II

BACKGROUND AND PREVIOUS RESEARCH

A. PREVIOUS ARCHAEOLOGICAL STUDIES

Site 7S-F-68 was initially identified during a 1988 survey of the Route 113 right-of-way between Georgetown and Milford (LeeDecker et al. 1989). The site occupies a small knoll or low ridge which is surrounded by extensive low-lying, poorly drained tracts (Figure 1). There is no nearby surface water, and a small wetland zone to the south corresponds to the headwater area of a small unnamed tributary stream.

During the Phase I fieldwork, two transects of two shovel tests each were excavated within the existing DelDOT right-of-way. The shovel tests were placed 15 meters apart and the transects were separated by 11 meters because of the small area within the right-of-way that appeared relatively undisturbed. One chert flake was recovered from the ground surface and five additional flakes were retrieved from two of the shovel tests. A range of lithic material was present, including jasper, ironstone, and quartz, in addition to chert.

Historic material was also recovered from all four Phase I shovel tests. This material included a delftware sherd, a square-cut nail, and amber bottle glass. Unidentifiable metal and flat glass were noted in two of the shovel tests but discarded in the field. Based on late nineteenth-century and early twentieth-century maps, the survey area was not defined as having potential for an historic occupation, and the initial survey did not identify any evidence of an historic structure or foundation associated with the site.

The 1991 Phase II evaluation consisted of site-specific historical research and more intensive archaeological examination, including the excavation of additional shovel tests and test units. A complete chain of title was prepared, and the 4 Phase I shovel tests were supplemented by 24 Phase II shovel tests and 12 test units. With one exception, the Phase II test units measured 1x2 meters in plan. The Phase II testing began with the extension of a grid over the site area, aligned with the highway right-of-way, and shovel tests were placed at 6-meter intervals according to a systematic unaligned pattern. The site occupies a low knoll that slopes down to a small wetland area, and it has been downcut on the east by the highway and on the north by a gravel and shell driveway leading to the automobile repair shop. The shovel testing suggested that the site area extends outside the right-of-way to the west, but the owner of the adjacent property would not permit archaeological testing on his land. Based on the Phase II testing, the site was estimated to cover an area measuring approximately 35 meters north-south, extending at least 20 meters west from the shoulder of Route 113 (Figure 2).

The Phase II excavations demonstrated that the soil stratigraphy was relatively straightforward, consisting of a plowzone (Ap-horizon) that overlay a weathered subsoil. The soils consisted primarily of fine sands, with some mottling and argillic development visible in the lowermost levels. In the most elevated area of the site, the A-horizon was severely truncated, while the downslope area exhibited a much more massive organic surface soil. The shovel testing indicated that the prehistoric materials were most concentrated in the more elevated portion of the site, with decreasing densities in the northern downslope area near the wetland. Prehistoric materials were recovered from depths of more than one meter.

Features identified during the Phase II fieldwork included a dog burial (Feature 1) and a charcoal concentration (Feature 2). The dog burial was located at the northern periphery of the site and within the gravel driveway area leading to the automobile repair shop. The deceased animal had been placed in a shallow rectangular shaft; aside from the skeleton, the burial pit fill was culturally sterile except for a quartz projectile point. It is believed that the dog burial is an historic or modern feature, notwithstanding the presence of a prehistoric projectile point. Feature 2 was a concentration of charcoal identified immediately beneath the plowzone. No artifacts were recovered from the feature during excavation; however, four liters of soil were retained for flotation processing. A 3.0-gm sample of charcoal from the feature yielded a radiocarbon date of 1140 $\pm$ 60 years BP (Beta-46395), which falls in the terminal Woodland I period. The feature probably represents a cooking area, although there was little associated fire-cracked rock that would suggest use as a dry roasting hearth. Aside from charcoal, the flotation samples did not contain any charred botanical material that would provide information regarding the site's prehistoric environment or the subsistence practices of the site occupants.

