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MIDDLE AND LATE WOODLAND SETTLEMENT AT GREAT NECK, SITE 44VB7 IN VIRGINIA BEACH, VIRGINIA

A Thesis

Presented for the

Master of Arts

Degree

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Mary Ellen Norrisey Hodges

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ABSTRACT

This thesis examines Middle and Late Woodland archaeological components at the Great Neck site (44VB7) located in Virginia Beach, Virginia. Middle Woodland remains are examined to determine what function Great Neck served within regional settlement systems. The types of features at the site, their spatial relationships, and variation among ceramic assemblages are analyzed to establish the number of occupations represented by the archaeological deposits and the size and duration of the settlements associated with each. It is concluded that two distinct regional populations utilized Great Neck during the Middle Woodland. The site contains the remains of multiple occupations by a population associated primarily with the estuarine zone of southeastern Virginia who established base camps, comprised of perhaps a few small kin groups, which were abandoned for only short periods during the annual cycle. A population associated primarily with the interior freshwater zones of northeastern North Carolina and southeastern Virginia used the site on a more transient basis.

Late Woodland remains are examined for information on sociopolitical structure and cultural variation among coastal Algonquian populations. These two aspects are considered relevant to understanding the development and evolution of the paramount chiefdom of the Powhatans during the 16th and early 17th centuries in the Coastal Plain of Virginia. It is concluded that structural and mortuary features provide evidence for positions of ascribed status among the population which resided at Great Neck ca. A.D. 1330-1510. Archaeological data have yet provided no unequivocal proof that populations

in southeastern Virginia comprised an ethnic group distinct from districts of the Powhatan chiefdom located elsewhere within the James River drainage.

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CHAPTER 1

INTRODUCTION

To those familiar with the archaeology of the Coastal Plain of Virginia, the Great Neck site is recognized as one of the largest and most significant sites in the region dating from the Woodland period of prehistory. Located in the City of Virginia Beach, the site is situated on Great Neck Peninsula, roughly 2 km southeast of Lynnhaven Inlet (Figures 1, 2, and 3). Traces of Native American activity dating from the Paleo-Indian and Archaic periods have been found either within or in the immediate vicinity of the Great Neck site, but the area is most important for the record preserved there of the lifeways of peoples who lived during the Middle and Late Woodland periods (ca. 500 B.C. through A.D. 1600). The Great Neck site proper (44VB7) is comprised of the remains of overlapping Middle and Late Woodland settlements which, as presently understood, extend for a distance of at least 640 m along the south shore of Broad Bay. The archaeological investigations reported here indicate the most intensive use of the site occurred during the periods ca. A.D. 300-400 and A.D. 1400-1500.

For many years following prehistoric Native American settlement at Great Neck, the forces of nature, particularly processes of erosion along the shoreline of Broad Bay, constituted the most severe threat to the preservation of the archaeological remains. During most of the historic period, Great Neck Peninsula was a sparsely populated agricultural region, and human impact on the archaeological remains from the building of structures and plowing could be considered relatively minor within a statewide context.

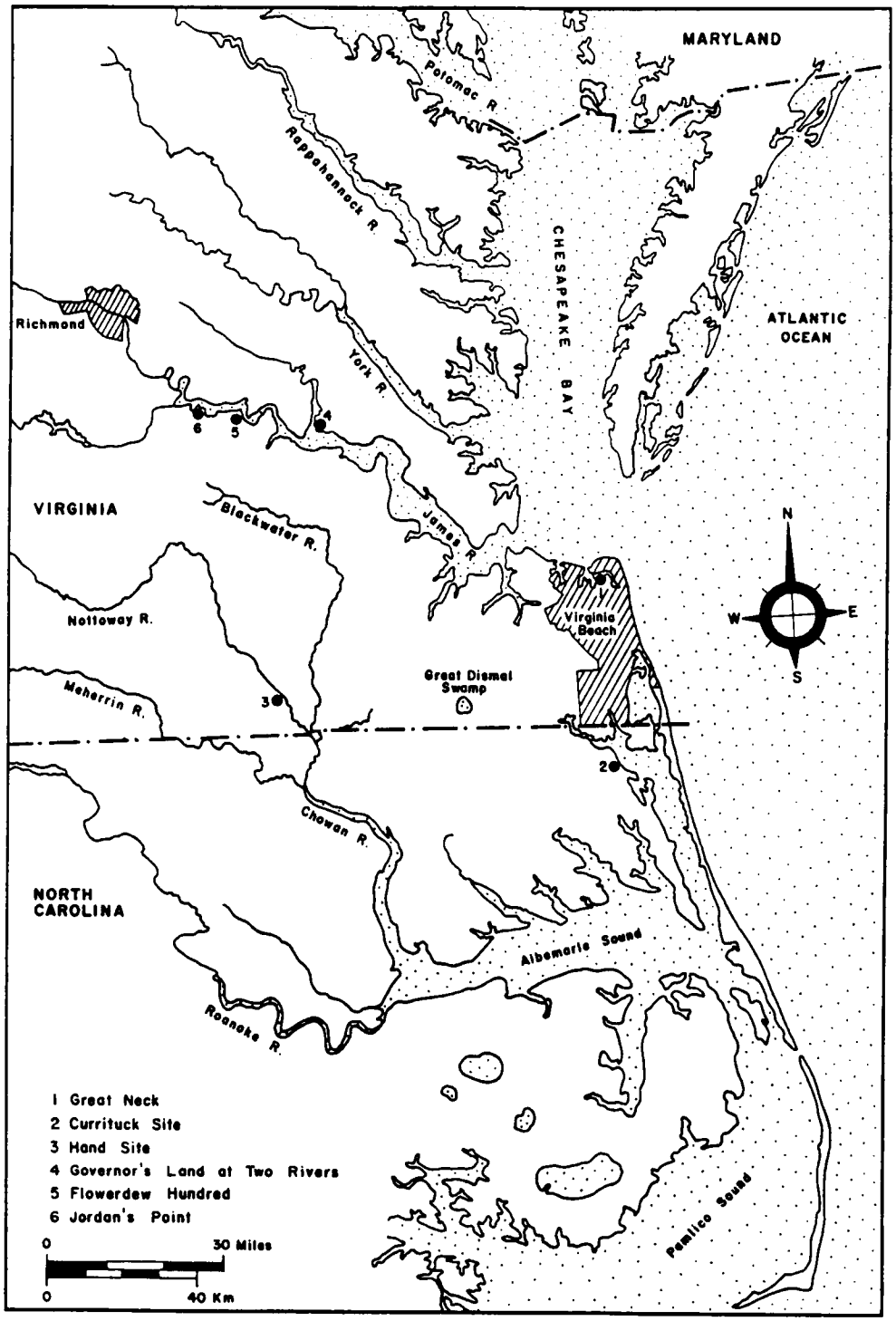


Figure 1. Location of the Great Neck site within the coastal regions of Virginia and North Carolina.

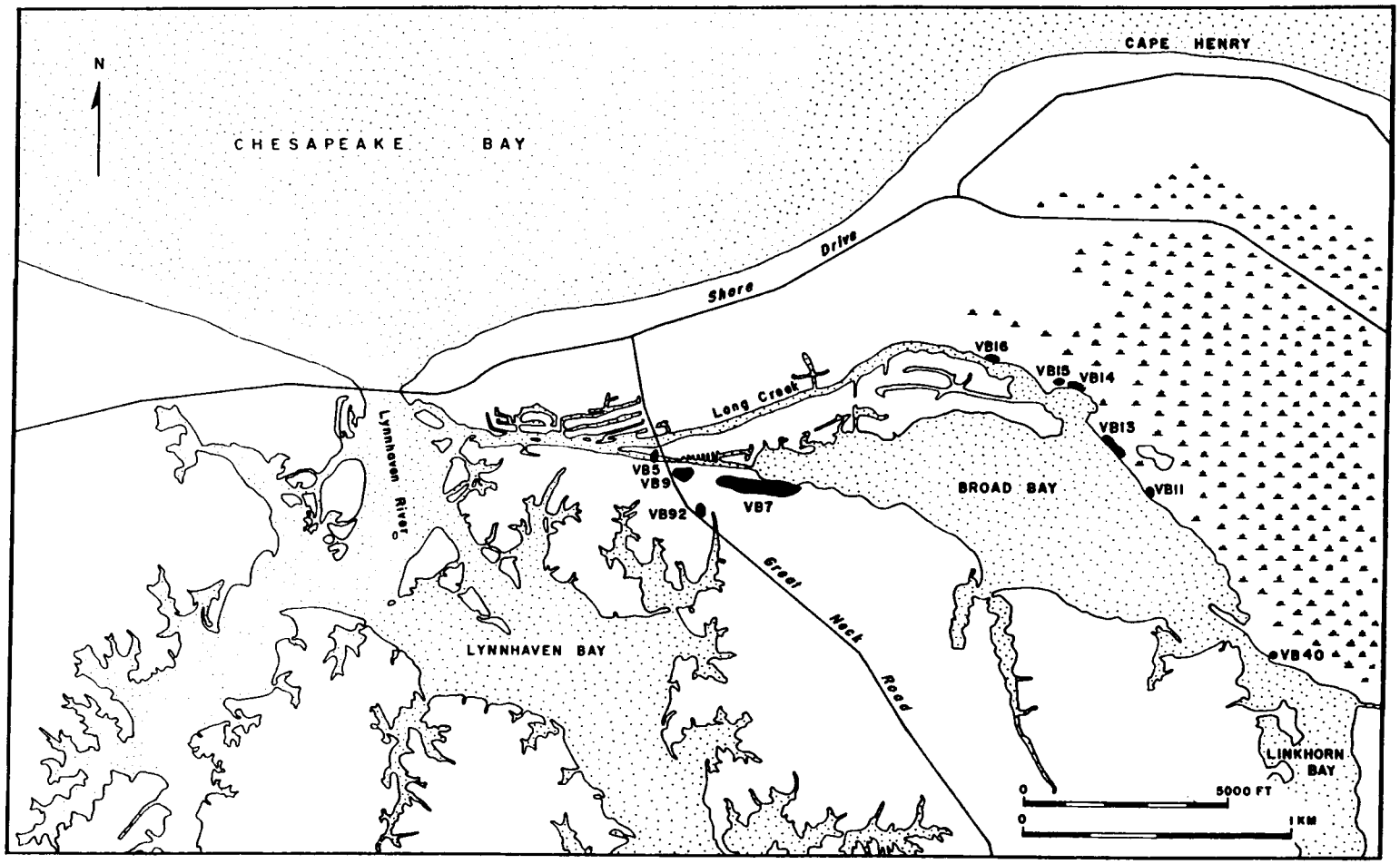


Figure 2. The Great Neck site and immediate environs.

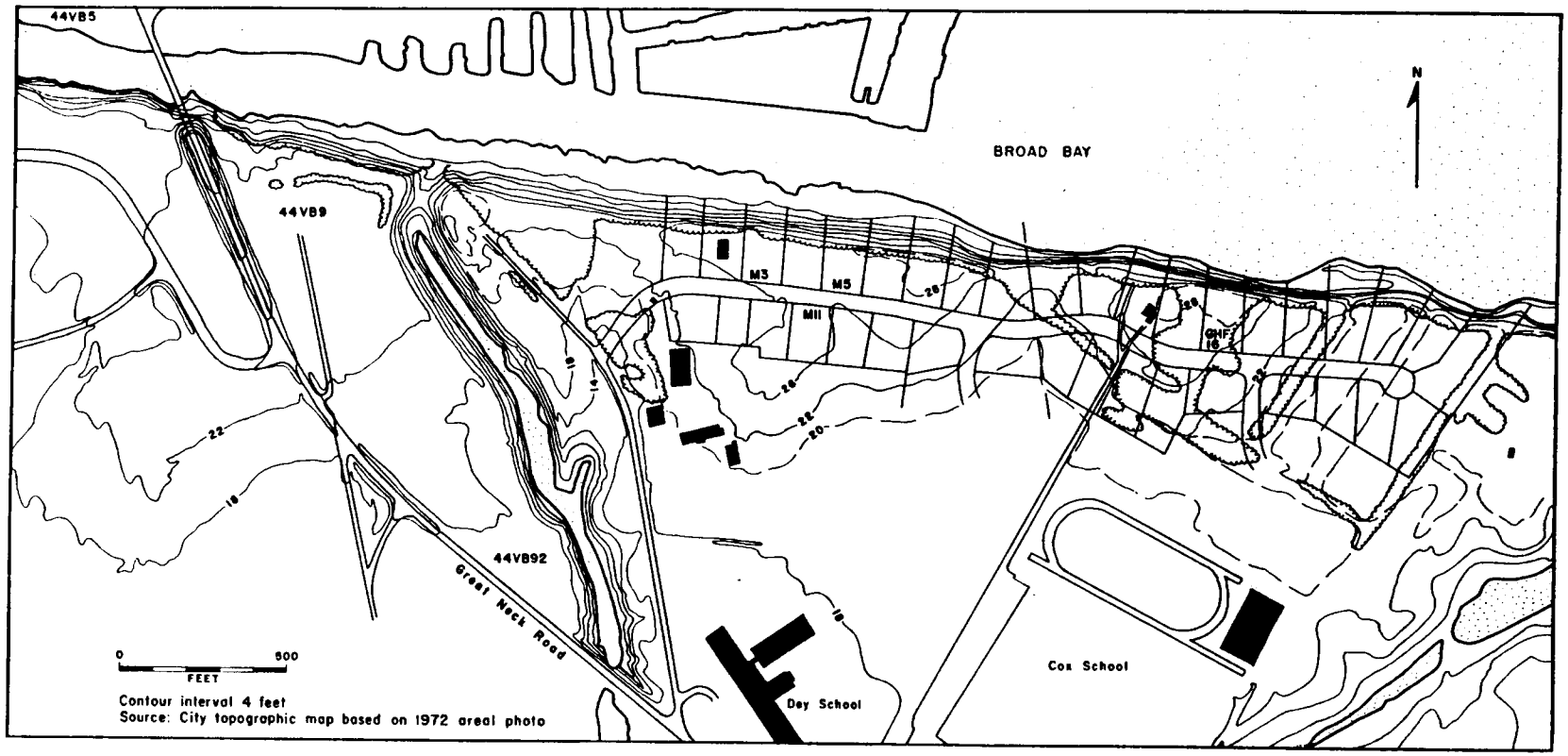


Figure 3. Relationship of Great Neck and lots investigated by VDHR to local topography.

This situation changed in the 1970s as the City of Virginia Beach experienced rapid economic and population growth. Plans from this period called for residential development of the Great Neck site, which at present is encompassed by two subdivisions, Meadowridge and Green Hill Farms, each comprised of single family dwellings situated on one-half to one-acre parcels.

Fortunately, a number of individuals and organizations were able to conduct archaeological excavations at several locations within the Great Neck site prior to residential construction. The Virginia Department of Historic Resources (VDHR) participated in this effort beginning in 1981, sponsoring the excavations which are the focus of this report.

The report opens with a discussion of Great Neck's environmental and cultural context (Chapter 2) and a discussion of the research questions which guide the analysis of the archaeological remains presented here (Chapter 3). Following a review of excavations at the site by individuals and organizations other than the VDHR (Chapter 4), the remains encountered on each of four residential lots investigated by the VDHR are described in separate chapters. Middle Woodland remains at Great Neck are analyzed for information pertinent to determining the role the site played within local and regional settlement systems. Examination of Late Woodland remains focuses on the recognition of socio-political organization and cultural variation and affiliation among coastal Algonquian peoples in Virginia and North Carolina.

The residential lots examined by the VDHR are discussed in chronological order by date of investigation. Lot 16, in the Green Hill Farms subdivision, was the first

property examined by the VDHR, and was found to contain structural, processing, and mortuary features associated with a palisaded settlement dating from the second half of the Late Woodland period (Chapter 5). Traces of Middle Woodland occupation and the remains of a late 19th/20th-century agricultural structure were also encountered within the areas tested. The focus of VDHR excavations in 1982 on Lot 3 in the Meadowridge subdivision was a cluster of Middle Woodland pit features presumably used for storage and processing and dating from ca. A.D. 300-400 (Chapter 6). A few artifacts and one burial dating from the Late Woodland period were also found. The two other lots examined in the Meadowridge subdivision also contained remains of both Middle and Late Woodland settlement. In excavations on Lot 11 in 1986, the VDHR uncovered several Middle and Late Woodland pit features and the remains of possibly four structures, at least two dating from the Late Woodland period and one possibly from the Middle Woodland (Chapter 7). Lot 5, tested during the winter of 1986/87, was found to contain a number of Middle Woodland pit features, most of which had previously been excavated by avocational archaeologists (Chapter 8). The intensive Middle Woodland settlement on the property was followed by a Late Woodland occupation indicated by several small processing features, three burials, and the remains of post structures.

The artifacts recovered in VDHR excavations are described in each of the chapters devoted to the four lots. Ceramic vessel sherds are also discussed in an additional chapter (Chapter 9) which examines these artifacts in relation to the specific research questions which underlie this work as a whole. Drawing on the work of the

VDHR and others, the report concludes with a summary of the culture history of the Great Neck site.

CHAPTER 2

ENVIRONMENTAL AND CULTURAL CONTEXT

The Great Neck site is situated in the Outer Coastal Plain of southeastern Virginia in a near-coastal, yet relatively well protected location within the City of Virginia Beach. The site lies inland just over 5 km southwest of the Old Cape Henry Lighthouse, which marks the mouth of the Chesapeake Bay on the Atlantic Ocean. This location would have provided a particularly rich environmental setting for aboriginal occupation during the Woodland period due to its proximity to the estuarine resources of several drowned tributaries of Chesapeake Bay and its association with elevated, well drained, and agriculturally productive soils.

The climate of the Outer Coastal Plain in southeastern Virginia is relatively mild. As measured at Norfolk, Virginia, the average daily minimum temperature in winter is 33° F, while the average daily maximum in summer is 85° F. Annual precipitation is 45 inches with 56% of this falling from April through September (Hatch et al. 1985:1-2).

The Great Neck site lies along the south shore of Broad Bay, which flows westward to enter the Lynnhaven River near its confluence with the Chesapeake Bay at Lynnhaven Inlet. These waterways contain extensive areas of tidal flats and brackish water marshlands and would have supported a wide array of mammalian, finfish, shellfish, and plant species of potential economic importance to the native inhabitants.

Great Neck is positioned at the northern end of Oceana Ridge, an elevated landform probably formed as a barrier island very late during the Pleistocene. The ridge

extends southeastward from Broad Bay for a distance of 11 km parallel to the Atlantic Coast. The Great Neck site lies along the crest of the ridge where elevations reach 25-30' AMSL (Oaks and Coch 1973:21-22, 89).

The soils on Oceana Ridge in the vicinity of Lynnhaven, Broad, and Linkhorn bays are of the State-Tetotum-Augusta series which includes well drained, moderately well drained, and somewhat poorly drained soils with a loamy subsoil (Hatch et al. 1985). The soils of the Great Neck site itself are State loam on 2-6% slopes, a deep, well drained soil considered prime farmland (Hatch et al. 1985:26-27). While almost 48% of the land surface in the City of Virginia Beach is classified as potential prime farmland, roughly three-quarters of this acreage requires drainage in order to be suitable for cultivated crops (Hatch et al. 1985:Tables 4 and 5). Much of this poorly drained acreage is located on the broad Mount Pleasant Flat, an incompletely dissected landform extending west, south, and east of Oceana Ridge from the Western Branch of the Lynnhaven River to Back Bay and the Atlantic Ocean (Oaks and Coch 1973:21).

Lands located north of Oceana Ridge are also generally unsuited to cultivation. Much of this area now comprises Seashore State Park and consists of a series of convex sand ridges separated by marshy flats. The relatively restricted areas of Fripp sand which top the ridges are excessively drained and have a low available water capacity (Hatch et al. 1985; Oaks and Coch 1973:23).

A number of researchers have examined the environmental structure of the Coastal Plain of Virginia and its influence on population distribution and size, settlement systems, sociopolitical organization, and cultural interactions among the native inhabitants

during the Woodland period (Binford 1964; Egloff 1985; Mouer 1991; Turner 1976). While much of this work has focused on the Inner Coastal Plain and fall line transition zone, the Outer Coastal Plain of southeastern Virginia also presents an interesting study region in this respect. The close proximity of the different environments associated with the Chesapeake Bay and Carolina Sounds drainages in southeastern Virginia may be particularly important for understanding cultural development and interactions during the Woodland period.

Similar to areas north of the James River, the Outer Coastal Plain of southeastern Virginia is characterized by very low relief and elevation, with only few areas standing higher than 15 ft AMSL. Elevation ranges approximately 20-70 ft AMSL across the Inner Coastal Plain, which extends from the Suffolk Scarp (which forms the western border of the Great Dismal Swamp) westward to the fall line. Relief within the Inner Coastal Plain may be 20-50 feet in areas away from the major streams (Oaks and Coch 1973:8).

