

## II. PREHISTORIC CONTEXT AND PREVIOUS RESEARCH

### A. PREVIOUS INVESTIGATIONS IN THE REGION

Most of the known archaeological sites in the vicinity of Odessa, Delaware, were recorded by the University of Delaware during the course of planning study surveys (Custer and Bachman 1986a, 1986b) (see Figure 1). Other investigations, conducted by Wright (unpublished survey forms on file in the DESHPO) and Gardner and Stewart (1978), located a few prehistoric sites in the Odessa area and along the Appoquinimink River. The University of Delaware planning study surveys conducted between Drawyer and the Appoquinimink River located a substantial number of prehistoric sites, many of Woodland II affiliation (Minguannan) (Custer and Bachman 1986a, 1986b).

Little in-depth information is available on these previously recorded sites. Most of the sites produced only a few diagnostic artifacts, sufficient to characterize one period of occupation but not enough to discern the entire duration of use on most of these sites. However, the site distributions along Drawyer Creek and the Appoquinimink River show some interesting patterns. Seventeen sites were recorded on the height of land between the two systems. Further analysis of these sites may reveal significant shifts in land use that reflect adaptive changes over time in northern Delaware.

Although some bias is involved in the discerned site distribution patterns, there are also distributional trends that may provide new information on settlement patterning should these sites be further investigated. The distributions are skewed in favor of the major drainages, but there is also evident a tendency for sites to be distributed along intermittent drainages from the stream's mouth to the headwaters. This tendency may have something to do with resource extraction patterning, seasonality of site distributions at any particular point in time, or changes in adaptive strategies through time.

One of the more significant sites excavated in the area is the Hell Island Site (7NC-F-7), an Early through Late Woodland camp excavated by Wright (1962) in the 1950s and by Thomas (1966) in 1965. This type site for Hell Island ceramics, as originally defined by Wright (1962), is located on an island in the Appoquinimink River. The site contains three components: (1) a Wolfe Neck occupation (700-400 BC), (2) a Delaware Park/Webb Complex component (AD 600-1000), and (3) a Townsend occupation (AD 1000-1500). The Hell Island Site artifact assemblage contains a projectile point assemblage very similar to the collection obtained from the Drawyer Creek South Site, including Fox Creek lanceolate, stemmed Bare-Island-like forms, fishtail points, and triangular points.

In the uplands surrounding Drawyer Creek, and for the Middle Atlantic Coastal Plain at large, the question of buried site contexts has become an important issue in recent years. Curry (1980), for example, notes that for the region just west of Chesapeake Bay, a number of upland Late Archaic manifestations have been located in buried contexts. Curry postulated at the time of his study that these sites (e.g., Site 18An408) were most likely buried during the dry Sub-Boreal climatic episode (3110 BC - 810 BC) when defoliation created optimum conditions for the removal and redeposition of aeolian soils. This site contained Late Archaic materials on the surface as well as in subplowzone contexts to depths of 50 centimeters below surface (Curry 1980:5).

Later, Curry and Ebright (1990) found that site burial in the Coastal Plain uplands was due not only to aeolian deposition but to alluvial deposition as well, particularly in settings which, upon initial inspection, appeared to be outside any floodplain environments. The site sample addressed by Curry and Ebright (1990) included a range of contexts subject to aeolian and fluvial deposition, or a combination of both (e.g., Harmans Site, 18An29).

This issue is of particular relevance to northern Delaware, as Ward and Bachman (1987) have noted for their study of Woodland period sites buried by aeolian deposits. Ward and Bachman (1987:103) attribute this phenomenon to climatic changes that occurred during the middle Holocene (ca. 3000-1000 BC). Several of these buried aeolian sites, including Site 7NC-G-63, were located on an upland surface overlooking Drawyer Creek (Ward and Bachman 1987:106). Aeolian site burial is relatively uneven, however, and appears to be greatly affected by local topographic conditions. Consequently, sites such as Drawyer Creek South, situated on the upland/floodplain interface, appear to have been preserved by this type of depositional pattern.