The Phase II artifact collection contains both prehistoric ceramics and lithics. A total of 27 prehistoric sherds were recovered, including both shell- and sand/grit-tempered wares. As a whole, the ceramics

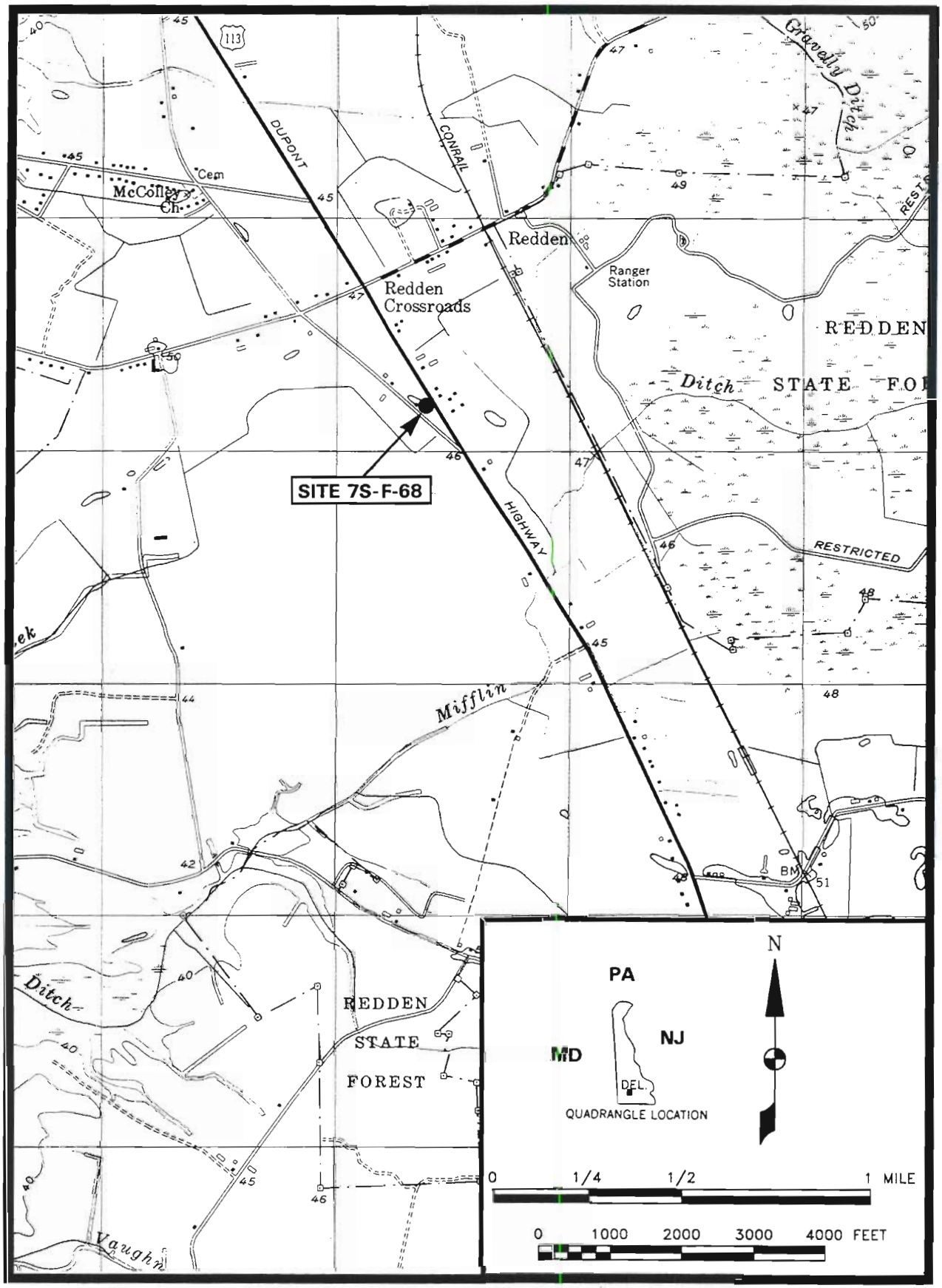

FIGURE 1: Site Location

SOURCE: USGS 7.5 Minute Quadrangle, Georgetown, Del., 1954 (Photorevised 1983)