In southeastern Virginia, the divide between the Chesapeake Bay and Carolina Sounds drainage systems lies only about 10 km south of the Great Neck site. Following the divide westward, it runs first to the southwest to encompass the tributaries of the Elizabeth River within the James River drainage, and then to the northwest and southwest to skirt the Great Dismal Swamp which is included in the Carolina Sounds drainage. From Suffolk westward the divide trends to the northwest again to end up roughly 10 km south of the James River in the vicinity of Hopewell. The remnant of a third drainage system comprised of Rudee Inlet, Owl Creek, Salt Pond, and Fresh Pond lies southeast

of Great Neck, but this has been nearly destroyed by headland retreat of the Atlantic Coast (Oaks and Coch 1973:10-11).

East of Isle of Wight County, the major rivers which comprise the Chesapeake drainage in southeastern Virginia include Chuckatuck Creek, the Nansemond River, the Elizabeth River, the Lafayette River, Little Creek, and the Lynnhaven River. The tributaries of the Carolina Sounds drainage which flow through the Outer Coastal Plain of Virginia include the Northwest and North Landing rivers, which empty into Currituck Sound, as well as the Great Dismal Swamp. The Meherrin, Nottoway, and Blackwater rivers are major components of the Carolina Sounds drainage which originate within the Piedmont or at the fall line and flow south or southeast across the Virginia Coastal Plain to meet the Chowan River at or a few miles south of the Virginia-North Carolina border. From here the Chowan flows into Albemarle Sound. The confluence of the Nottoway and Blackwater rivers with the Chowan River is situated about 80 km southwest of Great Neck, while Lake Drummond in the Great Dismal Swamp is located within a distance of about 50 km.

The waterways comprising the Chesapeake Bay and Carolina Sounds drainages in southeastern Virginia differ in many respects. Saltwater from the Atlantic Ocean enters the Chesapeake Bay and the James River relatively unimpeded, and the saltwater zone of the James extends upriver as far as the mouth of the Chickahominy River. Tributaries of the James and Chesapeake Bay in the Outer Coastal Plain in southeastern Virginia are relatively short, and saltwater penetrates deeply into the interior. The

mouths of the waterways are embayed and their shorelines are lined with brackish water marshes.

While portions of the Carolina Sounds drainage are equally as embayed as components of the Chesapeake system, north of Cape Lookout the Carolina Sounds system is protected from direct saltwater intrusion by a chain of barrier islands which has few inlets leading from the Atlantic Ocean. Thus, the waters of Currituck Sound are essentially fresh. Brackish water marshlands line the eastern shores of Albemarle Sound, but freshwater swamp forests are found at the mouths of the major rivers which enter the sound. The Great Dismal Swamp and the East Dismal Swamp are the largest examples of the many interior freshwater cypress and tupelo gum swamps characteristic of the Coastal Plain of northeastern North Carolina (Binford 1964:42; Oaks and Coch 1973:10-11; Schoenbaum 1982:8-9, 72, 74, 77, 106, 115-116).

The different environmental characteristics of the Chesapeake Bay and Carolina Sounds drainage systems may explain the presence and distribution of at least two distinct cultural traditions within southeastern Virginia by the beginning of the Woodland period. At present, these traditions are most clearly distinguished by their material culture. The environmental structure and relative productivity of the two drainage systems may also account for less well understood differences in settlement and subsistence systems associated with each cultural tradition.

The Woodland period, as defined by the development of a ceramic technology, begins ca. 1,200 B.C. in Virginia. As elsewhere in the Eastern Woodlands, a number of general trends are associated with the Archaic/Woodland transition in Virginia. By

the Late Archaic, settlement patterns begin to reflect a decline in residential mobility, an increased focus on riverine and estuarine settings, and an expansion of the subsistence base with subsequent intensification in the use of certain resources.

While all would agree that an increasing degree of sedentism is reflected in the archaeological record of the Early Woodland (ca. 1,200 B.C. - 500 B.C.), Middle Woodland I (ca. 500 B.C. - A.D. 200), and Middle Woodland II (ca. A.D. 200 - A.D. 900) periods in Virginia, there is some difference of opinion among researchers about whether fully sedentary settlement systems, in which at least a portion of a population resided year-round at the same location (Rafferty 1985:115), were present prior to the Late Woodland. Some have suggested that sedentary systems existed during the Early and Middle Woodland periods in the vicinity of Portsmouth and Virginia Beach (Gardner 1982, 1987; Mouer 1992; Painter 1988); the Outer Piedmont in the James River Valley (Mouer, Ryder, and Johnson 1981a, 1981b); the Outer Coastal Plain of the Northern Neck (Potter 1982); and the Shenandoah River Valley (Gardner 1982, 1987). But, as Blanton (1992:71) has noted, other than contrasts in site size and in artifact density between large and small sites, there is little evidence yet available to support the idea these systems were sedentary. Exceptions include seasonality data derived from analysis of vertebrate faunal remains from Middle Woodland II contexts at the Maycock's Point (44PG40) site in the Inner Coastal Plain on the James River (Barber 1981) and the discovery of substantial Early Woodland structures at the 522 Bridge site (44WR329) on the North Fork of the Shenandoah River (McLearen 1992a).

Blanton (1992:69-71) has proposed two basic models to explain the Early and Middle Woodland large site/small site dichotomy which is found throughout the state. In the first, which conforms generally to the logistical model defined by Binford (1980), base camps occupied by an extended kin group were established on a seasonal basis for the exploitation of certain preferred, predictable resources. From these settlements, subunits of the larger group dispersed to procurement camps. Both base camps and procurement camps were supplemented by more briefly occupied foray camps. Under the second model, which accounts for a greater degree of social integration among regional populations, the larger sites are interpreted as "aggregation" sites where extended kin groups from adjoining territories gathered at least annually at certain resource-rich locations.

Related to the reduction in residential mobility which characterizes the Archaic/Woodland transition in Virginia is the development of subregional traditions by the Early Woodland. These are best reflected in the archaeological record by different technologies and styles of ceramic manufacture, and likely indicate an increase in territorial circumscription, perhaps due to population growth (Blanton 1992:69; Egloff 1985). While ceramic distributions are distinct, they do overlap, and thereby suggest that territorial boundaries were flexible (McLearen 1992b:46).

Research by Painter (1988) and Phelps (1983) has documented the presence of at least two major cultural traditions within the Coastal Plain of southeastern Virginia and northeastern North Carolina during the Early and Middle Woodland. For the Early Woodland, Painter (1988) has identified the "Currituck Culture," which "inhabited the

seacoast, barrier islands, and coastal estuaries (the bays, sounds, and river mouths) of the region," and the "Dismal Swamp Culture," which "inhabited the elevated fringes and raised ridges or islands within the Great Dismal Swamp, its tributary swamps and small streams, its outlet rivers to the south and east and other freshwater swamps and smaller inland rivers to the west and northwest of the Great Dismal Swamp." Each culture is associated with ceramic manufacturing traditions which show a roughly parallel evolution in vessel shape, but which can be distinguished by trends in the tempering agents employed.

Painter (1988) has identified Waterlily Plain, a shell-tempered ware produced in low, oval, flat-bottomed forms with lug handles, as the earliest ceramic associated with the Currituck Culture. He believes the ware may date even earlier than ca. 1550 B.C. and, similar to Stalling's fiber-tempered ceramics in coastal South Carolina (Sassaman et al. 1988:91), may have preceded the manufacture of steatite bowls in the region. A few sherds of Waterlily Plain have been recovered from shell midden sites in the vicinity of Currituck, while five cached pots have been found in the town of Waterlily situated on the western shore of Currituck Sound (Painter 1988:16-17).

Waterlily Plain was followed in the Currituck Culture by two ceramics which were manufactured in taller, open-mouthed jar forms with lugs or small knobbed handles and distinctive circular, flat bottoms which flare at the base. These types, Great Neck Plain and Craney Island, were tempered, respectively, with shell and clay, and shell, clay, and sand. These wares in turn were succeeded by similarly-shaped vessels of the Currituck type which lack handles. Painter believes the earliest Currituck wares were

tempered with shell and clay and the later with shell only. He has obtained radiocarbon dates ranging from 810 B.C. $\pm$260 to 660 B.C. $\pm$ 60 on "beaker" forms without handles at the Currituck site in North Carolina, where he described the ceramics as "shell-tempered, sand-tempered, and sherd-tempered... cord-marked, fabric-impressed, and net-impressed... Sometimes they combine two or more tempering agents such as shell and sand, or shell, marl, and sand" (Painter 1977:47-48; 1978).

Painter (1988) associates both aceramic and ceramic components of his Dismal Swamp culture with Perkiomen projectile points, although it might be more reasonable to assume that these points predate the manufacture of ceramics and are instead associated only with steatite bowls. The earliest ceramic identified in the area is the White Marsh type, a steatite-tempered ware produced in vessel forms similar to those of the Currituck culture type Waterlily Plain. The steatite-tempered Marcey Creek type and the steatite and clay-tempered Dismal Swamp type which followed White Marsh were produced in taller, oval forms with lug handles. They were succeeded by the Cypress Swamp Knobbed type, a clay-tempered ceramic made in tall, lugged, beaker forms. The latest type in the developmental sequence within the Dismal Swamp culture is a clay and sand-tempered ceramic of the Currituck type, produced in beaker forms lacking handles.

While Painter's research has produced information relevant for understanding the distribution of cultural traditions in coastal versus interior sections of southeastern Virginia, Phelps's (1983) research best highlights contrasts between the cultural traditions found along the Virginia versus North Carolina coasts. The discovery of Stallings fiber-tempered ceramics within the North Carolina Coastal Plain is among Phelps's most

important findings. The ceramic is relatively common as far north as the Neuse River drainage. Phelps (1983:27) notes that "...the implication of this distribution is the earliest known boundary between the Southeast and Middle Atlantic subareas."

The fact that three sites along the Chowan River have also produced fiber-tempered ware also provides some clues to early ceramic development within the Middle Atlantic region, suggesting that the technology is unlikely to have developed independently, but rather from influences from the south (Egloff 1991:246-247). Stallings fiber-tempered ceramics date from ca. 2500 - 1300 B.C. The earliest radiocarbon date yet obtained on ceramics in Virginia is 1160 B.C $\pm$ 70. This date is associated with Bushnell Plain, a schist-tempered ware (also containing small proportions of clay, fiber, steatite, bone, and shell inclusions) produced in vessel forms similar to those associated with the Waterlily Plain and Marcey Creek types (Waselkov 1982:290-291, Table 42).

Marcey Creek ceramics are found in small quantities in the Coastal Plain of North Carolina, although they are not common in the area. Phelps (1983:29-30) equates the sand-tempered, Deep Creek series with the Early Woodland in northeastern North Carolina. Deep Creek is predominantly cord-marked, although net-marked, fabric-marked, and simple stamped surfaces are also present. Both conoidal and flat bases are associated with the series, although the latter are rare.

The Middle Woodland period in coastal North Carolina is represented by the Mount Pleasant series which includes sand-, grit-, or pebble-tempered ceramics with fabric-marked, cord-marked, net-marked, and plain surfaces. These ceramics have been

radiocarbon dated from A.D. 265 $\pm$ 65 to A.D. 890 $\pm$ 80 (Phelps 1983:31-33). The boundary between a circum-Chesapeake interaction sphere (Egloff 1985) and the North Carolina Coastal Plain at this time is indicated by the distribution of the Mockley series. This shell-tempered ceramic is nearly ubiquitous within the Coastal Plain of Virginia and Maryland north of the James River, but has been found on only a few sites in North Carolina along the Chowan River (Phelps 1983:32). Mockley is also rarely found along the Nottoway and Meherrin rivers in the interior of southeastern Virginia. The predominant Middle Woodland ceramic in this area is Stony Creek, a poorly defined series of sand-tempered ceramics with cord-marked, fabric-marked, and net-marked surfaces comparable to Phelps's Mount Pleasant series (Egloff and Potter 1982:99-103).

Although the distribution of cultural traditions within the Coastal Plain of northeastern North Carolina and southeastern Virginia are beginning to be understood, less information is available on the nature of settlement systems within the region during the Early and Middle Woodland. On the basis of a study of settlement patterns in the vicinity of Portsmouth, Virginia, Gardner (1982) has proposed that a major shift in settlement practices occurred between the Late Archaic and Early Woodland. During the Late Archaic period, seasonal macro-band base camps were established in association with the Dismal Swamp. From these, subunits of the group dispersed to seasonal micro-band base camps established adjacent to the estuaries. Both settlement types were supplemented by foray camps. By the Early Woodland period, the primary focus of the settlement system had shifted from the Dismal Swamp to the estuaries. Sedentary macro-band base camps were established adjacent to the estuaries at their juncture with

freshwater streams. The base camp was supplemented by foray camps as needed, but no seasonal dispersal was necessary.

Information on site size and structure is hard to glean from Painter's work, but, in general, his descriptions of the Currituck Culture also suggest a reduction in residential mobility over time. Sites associated with Waterlily Plain ceramics in the estuarine zone seem to be small, and at least one yielded cached pots suggesting seasonal abandonment and reoccupation. In contrast, at the Currituck site Currituck series ceramics were found associated with structural remains, large pit features, and a predominance of primary versus secondary burials (Painter 1977, 1988). Painter is uncertain whether sites associated with the Dismal Swamp culture are "long-term" habitations or seasonally-occupied base camps, although he notes that no structural patterns or pit features have yet been identified at these locations (Painter 1988).

Phelps admits that little is known about Early Woodland settlement systems within the North Carolina Coastal Plain, but suggests that they may represent a continuation of Late Archaic patterns. By the Middle Woodland period, a major change is evident. Small interior streams are occupied less frequently, and the number of sites associated with the major rivers, the estuaries, and the coast increases. Site types include seasonal base camps in each of these zones and, possibly, sedentary villages (Phelps 1983:33-35).

By the Late Woodland period, settlement systems based on sedentary village settlements supplemented by small procurement sites and hunting quarters were the norm throughout the Coastal Plain of Virginia (Rountree 1989:45). Sixteenth and 17th-century ethnographic accounts as well as a limited amount of archaeological data on subsistence

remains indicate that by this time agriculture played a significant role within the economy (Barfield and Barber 1991; Rountree 1989:44-47). While site settlement locations suggest horticultural practices may have been introduced within the Coastal Plain of Virginia as early as the Early Woodland period, a dearth of systematic ethnobotanical data makes it presently impossible to assess for the Early and Middle Woodland either the importance of the oily and starchy seeds which comprised the Eastern Agricultural Complex or the development of these herbaceous annuals toward cultigen status within the state. Maize pollen estimated to date from ca. 250 - 50 B.C. has been recovered from a peat profile in the Great Dismal Swamp (Whitehead 1965), but the earliest remains of corn and beans in archaeological contexts in the Virginia Coastal Plain post date ca. 900 A.D.

While no evidence for other than tribal organization exists for the Early and Middle Woodland periods in Virginia, the ethnohistorical record indicates that chiefdom level societies had arisen by the late 16th century within the Coastal Plain of North Carolina and Virginia (Feest 1978a:277-278; Rountree 1990:10; Turner 1986:21-22). Political authority was further consolidated within the Virginia Coastal Plain during the last few decades of the 16th century with the rise of the paramount chiefdom of the Powhatans. By A.D. 1607, the Powhatan chiefdom incorporated approximately 31 districts distributed east of the fall line from the southern shore of the James River north to at least the southern shore of the Rappahannock River, and perhaps the southern shore of the Potomac River, and including the Eastern Shore. Characteristics of the Powhatan chiefdom included "ascribed positions of leadership, formalized redistribution systems

and priesthoods, and an hierarchical organization which centralized and coordinated economic, socio-political, and religious activities both within and between settlements" (Turner 1988:1). It remains a subject of debate among researchers whether the development of the paramount chiefdom of the Powhatans was the result of purely indigenous processes such as population pressure (Turner 1976, 1985:209-211), or whether it involved external factors, such as a military threat from European or other native peoples or social disruption due to the spread of epidemic disease caused by European contact (Rountree 1989:140-142; 1990:10, 25).

The Great Neck site lies within what was the early 17th-century district of Chesapeake, which extended over what are now the cities of Norfolk, Portsmouth, Chesapeake, and Virginia Beach (Rountree 1990:20). Chesapeake territory was conquered and resettled by the Powhatans through warfare sometime either shortly before or shortly after the founding of the English settlement at Jamestown (Rountree 1990:25-27).

Within the Coastal Plain of southeastern Virginia and northeastern North Carolina, the cultural groups present during the Late Woodland are represented by two ceramic traditions. Shell-tempered ceramics with predominantly fabric-marked or simple stamped surface treatment are associated with the distribution of Algonquian groups within the Outer Coastal Plain of both Virginia and North Carolina as noted in late 16th-century and early 17th-century ethnographic accounts. In Virginia, these ceramics include several types defined within the Townsend series (Blaker 1963; Stephenson and Ferguson 1963:109-113) as well as the type Roanoke Simple Stamped (Blaker 1952;

Harrington 1948). In North Carolina, similar ceramics are subsumed under the Colington series as defined by Phelps (1983:36-37). Cashie, a series of sand-tempered ceramics with predominantly fabric-marked and simple stamped surfaces, is associated with the territories of three Iroquoian-speaking groups, the Tuscaroras, Meherrins, and Nottoways. The Tuscaroras inhabited the Inner Coastal Plain from the Neuse to the Roanoke River, while the Meherrins and Nottoways occupied the Inner Coastal Plain within the drainages of the rivers which bear their names (Phelps 1983:36-47). Within each ceramic tradition, simple stamped surfaces may be primarily associated with the Protohistoric period, or post ca. A.D. 1500.

The presence of Colington series ceramics in coastal North Carolina represents a southern expansion of a shell-tempered ceramic tradition, represented by the Mockley and Townsend series, which spans the Middle Woodland II and Late Woodland periods within much of the Coastal Plain of Virginia and Maryland. Ceramic distributions above the mouth of the Chowan River in the Carolina Sounds drainage are difficult to interpret, but here, too, available data suggest an interior expansion of the shell-temper tradition. Research by Phelps (1982), Binford (1964), and Smith (1984) indicates that Late Woodland shell-tempered ceramics are a significant component of sites as far inland as the mouth of the Meherrin River and at least 15 km above the mouth of the Nottoway River. Collections from these sites contain a very low proportion of shell-tempered, simple stamped ceramics relative to fabric-marked sherds (Binford 1964:Table 45; Smith 1984:Figure 4), suggesting associated components may predate ca. A.D. 1500. In contrast, the high proportion of a Cashie-like ceramic (Branchville) with simple stamped

versus fabric-marked surfaces documented by Binford for several sites at or just below the mouth of the Meherrin River may indicate that associated components may post date A.D. 1500, and may in fact represent early 18th-century settlements of the Meherrin (Binford 1964:259-260, Tables 45 and 51). These interpretations remain tentative, however, and it should be noted that at the Hand site, situated on the Nottoway River southwest of Franklin, Virginia, shell-tempered, fabric-marked sherds were predominant over shell-tempered, simple stamped ceramics in the fill of a burial which was accompanied by a pair of iron scissors and a wood-hafted, hand-wrought nail (Smith 1983:79). Further, the fact that Late Woodland shell-tempered ceramics are distributed within the freshwater tidal zone of the Chowan drainage (the late 16th-century territory of the Chowanook) does not necessarily imply that other cultural practices of the groups who occupied this region where indistinguishable from those found along the North Carolina coast. For example, Phelps (1980) has noted variation between mortuary practices associated with the inner and outer estuarine zones in northeastern North Carolina.

CHAPTER 3

RESEARCH ORIENTATION AND ANALYTICAL METHODS

Archaeological interpretation is fundamentally dependent on the ability to recognize pattern among material remains. In the Virginia Coastal Plain, as elsewhere, efforts to interpret the archaeological record and, ultimately, to explain cultural behavior and processes are stymied by a dearth of systematic survey and excavated data. Until data from a representative regional sample have been acquired, each new site or collection presents a unique case, and pattern cannot be recognized. Thus, much of the report which follows is concerned with basic description of the archaeological remains encountered at Great Neck. The value of some of this information may be proved only in future comparative research.

The Woodland record at Great Neck is also examined below in relation to a number of specific research questions. For the Middle Woodland period, analysis of the archaeological remains is primarily directed toward determining the role the Great Neck site played within local and regional settlement systems.

Upon cursory examination of the Middle Woodland record at Great Neck, one is struck by the large size of the site, the abundance of pit features, and the dense accumulation of artifacts. On the basis of these characteristics alone, it is tempting to assume that the site represents a single settlement occupied for an extended period by a large population group, or perhaps an aggregation site occupied by a number of local groups who gathered together annually on seasonal basis. In recent years, however,

increasing appreciation for the complex cultural and natural processes involved in site formation (Schiffer 1987) has obliged archaeologists to be wary of such easy assumptions. Schiffer (1987:100) defines an occupation as the "continuous and uninterrupted use of a place by a particular group." In interpreting the function of Great Neck during the Middle Woodland period, diverse sources of data need to be critically evaluated to eliminate the possibility, among others, that the large size of the Middle Woodland component and its artifact-rich deposits are not instead the product of multiple, short-term occupations by relatively small population groups.