*Note: The burial of prehistoric archaeological sites by wind-blown sediments, overbank floods, and other means is an important issue. It is particularly significant in areas along the Middle Atlantic coast, where most sites tend to be disturbed or at least partially mixed because they are found on the surface and/or in very shallow soils. When sites are found in more deeply buried contexts, the value of the information archaeologists can obtain from them is greatly increased. In these more ideal situations, we can then reconstruct activity patterns of the prehistoric inhabitants of the site on the basis of what they left behind. Such patterns include the ways in which stone tools were made, ceramic vessels were produced and used, and food was processed and consumed. These were among the many activities that formed an important part of daily life centuries before the earliest written records in Delaware.*

## B. PREHISTORIC BACKGROUND

The prehistory of northern Delaware is comprised of four major periods of cultural development: Paleoindian (10,000 to 6500 BC), Archaic (6500 to 3000 BC), Woodland I (3000 BC to AD 1000), and Woodland II (AD 1000 to 1600). A number of researchers (e.g., Custer 1984, 1994; Steponaitis 1980; Wright 1973) have developed chronologies for various portions of the Delmarva Peninsula/Chesapeake Bay region. Custer's (1984, 1989) settlement models have proved useful for designing Phase I surveys along linear transects typical of Department of Transportation surveys.

The Paleoindian period spans a time range from 10,000 to 6500 BC. It is the earliest recognized period of human occupation in the area. Paleoindian settlement patterns were characterized by a seminomadic existence within a defined territory, with a focus on hunting and the exploitation of high-quality lithic sources. Pleistocene megafauna, such as mammoth and mastodon, were extinct by this period, so the hunting emphasis was most likely on deer and elk, and perhaps caribou. Unfortunately, in the Delmarva Peninsula the archaeological record has not preserved such faunal remains in association with Paleoindian artifacts.

Custer (1984) classifies Paleoindian sites in northern Delaware within what is termed the Delaware chalcedony complex. By definition, the Delaware chalcedony complex consists of extensive outcrops of moderate- to high-quality siliceous raw material that was most likely utilized by

Paleoindian groups on a periodic basis. Directly associated evidence in the form of diagnostic Paleoindian artifacts is limited to a few serrated late Paleoindian notched point forms; however, further research is expected to recover more tangible evidence indicating the use of these outcrops throughout the Paleoindian period in northern Delaware (Custer 1989:103).

Paleoindian settlement patterns are marked by a focus on utilizing resources from inland swamps and other productive early Holocene habitats while at the same time maintaining ties to preferred outcrop areas where high-quality raw material could be obtained for manufacturing stone tools. Concentrations of fluted point finds have been noted in Delaware (Custer 1989:102) near sources of Delaware chalcedony (Custer and Galasso 1980). Jasper outcrops such as those associated with Iron Hill (Custer 1989:103) in northern Delaware, and Vera Cruz (Hatch and Miller 1985; Stevenson et al. 1990) in southeastern Pennsylvania, may also have been utilized by Paleoindian groups in the region, although direct evidence of this is also very limited. There are, however, a number of Paleoindian sites recorded in the Iron Hill area of New Castle County. Finally, a number of Paleoindian site locations have been found along the mid-peninsular drainage divide in Delaware (Custer 1989:105), where a mosaic of poorly drained settings surrounds well-drained knoll features. Paleoenvironmental data from the mid-peninsular drainage divide documenting these early Holocene landscapes have been obtained from the Dill Farm Site (Custer and Griffith 1984).

The Archaic period (6500 to 3000 BC), as traditionally defined, is characterized by increasing sedentism and more efficient adaptation to local resources (Caldwell 1958). The continuity from Paleoindian through Early Archaic times noted by Gardner (1977) obscures the distinction between the two periods. Continuity in subsistence and settlement systems through the Early Archaic Palmer and Kirk phases, as observed by Gardner (1977), provides support for the classification of all sites within this continuum as Paleoindian. Custer (1984, 1989), in agreement with this point, notes this by including the Early Archaic within the Paleoindian period.