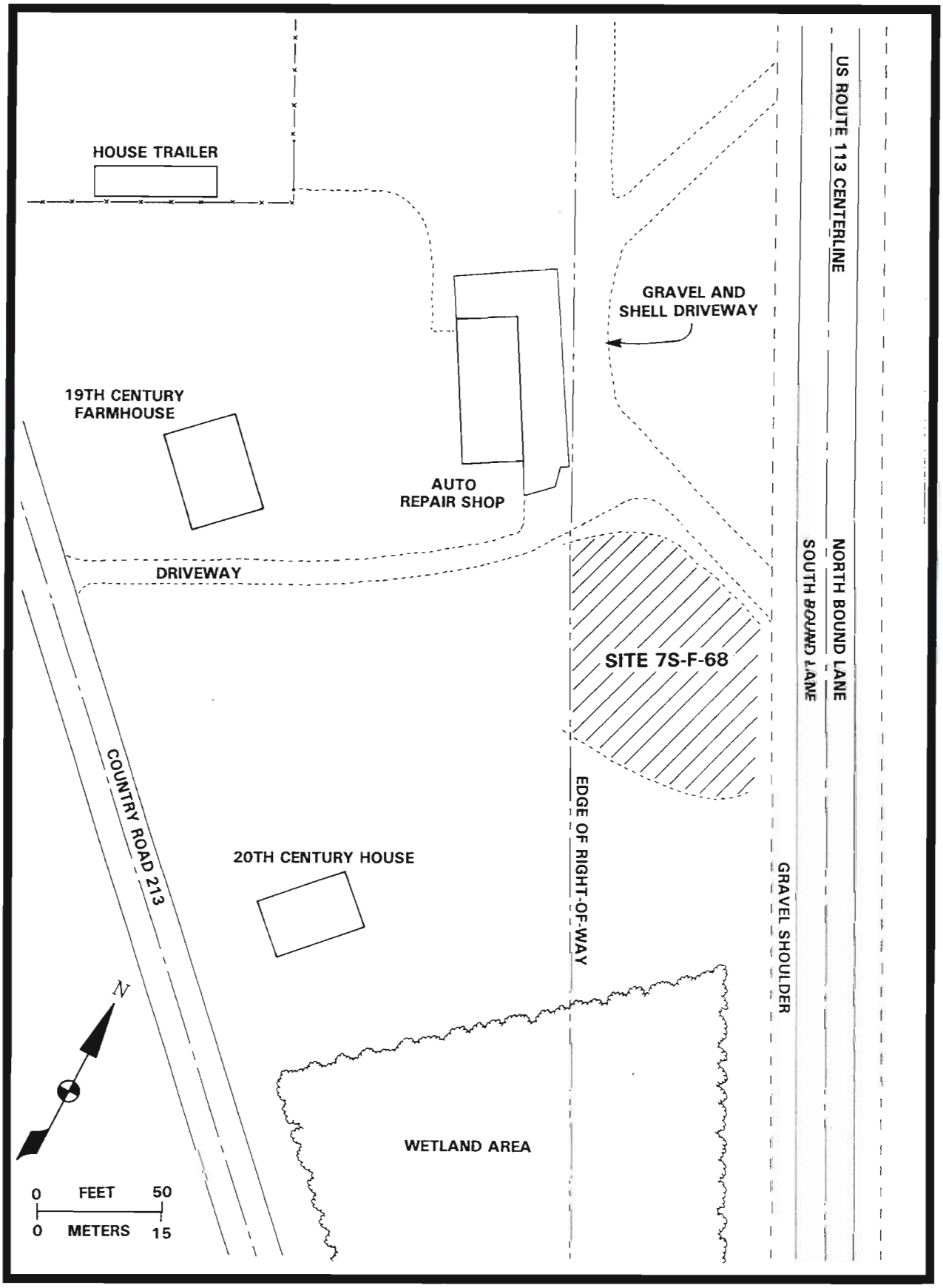

FIGURE 2: General Site Plan

were poorly preserved, and few of the sherds exhibited identifiable surface decoration. One rim sherd was identified in the collection, but none of the sherds was large enough to permit a determination of vessel form. The shell-tempered ceramics may all be placed within the Townsend series, indicating occupation of the site during the Woodland II period. The sand/grit-tempered ceramics were not identifiable as to specific ware group, and they are considered only a general Woodland period indicator.

The Phase II lithic assemblage contains a broad range of artifact types and raw materials. Although dominated by cryptocrystalline materials (jasper, chert, and chalcedony), the assemblage also contains appreciable amounts of quartz and quartzite, which are widely available in secondary cobble deposits throughout the Coastal Plain. Jasper, chert, and quartz account for the majority of the chipped-stone tools, but there are also some bifaces made of argillite, chalcedony, and rhyolite.

The bifacial implements include 13 projectile points, most of which are complete enough for typological identification. Two of the points resemble the St. Albans point type (Broyles 1971), which is an Early Archaic diagnostic. A third possible Early Archaic point is represented by a heavily beveled and resharpened quartz blade fragment. Late Archaic use of the site is indicated by the recovery of single examples of Otter Creek (Ritchie 1971), Halifax (Coe 1964), and Teardrop (Kraft and Blenk 1974) points. However, the chronology for the Archaic period is not well developed in Delaware, and it is possible that the Otter Creek and Teardrop points extend back into the Middle Archaic, while the Halifax point type may extend into the Woodland I period. Four points in the collection resemble the Rossville point type (Ritchie 1971), which appears in Delaware after circa 500 BC. One jasper Jack's Reef corner-notched point (Ritchie 1971) and an untyped stemmed point made of jasper also date to the Woodland I period. Other