The number of occupations represented by the Middle Woodland record at Great Neck is assessed in this report by studying the stratigraphic relationship between deposits at the site; but, as Binford (1982:16-17) has noted, the rates of the geological processes which conspire to bury archaeological remains combine with the "tempo of land use, or how frequently a place is utilized," to determine how discretely occupational episodes may be preserved. At a given locale with a slow rate of noncultural deposition and a fast tempo of land use the result may be "palimpsest" assemblages (Binford 1982:16-17; Schiffer 1987:102-103). Given Great Neck's topographic setting, much of the site has been subject to erosion since the Middle Woodland, with noncultural deposition occurring primarily only in down-slope locations through such processes as soil creep, wash, and slumping. Further, within many of the deposits at the site, any evidence of cultural stratification which once may have existed has since been destroyed by plowing.

Although data from vertically stratified deposits at Great Neck are limited, the horizontal distribution of features is also analyzed for information on the number of

occupations represented at the site. For example, the frequency with which Middle Woodland pit features intrude one another -- an indication of reoccupation -- is examined. The absence of such intrusions, however, does not necessarily imply that only a single occupation is represented. If occupation by one group follows closely upon another, the location of earlier features might still be visible to the later group and, thus, avoided. To account for these circumstances, the internal structure of the site is further analyzed to determine if discrete clusters of functionally similar features occur across the site.

The question of contemporaneity among feature clusters must still be addressed if we are to establish the number of occupations as well as the size of the population group represented at any one time at Great Neck. Although refitting of artifacts is often useful in this regard, because of the excavation strategies employed, most collections acquired from the Great Neck site are not suited to this type of analysis. Consequently, the question of contemporaneity is addressed primarily through analysis of technological and stylistic variation between assemblages of functionally similar artifact types associated with different areas of the site. Caution is exercised in attributing such variation to cultural change through time, however, since some degree and type of diversity might be expected at an aggregation site occupied concurrently by a number of local bands (Conkey 1980).

The Middle Woodland record at Great Neck is also scrutinized to assess the degree of permanence represented by the settlement. In addition to site seasonality data provided by Gardner (1990a) and Whyte (1986, 1988), who have studied botanical and faunal remains from the site, three types of features are examined in this regard.

Structural remains are studied, since the size of structures and the amount of labor invested in their construction have commonly been found to be correlated with the degree of real or anticipated mobility among hunter-gatherers. Larger and more substantial structures are associated with reduced mobility (Kent 1991:41-42; Rafferty 1985:129). Evidence for the existence of formal storage facilities at Great Neck is assessed, since these types of features are also correlated with mobility (Kent 1991:39; Rafferty 1985:134). Storage facilities are generally considered indicative of low residential mobility: they represent one strategy to stretch subsistence resources through seasons when local resources are in decline (Rafferty 1985:134). Finally, mortuary features are examined, particularly the presence of secondary versus primary interments and the arrangement of these within the site. Among "forager" societies, in which settlement and subsistence strategies are logistically organized (Binford 1980), the frequency of secondary burial may be correlated with the proportion of the annual cycle spent away from the primary base camps (Hofman 1986:49). The relative frequency of secondary burial should decrease and the establishment of preferred cemetery areas should increase with a reduction in residential mobility.

While this report focuses on determining how Great Neck itself was used by native peoples during the Middle Woodland, the site obviously functioned within larger geographical and cultural contexts during the period. Thus, archaeological data from the coastal regions of southeastern Virginia and northeastern North Carolina are reviewed briefly to establish Great Neck's position within this broader setting.

This report's analysis of the Late Woodland remains at Great Neck is concerned primarily with understanding the nature of sociopolitical organization and cultural variation and interaction among Algonquian societies in coastal Virginia and North Carolina. One of the most interesting features of coastal Algonquian societies in Virginia was the existence by the early 17th century of the paramount chiefdom of the Powhatans (Rountree 1989; Turner 1976). The Powhatans have generated considerable anthropological interest for, as Fitzhugh has observed, they are:

> one of a few examples of ethnographically known 'complex cheifdoms' in the eastern United States, and their origins and development are critical to understanding processes that may have been important in the origins of the more complex Mississippian societies that had become extinct in eastern North America several hundred years earlier (Fitzhugh 1985:199).

Scholars of the Powhatans have proposed a number of sometimes conflicting hypotheses to explain the rise of the Powhatan chiefdom (Binford 1964; Rountree 1989:140-142, 1990:10, 25; Turner 1976, 1985:209-211; 1993), yet these remain to be tested extensively with archaeological data. In fact, as Turner (1986) has pointed out, identification of the Powhatan as a chiefdom level society remains grounded in analysis of ethnohistorical sources. Review of the known archaeological record reveals that "At best, only limited nonconclusive data exist concerning the presence of rank societies in the Virginia Coastal Plain" (Turner 1986:24).

A complete understanding of the evolution of the Powhatan chiefdom awaits require years of directed archaeological research, but analysis of the Late Woodland record at Great Neck potentially can contribute in at least a small way to this process. The site represents one of the many dated contexts which will be required to chart the

development of the paramount chiefdom. It also is a particularly important locale in this respect since it lies within what was the Chesapeake district during the late 16th and early 17th centuries. Turner (1993:89, 1992:115-116) has noted that Chesapeake, which was occupied by one of the largest population groups among the Powhatan, was also among the last districts to be incorporated into the chiefdom. In contrast to other groups which are suggested to have been incorporated through alliance, the Chesapeake were among those conquered through warfare (Turner 1993:87-89). With the aim of further documenting and explaining such variation in the expansion of the Powhatan chiefdom, this report analyzes the Late Woodland record at Great Neck for evidence regarding the nature of sociopolitical organization among the site's inhabitants and for information relevant to understanding economic, social, and political relations among population groups within the Coastal Plain.

The nature of sociopolitical organization at Great Neck is explored by examining two types of features, structural patterns and burials, for evidence of vertical stratification within the society. Ethnohistorical data on coastal Algonquian peoples in Virginia indicate the existence of three levels of ascribed sociopolitical rank in the Powhatan chiefdom: 1) commoners 2) district and village chiefs, and 3) the paramount chief. Turner (1986:23) has suggested that the Powhatans might be identified archaeologically as a chiefdom by the presence of specialized structures. The higher status of paramount, district, and village chiefs was reflected in the size of their houses, which were larger than those of commoners; in the existence of warehouses in which tribute in the form of luxury goods and foodstuffs was stored; and in the existence of temples to which access

was restricted and in which tribute, the mortuary remains of the rulers, and images of their god were watched over by priests (Rountree 1989:144-145; Turner 1986:23). Thus, the structural remains at Great Neck and their spatial associations within the site are examined to determine if these types of specialized structures can be identified.

Archaeologists working in diverse temporal and geographic contexts have employed mortuary remains as a source of information on sociopolitical organization among past societies. O'Shea (1984) has explicitly examined the often unstated principles which underlie such use of mortuary data. For present purposes, the most important of these are:

> Corollary 3a. The nature of the society will pattern and circumscribe the practices for the disposal of the dead; and,
>
> Corollary 3b. The specific treatment accorded an individual in death will be consistent with that individual's social position in life (O'Shea 1984:36).

Based on these premises, the mortuary features at Great Neck are examined to determine if patterned variability in the treatment of individuals indicative of social ranking is present. Five "channels of mortuary variability" (O'Shea 1984:39-44) are examined: age and sex as expressed by physical characteristics of the human remains; preparation and treatment of the corpse; type of mortuary facility; the presence or absence of associated funerary items and their type; and interment location and spatial context.

Building on work by Mouer (1985), who first explored the possibility of ethnic diversity within the Powhatan chiefdom, Turner (1993) has identified five major cultural or political regions which were eventually incorporated into or allied with the Powhatans. While ethnohistorical data indicates that one of these regions, the Chickahominy district,

was politically autonomous from the Powhatan until 1616, identification of the remaining regions rests largely on observations of patterned variation in the distribution of ceramic types in the Virginia Coastal Plain. These four regions include the Powhatan core area along the Pamunkey and Mattaponi rivers, represented by Townsend ceramics; the Patawomeck district located within the Inner Coastal Plain on the Potomac River, represented by Potomac Creek ceramics; a number of districts located on the upper James River in the Coastal Plain where Cashie ceramics are found; and the Nansemond and Chesapeake districts in the coastal areas of southeastern Virginia where Roanoke Simple Stamped ceramics are found.

The question of ethnic diversity among the Powhatans has significance for explaining both the order and manner in which different regions were added into the chiefdom and for understanding how social and political relations within the chiefdom were extended and solidified (Mouer 1985; Turner 1993). In order to determine if cultural differences in other than ceramic technology might be identified to support the existence of ethnic diversity within Powhatan society, the Late Woodland record at Great Neck is compared to other roughly contemporaneous sites in the Virginia and North Carolina Coastal Plain which have been the subject of extensive areal excavation. Variation in community plan, sociopolitical organization, and building and mortuary practices is examined among these geographically diverse contexts.

Before presenting the findings of VDHR excavations at Great Neck, a few words are needed concerning the methods employed in the analyses of artifacts reported in succeeding chapters. Unless otherwise noted, the artifacts discussed include only those

remains recovered in the field through hand excavation or screening through one-quarter-inch mesh, or those recovered in one-quarter-inch fraction waterscreen samples processed. Materials comprising the smaller fractions from the waterscreen samples and artifacts included in fill (usually less than 2 liters in volume) later processed by flotation techniques were not analyzed.

Descriptions of ceramics in the text refer only to those sherds "larger than one inch," unless otherwise noted. Sherds with a sufficiently small interior or exterior surface area to be enclosed by a square measuring one inch on a side were quantified by weight or number, but were not examined further except to identify small fragments of ceramic smoking pipes. Frequencies noted in the text or in tables, whether referring to the number of body or rim sherds, or the occurrence of decoration, reflect the number of sherds in a collection prior to refitting. This method was adopted to eliminate biases which often result from an analyst's ability to easily recognize vessels with signature styles of paste, surface treatment, or decoration when individual vessels are less easily distinguished among the more commonplace sherds.

The number of basal sherds in each collection was quantified in a conservative manner. Counts of bases from flat-bottomed vessels include only those sherds on which a portion of the distinctive juncture between the vessel wall and base is represented. Presence of the apex of the base was required for quantification as a conical or round base.

Sherd thickness was measured to the nearest whole millimeter. The thickness recorded for each sherd was the highest reading obtained on approximately three

measurements per artifact. Vessel diameter, where noted, was derived by transferring the arc of the vessel wall on the interior of the lip to paper. The diameter of the circle including this arc was estimated using a standard geometric formula.

The typology employed in the ceramic analysis might be described as "generic." Within the Coastal Plain Province of Virginia and North Carolina, ceramic paste and exterior surface treatment are presently understood as the most temporally-sensitive attributes of prehistoric Native American pottery within a given geographic region (see, for example, Egloff and Potter 1982; Phelps 1983). Only these two attributes are used in quantifying the collections in the tables which accompany this report, although other attributes are reviewed in the text.

The reader should also note that plain-surfaced ceramics are not always quantified, but instead are subsumed under the category "Unidentified," which also includes sherds with surfaces so highly weathered as to preclude accurate identification of surface treatment. Since current research is increasingly yielding evidence that the production of plain-surfaced ceramics became more prevalent during the late prehistoric and early contact period among Native American populations in the Virginia Coastal Plain (Hodges 1993a:19-20), it may appear that an opportunity to acquire significant data was lost by this approach. It was believed, however, that little purpose would have been served in certain instances by quantifying plain-surfaced ceramics. To have done so meaningfully by assigning such sherds to defined ceramic series posed a high risk of entering researcher bias into the analysis. Each lot investigated by the VDHR at Great Neck held archaeological components dating from the Middle and Late Woodland

periods, and the predominant ceramics from each period are shell-tempered. It is the experience of the author that the age (Middle or Late Woodland) of individual shell-tempered sherds cannot be determined reliably by, for example, the proportion of shell inclusions in the paste or by sherd thickness, even though these attributes may display modal tendencies over time.

All lithic artifacts recovered through one-quarter-inch dry- or wet-screening processes were analyzed in the collections reviewed. The artifacts were examined visually without the aid of magnification for evidence of intentional modification or use-wear. Categorization of certain assemblages of flakes by size was done by comparing flakes, in the manner described for size-sorting ceramic sherds, against squares graduated in increments of 10 mm on a side. Both whole and fragmentary flakes are included in each size category.

All bone remains recovered in one-quarter-inch dry- or wet-screening processes were examined for evidence of modification, again, without aid of magnification. Examination of shell remains was admittedly cursory, with the result that only very obviously modified artifacts, such as beads, are identified in the collections.

CHAPTER 4

HISTORY OF EXCAVATIONS AT GREAT NECK

While a number of prehistoric sites have been identified along the south shore of Broad Bay, the area usually referred to as the Great Neck site is officially designated by state archeological site number 44VB7. This designation encompasses an area of approximately 7.8 hectares (19.3 acres) situated roughly 400 m east of the Great Neck Road bridge over Long Creek, and extending east along the south shore of Broad Bay for a distance of at least 640 m (Figures 2 and 3). Within this area, remains of Middle and Late Woodland settlement have been encountered from the shoreline of Broad Bay extending south as far as 120 m. Site 44VB7 is now contained within two residential developments: Meadowridge subdivision on the west and Green Hill Farms subdivision on the east (Figures 3 and 4). Since lot numbers are duplicated between the two developments, in this report lots in the Meadowridge subdivision are designated by the prefix "M", and those in the Green Hill Farm subdivision by the prefix "GHF".

Because of the richness of the archaeological remains at Great Neck, it is likely that the site was surface collected by avocational archaeologists and others for a number of years prior to the excavations reviewed in this chapter. At least one of these collections is known to have been deposited in a public facility. Field notes accompanying the collection of the late James Coates of Norfolk, now curated by Jamestown Settlement, indicate Coates collected artifacts in the Great Neck area between 1939 and 1942. The collections from Great Neck, designated by Coates's site numbers

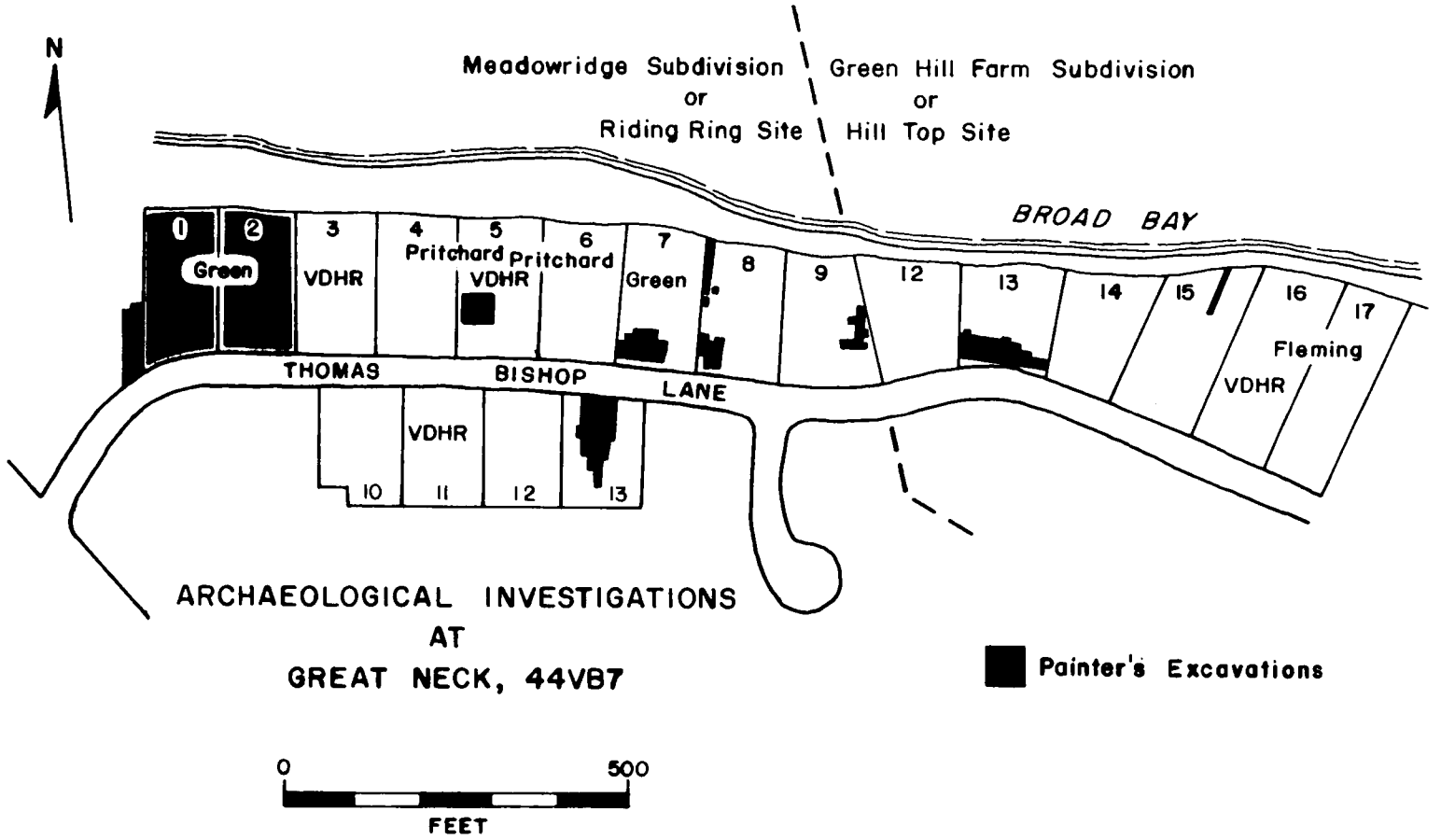


Figure 4. Location of major archaeological investigations conducted at site 44VB7.

8, 9, 9½, and 10, were obtained from areas west of Great Neck Road as well as the areas east designated by state site numbers 44VB9 and 44VB7. The collection from Coates' site 9½ includes the nearly complete remains of one shell-tempered, fabric-marked and three shell-tempered, simple stamped ceramic vessels which Coates excavated during the construction of Dey School (Mike Taylor, personal communication 1990).

Between the time residential development was proposed in the 1970s and the completion of the Meadowridge and Green Hill Farms subdivisions in the late 1980s, the Great Neck site was the focus of several archaeological excavations of larger scale conducted by a number of individuals and organizations. While researchers commonly shared information with each other, their efforts were not formally coordinated. No overall grid coordinate system exists to enable one to link site plans from one project with another. Fortunately, each group did reference its finds to numbered residential lots indicated on plats of the subdivisions (Figure 4).

The first excavations conducted at the Great Neck site in anticipation of residential construction were directed by Floyd Painter, an avocational archaeologist from Norfolk who was often assisted in his work by students from Old Dominion University. Painter was very familiar with the archaeology of the coastal areas of southeastern Virginia and northeast North Carolina. Three sites which he had previously worked on are particularly pertinent to his investigations at 44VB7: Long Creek Midden (44VB5), a Middle and Late Woodland site situated on Bay Island just 500 m west of 44VB7 and presently separated from Great Neck Peninsula by a canal linking Broad and Lynnhaven

bays (Painter 1967, 1968, 1971; Painter and Pearce 1966; Pearce 1968a, 1968b; Sawyer 1971); the Currituck site (31CK34), located on the west shore of Currituck Sound five miles south of the Virginia-North Carolina border (Painter 1962, 1963, 1976, 1977); and Waratan (31CO1), located on the east bank of the Chowan River above Edenton about midway between Bennetts and Rockyhock creeks (Painter 1962, 1963).

Painter conducted work at Great Neck from the late 1970s through the mid-1980s, during which time he tested at least nine house lots. In 1983 and 1985 he donated to the VDHR large portions of his collection from Great Neck, including human skeletal remains and samples of ceramics, lithics, bone, and shell from Lots M1, M2, M7, and M13. Painter has already published articles concerning the general history of the area (Painter 1979) and certain artifact types (Painter 1967a, 1967b, 1980a, 1980b, 1980c), and he is currently preparing a full report on his excavations. In Painter's writings, the portion of the Great Neck site encompassed by the Meadowridge subdivision is referred to as the "Riding Ring" site. Lots lying to the east in the Green Hill Farms development are part of his "Hill Top" site (Painter 1981). Figure 4 was prepared from a map provided to the VDHR by Painter and shows the areas he examined on each lot.

In his writings and in personal communication, Painter has identified the remains of two different prehistoric cultures at Great Neck. The "Lynnhaven Culture," which Painter ascribed to the Early Woodland period based on radiocarbon dates of ca. 810 - 660 B.C. from the Currituck site (Painter 1978), is represented by flat-bottomed ceramic vessels, or "beakers." As discussed below, similar vessels have since been radiocarbon dated by the VDHR at Great Neck to ca. A.D. 290-380.

A number of closely spaced, large pit features and burials associated with the Lynnhaven Culture were excavated by Painter on Lot M1 and the western edge of Lot M2 (Figure 5). He also encountered a few Middle Woodland pit features on Lots GHF13 and M13, noting that the features on Lot M13 were not as densely distributed as those on Lot M1, and that the ceramics on Lot M13 were primarily shell-tempered, cord-marked, and conical in form. Flexed burials are characteristic of the mortuary pattern within the Lynnhaven Culture (Painter, personal communication 1989).