*Note: Paleoindian sites, considered to be the earliest prehistoric sites in Delaware, are commonly found on well-drained surfaces adjacent to wetlands and/or near outcrops of high-quality stone suitable for use in making stone tools.*

Most of the Early Archaic (late Paleoindian) sites are known solely from surface finds, many of which are simply isolated projectile point recoveries. Stratigraphic data supporting the defined sequences for projectile point styles are derived mainly from sites in the Ohio Valley (Broyles 1971), Meadowcroft (Adovasio et al. 1975), and the Shenandoah Valley (Gardner 1974). Diagnostic projectile point types representing Early Archaic occupations in the region include, primarily, Palmer corner-notched, Kirk notched and stemmed, MacCorkle, and a variety of lesser-known types. Sites containing these styles of projectile points have a similar distribution to fluted-point sites in Delaware, such as along the mid-peninsular drainage divide (Custer 1989:108). Recent excavations at the Blueberry Hill Site (7K-C-107), along the St. Jones River in Dover, have produced deeply buried early Holocene components defined by Palmer and bifurcate points (Heite and Blume 1995).

Many of the Early Archaic (late Paleoindian) sites with intact components are very likely in submerged contexts in the Delaware and Chesapeake drainage estuaries. Many of these sites were inundated during the early Holocene as sea levels rose with the melting of continental glaciers in northern regions of the continent. Submerged terrace surfaces have produced numerous finds,

including Paleoindian projectile points, during times of low tide (Gardner and Wall 1978), indicating that a substantial number of sites lie in drowned estuaries along the Atlantic seaboard.

*Note: The Early Archaic period peoples, very similar in many ways to their Paleoindian predecessors, are also represented by sites often found on well-drained surfaces adjacent to wetlands and/or near outcrops of high-quality stone. Many of these sites were flooded by the rising waters of Chesapeake Bay, which, over the last 10,000 years, has essentially drowned many of these locations.*

Subsequent Middle Archaic period occupations (6000 to 3000 BC) are marked by the diagnostic bifurcate projectile point style. Again, most of the sites of this period are known through projectile point finds on Holocene terraces (e.g., the Blueberry Hill Site) and upland surfaces, as well as along estuaries, swamp margins, and near springheads. Most of these sites, too, are surface finds and are often located in drowned valleys, estuarine settings, and upland or interior headwater areas. There are relatively few radiocarbon-dated components from this period in Delaware; however, a few examples exist, such as at the Two Guys Site (7S-F-68), which produced a date of  $7560 \pm 60$  BP (Beta-56049) (LeeDecker et al. 1996). A variety of lithic raw materials are represented on these sites, including argillite, quartz, quartzite, rhyolite, jasper, and several varieties of cherts and chalcedonies. Middle Archaic occupations represent some significant changes in early Holocene adaptations in the region which involve exploitation of a wider range of environments and new additions to the toolkit, such as drills and, later, groundstone items.

*Note: By the Middle Archaic period, small camps were distributed across the landscape, along riverbanks, near springheads, near estuaries, and in the same wetland locations traditionally settled in earlier times. The expansion of these peoples into new types of environments brought improvements in stoneworking technology, and the addition of new tool forms. This trend continued into the Woodland I period (also called the Late Archaic period in nearby regions), and use of the landscape intensified. Much greater efficiency developed in hunting, fishing, and food gathering, and there were also technological improvements and innovations such as stone bowls and spearthrowers, and the use of groundstone tools such as axes, gouges, and celts.*

Buried early Holocene components are more commonly found in upstream areas in the nearby Delaware and Susquehanna drainages. Sites such as Blueberry Hill (Heite and Blume 1995), however, seem to represent an exception, and can be explained by localized accretion of aeolian deposits on exposed bluff edges.

The first two millennia of the Woodland I period (ca. 3000-1000 BC) in the Delmarva region are marked by assemblages typically containing scrapers, drills (often fashioned from resharpened points), adzes, celts, netsinkers, anvilstones, and steatite bowls. The appearance of groundstone tools, used for the processing of gathered wild plant foods, illustrates a reliance on new technology related to shifts in subsistence practices. One of the more common diagnostic artifacts representing this period is the Orient Fishtail point. A few fishtail points, as well as Bare Island points, also found during this time, were recovered from the Drawyer Creek South Site during Phase III excavations.