bifaces in the collection include 2 middle-stage bifaces and 4 unidentifiable fragments. The unifacial tools include 1 endscraper, 3 utilized flakes, and 1 retouched flake. These tools suggest a range of generalized processing or maintenance tasks. A single pitted cobble may be indicative of plant food processing activities. Lithic production tasks are well represented by cores and debitage. The majority of the cores exhibit bipolar production, a technique that permits maximum exploitation of available raw material. The various types of debitage in the collection indicate that the full range of the lithic reduction sequence was carried out at the site, from initial decortication and early reduction to bifacial thinning. Fire-cracked rock, indicative of cooking or heating activities, is represented primarily by quartzite, with minor occurrences of ironstone, quartz, siltstone, and sandstone.

The Phase II testing indicated that Site 7S-F-68 was used repeatedly during the Archaic and Woodland periods of prehistory. The site would be classified as a procurement site or microband base camp (Custer 1984), by reason of its environmental setting and small size. Archaeological criteria for identification of procurement sites and microband base camps are not well developed, but existing prehistoric settlement pattern models (Custer 1984) indicate that these site types are typically located on knolls or well-drained soils adjacent to wetland areas or low-order streams.

The recovery of a delftware sherd during the Phase I survey aroused interest in the site's historic component. During the Phase II fieldwork, a small amount of additional historic material was recovered, but analysis indicated that the historic deposits represented a combination of modern litter and sheet refuse associated with a farmhouse that faces Route 213, which is the old Georgetown-Milford Road. The title search indicates that the site area was historically associated with the farmhouse facing Route 213, and that structure is located roughly 150 feet from the site area (see Figure 2).

