construction techniques. Rather, the defining mark of Late Woodland ceramics is intentional decoration (Custer 1989; Custer and Griffith 1986; Griffith 1982). Three Late Woodland ceramic wares are recognized for the Delmarva Peninsula: Townsend, Minguannan, and Killens wares. All three wares are variants on a basic Late Woodland coastal plain ware extending throughout the western and eastern shores of the Chesapeake Bay region. In a sense, these wares mark geographic separation based on the availability or use of shell as a tempering medium. Townsend ware is probably the most numerous of the three and can be found heavily concentrated throughout the southern two-thirds of the peninsula. The five types of Townsend ware are moderately thin-walled, finely made, fabric-impressed conoidal vessels tempered with crushed shell and decorated with incised and/or corded decorations (Griffith 1982). As noted above, Townsend ware is an outgrowth of Mockley and continues some of this last ware's vessel shapes, introducing at least one new one, a squat, globular-bodied pot with a constricted neck and flared (and sometimes straight) rim. The latter is a vessel shape that appears in numerous Late Woodland ceramic assemblages in the Middle Atlantic region. It is prominent in Potomac Creek assemblages in the Potomac Valley (cf. Stephenson et al. 1963:117). In fact, globular-bodied vessels appear to be more common than deeper conoidal vessel shapes.

Decoration is common on all these Late Woodland vessels, involving mostly application of incised lines forming triangular based motifs. Griffith (1982) has identified one dozen different motifs on Townsend wares, varying from simple, cord-impressed horizontal bands to herringbone patterns to complex, incised geometric designs. Lopez presents an excellent summary of the designs on Townsend and related wares in the Delmarva and surrounding region (Lopez 1961, reprinted in Kent, Smith, and McCann 1971).

Custer's (1989) Minguannan ware, the second most common Late Woodland ceramic groups in the area, are lightly scattered throughout the northern two-thirds of the Delmarva Peninsula.

These thin-walled, finely made, conoidal wares are tempered with sand, grit, and crushed quartz. Surface treatments include smoothing, cordmarking, and smoothed-over cordmarking. The decorative motifs are nearly identical from those of the Townsend wares (Custer 1989; Stewart et al. 1986). Similarities between Minguannan ware and Overpeck Incised ceramics should be noted; indeed, it is probable that the definition of Minguannan is redundant, given the existence of Overpeck as a defined ware group.

The third, and least common, variety of ceramic ware is Killens ware, found in the north-central portion of the Delmarva Peninsula. It is similar to the other two wares in terms of construction and decoration, but is tempered with a mixture of crushed shell and grit. Killens ware is often found along with Townsend and Minguannan ceramics, and may represent a transition between the availability of shell and grit.

Late Woodland projectile point typologies are generally agreed to point towards a major technological jump: the regional introduction of the bow and arrow. This shift is evidenced by the proliferation of small, triangular points at Late Woodland archaeological sites. Common triangular projectile point types in the Middle Atlantic region include the Levanna and Potomac (Madison) forms, but the large number of variations precludes assigning any specific triangular point types to the Delmarva Peninsula.

As in earlier periods, Custer has added additional terminology to existing schema. Custer has defined two archaeological complexes for the Late Woodland period on the peninsula: the Minguannan and Slaughter Creek complexes. Site distributions will be described here in light of these complexes.

The Minguannan complex occupies the upper two-thirds of the Delmarva Peninsula and extends into the Piedmont Uplands, where it extends into the range of Overpeck ceramics. The complex's diagnostic artifacts include, appropriately, Minguannan wares and triangular points (Custer 1989). The defining characteristic of the Minguannan complex is that it does not cleave to the traditional idea of what comprises a Late Woodland culture. To date, known Minguannan sites do not contain storage features, burials, middens, or domestic structures. No remains of Minguannan villages have been uncovered on the Delmarva Peninsula, probably a result of sampling and/or localized excavations as opposed to the opening of larger areas. Known or documented Minguannan base camps are generally located in areas occupied by earlier Late Archaic to Middle Woodland groups. These areas are usually resource-heavy environments, like brackish marshes, major floodplains, or poorly drained sinkholes.

The Slaughter Creek complex encompasses components identified by Townsend ceramics. This complex also exhibits several adaptations not seen in the Minguannan complex, such as storage pit features, sedentary villages, and burials. The Slaughter Creek complex occupies the southern two-thirds of the peninsula. Wide varieties of shellfish and large amounts of mammal bone, mostly those of deer, are found at Slaughter Creek sites. Although evidence for cultigens is rare, abundant data exists for intensive gathering and storage. Hickory nuts and seeds from *Amaranthus* and *Chenopodium* have been recovered from storage features on Slaughter Creek sites. Apparently, while Slaughter Creek groups resided in large, macro-band-to-village-sized assemblies, they did not rely on intensive agriculture for subsistence. Custer suggests that these

groups relied instead on intensive hunting and the gathering of wild plant and shellfish resources (Custer 1989).