Painter's "Chesapeake Culture," dating to the Late Woodland period, is represented by shell-tempered, fabric-marked and "combed or brushed" (referred to in this report as simple stamped) pottery. Charcoal and bone recovered in Painter's excavation of a shallow pit feature, containing both fabric-marked and simple stamped sherds and located on the south edge of Lot M6, was radiocarbon dated to 1520 $\pm$70 A.D. (uncalibrated) (Painter 1981). Painter has noted that few pit features other than burials are associated with the Chesapeake culture at Great Neck. Burial pits are commonly shallow and the skeletal remains are in an extended position. He encountered no ossuaries in his excavations.

Painter (personal communication 1989) currently feels that the "Great King of Great Neck," an adult burial he encountered near Thomas Bishop Lane on Lot M1, probably dates from the Late Woodland period and not the Early Woodland as previously reported (Painter 1980). Thousands of shell beads which presumably covered the individual's clothing were associated with the burial, as were two tubular copper beads and two pearls. At least one other Chesapeake burial was encountered on Lot M1.

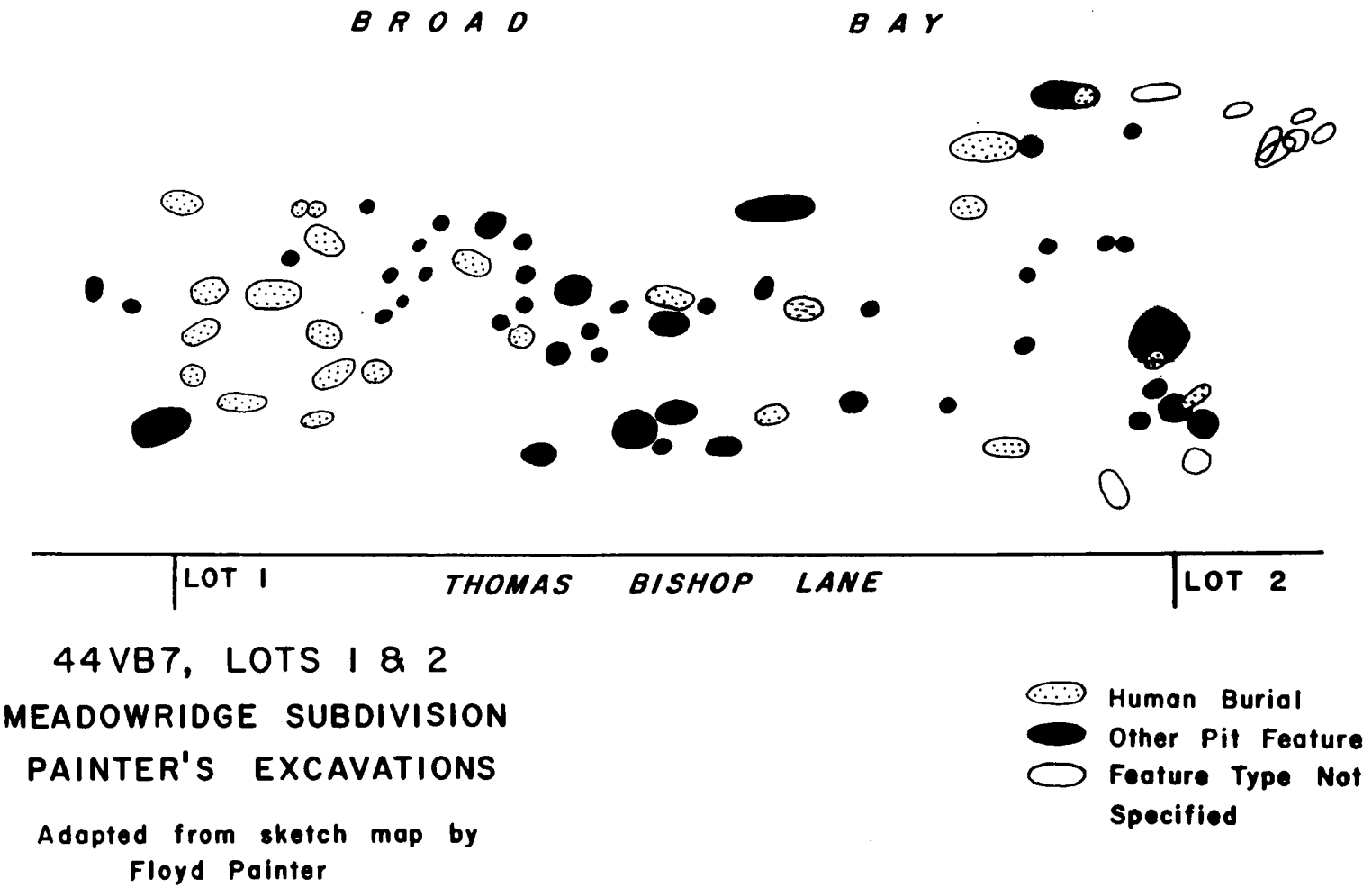


Figure 5. Archaeological features identified by Floyd Painter on Lots 1 and 2, Meadowridge subdivision.

Identified as a subadult female, the burial was accompanied by a shell-tempered, simple stamped vessel and shell and copper beads. In his excavations on Lot M7, Painter (personal communication 1989) encountered a large Chesapeake Culture midden deposit.

James Pritchard, another avocational archaeologist from southeastern Virginia, also conducted extensive excavations at the Great Neck site in the 1970s and 1980s. Pritchard excavated a number of features on Lots M4, M5, and M6, and has provided the VDHR copies of his sketch maps of these areas (Figure 6). The maps show a number of Middle Woodland and Late Woodland trash-filled pit features and burials:

Lot M4:
2 Middle Woodland shell-filled pits
1 Late Woodland shell-filled pit
5 Late Woodland burial pits (including one adult interment accompanied by shell beads and one child interment accompanied by shell beads)

Lot M5:
15 Middle Woodland trash-filled pits
3 Middle Woodland burial pits
1 Late Woodland trash-filled pit
2 Late Woodland burial pits (including one pit containing a child accompanied by shell and copper beads and an adult accompanied by shell beads)

Lot M6:
7 Middle Woodland trash-filled pits
1 Middle Woodland burial pit
1 Late Woodland midden deposit
10 Late Woodland burial pits (including one interment referred to as the "Prince")

Other archaeological investigations at Great Neck during the late 1970s were conducted by Paul R. Green (1987), then a graduate student in anthropology at the University of North Carolina, Chapel Hill. In the course of his dissertation research, Green conducted archaeological survey and test excavations in 1978-81 in Seashore State

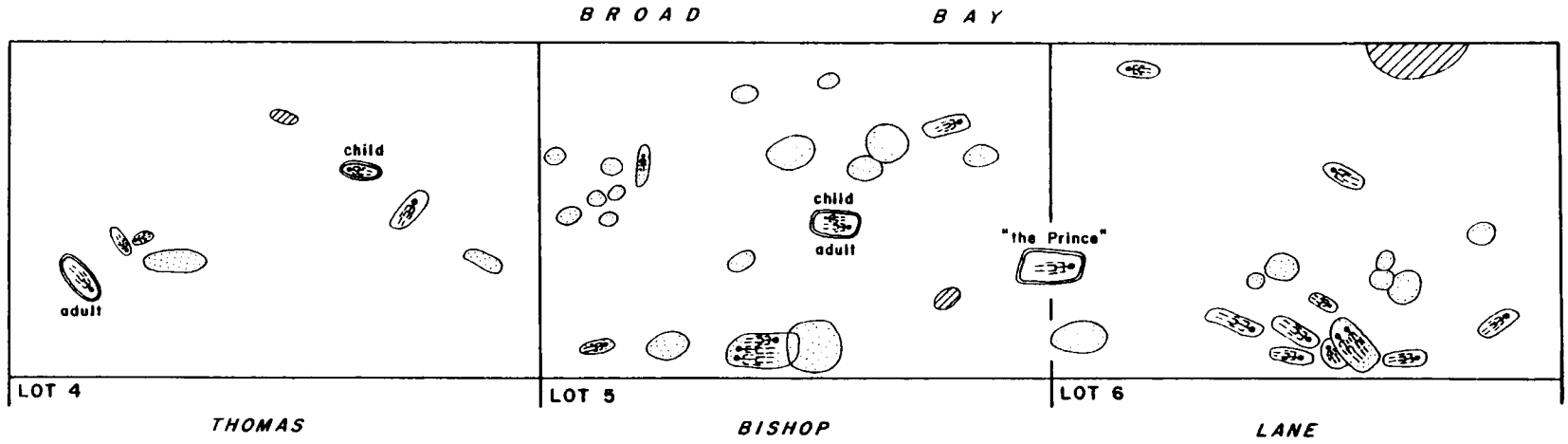


Figure 6. Archaeological features identified by James Pritchard on Lots 4, 5, and 6, Meadowridge subdivision.

State Park and Natural Area, located on the north side of Broad Bay. In 1979, he excavated two small areas on the Great Neck site.

Green opened one 5 ft by 5 ft unit on Lot M7 near the end of one of Painter's excavation trenches, finding three small, trash-filled pits and some possible postmolds. The features yielded predominantly Late Woodland, shell-tempered, fabric-marked and simple stamped ceramics along with a few sand-tempered Middle Woodland sherds. Four 5 ft by 5 ft units were opened along the boundary between Lots M1 and M2, contiguous with Painter's excavations. Features encountered here included two large trash-filled pits, one of which may have included a burial or have been intruded by the mortuary feature. Middle Woodland period shell-tempered ceramics were associated with each of the two trash-filled features, with both conical and flat-bottomed bases recovered from one.

The VDHR became actively involved in archaeological investigations at Great Neck through the work of Richard Fleming (1981), then a university student in anthropology, whose family had purchased a residential lot in the Green Hill Farms subdivision. In Fleming's monitoring of construction of his family's house on Lot GHF17 in 1980, he documented eight prehistoric features including five human burials. Conducting further survey and test excavations on Lot GHF16, Fleming found that the second property also contained archaeological remains, including two burial features.

Contacted by Fleming about his findings, the VDHR was encouraged to conduct excavations on Lot GHF16 in 1981 (Egloff and Turner 1984). Plans for excavation elsewhere within the Great Neck site were developed by VDHR once it was learned that

a large portion of the site had yet to be examined by Painter and Pritchard. The work on Lot GHF16 was followed the next year by excavations on Lot M3 (Egloff and Turner 1984). Plans for further excavation at Great Neck were hampered, however, by budgetary difficulties at VDHR. When these problems were finally resolved in 1986, housing construction had already been completed or initiated on all but two lots of the subdivisions encompassing the site. Excavations on these lots, M5 and M11, were conducted by VDHR in the fall and winter of 1986/87.

Also of direct relevance to the excavations reported here are investigations conducted in 1984 under contract to the Virginia Department of Transportation by the James Madison University Archaeological Research Center (JMUARC) at two other sites on Great Neck Peninsula. The JMUARC excavations involved the Addington (44VB9) and Sherwood Forest (44VB92) sites, which were slated to be impacted by the widening of Great Neck Road and the bridge over Long Creek. The Addington site lies directly west of the Great Neck site proper (44VB7), while Sherwood Forest lies roughly 300 m south of Addington. It is likely that sites 44VB7 and 44VB9 represent portions of what once may have been a continuous complex of settlement remains which is now divided into two sections by a canal dug sometime after 1918 connecting Long Creek Canal and Brock Cove.

At both the Addington and Sherwood Forest sites, JMUARC encountered extensive archaeological remains dating from the Middle Woodland period including numerous trash-filled pit features, two burials, and midden deposits (Geier, Cromwell, and Hensley 1986; Geier, Cromwell, and McCartney 1985; Geier, Smith, Andrews, and

Buchanan 1986; Sherwood 1986; Whyte 1986). At Addington, the pit features were distributed across the crest and northern slope of the west end of a ridge rising 24 ft above sea level. Midden deposits were found along the flanks of the ridge, particularly along its north side. Radiocarbon dates of A.D. 300 $\pm$70 and A.D. 230 $\pm$60 (uncalibrated) were obtained on debris from the fill of two of the pit features. Abundant Late Woodland ceramics were recovered from an extensive talus midden which had accumulated along the present shoreline of Long Creek Canal at Addington, but the only other features encountered which could be associated with the Late Woodland period were two trash-filled pits. No structures were indicated by the arrangements of the few scattered postmolds found at the site. Evidence of Early Woodland occupation at Addington was confined to two pit features which yielded a flat-bottomed, shell-tempered ware with plain surfaces similar to the type Waterlily Plain defined by Painter (1988:25-28).

CHAPTER 5

LOT 16, GREEN HILL FARM SUBDIVISION

Introduction

The VDHR conducted test and salvage excavations on Lot 16 during the late spring and late summer of 1981, investigating approximately 12% of the lot prior to the construction of a residential structure by the landowner. Based on preliminary testing, area excavation focused on two major clusters of prehistoric features dating from the Late Woodland period. In the northeast corner of the lot, adjacent to the bank above Broad Bay, excavations revealed a portion of a prehistoric settlement consisting of the remains of a palisade enclosing an area containing two oval house patterns. Two burial features were situated along the palisade. In the west-central section of the lot, excavations exposed a cluster of postmolds, suggestive of another oval house pattern, and two additional burial features. After the conclusion of planned excavations and during construction of the new house, an ossuary was investigated just south of the palisaded enclosure.

The artifact collections recovered from VDHR excavations on Lot 16 also provided evidence of additional prehistoric occupation dating from the Middle Woodland period, but no intact features associated with the period were identified in the course of excavations. During the Historic period, Lot 16 was used for agricultural purposes. Excavations in the northeastern corner of the lot uncovered the remains of an historic

structure, probably a work shed or barn dating from the late 19th through 20th-century, as well as several postholes forming a fenceline.

Previous Investigations

The VDHR was encouraged to conduct excavations on Lot 16 after being contacted by Richard Fleming, who had tested the lot in 1980. Prior to Fleming's work, only very limited archaeological investigations had been conducted on the Great Neck site in the immediate vicinity of Lot 16. Floyd Painter includes Lot 16 in what he refers to as the "Hill Top" section of the Great Neck site. On his overall map of the site and in personal communication with Fleming and VDHR staff, Painter has indicated that the investigations he conducted in the area involved limited shovel testing on Lots GHF15 and GHF16 and the excavation of a narrow test trench perpendicular to the shoreline on Lot GHF15. VDHR excavations on Lot 16 revealed little evidence of previous shovel tests and no evidence of previous excavations of a more extensive nature.

Archaeological features noted by Painter include the presence of whole and broken brick in the western half of Lot 15; a brick cattle dip on the boundary between Lots 16 and 17; and the recovery of a "witch bottle," or glass phial containing nails and brass pins, on Lot 16 near the edge of the cliff above Broad Bay (Fleming 1981; Painter 1980a). Painter has also reported on a secondary burial of a single individual dating from the prehistoric period excavated from the eroding cliff bank on Lot GHF15 (Painter 1981).

Richard Fleming's involvement with the Great Neck site began when his parents began construction of a house on Lot GHF17, situated immediately east of Lot 16. Fleming occasionally had the opportunity to monitor the excavation of the foundation footings and water pipe trenches for the new house, and he documented the presence of eight prehistoric features exposed by this activity (Figure 7) (Fleming 1981). Included among these were a large pit (Fleming's Feature 3) 8 ft in diameter containing a human burial (Fleming's Feature 4), another human burial (Fleming's Feature 1), and a basin-shaped pit (Fleming's Feature 2) approximately 2 ft in diameter, all situated between 40 and 80 ft south of the present bank above Broad Bay. Fleming also noted the presence of three additional human burials destroyed in construction.

Fleming's archaeological investigations on Lot 16 involved systematic surface reconnaissance, shovel testing, and the excavation of a small test square (Fleming 1981) (Figure 7). Beginning with an inspection of the cliff face above Broad Bay, he noticed an area where oyster shell and prehistoric artifacts were eroding from the bank. Removing the forest humus from above a bone protruding from the bank in this area, he exposed the surviving portions of a human burial (Fleming's Feature 7). The burial was partially flexed to the right side and oriented north-south. The cranium would have been situated at the north end, although this and elements of the upper torso had already been lost to erosion. Fearing that further excavation would only increase erosion along the bank, Fleming covered the burial with sterile sand, camouflaging it with forest litter so that it could be scientifically excavated at a later date. Unfortunately, the burial was subsequently disturbed and removed by vandals.

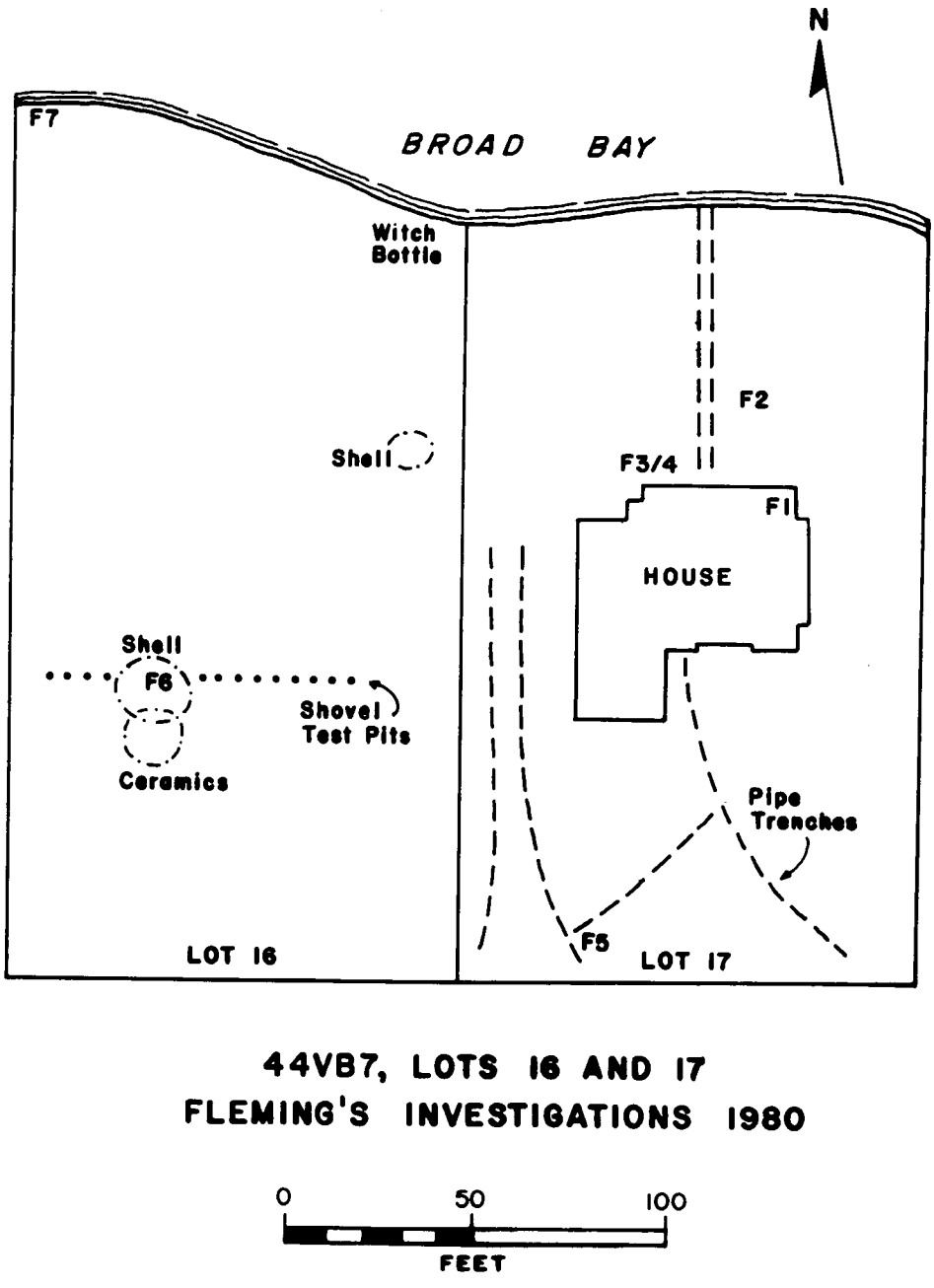


Figure 7. Plan of test excavations by Richard Fleming, Lot 16, Green Hill Farm subdivision.

Following discovery of the burial feature, Fleming undertook a more thorough examination of Lot 16 during December 1980, beginning with a systematic surface inspection conducted by walking longitudinal transects spaced 15 ft apart. As the lot was lightly wooded and had been recently cleared of brush, surface visibility was estimated at 70%. Lithic debitage, small prehistoric ceramic sherds, historic artifacts, and shell were observed, generally in low densities. Three concentrations of cultural debris were noted: one concentration of shell situated along the eastern edge of the lot about 60 ft south of Broad Bay and two overlapping concentrations of shell and prehistoric ceramics located about 150 south of Broad Bay just west of the center of the lot (Figure 7).

Test excavations were focused in the latter area. Along a line extending east-west across the lot through the northern edge of the shell concentration, Fleming excavated 13 shovel test pits at intervals of 5 ft. A trench 15 ft long and 1 ft wide was excavated within the shell concentration along this line. Soil from the shovel test pits and trench was screened, and the soil profile at the location of each shovel test pit was recorded. Plowzone depth was found to increase gradually from east to west, extending to 6 in below surface at the east and to 12 to 17 in below surface at the west. Artifact frequencies were fairly consistent along the line, except for a higher frequency of prehistoric ceramics in the most westerly shovel test pit and a sharp decline in ceramic frequency at the far eastern end.