Long and well-dated sequences from single profiles in the Delmarva region are limited, but radiocarbon dates have been obtained from individual site occupations. These dates cover most of

the span of Delaware prehistory. However, more often than not, even data recovery projects, such as Paradise Lane (Riley et al. 1995), Wrangle Hill (Custer et al. 1995), and others, have produced little or no datable carbon samples. Dates on materials other than shell have been derived from such sites as the Hawthorn Site (7NC-E-46), where a pit feature associated with stemmed and notched points was dated to 2250 BC (UGa-5378) (Custer and Bachman 1984); the Delaware Park Site (7NC-E-41), where a semi-subterranean pit house associated with a grooved axe and a biface cache was radiocarbon-dated to 1850 BC (UGa-3440) (Thomas 1981); and the Clyde Farm Site (7NC-E-6a), where a platform hearth associated with a stemmed point and Dames Quarter ceramics was dated to 1005 BC (UGa-5376) (see Custer 1989:appendix 2; Custer et al. 1986). At Lums Pond (Petraglia et al. 1998:46), radiocarbon dates were obtained from an occupation in Area 2 that produced narrow bladed stemmed points (Poplar Island). The calibrated dates range from 850 to 1380 BC. A component containing stemmed points at the Two Guys Site (7S-F-68) was radiocarbon dated to  $2640 \pm 140$  BP (LeeDecker et al. 1996).

Radiocarbon-dated contexts from areas in the Lower Susquehanna region and the nearby Potomac River Valley provide a comparative chronological framework for dating initial Woodland I occupations on the Coastal Plain. Some of these sites and the chronologies developed from them were the basis for constructing the initial chronology for Delaware. An initial sequence was developed by Stephenson and Ferguson (1963) which includes, for example, Piscataway, Otter Creek, Vernon, and Brewerton projectile point forms to represent the various cultural phases within this time frame. Otter Creek points have been found in both Middle and Late Archaic components (Funk 1965; Steponaitis 1980). An earlier dated context from the nearby Lower Susquehanna River Valley is the Duncan Island Site in Lancaster County (Witthoft 1959), a stratified Archaic site which contained evidence of hearths in B-horizon contexts. This site also showed fairly intensive use of quartzite and argillite, which Kinsey (1959) notes is characteristic of Poplar Island culture.

At Bare Island, Kinsey excavated a buried component containing large stemmed and notched points, along with bannerstones, gorgets, groundstone axes, celts, and grinding stones. The grinding stones indicate more intensive exploitation of local plant foods, suggesting perhaps a more sedentary existence, a trend which is evident for the Late Archaic period as a whole. Lithic materials most commonly utilized in the Bare Island occupation include rhyolite, siltstone, argillite, and quartz. Recoveries of steatite vessel fragments are further indications of tendencies toward a more sedentary economy. The steatite was most likely quarried from sources downstream at Christiana and Delta. Vinette I pottery (exterior cordmarked, usually tending toward vertical; and interior-horizontal) was also recovered from excavations at Bare Island.

Evidence obtained from surface collections in the Delmarva region shows a greater use of local lithic resources during the Woodland I period than by earlier Middle Archaic peoples. For example, there was a heavy reliance on quartz and quartzite as well as rhyolite, a nonlocal material obtained from the Blue Ridge. Settlement patterning in the Lower Delaware Valley during early Woodland I times appears to have been focused more on riverine resources. Surface site data from the area also show an increase in site size at this time. This would perhaps suggest the gradual focusing of subsistence strategies on locally abundant resources such as shellfish and fish spawns (as evidenced by netsinkers on many of the large sites) and a dramatic increase in local populations. At the same time, new types of environments being exploited included a much wider use of ephemeral (interior headwater) locations along the mid-peninsular drainage divide. The emergence of a sedentary way

of life developed as a result, supported by subsistence economies that may be considered focal, in Cleland's (1976) sense, although a much broader range of resources was being exploited at this time. In this part of the Coastal Plain, there were most likely seasonal occupations which depended on the productivity of riverine and estuarine resources and the seasonal availability of mast in the upland/interior locations.

The Woodland I period is also marked by the introduction of ceramics and the emergence and development of burial ceremonialism. Burial ceremonialism was more widespread in certain areas of eastern North America (e.g., the Ohio Valley and the southern Great Lakes region); in other areas, such as the Delmarva Peninsula, the evidence is limited chiefly to surface finds of trade items (e.g., Adena blocked-end tubular pipes) along major streams. A cremation site (West River Site) from which Adena artifacts were recovered is one of the few buried features dating to this time period in the region (Ford 1976). Comparable sites have been excavated in Delaware, as described by Thomas (1970) and classified by Custer (1994) within the Delmarva Adena complex.