The site's Phase II historic assemblage is dominated by bottle glass, much of which is attributable to littering. Seven additional delftware sherds were recovered during the Phase II excavations, but otherwise the historic ceramic assemblage consists entirely of whiteware, ironstone and yellowware. The Mean Ceramic Date (South 1977) for the assemblage is 1850.2, which is markedly earlier than dates obtained for the other historic sites tested along U.S. Route 113. Without delft, the site's Mean Ceramic Date is 1897.5 and consistent with the other tested historic sites along Route 113. The presence of delft in the assemblage would be suggestive of a colonial occupation, but there is little else in the assemblage to support assignment of a seventeenth- or eighteenth-century date. Other than one heavily worn gunflint, no material that would suggest an early historic occupation was recovered. Another notable aspect of the historic assemblage is the presence of shell button wasters; similar deposits have been noted at several other sites along U.S. Route 113. Shell button manufacturing was one of Sussex County's important industries, and was carried out in both industrial and domestic settings. At Site 7S-F-68, this material was in a pavement context, and it was not considered archaeologically significant (LeeDecker et al. 1992).

B. REGIONAL PREHISTORY

Custer (1984, 1986a) has divided the prehistory of

Delaware into four periods: (1) the Paleoindian period (ca. 12,000 BC - 6500 BC), the Archaic period (ca. 6500 BC - 3000 BC), the Woodland I period (ca. 3000 BC - AD 1000), and the Woodland II period (AD 1000 - AD 1650). The European Contact period (ca. AD 1600 - 1750) marks the final years of Native American occupation of the area during early European colonization of the state. While Custer's chronology utilizes the traditional Paleoindian/Archaic/Woodland cultural stages, his bracket dates differ significantly from those used by most archaeologists in the surrounding region. Custer's chronology differs most significantly from the prevailing regional model in the truncation of the Archaic period. Most investigators bracket the Archaic period from roughly 8000 to 1000 BC, and divide the Archaic into Early, Middle and Late subperiods. Custer includes most of the Early Archaic period (circa 8000 - 6000 BC) in the Paleoindian period, and he subsumes the Late Archaic period (circa 3000 - 1000 BC) into the Woodland I period. Issues related to prehistoric chronology are discussed in more detail in Chapter IV.

The Paleoindian period marks the initial occupation of the state by small groups of nomadic Native American hunters and gatherers. Their presence coincided with the amelioration of late Pleistocene glacial environmental conditions throughout eastern North America and the beginning of early Holocene conditions: that is, cold temperatures and alternating periods of wet and dry conditions. The economic system of the Paleoindians was based largely upon the hunting of large, cold-adapted animals, including both migratory and nonmigratory species. Although direct evidence of Paleoindian use of nonmammalian food resources is lacking in the archaeological record of Delaware, paleoenvironmental data indicate that their exploitative territories included habitats in which plant foods and other edible resources were available. Palynological and geomorphological data suggest that the vegetation in Delaware during the Paleoindian period consisted of a mosaic comprised of deciduous and boreal forests and grasslands that would have provided graze, browse and shelter for a variety of small and large mammals. In conjunction with various surface water settings, these habitats would have been focal points for Paleoindian foragers.

Custer, following Gardner (1974 et seq.), views the Paleoindian settlement pattern as highly focused on sources of high-quality lithic material. Based on Gardner's work on the Flint Run complex, Custer defined a variety of Paleoindian site types: quarry sites, quarry reduction stations, base camps, base camp maintenance stations, outlying hunting sites, and isolated point finds. Custer discusses two alternative Paleoindian settlement pattern models that would reflect differential regional distribution patterns of lithic raw material. The cyclical model would be most applicable to settings that contain a single lithic source area, while the serial model would be applicable in territories that include a number of widely separated sources.