Excavation of the test trench revealed a large, circular feature extending below plowzone into the subsoil, and Fleming opened a unit 8 by 10 ft in plan to fully expose the feature. Eleven possible prehistoric postmolds and one historic posthole/mold were

also identified within the square and mapped. The large feature (Fleming's Feature 6, VDHR's Feature 29A) proved to be a shallow pit containing a human burial. The feature was fully excavated and the skeletal remains removed by Fleming. Both feature fill and plowzone from directly above the feature were screened through one-quarter inch mesh, with a 50-gallon sample of feature fill reserved for waterscreening and flotation. The latter sample as well as the human remains from the feature were eventually donated by Fleming to the VDHR.

VDHR Excavations and Field Methods

The VDHR conducted salvage investigations on Lot 16 in 1981. Fieldwork was carried out over two extended periods: the first comprised of 20 days between June 1 and June 23, and the second involving 25 days during the period August 24 through October 28. Keith T. Egloff, VDHR staff archaeologist, served as field director. Field crew consisted of VDHR staff, interns, and volunteers, and ranged in size each day from one to seven persons. A total of 1368 hours (the equivalent of 171 person-days) was contributed to the excavation phase of the project, with approximately 13% of this total provided by interns and volunteers.

Because it was known that only limited time could be devoted to the salvage effort, initial testing was designed to assess the distribution of cultural features across the property so that excavation could quickly be focused on those areas with the highest probability of yielding significant remains. Once a topographic map of the lot had been

prepared and a metric grid established, testing began with the excavation of 11 units, each 2 m square in plan (Units 1-11, Figure 8). Four of these units were scattered across the northern third of the lot, hereafter referred to as Area A. On Lot 17, Fleming's monitoring of construction had indicated a high density of features in this area. The remaining seven test squares were positioned in the central third of the lot, hereafter referred to as Area B, distributed around the excavation unit opened by Richard Fleming.

In general, each test square was excavated in arbitrary 10-centimeter levels. Observations were recorded on the natural and cultural stratigraphic layers encountered, and the soil profile of one wall from each square was drawn. All soil was dry screened through one-quarter-inch mesh and informal observations were made in the field regarding artifact size, type, and density. In some areas, remnants of features disturbed by plowing were discernable above subsoil and were excavated as separate units. At subsoil level, the surface of each square was troweled carefully and any cultural or natural features were mapped.

Based on the distribution of prehistoric features and postmolds encountered in the test squares, selected areas of the lot were chosen for further examination (Figure 8). These units were first excavated by backhoe to a depth a few inches above subsoil, and then were shovel skimmed to subsoil level, troweled, and mapped.

In Area B, Units 12, 13, 14, 15, 16, and 24 were opened in the vicinity of Richard Fleming's initial excavation unit. Although Squares 4 and 5 in this area had yielded only a few postmolds, several postmolds and the edge of a large feature had been exposed in Square 1. Numerous additional postmolds suggesting an oval pattern were

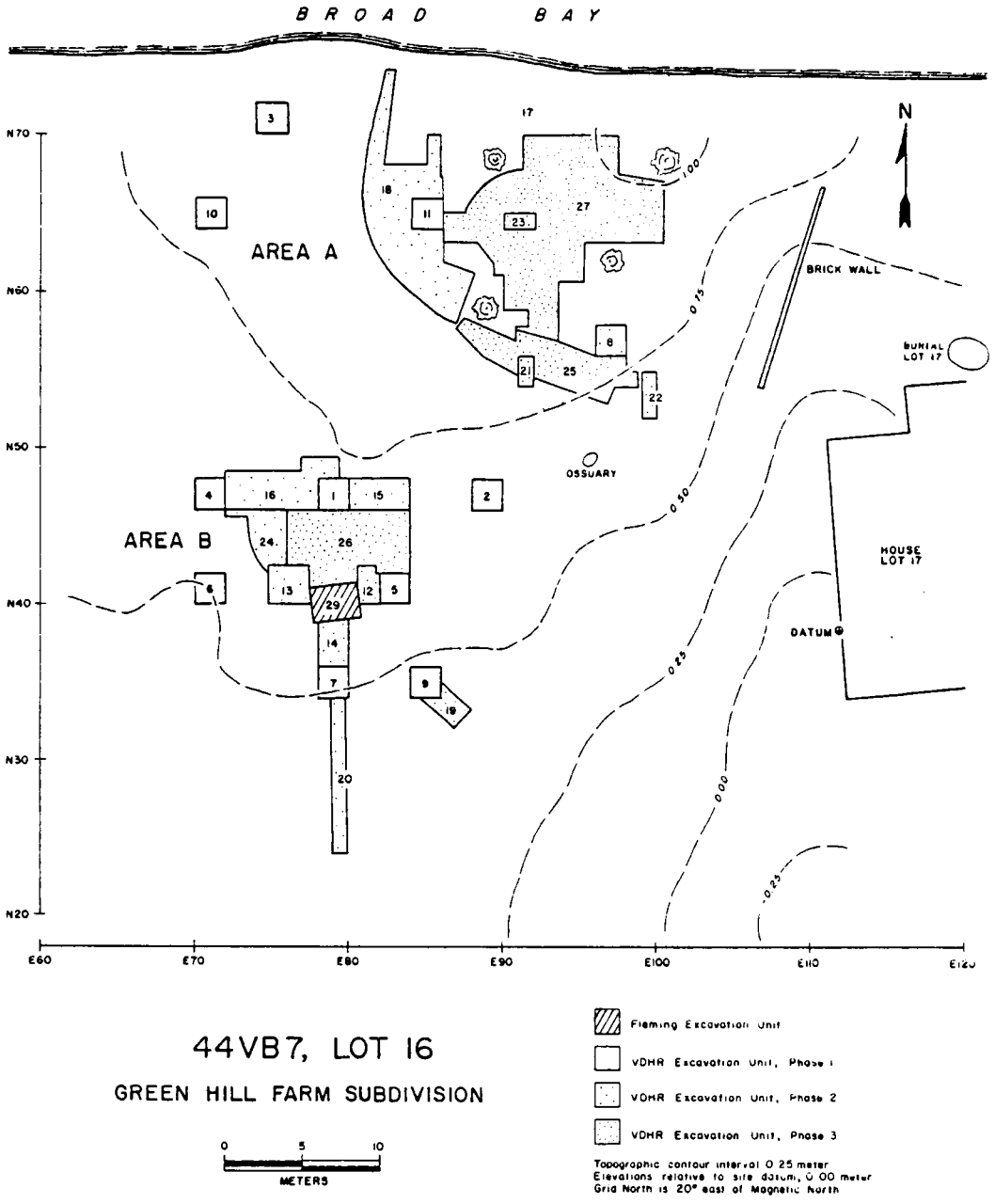


Figure 8. Topographic map of Lot GHF16 showing VDHR excavation units.

were exposed in the new units. Since excavation of Unit 7 had also exposed a feature, a trench 1 m wide was excavated from the edge of the square for a distance of 10 m southward. No additional cultural features were identified in the trench, however. Unit 19, excavated to test for a possible alignment of postmolds encountered in Square 9, yielded few cultural features.

In Area A, further excavation was initially focused in the vicinity of Unit 11 where a line of prehistoric postmolds oriented north-south had been exposed. Excavation by shovel of an area of roughly four square m directly west of Unit 11 had revealed a second line of postmolds, so the remainder of Unit 18 south of grid line N80 was opened using the backhoe. Exposed in the unit were two lines of prehistoric palisade posts converging toward the south, a large oval pit feature, and several brick piers and historic postholes. The palisade lines were traced further north of grid line N80 through shovel excavation of narrow trenches. Units 21 and 22, which measured 1 m by 2 m, were excavated to track the palisade eastward. Although a single line of postmolds was uncovered in Unit 21, excavation of Unit 22 indicated that any prehistoric features which may have existed in this area would have been disturbed by an old roadbed which had truncated the subsoil. A final test unit was excavated within the area defined by the palisade before the first phase of field excavation of Lot 16 was concluded on June 23. Unit 23, which measured 1 m by 2 m, revealed the presence of a few prehistoric post molds.

Excavation was resumed August 24 with the intent of investigating both the interior spaces defined by the palisade lines in Area A and the oval postmold pattern in

Area B. To this end, a trench was excavated by shovel between grid lines E89 and E98 exposing additional sections of the palisade as well as another large oval prehistoric feature. A backhoe was then used to open as large an area (Unit 27) within the palisade as was possible without damaging several trees standing on the property. In Area B, the backhoe was used to open Unit 26 which comprised the interior space defined by the test units excavated earlier in this area.

Excavations on Lot 16 were formally concluded on October 28, 1981, and the site was backfilled; however, when VDHR staff returned to the Great Neck site in April 1982 to begin salvage excavations on another lot, they learned an ossuary had been uncovered the day previous on Lot 16 during excavation of the footings for the new house the landowner had begun to build. Over the next two days the remains of the ossuary were excavated and its location plotted in relation to the datum used in the previous year's work on the lot.

All soil stains exposed in the investigations during 1981 on Lot 16 were mapped in plan view in the field at a scale of 1 in = 1 m. Due to constraints on time and budget, not all identified features were excavated. Those features which were excavated include all major prehistoric pit features; all soil stains exposed either along the wall lines or within the interior of the two longhouse patterns in Area A; a sample of postmolds along the two palisade lines in Area A; a sample of postmolds in Area B; sections of two linear trench features in Area A; and several historic postholes in both Areas A and B. Among features not excavated were several postholes and brick piers associated with an historic structure in the western section of Area A.

Both larger features and postmolds were bisected prior to full excavation, and a profile of each was drawn at a scale of 1 in = 50 cm. In most cases, field measurements of the diameters and depths of postmolds were also recorded to ensure against possible inaccuracies conveyed by the small drawings. Human burial features were bisected until the level of the skeletal remains was reached on one side. The opposite side of the feature was then taken down to this level and, finally, fill was removed from the skeleton remains from across the entire feature. Burials were drawn in plan after excavation at a scale of 1 in = 25 cm. Sections along both the long and short axes of the burial pit were drawn. Fill from all features was described by color and texture and was screened, at minimum, through one-quarter-inch mesh. Fill from the northern half of Feature 16C (a trash-filled pit containing a human burial) was reserved for waterscreening through one-sixteenth-inch mesh and for flotation. Both black and white and color photographs were taken of excavation areas at subsoil level after troweling. Closer views of major features were photographed both before and after excavation.

Topography and Recent Land Use

Although the topography of Great Neck Peninsula is relatively flat, the terrain slopes gently downward from elevations of up to 28 ft along the southern bank of Broad Bay where erosion has truncated one face of a former ridge line. This ridge presently has two peaks within the Great Neck site area, one of which is centered on Lots GHF15

and 16. This area, including those properties east of Lot 11, has formerly been referred to as the "Hill Top" section of the Great Neck site by Floyd Painter.

Within the bounds of Lot 16, the terrain slopes from the northeast corner with a difference of about 1.25 m in elevation across the lot. Prior to initiating excavations, VDHR staff prepared a topographic map of the property using the brick sill of the garage door of the house on Lot 17 as a datum. The elevations shown in Figure 8 are relative to this datum. The 0.75-meter contour corresponds to an absolute elevation of approximately 28 ft AMSL. The lot is highest, about 1 m above datum, in the northeast corner and slopes gently to the west and southwest. The slope toward the southeast corner of the lot, where the elevation is about 0.25 m above datum, is more abrupt.

An aerial photograph taken of Great Neck Peninsula in March 1963 indicates that Lot 16 was once included within a triangular parcel which formed an open yard around what was probably a domestic structure associated with an agricultural complex. Efforts to reconcile subdivision and city maps and aerial photographs of the area suggest the domestic structure was situated along what is now the eastern edge of Lot GHF14. An access road to the structure ran along what now would be the boundary between Lots GHF9 and 10.

The eastern boundary of Lot 16 is situated roughly along what in 1963 was a hedgerow separating the yard compound from a small pasture or overgrown field to the east. A portion of an old brick cattle dip which would have been situated near this hedgerow was preserved along the northwest border of Lot 17 when the VDHR began excavations on Lot 16 in 1981. Also visible at this time was an old dirt roadbed running

along the eastern edge of Lot 16 whose position is reflected in the topographic contours depicted in Figure 8.

The 1963 aerial photograph also indicates that a circle of trees straddled the hedgerow which once ran along the eastern border of Lot 16. This feature, represented by a circular, filled area of trees on city maps prepared from aerial photographs taken in 1972, would presently lie just outside the southern border of Lot 16 within Thomas Bishop Lane. It is likely the grove marked an historic cemetery said to have been removed and relocated prior to construction of the present subdivision road (Fleming 1981).

Site Stratigraphy

When VDHR began its excavations in 1981, Lot 16 was lightly forested. In some areas of the lot, heavy equipment used to clear brush in advance of house construction had disturbed the topsoil to a depth of 5-10 cm. Other areas along the eastern edge of the lot had been covered with fill presumably derived from construction activities on Lot 17.

Excavation of Units 1-11, the initial test squares opened by VDHR staff, indicated that Lot 16 had been plowed sometime in the past prior to its incorporation into the domestic yard discussed above. Plowzone consisted of a dark brown sandy loam and varied from 10-20 cm in thickness. Plowscars were visible against undisturbed soil

matrix in Units 8 and 11. Yellow-tan sterile subsoil was encountered at roughly 20-30 cm below modern grade across the lot.

In most of the 11 test squares, the interface between plowzone and sterile subsoil was characterized by a zone of tan-brown sandy loam 5-10 cm thick. Although not organically rich, the larger size of the sherds recovered from this layer suggested in the field that it represented a relatively intact deposit. As discussed below, later analysis of the ceramics recovered from excavated units of the plowzone and the interface zone indicated the lower layer contained a greater proportion of Middle Woodland period ceramics, or cord- and net-marked sherds.

More organic-rich midden deposits were encountered below plowzone in two areas of the lot. About 3 m south of the bank above Broad Bay, centered roughly on grid point N72 E90, a small backhoe trench excavated by the landowner's brother revealed a soil profile consisting of 10 cm of plowzone overlying a midden layer 10 cm thick. The upper 4 cm of midden contained an undisturbed concentration of ceramic sherds (VDHR Feature 17) dating from the Late Woodland period. An intact midden layer, consisting of brown-black sandy loam, was also found below plowzone in Square 7. Encountered 20-25 cm below modern grade, the layer extended for 15 cm to sterile subsoil. A small concentrated deposit of shell and predominantly Late Woodland ceramics (Feature 7E) was discernable at the top of the midden layer and extended for a depth of 5 cm.

Excavation of Square 22 indicated that some areas along the northeast border of Lot 16 had been severely disturbed by historic activity. The soil profile in Square 22

consisted of 25 cm of mixed orange clay, yellow clay, and brown humus, which is believed to have been backdirt from construction on Lot 17. Below this fill lay a lense of topsoil 5 cm thick. Subsoil was encountered 30 cm below modern grade. Square 22 was situated in the area of an old dirt roadbed, noted previously, which ran along the edge of Lot 16. As no soil stains were visible at subsoil level in the square, it seems likely that the subsoil had been truncated within the roadbed.

Excavation Area A

In addition to an historic component dating from the mid 19th through 20th-century, Excavation Area A of Lot 16 contained a small section of the southwest portion of palisaded Native American settlement (Figures 9 and 10). The Native American settlement was found to have been severely truncated on its northern side by erosion along the shore of Broad Bay. Associated ceramics, which are predominantly shell-tempered, simple stamped and shell-tempered, fabric-marked and incised-decorated wares, indicate a date late within the Late Woodland period. The settlement area is defined by two lines of palisade posts, which may form a corridor entrance. Within the enclosure, excavations exposed portions of two oval structures, or longhouses. Two burial pits lay along the inside of the exterior palisade line. Several discrete trash deposits were also encountered in the excavations.

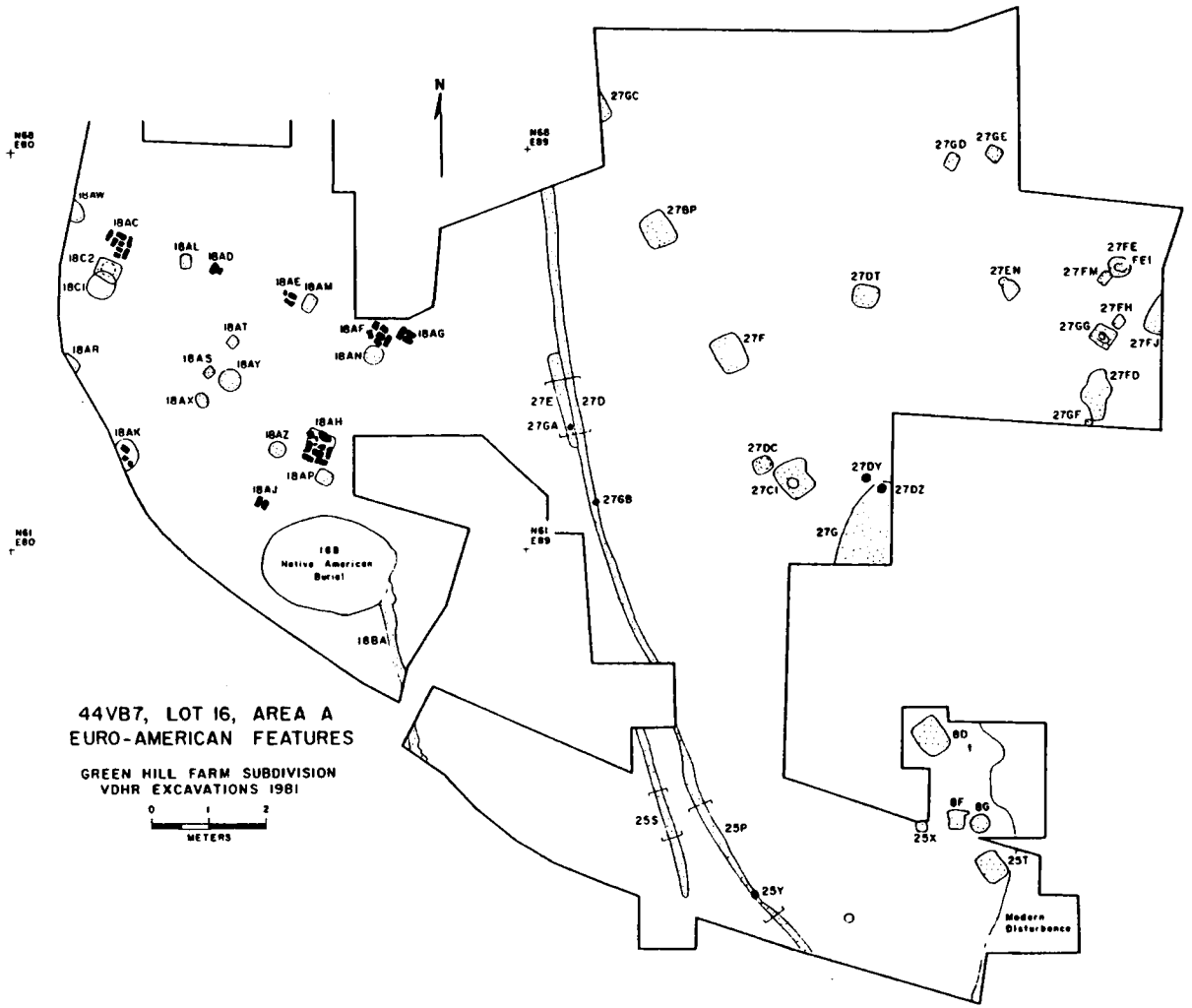


Figure 9. Plan of Euro-American features in Area A, Lot GHF16.