There is presently no evidence of cultigens in the region at such an early date. It is assumed that Woodland I (Early Woodland) populations subsisted mainly by hunting, gathering, and fishing, in a manner not unlike their Late Archaic period predecessors. Sites associated with low-order drainages are most likely representations of hunting camps.

Vinette I pottery, a crushed quartz (or chert/grit) interior-exterior cordmarked type, is one of the earliest diagnostic ceramic types for the Early Woodland in much of the Middle Atlantic region; its regional variants in Delaware are composed of high percentages of crushed rock. However, Marcey Creek, a steatite-tempered ware (Manson 1948), followed by Accokeek pottery, a crushed-quartz-tempered ware, are the primary time markers for Early Woodland in the Delmarva region. Early Woodland sites are generally larger than sites of previous times, and there seems to have been an increasing reliance on estuarine resources such as shellfish. This is evidenced by finds of large shell-midden sites (Wright 1973) in the region dating to this time period.

*Note: Pottery was first used during Woodland I times to replace the stone bowls used by earlier peoples. Although early attempts at making pottery were relatively crude, pottery vessels were a marked improvement over the heavy stone containers earlier times. Other innovations that came about during this period included burial ceremonialism and the burial mound phenomenon. These new ideas were spread through a broad-based trade network that resulted in long-distance exchange of exotic raw materials and finished objects, such as pipes, blades, polished stone ornaments, and other portable works of art. The everyday functional toolkit remained little changed from earlier times, but hunting, fishing, and gathering methods continued to improve. While stone toolkits remained relatively unchanged, ceramic containers appear to have improved over time. Vessels gradually become thinner, more homogeneous in composition, more elaborately decorated, and more durable. This would indicate a linear path of technological improvement with little incidence of failure over the last 2,000 years.*

Intensification in trade networks over a large region characterizes the end of the Woodland I period (500 BC to AD 1000). There was also an expansion of horticultural practices, although hunting, fishing, and plant collecting were still important subsistence pursuits. The subsistence economy is also marked by the initiation of maize horticulture (Gardner 1982), but this activity may have been

limited in many areas of the Coastal Plain in favor of intensive hunting, fishing, and collecting in resource-rich estuarine areas.

Pottery styles characteristic of this period changed to net-impressed wares (e.g., Popes Creek) and Mockley (late Middle Woodland). The large number of sites for this time period and the extensive size of some of the sites support the argument for possible seasonal aggregation and dispersal (Steponaitis 1980; Wheaton and Reed 1988). Toolkits utilized by late Woodland I peoples were basically the same as those used during the subsequent Woodland II period. However, a greater quantity of more exotic lithic materials are represented in late Woodland I assemblages. Technology seems to have been geared toward bifacial tool production rather than a prepared core and blade flake technology such as would be expected in the Ohio Valley.

The Clyde Farm and Barker's Landing complexes are defined by Custer (1989:192, 1994:22) as the principal divisions in early Woodland I times, i.e., from circa 3000 and 500 BC. The Clyde Farm Site (7NC-E-6) is the type site for the complex bearing its name. The site is a large macroband camp containing Marcey Creek and Dames Quarter ceramics, platform hearths, possible storage pits, and a pit house (see Custer et al. 1986), all signs of a sedentary existence. The Barker's Landing Complex is similar to Clyde Farm, but distinctions can be made based on the presence at Barker's Landing of a large proportion of artifacts manufactured from nonlocal raw materials such as argillite (most common), steatite, and rhyolite. The type site and similar macroband camps are located on the mid-peninsular drainage divide; at the time of the site's occupation, this freshwater-saltwater interface zone is believed to have been an environment extremely rich in resources (Custer 1989:224).