The stone tool kit of the Paleoindians was characterized by a limited number of bifacial and unifacial implements that suggest heavy emphasis on the procurement and processing of animal resources. These implements include projectile points, hafted and unhafted knives, scrapers, and less formalized flake tools. Of these, the fluted point is the diagnostic hallmark of the Paleoindian period. Other point styles indicative of the later part of this cultural period include both unfluted triangular forms and notched and stemmed points. The distributions and environmental settings of Paleoindian sites and isolated point finds suggest that these people maintained a way of life that consisted of relatively frequent movements of single or multiple family groups to and from resource-rich habitats. It appears that this basic subsistence/settlement strategy persisted with only minor variations for approximately 5,500 years.

Custer has identified a concentration of Paleoindian sites along the Mid-Peninsular Drainage Divide of the Delmarva Peninsula, a physiographic unit that encompasses the 7S-F-68 site area. Using modern LANDSAT imagery, it was found that Paleoindian site loci were strongly correlated with poorly drained or swampy areas. The Hughes complex in Kent County exemplifies this Paleoindian site distributional pattern. This complex includes a series of six surface finds located on low, well-drained knolls within or adjacent to a large freshwater swamp and other poorly drained areas (Custer 1986a:49-51).

The Archaic period is characterized by a series of changes in prehistoric Native American technologies, subsistence, and settlement. These shifts are interpreted as gradual human responses to the emergence of full Holocene environmental conditions. The landscape was dominated by mesic oak and hemlock forests. Reductions in open grasslands brought about by warm and wet conditions resulted in the extinction of certain cold-adapted grazing animal species (i.e., caribou and bison) that were the favored prey of Paleoindian groups. An alternative interpretation is that these vegetational changes were favorable to browsing animals such as deer which flourish in forest settings (Custer 1984, 1986a).

A rise in the sea level and an increase in precipitation at the beginning of the Holocene would have facilitated the development of inland swamps within the Mid-Peninsular Drainage Divide. At this time,

Native American populations in these locales shifted from the more hunting-oriented foraging pattern of the Paleoindian period to one in which plant foods became a more important part of their economies. In southern Delaware, large swamp habitats such as Cedar Swamp and Burnt Swamp would have served as locations for the first large residential base camps, possibly occupied by several different family groups. Associated with these larger group camps are more numerous and smaller procurement sites situated in various settings that would have been favorable for hunting and gathering activities during different seasons of the year.

Based primarily on the work of Gardner (1978 et seq.), studies by Custer define three types of Archaic sites: macroband base camps, microband base camps, and procurement sites. The three site types are distinguished primarily by their environmental settings, the size of the occupant group, and the range of activities carried out at the site. Macroband base camps are located in settings that afford access to the greatest range and quantity of resources, and they exhibit evidence of occupation by relatively large groups that carry out a broad range of activities. Procurement sites represent the opposite end of the Archaic site type continuum. They exhibit evidence of occupation by small groups that carry out a limited range of activities, and they are located to afford access to a specific resource (Custer 1984, 1986a).

Archaic tool kits differ from those of the Paleoindian period in that they include a number of artifacts indicative of plant food processing (i.e., grinding implements and stone mortars). Although Archaic groups in Delaware appear to have been less mobile than the preceding Paleoindian populations, they were more mobile than later Woodland period groups. The sizes of Archaic exploitative groups seem to have fluctuated seasonally and with the availability of food resources.

Based upon palynological and geomorphological data from the Middle Atlantic region, the Woodland I period has been described as a time of "dramatic change in local climates and environments" in which "a pronounced warm and dry period" (i.e., a mid-postglacial xerothermic) began at approximately 3000 BC and persisted to approximately 1000 BC (Custer and Bachman 1984). During that period, the mesic oak and hemlock forests of the Archaic were replaced by more drought-resistant (xeric) oak and hickory forests and more abundant grasslands. Although these conditions effected the drying up of some interior streams, continued sea level rise resulted in the creation of highly productive and large brackish water marshes in coastal areas. In essence, the xerothermic is hypothesized to have effected shifts in the distributions of plant and animal species and the establishment of new resource-rich settings in some areas of the state.