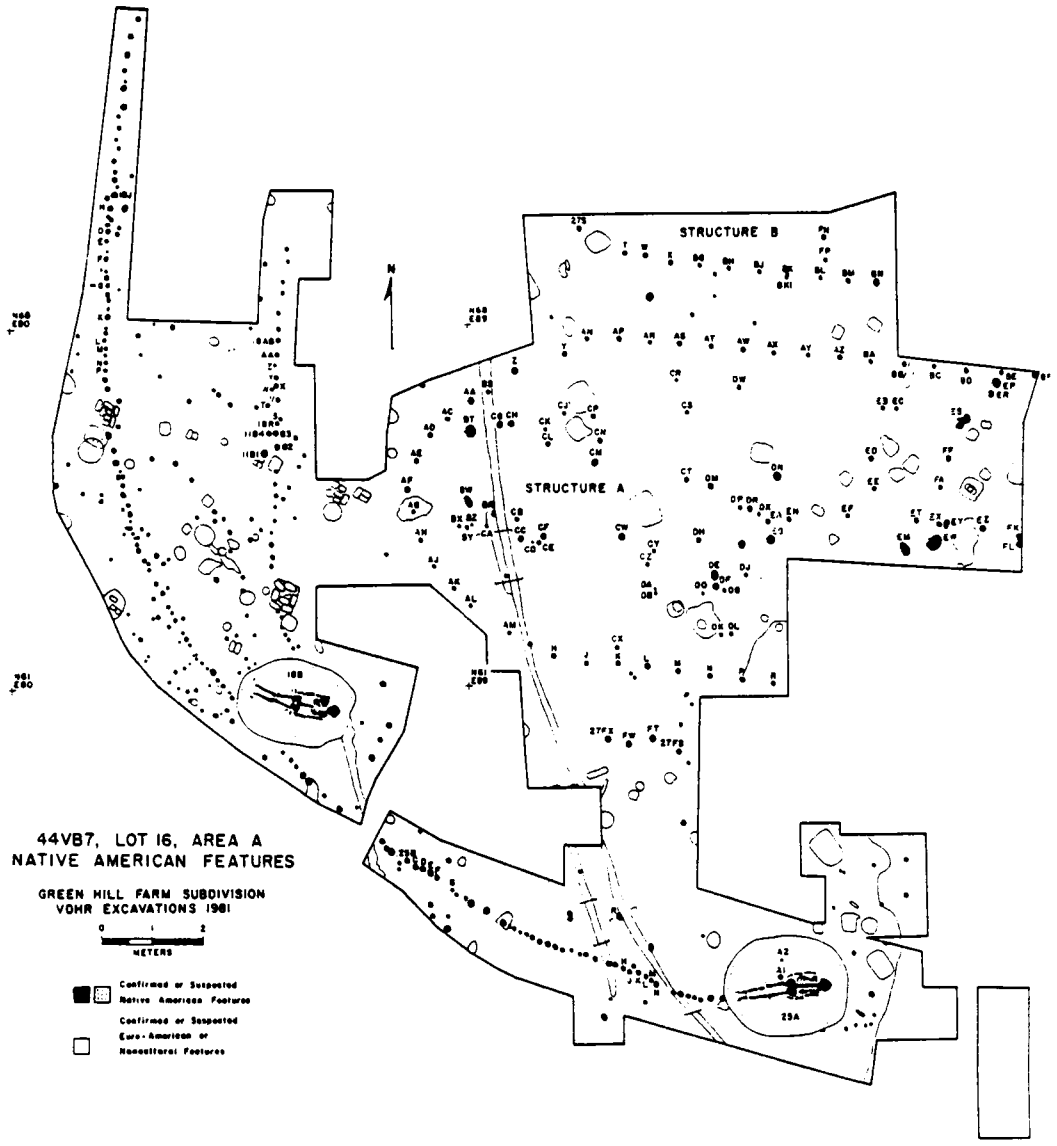


Figure 10. Plan of Native American features in Area A, Lot GHF16.

Historic Component

Since it is not a focus of the present study, the historic component documented on Lot 16 during VDHR investigations is discussed only briefly. Two major groups of historic features were identified in the excavations: one defining an historic structure and the other defining a fenceline (Figure 9). Several scattered features were uncovered as well.

The historic structure was located in the vicinity of grid point N64 E84. Oriented northwest-southeast along its longer axis, the structure was defined by a series of postholes and brick piers, only one of which was excavated. Given the pairing of posts and piers in at least three corners and along the northeast wall, it is likely that the structure was built initially employing post-in-the-ground construction, with piers added at a later date for reinforcement or repair.

The original structure is likely defined by corner postholes 18AN, 18AP, and 18AR, with two secondary posts 18AL and 18AM perhaps supporting a sill along the northeast side. It is unclear whether posthole 18C2 formed the fourth corner of the structure since it does not lie square with the other three posts.

In repairing the structure, brick piers 18AC, 18AF, and 18AH were added to the corners, while 18AD and 18AE were added along the sill. It appears the building was also expanded at this time with the addition on the southwest side of piers 18AJ and 18AK. Whether Feature 18AW is a posthole representing additional expansion cannot be known given the limits of the excavation area.

The initial structure in Area A was roughly 16 ft northwest-southeast by 8 ft northeast-southwest. The addition represented by piers 18AJ and 18AK extended 9.2 ft along the southwest wall and was approximately 3 ft deep.

The second major group of historic features uncovered on Lot 16 represents an historic fenceline located in the eastern half of Area A. Situated approximately 18 ft due east from the northeast corner of the structure just described, the fenceline is oriented northwest-southeast. It is comprised of at least six postholes: 25T, 8D, 27C1, 27F, 27BP, and 27BR. Only the first five of these were excavated. The postholes are situated approximately 8 ft apart. It is likely that another post within the line would have been found if an area left to preserve a tree between posts 8D and 27C1 had been excavated. Three soil stains identified along the fence line may represent repair posts: 27DC, 8F, and 8G. Of these, only Feature 27DC was excavated.

In addition to the structure and fenceline, Area A of Lot 16 also contained some rather enigmatic trenches which are believed to date from the historic period. Excavation of sections 25P, 25S, 27D, and 27E within three of the trenches indicated that they were too narrow to have been dug by shovel, and too deep to represent plow scars. An additional trench, Feature 18BA, was not tested.

The bottoms of the trenches were thoroughly searched for evidence of post stains in the excavated sections. While stains of four postmolds were visible at the bottoms of the features, one of these relates to a prehistoric palisade line and one to a Native American longhouse. Thus, there is little evidence to suggest the trenches were used to seat a wall or other line of posts.

The trenches ranged from 0.3 to 0.5 ft (10-15 cm) wide and extended to a maximum of 0.6 ft (20 cm) below subsoil level. Fill consisted of brown loam varying with from 5% to 70% yellow clay mottling. Basal profiles varied from rounded to wedge-shaped.

No clear evidence exists to indicate the trenches are historic, since only prehistoric artifacts were recovered from fill excavated from the test sections. Examination of prehistoric postmolds 25R, 27CA, and 27GB, which were situated along the margins of two of the trenches, also provided no clue to dating the features. Similar fill in both postmolds and trenches prevented determining if the trenches were intrusive upon the postmolds or *vice versa*. The four postmolds situated within the trenches (postmolds 25Y, 27BR, 27BS, and 27GA) were discernable only at the bottoms of the linear features.

Historic artifacts recovered from plowzone contexts on Lot 16 include a relatively small number of pearlware, whiteware, porcelaneous, and stoneware ceramics; an abundance of bottle and jar glass; lesser amounts of window glass; several cut and wire nails; other miscellaneous iron and other metal objects; coquina tile; brick rubble and mortar; coal; gun cartridge caps; and numerous fragments of clay pigeons. While the assemblage does include domestic items, architectural debris and artifacts relating to agricultural activities are better represented. Additionally, much of the bottle glass collected could have been deposited during target shooting on the property, an activity indicated by the numerous clay pigeon fragments recovered.

The array of artifacts suggests that the historic structure identified in Area A served as a work shed or barn dating from the mid-19th through 20th century. If animals were not housed within the structure, the evidence suggests they were kept nearby. Several fragments of barbed wire were found within Unit 8 which falls along the historic fenceline discussed above. A snaffle bit and strap ornament were recovered from Units 9 and 11, respectively, and three horseshoes were noted on the surface of the lot during the course of excavations.

Palisade

Two series of prehistoric postmolds forming sections of roughly concentric palisade lines were uncovered in Area A (Figures 10 and 11). The longest section exposed was that of the exterior palisade, which was exposed from grid unit N73 E82 through N54 E96. Between grid units N69 E85 and N61 E85, an 8-meter section of an interior palisade was found.

From the small sample of postmolds excavated along the palisade lines, diagnostic artifacts were recovered from only the exterior line. Indicative of a Late Woodland period occupation, these artifacts consisted of one shell-tempered, fabric-marked sherd each from postmolds 18H and 25M, and one shell-tempered sherd with incised decoration from postmold 25E.

The exact configuration of the palisade remains unclear. The arc formed by the exposed section of the exterior palisade line defines a circle approximately 30 m in



Figure 11. Palisade line in Area A, Lot GHF16.

diameter which would have enclosed 0.071 hectares (0.176 acres). If the palisade was indeed circular, the exposed section would represent roughly 30% of its circumference. It would also follow that erosion would have removed at least 10 m of shoreline since construction of the village, destroying 27% of the area enclosed by the palisade.

There are suggestions that the palisade was not circular, however. Two burial pits (Features 18B and 25A) were uncovered in Area A, both situated just inside the exterior palisade and aligned roughly parallel to it. One of the burial features (Fleming's Feature 3) documented by Richard Fleming on Lot 17 is very similar to these burials in the shape and size of the pit and the orientation and placement of the skeleton (no information is available on the other three burials on Lot 17 identified by Fleming). It seems likely that the burial on Lot 17 also lay along the palisade. If so, an oval palisade extending at least 42 m east-west is indicated.

The function of the interior palisade line is also problematical. This line of postmolds appears to represent a palisade rather than a house wall, since the posts are spaced more closely than those in two longhouse patterns (Structures A and B) identified in Area A. Since the interior palisade line could not be tracked further north, and its southern terminus is obscured by the placement of Feature 18B, it remains to be determined whether the interior line is an earlier palisade, with the size of the enclosure expanded by the addition of the exterior line, or if the interior line forms the inside wall of a corridor entrance approximately 3.5 m wide at its north end and 1.5 m wide at its south end. Entrances of this type are indicated in ethnohistoric sources from the contact period. Arthur Barlowe described the village of Roanoke in coastal North Carolina as

"fortified round about with sharpe trees,..., and the entrance into it made like a turne pike very artificially" (Barlowe 1982:7). A palisade with two entrances formed by overlapping the ends of two separate walls is also pictured in John White's late sixteenth-century drawing of the village of Pomeiock in North Carolina (Figure 12).

Differences in the size and spacing of posts used in constructing the interior and exterior palisades suggest each wall may have served a different function. Based on diameters measured at subsoil level, posts comprising the exterior palisade are larger than those from the interior line (Analysis of variance: $F = 9.170$; $d.f. = 1$; $p = .0029$) (Table 1, Figure 13). Among the small sample of postmolds excavated, those from the exterior line also extended to a greater mean depth below subsoil level (Analysis of variance: $F = 3.555$; $d.f. = 1$; $p = .0688$). These differences, as well as the closer spacing of postmolds along the exterior palisade, suggest this line was more heavily fortified and formed a stronger barricade than the interior palisade.

Alternatively, differences in mean postmold diameter and depth between the two lines may be due to variation in plowzone depth across the excavation area. Although the posts in both palisade lines were seated vertically in the soil, the postmolds commonly tapered slightly near the bottom to pointed or slightly rounded bases. Thus, postmold diameter is partially dependent on the depth of exposure. It is also possible that the closer spacing of posts along the exterior palisade is the result of repair or reinforcement of the wall.

It may be significant, however, that the number of scattered postmolds adjacent to the palisade lines is greater in the area containing both the interior and exterior walls



Figure 12. The Town of Pomeiock. Watercolor by John White. Source: Stefan Lorant, ed., The New World: The First Pictures of America. Duell, Sloan and Pearce, New York, 1946, p. 189.

Table 1. Postmold diameter and depth for palisade lines and structures, Lot GHF16. (a) diameter (b) depth.

(a)

POSTMOLD DIAMETER (CM)	INTERIOR PALISADE	EXTERIOR PALISADE	STRUCTURE A	STRUCTURE B
N	28	120	36	11
RANGE	6.0-11.0	5.0-16.0	8.0-16.5	9.0-13.0
MEAN	8.12	9.65	12.03	11.18
STANDARD DEVIATION	1.32	2.59	2.03	1.08

(b)

POSTMOLD DEPTH (CM)	INTERIOR PALISADE	EXTERIOR PALISADE	STRUCTURE A	STRUCTURE B
N	10	23	36	11
RANGE	6.0-12.0	5.0-25.0	6.5-29.0	17.0-30.0
MEAN	9.20	12.67	18.65	24.54
STANDARD DEVIATION	1.75	5.66	5.41	4.54

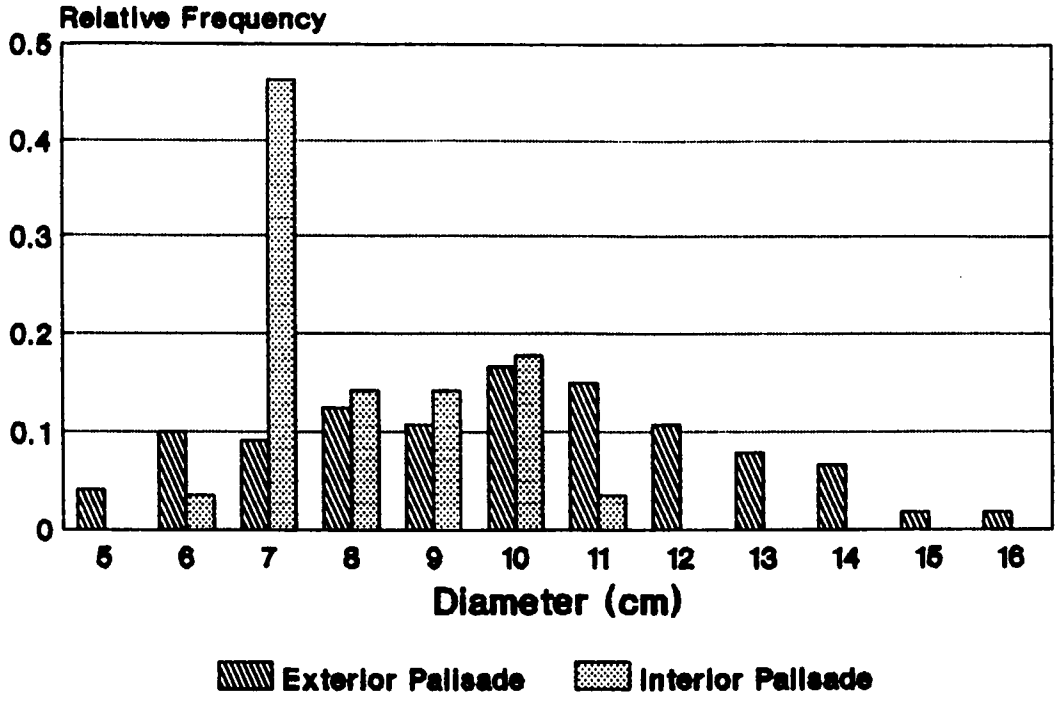


Figure 13. Histogram of postmold diameter, interior and exterior palisade, Lot GHF16.

than in the area to the southeast where only the exterior palisade extends. While no clear patterns are apparent in the arrangement of scattered posts in the western section of Area A, it is possible some may form interior barriers along a proposed corridor and some may form a type of defensive scaffolding along the outside edge of the exterior palisade (for example, note the rectangular arrangement of postmolds in the vicinity of grid point N61 E83).

Structures

Two prehistoric structures, referred to as Structures A and B (see Figure 10), were present in Area A within the area enclosed by the palisade lines. The walls of both structures form elongated oval shapes, oriented along their long axes in an east-west direction roughly parallel to the shore of Broad Bay. Several ceramic sherds, including both shell- and sand-tempered wares, were recovered from postmolds excavated along the walls of the structures, but only one of these is diagnostic. Postmold 27J of Structure A yielded one shell-tempered sherd with simple stamped surface treatment, a type diagnostic of the Late Woodland period.

Structure A was the most completely exposed of the two postmold patterns. The configuration of the exterior of the structure is well defined because the postmolds along the wall are evenly spaced with no signs of rebuilding. The walls are straight along the sides of the structure, curving around in an arc on at least the west end. The structure is 6.3 m wide (20.7 ft) and at least 12.2 m (40.0 ft) long. The east end could not be

exposed fully because the postmold pattern extended into the area of a tree which the owner of Lot 16 intended to retain and into the landscaped yard of Lot 17.

As excavated, the walls of Structure A are comprised of 38 postmolds. With a mean diameter of 12 cm (Table 1), these postmolds were larger than those employed in construction of the palisade lines. The posts were oriented vertically and had either rounded or pointed ends. Mean depth below subsoil was approximately 19 cm (Table 1).

Examination of the spacing between the wall posts in Structure A provides a strong indication of the placement of doorways. While the distance between posts ranged from 38 to 103 cm, fully 70% of the distances fell within a range of 58 to 69 cm (Figure 14). The distances between posts were most regular along the side walls, and less so along the curved western end. Still, along the curved end, two doorways are suggested by outlying measurements between two pairs of posts. On the south side of the structure, postmolds 27AL and AM were situated 95 cm apart. Along the north wall, a distance of 103 cm separated postmolds 27Y and 27Z.

The placement of the doorways in respect to each other may explain some of the irregularities in the spacing of posts along the curved end of the structure. In analysis of the building, a line was drawn connecting the centers of postmolds 27AP and 27BF along the north wall, and then perpendiculars to this line, running through the center of each postmold along the north wall were established. This process indicated that, with the exception of postmolds 27AM and 27Z, each post on the south half of the structure is paired with a post on the north side. This pattern suggests the frame of the structure

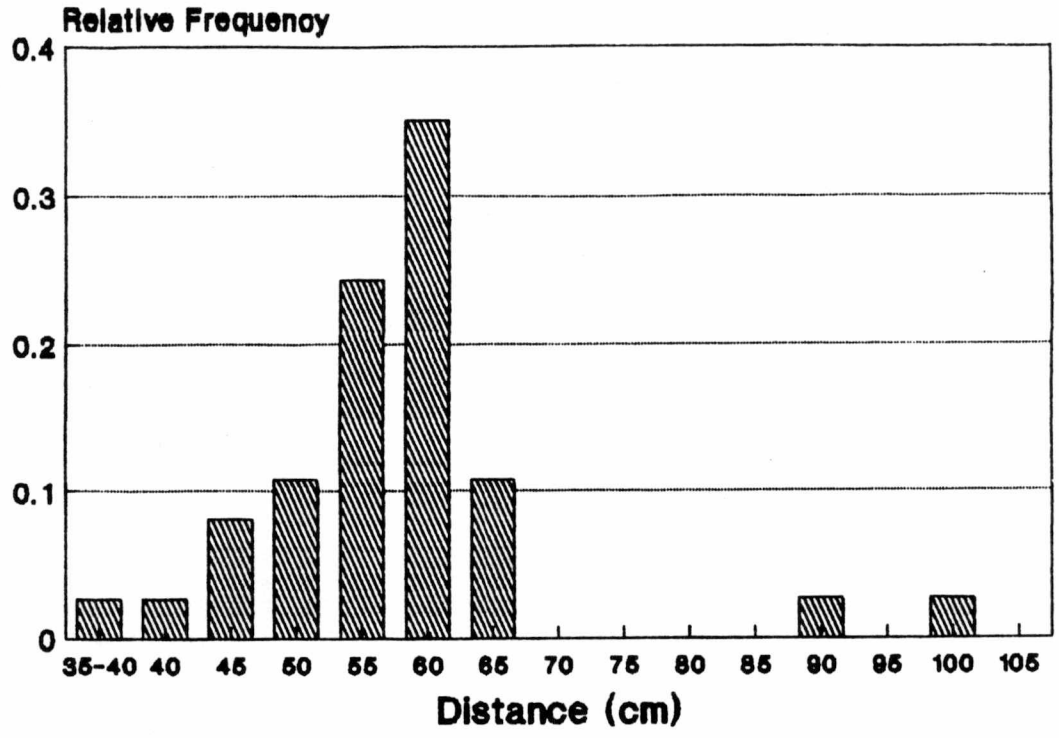


Figure 14. Histogram of distances between postmolds along walls of Structure A, Lot GHF16.

was constructed by raising prepared arches comprised of two saplings lashed together, a method employed in some modern reconstructions (Callahan 1981, 1985).

Offsetting of the entrances into the structure must have been a deliberate action if this construction method was employed. Some of the shorter distances between posts in sections of the walls near the entrances may represent efforts to provide additional stability near the doorways, or, if prepared arches were used, may have been partially determined merely by the placement of the doorway on the opposite wall. Alternatively, irregular spacing between postmolds at the west end of the structure may indicate the use of a framing method similar to that recently employed in the Indian Village at Jamestown Settlement. In this technique, posts forming the curved end of the structure are pulled backward parallel with the long axis of the structure and tied into the arches which form the straight walls of the building.

Sixty-two soil stains identified as prehistoric postmolds were excavated within the interior of Structure A. Postmold diameters ranged from 5.0 to 20.0 cm, with depths below subsoil level ranging from 4.0 to 30.0 cm. As suggested by their larger diameter or greater depth in relation to other postmolds and by their placement within the interior of the house, seventeen posts (27BW, 27BT, 27CF, 27CM, 27CP, 27CW, 27DE, 27DM, 27DN, 27DR, 27DS, 27EF, 27EG, 27EM, 27EX, 27FK, and 27FL) are likely to have functioned as interior roof supports. How the remaining interior posts functioned is uncertain, but there is a linear arrangement of postmolds running roughly down the center of the structure parallel to the long axis. Postmolds such as 27CR, 27DW, 27EB, and 27EC along the north side and 27DK and 272DL along the south side of the

structure may represent supports for benches along the walls. The arrangement of posts within the western end of the structure suggests windbreaks behind each doorway.

A second structure was identified in Area A, but only a small portion of it was exposed. Structure B also appears to be oriented east-west along its long axis. It lies north of and parallel to Structure A, and the walls of the two structures lie 1.5 m apart.

Eleven postmolds were identified along the south wall of Structure B. They are roughly the same size as those in Structure A, although, on average, they extend to a greater depth below subsoil level (Table 1). Distances between the wall posts are also similar. With the exception of the space between postmolds 27S and 27T, the distance between posts ranged from 40 to 66 cm. The gap between the aforementioned posts, measuring 104 cm, likely defines a doorway.