Subsequent Woodland I complexes described by Custer (1989, 1994) include Wolfe Neck, Carey, Webb, and the previously mentioned Delmarva Adena complex, each with its distinctive cultural attributes and regional patterns of distribution. A tripartite (macroband/microband/procurement site) system of site classifications within each complex is exemplified by sites such as the Delaware Park Site (7NC-E-41), a Clyde Farm Complex macroband camp; the Bank Site (7NC-E-67) (Custer et al. 1986), a microband base camp represented by scattered hearths, lithic manufacturing debris, staged bifaces, stemmed points, broadspears, early ceramics, and steatite (Custer 1989:200); and procurement sites, which are small scatters in upland or interior settings characterized by scatters of a few flakes, isolated tools, and, in some instances, cobble deposits utilized as raw material sources (Custer 1989:200).

*Note: Pottery manufacturing techniques continued to improve during Woodland I times, but stone toolkits used for everyday subsistence tasks remained relatively unchanged. Although cultivated plants such as maize were introduced, they were limited contributions to an economy that was heavily oriented toward exploiting the rich fish, shellfish, and aquatic plant life (e.g., wild rice) of Coastal Plain estuaries.*

The Woodland II period in the Delmarva Peninsula may be divided into two complexes: the Slaughter Creek Complex and the Minguannan Complex. In the southern Delmarva Peninsula, diagnostic artifacts for the Slaughter Creek Complex include Townsend ceramics and triangular projectile points. Large Slaughter Creek Complex macroband camps, some of which may have developed into large village communities, typically contain storage pits and other indications of

long-term occupations and sedentary lifeways. Most of the larger Slaughter Creek sites are distributed in the Delaware Shore, Mid-Drainage, and Coastal/Bay physiographic zones of southern Delaware (Custer 1984, 1986). By comparison, in many regions of the Middle Atlantic, by around AD 1300, maize agriculture was well established and many of the settlements were fortified.

The Minguannan Complex is the comparable cultural complex defined for the northern part of the Delmarva Peninsula (Custer 1989:311). Typical Minguannan ceramics may be described as well made, grit-tempered, and very similar to Potomac Creek ceramics. Diagnostic lithics include triangular points. While sedentism developed to a greater degree during this time in northern Delaware, as evidenced by storage pits, house patterns, and other indications of long-term occupations, there does not seem to have been a clear shift to horticultural production in the context of large village settlements. Instead, there is a great deal of continuity between Woodland I settlements established in favorable estuarine and other wetland settings and subsequent Woodland II occupations. Examples of such continuity include the Hell Island, Delaware Park, and Clyde Farm sites (Custer 1982; Thomas 1966, 1982; Wright 1962). The continuity is expressed in the persistence of a hunting/gathering/fishing subsistence pattern focusing on seasonally productive interior and estuarine resources. This pattern is not unlike those revealed at the Abbott Farm Complex sites of the Late Woodland period, near Trenton, New Jersey, and is also supported by ethnographic information on the Lenape, one of the groups inhabiting the region around the time of European contact (Stewart et al. 1986; Weslager 1972).

Other trends in the Late Woodland period in the region include shifts in lithic raw material preferences. These shifts may relate to the development of more sedentary lifeways, the increasing reliance on horticultural products (e.g., corn, beans, and squash), and a concomitant de-emphasis on intensive hunting and gathering. The result would have been a diminution of site catchment areas, which would, in turn, have resulted in more limited exploration for lithic raw materials and greater dependence on near-camp resources, as well as those easily obtained through trade.

*Note: During the Woodland II period, identified on many northern Delaware sites by the decorated ceramic style known as Minguannan, large multifamily camps grew into hamlets and villages. Although maize and other domesticated plants were cultivated at this time, it is believed that the rich game, fish, shellfish, and edible plant resources associated with estuaries were still heavily exploited. The further development of storage technology permitted the accumulation of surplus food stores and supported a more settled way of life at this time. This pattern continued for a short period after European contact in the 1600s, but traditional lifeways soon disappeared.*

The protohistoric period in northern Delaware, i.e., the period of first contact between Delaware aboriginal groups and European settlers, is represented by upheaval in native societies. This occurred as a result of disease, forced migration, the introduction of European manufactured goods into native material culture assemblages, and the inevitable economic chaos resulting from rapid changes in subsistence practices. There are very few sites dating to this time period in Delaware. Archival source information describes minimal interaction between local native residents and the European newcomers. There is substantial information, however, regarding the role the Susquehannocks played in dominating the fur trade in this region at the head of Chesapeake Bay. A small number of descendants of the original Native American inhabitants of Delaware still reside in the state today.