CONTACT PERIOD (550 – 250 B.P.)

The Contact period witnessed the wane and demise of Native-American cultural influence and the beginnings of European cultural, political, and economic domination of the Delmarva Peninsula. The beginning of the Contact period saw various native groups on the peninsula more or less continuing the same adaptations exhibited at the end of the Woodland period. Villages and agriculture were prevalent in the resource-rich lower two-thirds of the peninsula, while macro-band-scale hunting and gathering occurred in the northern portions. By the time William Penn arrived in New Castle, Delaware, the Lenape had become more sedentary and embraced village life and agriculture (Weslager 1985).

The Contact period began during the earliest explorations of Delaware, which occurred in the sixteenth century when Spanish and Portuguese merchants charted portions of the state's coastline. Henry Hudson and Cornelius Hendricksen later followed these merchants (the former in A.D. 1609 and the latter in 1614), establishing a Dutch presence in Delaware. The King of Sweden granted a charter for land in present-day Delaware to a group of Swedish settlers in A.D. 1631. Seven years later, Swedish Lutherans landed in the vicinity of Lewes Delaware, migrated north towards Philadelphia, and founded a settlement they named New Sweden. Colonel Johan Prinz served as governor of New Sweden from A.D. 1643 to 1653. In A.D. 1638, Governor Peter Minuit erected Fort Christine and established the village known as Christineham (Thomas, Regensburg, and Basalik 1980:II – 1). The fort and settlement were erected at the confluence of the Christiana and Brandywine Rivers. The first recorded Dutch settlement also occurred in A.D. 1631, near present-day Lewes. Thirty settlers under the auspices of the Dutch East Indies trading company erected a settlement (Zwaanendael) on the west bank of Lewes creek. Native Americans destroyed the small settlement in A.D. 1632, and Dutch colonization came to a standstill in the Lewes area until A.D. 1658, when the Dutch, intending to secure the region, erected a settlement called Hoerekill.

In A.D. 1651, Peter Stuyvesant purchased a tract of land—previously sold to the Swedes—from the Lenapi. Believing the land to be under Dutch ownership, Stuyvesant erected Fort Casmir and the village of New Amstel, present-day New Castle. Three years later, in A.D. 1654, Prinz's successor Johan Rising seized Fort Casmir and renamed it Fort Trinity. Though the Lenapi confirmed Swedish ownership of the Delaware River's west bank, the Dutch sent Stuyvesant back in A.D. 1655 to recapture the fort from the Swedish. On August 31, 1655, Stuyvesant was successful, and Fort Casmir was returned to the Dutch. In addition, the Swedes were driven from both banks of the Delaware River. Fort Christiana was captured two weeks later, and the territory remained under Dutch control until A.D. 1663, when the Dutch West India Company transferred rights to land along the Delaware to King Charles II of England. Charles granted the tract, extending from south of Christiana Creek to Bombay Hook, to James, Duke of York in A.D. 1644 (Scharf 1888). Desiring a British territory for British subjects, the duke drove the Dutch from the region and changed the name of New Amstel to New Castle. Thusly, when William Penn landed in New Castle, Delaware in A.D. 1682, the native inhabitants of the area

had already been in contact with the preceding Swedish and Dutch settlers for at least 50 years. Penn, a Quaker, received a charter for land in Delaware circa A.D. 1682; he almost immediately proceeded to issue patents to those English Quakers seeking religious freedom (Weslager 1985). That same year, Penn renamed St. Jone's County and Deale County (newly named Kent and Sussex Counties, respectively).

The effect of this European settlement upon the native population of the Middle Atlantic was disruptive at best, and final at its worst. The European desire for furs led to the dissemination of European trade goods throughout the Middle Atlantic region, but the fur trade was not ultimately beneficial to the participating native groups. Internecine warfare over access to both the furs and the fur-trading centers ensued, and the mammal resources themselves were soon depleted. Also, a rising dependence on trade goods led to the abandonment of traditional lifeways, such as ceramic manufacture and production of stone tools. Finally, European-introduced illnesses to which the inhabitants had immunity (small pox, influenza, etc.) swept the native populations (Custer 1989). By the time of Penn's charter in Delaware, many of the original native groups had either died out or migrated westward in desperate bids for either additional trade-quality pelts or unsettled lands. The depletion of the local fur-bearing animal population led to other commercial/economic adaptations. The Lenape, for instance, relied on horticulture, hunting, and gathering as their economic base. The Lenape farmed corn, beans, and peas, while also trading heavily with local Europeans using this common "coin" (Weslager 1985). In the case of the Lenape, this type of adaptation were more of a "last gasp," before migrating first to the Susquehanna River valley, and ever westward to escape the inherently rapacious nature of European-style economic systems.