Human Burials

Two burial pits were uncovered in Area A: Features 18B and 25A. Both were fully excavated with the skeletal remains removed and curated permanently for analysis. The burials are very similar both in the placement of the features in relation to the exterior palisade and in the orientation of the skeletal remains. A burial pit and associated skeletal remains exposed by Richard Fleming on Lot 17 (Fleming's Feature 3 and 4, respectively) are also similar in orientation to the Lot 16, Area A burials.

Burial 18B lies in the area of grid point N61 E85. The feature is situated just within the exterior palisade and appears to intrude upon the fortification line. Oriented

roughly east-west along its long axis, the burial pit was 2.30 m long and 1.75 m wide (Figure 15). The sides of the pit sloped slightly inward toward the base at an angle ranging from 8 to 17° from the vertical. The base of the feature was relatively flat, extending from subsoil level to a depth of 0.27 m at the east end to 0.36 m at the west.

Fill within the pit was mottled, consisting of brown loam and yellow and orange clay. The fill contained lithic and ceramic debris as well as small quantities of animal bone and shell. Sixty-nine percent of ceramic sherds recovered are diagnostic of the Late Woodland period (12 shell-tempered, simple stamped; 28 shell-tempered, fabric-marked). A triangular projectile point of jasper was also recovered.

The skeleton was situated at the base of the feature and was roughly centered within the pit. The remains were fully articulated with the cranium positioned at the east end. Extended on its back, the body had been placed with the arms stretched out along each side and the face turned to the left side. The long axis of the body, defined by a line running from the base of the occipital through the sacrum, was oriented N 123° E.

The burial was of an adult female, 25-30 years of age. Hypoplastic lines were noted on the left first incisor and canine (Chase 1992). Three triangular ornaments made from sheet copper and drilled at one end were found with the skeleton closely spaced together on the medial side of the distal end of the left humerus.

Burial 25A was located approximately 9 m southeast of Burial 18B. The former pit was also situated just within the exterior palisade line and, again, the burial appeared to intrude upon the fortification. Feature 25A3, which was visible at subsoil level within the feature fill, is believed to be a modern test hole, although it does lie in line with the

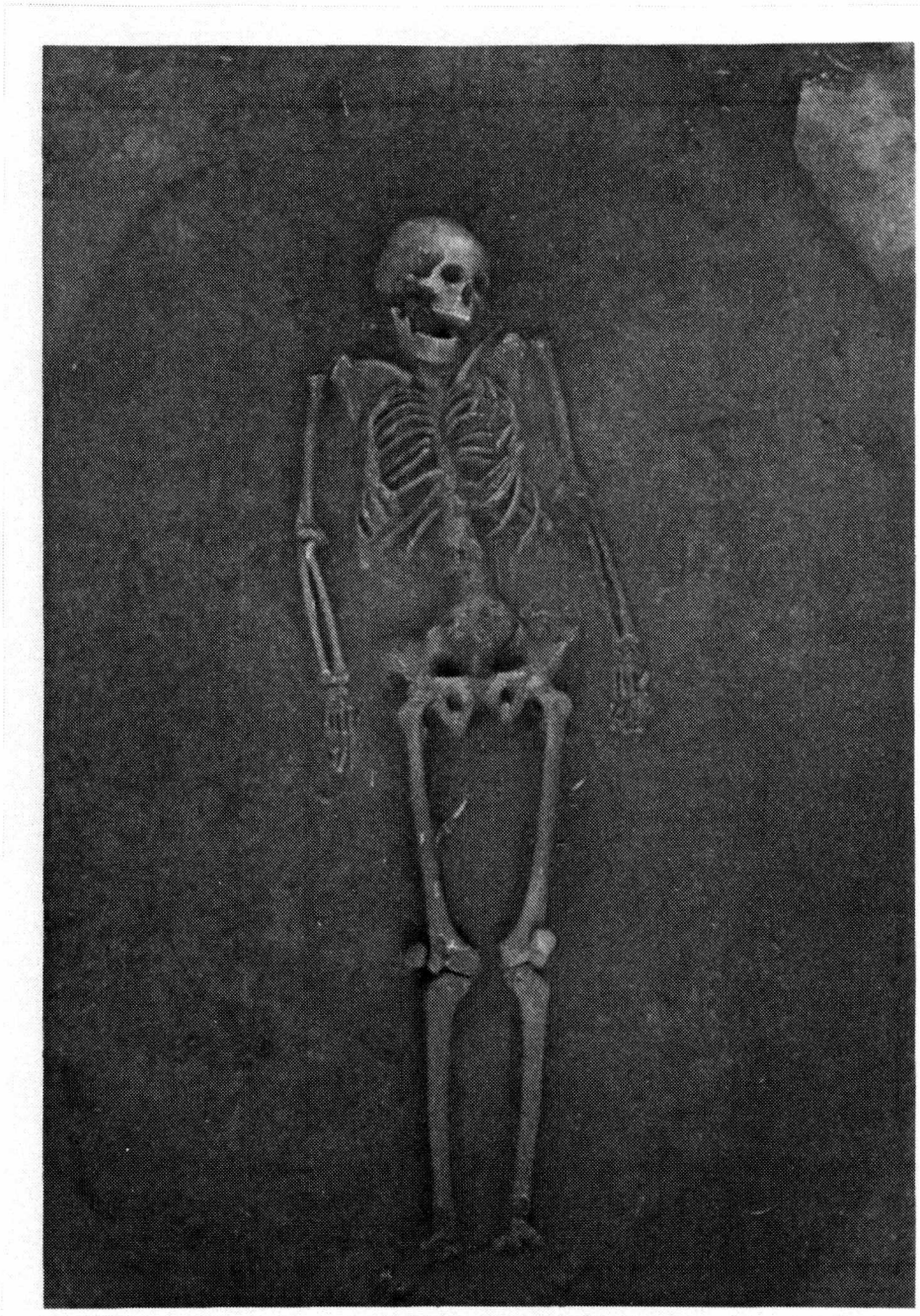


Figure 15. Burial 18B, Lot GHF16.

exterior palisade. The hole was 15 cm in diameter and extended to a depth of 46 cm. Two iron fragments, along with prehistoric artifacts, were recovered from its fill. Two other scattered circular stains were identified at the base of the burial pit. Feature 25A1 was observed at 21 cm below subsoil in the feature fill and was 14 cm in diameter and 10 cm deep. Feature 25A2 was discernable at 28 cm below subsoil and was 7 cm in diameter and 5 cm deep.

The pit of Burial 25A was oriented along its long axis in an east-west direction. Slightly larger than Burial 18B, it was 2.42 m long and 1.95 m wide. The walls of the pit sloped inward towards the base at an angle 10 to 20° from the vertical. The pit was 0.49 m deep and had a flat base.

Similar to Burial 18B, Feature 25A was filled with mottled soil consisting of brown loam and yellow and orange clay containing ceramic, lithic, bone, and shell debris. Fifty-nine percent of ceramic sherds are shell-tempered types diagnostic of the Late Woodland period (9 simple stamped; 20 fabric-marked). No diagnostic lithics were recovered. Radiocarbon analysis of a sample of human bone obtained from the feature produced a modern date (Beta-12117). It is possible the sample had been contaminated with Butvar, a consolidant applied in the field to preserve some bone elements.

The skeleton itself was oriented in a similar manner to the one contained in Feature 18B: articulated and lying fully extended on its back, arms at its sides, the head turned to the left side. The long axis of the body was oriented N 107° E, with the head at the east end.

The skeleton was of an adult male with an estimated age of 45 years or older. Caries were present on seven teeth and one contained an abscess. Seven molars and one incisor were resorbed (Chase 1992). On the individual's right side, situated between the arm and the trunk, lay a tubular clay smoking pipe with an expanded bowl. The pipe extended from the region of the wrist parallel to the radius. The mouthpiece lay at the west end. Also recovered with the skeleton was a rolled copper tube bead found on the left side of the neck region. Two additional fragments of tubular copper beads were recovered from the fill of the pit near the level of the skeletal remains.

Although precise information is not available on the burial exposed in a pipe trench dug during construction of the house on Lot 17, the feature was very similar to Burials 18B and 25A in terms of the orientation of both the pit (Fleming's Feature 3) and skeletal remains (Fleming's Feature 4). The burial pit on Lot 17 was oriented roughly east-west along its long axis and was approximately 2.7 m long and 1.9 m wide. The body was placed fully extended on its back, head at the east end, arms at its side, and face turned to the left. The skeletal remains were not removed.

The similar placement of burials 18B and 25A in relation to the exterior palisade line suggests that the palisade was standing when the burials were deposited. Additionally, the burials appear to intrude upon the palisade. No prehistoric postmolds in line with the palisade were discernable in the fill of the burials or found at the base of the features. Scenarios which could account for the evidence include repair of the palisade following placement of the burials (in which case postmolds placed into the burial fill were no longer discernable at the time of excavation) or placement of the

burials after the palisade had fallen into disuse, but while its former boundaries were still evident. It is also possible that the burials were positioned at entrances through the palisade. It is unlikely that the burials represent secondary interments placed upon abandonment of the village, since the skeletons were fully articulated.

Ossuary

While digging the footings for his house foundation in April 1982, the owner of Lot 16 encountered an ossuary situated roughly 5 m directly south of Burial 25A. VDHR staff learned of the find the next day when they visited the site prior to commencing planned test excavations on Lot 3 in the Meadowridge subdivision. Efforts were made to retrieve as much information on the ossuary as possible, although heavy machinery had disturbed portions of the feature and a concrete foundation had already been poured covering up one end.

Expanding the backhoe excavation slightly beyond the foundation trench revealed that the ossuary pit was oval, extending ca. 5.40 m north-south and at least 5.0 m east-west. The profile of the western wall of the excavation indicated the pit extended 25 cm below subsoil level. Fill consisted of brown sandy loam mottled with yellow to orange clay. As defined, the center of the feature was situated at approximately grid point N49 E95.

The human skeletal material which remained in the ossuary was concentrated at the east end of the exposed section. (Human bone was also seen in the spoils thrown out

by the mechanical digger used to excavate the foundation trench). Here the fill contained less clay mottling and the deposit extended only 7.5 cm below subsoil level. The pit and bone deposit extended further eastward but were interrupted by the concrete foundation.

The skeletal elements were deposited in disarticulated position and included the remains of at least three individuals: one male estimated at 30 years of age; one adult female; and an adolescent (Chase 1992). Both long and short bones, including elements of the wrist, hand, and foot, were recovered. Ceramics from the ossuary fill indicate a Late Woodland period date for the feature. Of five shell-tempered sherds, two are fabric-marked, one simple stamped, and two unidentified. One sand-tempered, net-marked sherd was also recovered.

Other Features

Feature 18C1 was one of several additional prehistoric features exposed in the northern portion of Lot 16. Located just outside of the exterior palisade line near grid point N66 E82, the feature was a small basin 0.5 m in diameter. The walls of the basin sloped gently to a rounded bottom which lay 10 cm below subsoil level. Fill consisted of a dark brown sandy humus containing small shell fragments.

Although the configuration of the basin suggested a prehistoric feature, in both plan and profile it appeared to intrude on Feature 18C2, interpreted as an historic posthole. Artifacts recovered from Feature 18C1 include five small prehistoric sherds, one quartzite flake, seven fragments of window glass, one fragment of emerald green

molded glass, a small piece of coal, and 47 grams of oyster shell. Feature 18C2 yielded only prehistoric artifacts. It is likely that Feature 18C1 indeed dates from the prehistoric period, but that its upper surface just below subsoil level had been disturbed by plowing.

Another prehistoric feature located in Area A was encountered in the northeast corner of Test Square 3. Only that portion of the feature included within the square was excavated. Feature 3E was discernable at 20 cm below modern grade at the top of a zone of tan-brown sandy loam which lay below plowzone. The fill of the feature was distinguished from the surrounding matrix by the presence of shell and larger ceramic sherds. In plan, Feature 3E extended at least 1.1 m north-south and 0.75 m east-west. Both the feature deposit and the surrounding matrix extended for a depth of 10 cm before grading into sterile subsoil. Ceramics recovered from Feature 3E were predominantly shell-tempered with simple stamped surface treatment. The faunal remains from the feature included oyster, hard shell clam, and soft shell clam shell in addition to bone.

Directly south of Unit 3 lay another feature for which little information is available. Encountered in a shovel test by the landowner's brother, the presumably prehistoric feature contained charcoal, animal bone, hardshell clam, and large lumps of baked clay. Spoils from the excavation yielded shell-tempered ceramics with fabric-marked and simple stamped surface treatment.

During additional digging with a backhoe near the edge of the bluff overlooking Broad Bay, the landowner's brother exposed another feature centered on grid point N71.65 E90.30. Once the feature was recognized, trenching was halted and the wall of the trench was troweled and examined by VDHR staff. The profile revealed the

remaining intact portion of a dense concentration of ceramic sherds, designated Feature 17, situated at the interface between the plowzone layer and a lense of midden soil 10 cm thick. The sherd cluster itself was 0.30 by 0.60 m in plan and 6 cm thick.

The intact portion of the feature was excavated by VDHR staff and soil from both the backhoe spoils and the plowzone directly above the feature was screened for artifacts. Subsequent mending in the laboratory indicated that the intact portion of the feature contained fragments from two shell-tempered, fabric-marked vessels. Sizable portions of each vessel were reconstructed through cross-mending with sherds recovered from the screened backhoe spoils. Some of the mended sherds from each vessel show evidence of having been burnt after the vessel was broken. Because of the threat of erosion along the cliff face, no further area was opened up in the vicinity of the feature, which lay a little over one m beyond the northern edge of Unit 27. The position of Feature 17 suggests, however, that it may have been associated with Structure B.

Radiocarbon analysis was conducted on charcoal collected from between several tightly packed sherds excavated from the intact portion of Feature 17. A date of 1570 $\pm$170 years: A.D. 380 (Beta-19777, not calibrated) was obtained. This date is considered much too early for the Townsend ceramics associated with the charcoal sample.

Excavation Area B

Excavation Area B, located south of Excavation Area A, contained a dense array of prehistoric postmolds, which appear to define an oval structure, as well as a few historic postholes (Figure 16). Two Native American burials lay along what seem to be opposite walls of the structure. Three trash-filled pits were also uncovered in the vicinity of the structure and in the area to the south. The predominance of shell-tempered, simple stamped and fabric-marked ceramics in the fill of the burial pits and the presence of these wares in a few postmolds indicates the burials and structure date from late within the Late Woodland period. This feature complex shows some affinity to the palisaded settlement in Area A in respect to the plan of the structure and the configuration and placement of the burials.

Structure

Numerous prehistoric postmolds were uncovered in Area B, with the most dense concentration centered on Unit 26. The arrangement of posts in this area is difficult to interpret, but suggests an oval structure, Structure C, with its long axis running northwest-southeast. The southwest side of the structure is the best defined, and is represented by a line of postmolds including 13A, B, and C. The opposite wall is less apparent. The strongest linear pattern on this side of the structure is represented by

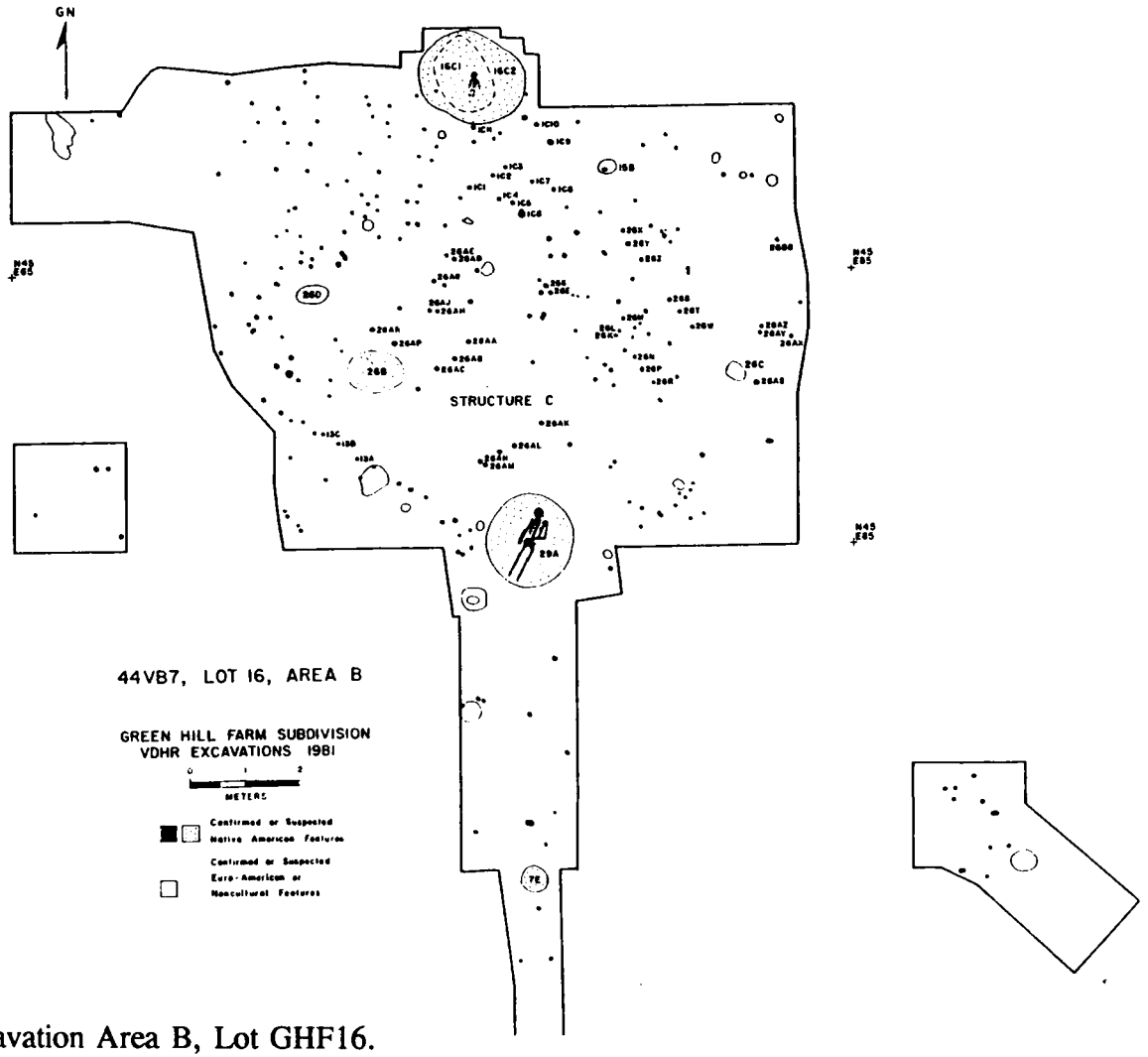


Figure 16. Plan of Excavation Area B, Lot GHF16.

postmolds 26S-T, 26W-Z, and 1C9-10. This line does not run parallel to the southwest wall, however.

These two walls define a structure whose width decreases gradually toward the southeast end from a maximum of 6.90 m at the position of postmold 1C9 to 5.5 m at postmold 26W. The ends of the structure are defined by arched lines of postmolds in the vicinity of N47 E76 at the northwest end and N41 E82 at the southeast end. The density of postmolds in Area B outside of these side and end walls is noticeably less than within the defined structure.

Measurement along a line drawn midway between the two side walls indicate that Structure C was 10.20 m long. The diameters of eleven excavated posts from along the side walls ranged from 7.0 to 11.0 cm (mean 8.6, $\sigma = 1.463$). Depths ranged from 2.0 to 16.0 cm below subsoil level. Seven distances measured between the excavated posts ranged from 25 to 42 cm.

Although the postmolds in Area B do not form a clear pattern and it is uncertain whether evidence from all posts associated with Structure C survived, certain other features of the structure can be suggested. For example, given the walls of the structure as defined above, gaps between adjacent postmolds in each of the four corners may indicate the locations of doorways. A bench or platform inside the northeast wall is suggested by series of posts in this area which run parallel to the exterior wall. (Alternatively, these lines could represent exterior walls themselves). It is likely that many other postmolds on the interior of the structure represent support posts, but the

dense arrangement of postmolds at the northwest end of the structure suggests the presence of additional earth-fast furniture or interior partitions.

Diagnostic ceramics recovered from the sample of excavated postmolds in the vicinity of Structure C indicate a Late Woodland period date. Postmolds 13C, 26Y, 26AA, 26AE, and 26AS each yielded one sherd of shell-tempered, simple stamped ware.

Human Burials

Two burials were uncovered in Area B: Features 16C and 29A. Burial 16C, situated in the vicinity of grid point N48 E78, lay along the northern wall of Structure C. No postmolds in line with this wall were discernable in the burial fill.

The intact portion of the burial pit was very shallow, extending only 10 cm below subsoil level which, in this area of the site, was 35 cm below modern grade. Disturbed fill from the feature could be discerned within the plowzone.