In turn, these proposed shifts in climate, environmental conditions, and resource distributions are believed to have resulted in radical changes among resident prehistoric Native American populations in the study area, including a trend toward greater sedentism and more complex systems of social organization and interactions. For example, major river floodplains and estuarine swamp habitats became the primary resource zones and the locations of large residential base camps occupied on a multi-seasonal or year-round basis. Such sites are particularly prominent in northern Delaware; they include the Delaware Park Site, the Clyde Farm Site, the Crane Hook Site, and the Naamans Creek Site. Artifact assemblages and features from these sites suggest intensive utilization by prehistoric populations and a trend toward more sedentary lifeways. In southern Delaware, there was an increase in the utilization of shellfish in the coastal areas, concurrent with an inland shift in the locations of macroband base camps along the tidal drainages. Within the Mid-Peninsular Drainage Divide zone, there is little evidence that site distribution patterns changed from the preceding Archaic period (Custer 1984, 1986a).

Custer has observed that the Woodland I settlement pattern is characterized by a reduction in the number and variety of site locations utilized, although the three primary site types established during the Archaic period--macroband base camps, microband base camps, and procurement sites--continued into the Woodland period. However, Custer notes that Woodland period macroband base camps were significantly larger than Archaic macroband base camps, and there is some regional variation in the settlement patterns in various physiographic zones.

The tool kits of Woodland I groups are generally similar to those of the Archaic, with the addition of such items as heavy woodworking tools, soapstone and ceramic containers, broad-bladed points, and netsinkers. The increased abundance of plant processing tools over the preceding period suggests more intensive utilization of plant foods, which by the end of Woodland I times may have approached the level of productive intensification. The presence of non-local lithic materials such as argillite, rhyolite, and soapstone are interpreted as indicators of incipient regional trade and exchange networks. Soapstone and ceramic vessels are viewed as items that facilitated more efficient food preparation and storage of surplus foods. Pit features employed for food storage and the remains of prehistoric dwellings have been documented at the Delaware Park and Clyde Farm sites in northern Delaware.

The inferred reduction in overall group mobility, the presence of certain artifact types indicative of intensified resource processing, the possible generation of food surpluses, the presence of artifact caches, and the possible existence of increased interregional exchange networks as inferred from the presence of nonlocal lithic raw materials are interpreted as indicators of the initial development of ranked social organization as opposed to earlier egalitarian systems.

The Woodland II period within the Middle Atlantic region is marked primarily by the development of horticulture and increased sedentism. During this period, settlements became larger and more permanent and tended to be located adjacent to areas with easily worked floodplain soils. This period is also characterized by an attenuation in the interregional trade and exchange systems. The shift to agricultural food production effected important changes in the Woodland II settlement pattern, although the settlement pattern included the basic site types established during the Archaic period--macroband base camps, microband base camps, and procurement sites. Two Woodland II complexes have been defined for Delaware. In southern Delaware, the Slaughter Creek complex is characterized by the presence of Townsend ceramics, triangular projectile points, large macroband base camps and possibly fully sedentary villages with numerous food storage features. Most major sites assigned to the Slaughter Creek complex have been identified in the Delaware Shore, Mid-Drainage, and Coastal/Bay physiographic zones of southern Delaware. Current Slaughter Creek complex settlement models indicate that the Mid-Peninsular Drainage Divide Zone would have been used for special resource procurement sites (Custer 1984, 1986a).

The European Contact period is marked both by the initial contact between the Native American inhabitants of Delaware and European colonists and the subsequent total collapse of traditional native lifeways and socio-political organization. The picture is further complicated by the paucity of sites dating to this important period within the state. However, historical sources indicate that resident Native American populations had minimal interaction with European settlers and were subjugated by the Susquehannock Indians of southern Lancaster County, Pennsylvania. A small number of descendants of the original Native American inhabitants of Delaware still reside in the state today.