At subsoil level, the burial pit appeared oval in plan extending 1.90 m northwest-southeast and 1.55 m northeast-southwest. The outer edges of the pit were filled with yellow and orange sandy clay mottled with brown loam and containing a little ceramic, lithic, bone, and shell debris. The skeletal remains were situated roughly in the center of the overall pit, but within the southeast end of an inner core of very dark brown fill containing an abundance of ceramic sherds, lithic flakes, and fragments of non-human bone and shell. This oval, trash-rich deposit was 1.35 m by 0.90 m in plan. The ceramics recovered from the deposit are predominantly shell-tempered. Of the 18 shell-

tempered sherds recovered, 33% are fabric-marked and 61% simple stamped. Surface treatment on 4% was unidentifiable. The four additional ceramic sherds recovered are Middle Woodland sand-tempered types.

The interment was an infant, fully articulated, placed extended on its back with the arms stretched along its sides and the legs placed slightly toward the right side. The cranium lay at the north end. The long axis of the body, defined by the vertebral column, was oriented N 20° E. The infant is estimated to have died at 6-9 months of age (Chase 1992).

The second burial within Area B was excavated and mapped by Richard Fleming in December 1980. The test square opened by Fleming to expose the burial was relocated during VDHR excavations in 1981, and Fleming's map of the square was tied into the VDHR site plan. Feature 29A (Fleming's Feature 6) appears to lie along the south wall of Structure C as defined by postmolds 13A-C. No postmolds were recognized within the feature fill. The burial pit was circular in plan, 1.60 m in diameter. Fill consisted of dark brown loam containing abundant artifacts and shell.

The human skeletal remains were centered within the pit. Placed on its back, the limbs were fully extended, except for the left arm which was bent at the elbow and oriented so that the hand rested above the lower portion of the vertebral column. The cranium lay at the northeast end of the pit and was turned slightly to the right side. The long axis of the body, defined by a line running from the base of the occipital through the sacrum, was oriented N 46° E. The skeletal remains are of an adolescent estimated to be 15 years of age $\pm$ 36 months (Chase 1992).

Paul Green's (1987:Table 11) analysis of ceramics recovered by Fleming from the fill of Feature 29 indicated a predominance of shell-tempered Late Woodland wares: 46% simple stamped and 13% fabric-marked. Fill reserved from the feature by Fleming for waterscreening (54 liters) and processed by the VDHR yielded only one ceramic sherd larger than one square inch. The ceramic was shell-tempered with simple stamped surface treatment. Among other artifacts, the waterscreen sample also yielded one small, circular shell disc bead perforated through the center. Radiocarbon assay of human bone from the burial yielded a date of 620 $\pm$ 80 years: A.D. 1330 (Beta-12117, not calibrated).

Other Features

Three additional prehistoric features were encountered in Area B. Two of these, Features 15B and 26B, were located in the immediate vicinity of Structure C. Feature 15B, situated just west of grid point N47 E81, was an oval deposit of primarily oyster shell, 34 cm by 24 cm in plan. The deposit extended only a few centimeters below subsoil level. In addition to 532 grams of oyster shell, one shell-tempered, fabric-marked sherd, one jasper flake, and two fish vertebrae were recovered from the fill.

Feature 26B was a concentration of ceramics and oyster shell centered on grid point N42.20 E76.50 and identified in the plowzone. The artifact concentration measured roughly 0.80 m north-south by 1.00 m east-west in plan and 15 cm thick. None of the deposit extended below subsoil level. Diagnostic ceramics recovered

through screening the plowzone in a 1.5 m by 1.0 m area centered on the artifact concentration were all shell-tempered and included 15 simple stamped, 1 cord-marked, and 1 plain-surfaced sherd.

South of Structure C, Feature 7E, another concentration of ceramics and shell, was identified above subsoil level within a 10 cm thick layer of midden soil preserved in this section of the site. The feature was located adjacent to grid point N34 E79. It measured 0.40 north-south by 0.45 m east-west in plan and was 15 cm thick. Thirteen of the 17 sherds recovered are shell-tempered, fabric-marked. Shellfish remains recovered from the pit include 2809.0 grams of oyster shell and 2.4 grams of hard shell clam shell.

Collections

Ceramic Artifacts

Using two attributes--paste and surface treatment--four ceramic series were identified in the collections from Lot 16. Each of these is at least roughly comparable to a series previously described in the regional archaeological literature and can be used to date the Woodland occupations on the property.

VDHR excavations on Lot 16 were focused on those areas which test units had indicated held the highest feature density. Once these areas were identified, efforts were directed primarily toward exposing the plan of structural features associated with

prehistoric settlement and recovering archaeological information from those portions of discrete features preserved intact below subsoil level. The only prehistoric pit features or structural patterns encountered in the excavations date from the Late Woodland period. Excavation of 11 initial test units provided more general and systematic data relating to use of the property during the prehistoric period. The artifact collections recovered from these units were obtained by screening all deposits above sterile subsoil through one-quarter inch mesh. Analysis of these collections indicated they include a significant number of ceramic sherds diagnostic of the Middle Woodland period.

Table 2 shows the distribution of ceramics by temper and surface treatment recovered from 10 of the 11 initial 2 m by 2 m test units excavated on the lot, while Table 3 lists those ceramics recovered from 6 Late Woodland features. The shell-tempered, simple stamped and fabric-marked ceramics which predominate in both collections are comparable, respectively, to the Late Woodland type Roanoke Simple Stamped (Blaker 1952; Harrington 1948) and types in the Townsend series (Blaker 1963; Stephenson and Ferguson 1963). In the archaeological literature of North Carolina, comparable ceramics are subsumed under the Colington series (Phelps 1982, 1983:36-37).

Both Roanoke and Townsend ceramics from Lot 16 are tempered with at least moderate amounts of crushed shell added to a clay paste which is usually silty (Figure 17). The shell of the ribbed mussel (Geukensia demissa) appears to have been used most frequently, although shell from other species which are harder to identify from small

Table 2. Ceramics recovered from test units, Lot GHF16.

CERAMIC SHERDS LARGER THAN ONE INCH (NUMBER)	TEST UNITS										TOTAL	
	1	2	3	4	5	6	7	9	10	11	#	%
SHELL-TEMPERED												
SIMPLE STAMPED	15	12	60	11	15	24	21	6	3	2	169	
FABRIC	7	4	5	5	7	3	12	2	6	1	52	
SUB-TOTAL	22	16	65	16	22	27	33	8	9	3	221	57.8
SHELL-TEMPERED												
NET	1	--	1	5	4	1	--	--	1	--	13	
CORD	8	1	1	15	--	2	4	1	1	--	33	
SUB-TOTAL	9	1	2	20	4	3	4	1	2	--	46	12.0
SHELL-TEMPERED												
UNIDENTIFIED	6	1	4	3	6	11	11	5	6	4	57	14.9
FINE SAND-TEMPERED												
NET	16	2	2	3	7	1	4	2	--	--	37	
CORD	4	1	--	1	--	--	--	--	--	--	6	
SUB-TOTAL	21	3	3	4	8	2	5	2	--	--	48	12.6

Table 2 (cont.)

CERAMIC SHERDS LARGER THAN ONE INCH (NUMBER)	TEST UNITS										TOTAL	
	1	2	3	4	5	6	7	9	10	11	#	%
MEDIUM SAND-TEMPERED												
NET	1	1	–	3	–	–	–	–	–	–	5	
UNIDENTIFIED	1	–	–	–	1	–	2	1	–	–	5	
SUB-TOTAL	2	1	–	3	1	–	2	1	–	–	10	2.6
TOTAL	60	22	74	46	41	43	55	17	17	7	382	100.0
CERAMIC SHERDS SMALLER THAN ONE INCH (WEIGHT IN KILOGRAMS)	1.1	0.7	0.4	0.5	1.2	1.2	1.9	1.0	0.4	0.4	8.0	

Note: The ceramics listed include only those recovered from plowzone, interface zone, and midden layers, and not those recovered from discrete areas of feature fill observable above sterile subsoil level. Ceramics from Unit 8 are not listed as this square contained an overburden of fill from construction activities on Lot 17. Mistakes were also made in labeling artifacts recovered from lower levels of Unit 8.

Table 3. Ceramics recovered from selected features, Lot GHF16.

CERAMIC TYPE	FEATURE					
	3E	7E	16C	18B	25A	29A
SHELL-TEMPERED						
SIMPLE STAMPED	15	--	11	12	9	86
FABRIC	--	14	6	28	20	24
NET	--	--	--	2	--	--
CORD	--	--	--	2	1	--
PLAIN	--	--	--	4	7	23
COMBED	--	--	--	1	1	--
UNIDENTIFIED	--	1	1	5	8	31
FINE SAND-TEMPERED						
NET	--	--	3	2	2	5
CORD	--	--	--	--	1	--
PLAIN	--	--	--	--	--	14
UNIDENTIFIED	1	--	--	--	1	--
MEDIUM SAND-TEMPERED						
NET	--	--	--	1	--	--
FABRIC	--	--	1	--	--	1
UNIDENTIFIED	--	--	--	--	--	3
TOTAL	16	15	22	58	49	187

Note: Frequencies for Feature 29A are from Green's (1987:Table 11) analysis of the collection retained by Richard Fleming. Fine sand-tempered category includes Green's Middletown type. Medium sand-tempered category includes his Mount Pleasant type.

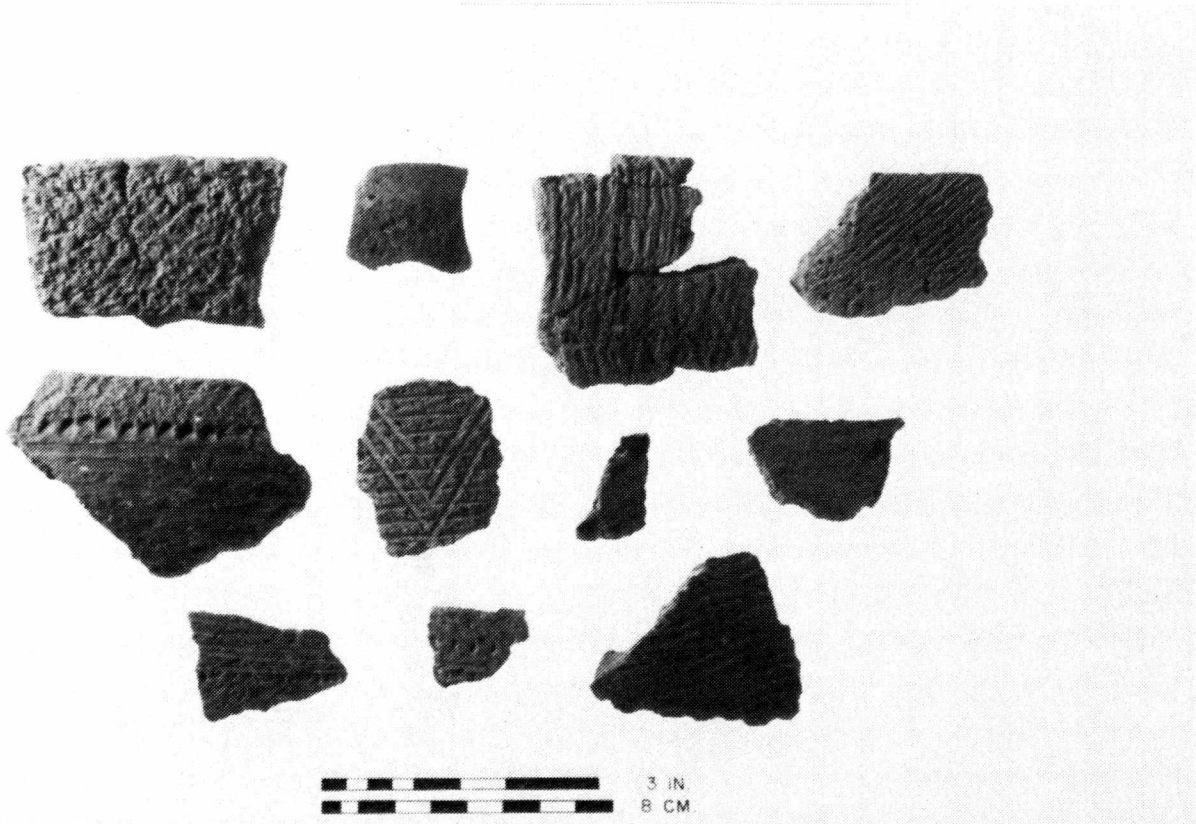


Figure 17. Townsend, Roanoke, and Mockley ceramics, Lot GHF16.

fragments may also have been employed. Surface color of the wares varies widely from tan to orange to black.

The exterior surfaces of Roanoke sherds bear usually overlapping impressions of an untwisted fiber which seems to have been applied by beating the vessel with a wrapped paddle. Impressions of individual fibers are most commonly 1.5-2.0 mm wide. The interior of sherds are sometimes scored with shallow grooves as might be produced by scraping the surface with the edge of a ribbed mussel shell. Of four rims recovered from the test units and features, two have straight profiles and two flare outward slightly at the lip. Two rims are marked with tamping on top of the lip: two are smoothed. Vessel bases appear rounded to sub-conical in form. Mean thickness of all but obvious basal sherds recovered from the features listed in Table 3 is 0.71 cm ($n = 45$, $\sigma = 0.09492$).

Decoration occurs on only 3 (2.8%) of the total of 118 Roanoke sherds analyzed in the collection. Two of the sherds bear incised decoration. All that can be said from these examples is that the decorative motifs represented consist of, at minimum, parallel lines of incising. One rim sherd in the collection is decorated with a line of punctations directly below the lip on the exterior surface.

The exterior surfaces of Townsend sherds recovered from Lot 16 bear impressions of fine, tightly woven, weft-twined fabrics. Interior surfaces of sherds are often scored. This treatment is also occasionally found on exterior surfaces. The large vessel fragments recovered from Feature 17C suggest that combing was a routine process in

exterior surface preparation preceding malleation of the surface with a fabric-wrapped paddle.

Of seven Townsend rim sherds in the two analyzed collections, three have straight profiles, three may curve inward forming a slightly constricted neck, and one flares outward at the lip. The one basal sherd (Feature 7E) in the analyzed collections is sub-conical in form. Mean thickness of sherds recovered from the features listed in Table 3 is 0.76 cm ($n = 66$, $\sigma = 0.10666$). A large rim fragment in the collection (Feature 7E) derives from a vessel estimated to measure 32 cm in diameter. The rim sherd is 0.7 cm thick 2 cm below the lip. The two vessels partially reconstructed from sherds recovered from Feature 17C (Figure 18) are estimated to measure 25-30 cm and 30 cm in diameter at the mouth. The former is estimated to stand 32 cm high and has a sub-conical base. The wall of each vessel is 0.8 cm thick 2 cm below the lip.

Seventeen (14.2%) of the 120 Townsend sherds analyzed bear some form of decoration comprised of incised elements or punctations, but the fragmentary condition of the sherds precludes a full understanding of the decorative designs represented. To facilitate comparison with assemblages from other sites, where possible in the discussion of the designs which follows, a code referring to the typology of Townsend decoration developed by Griffith (1982:55-57, Figure 8) is noted.

Evidence of decoration on five of the Townsend sherds from Lot 16 consists only of a series of parallel incised lines, and it is not known if other elements were paired with this motif. Five other sherds have incisions which cross-cut a band of parallel incised lines at an angle (R18). On one of these specimens, the overlying incisions form

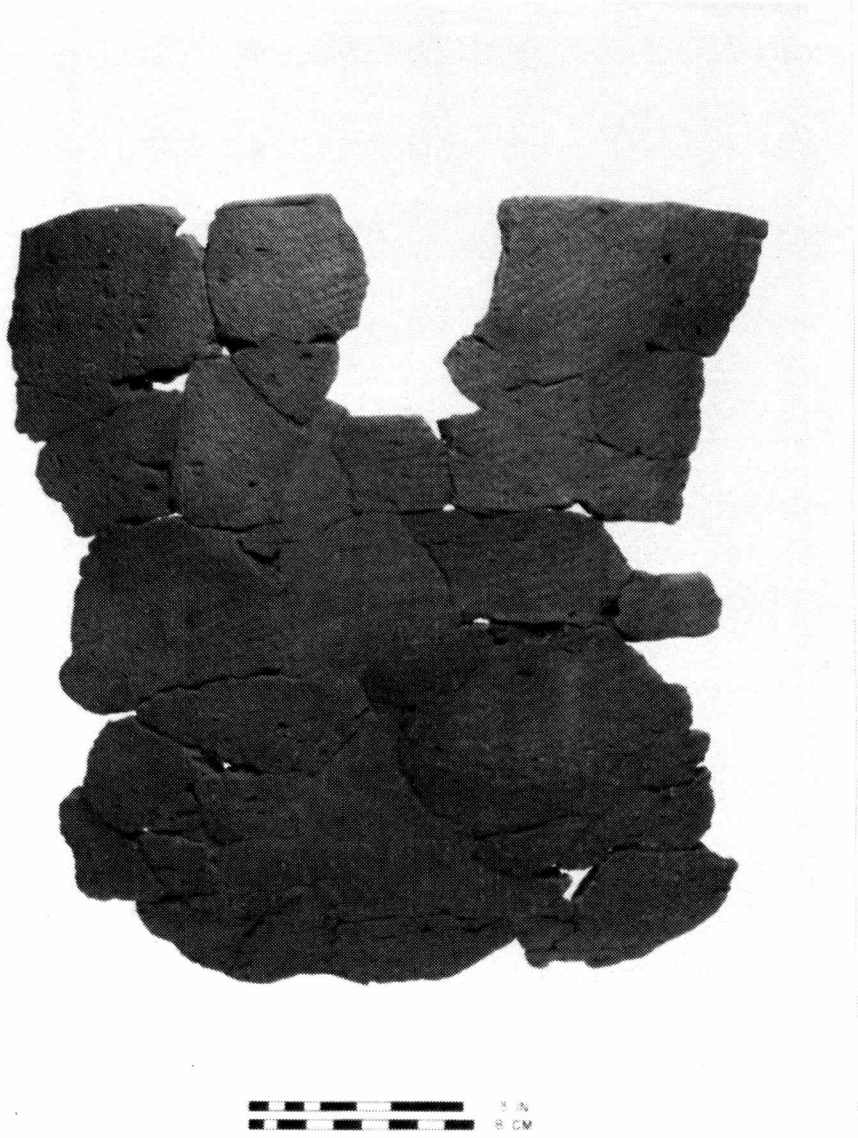


Figure 18. Townsend vessel fragment from Feature 17C, Lot GHF16.

triangles or chevrons. Three additional sherds have a band of parallel lines paired with a line of punctations. Two of these are rim sherds, and on both the punctations are positioned above (closer to the rim) the band of incising (similar to R12, for which Griffith specifies the band surmounts another element). Of the four remaining sherds, two appear to be decorated with hanging elements of grouped, parallel incised lines (R16); one has a filled triangular element; and one has an isolated, open triangle drawn with incising (R17). One additional rim sherd in the analyzed collections, as well as the rims of the two vessels from Feature 17C, are marked with the edge of a fabric-wrapped paddle on the interior of the vessel just below the lip. This "decoration" is likely a by-product of the vessel-shaping process.

As related in the descriptions above, the Roanoke and Townsend ceramics recovered from Lot 16 are similar in many respects. The primary difference between the two is in surface treatment, although one shell-tempered sherd (listed as "Unidentified" in Table 2 under Unit 6) was found to bear both fabric and simple stamped impressions on the exterior surface. The ceramics also differ in their use of incised decoration, with Townsend ware decorated more frequently. The sample recovered from Lot 16 does not permit us to determine whether the same or different decorative designs were used for each ceramic type.

The distribution of Roanoke and Townsend sherds on Lot 16 was examined to determine if temporal differences in the use of the ceramics might be discerned or if separate phases of Late Woodland occupation were represented by the structural remains and burials associated with Areas A and B of the excavation or by the two ceramics.

Analysis of the spatial distribution of Roanoke and Townsend ceramics on Lot 16 yielded no evidence to suggest more than one Late Woodland occupation is represented on the property. The distributions of simple stamped and fabric-marked sherds recovered from 10 of the initial test units are plotted in Figure 19. (These and similar plots in the report were created with the computer program SURFER 2.0 [Golden Software, Inc.], set to use the inverse distance method with a weighting power of 10 to generate a grid of values from unevenly distributed data. Data from Unit 8 were omitted in creating plots for Lot 16 for reasons addressed in Table 2). With the exception of the dense cluster of simple stamped sherds centered on Unit 3, which contained plow-disturbed remains from pit feature 3E, frequencies for both Roanoke and Townsend sherds are highest in the southwestern section of Excavation Area B. If a separate occupation is represented by each of the ceramics, disposal patterns during the two occupations were similar.

Some differences are evident, however, in the distribution of Roanoke and Townsend sherds in the Late Woodland features excavated on Lot 16. As seen in Table 3, Townsend ceramics are relatively more frequent than Roanoke ceramics in the collections from the two burials (Features 18B and 25A) situated along the palisade line. In the collections from burials associated with Structure C (Features 16C and 29A), located outside of the palisade, Roanoke ceramics predominate. The only two non-burial Late Woodland features which were encountered on Lot 16 in relatively undisturbed condition (Features 7E and 3E) contained either one or the other ceramic exclusively.

Extant contextual and radiocarbon associations suggest that Roanoke Simple Stamped was developed late within the Late Woodland period relative to the initial

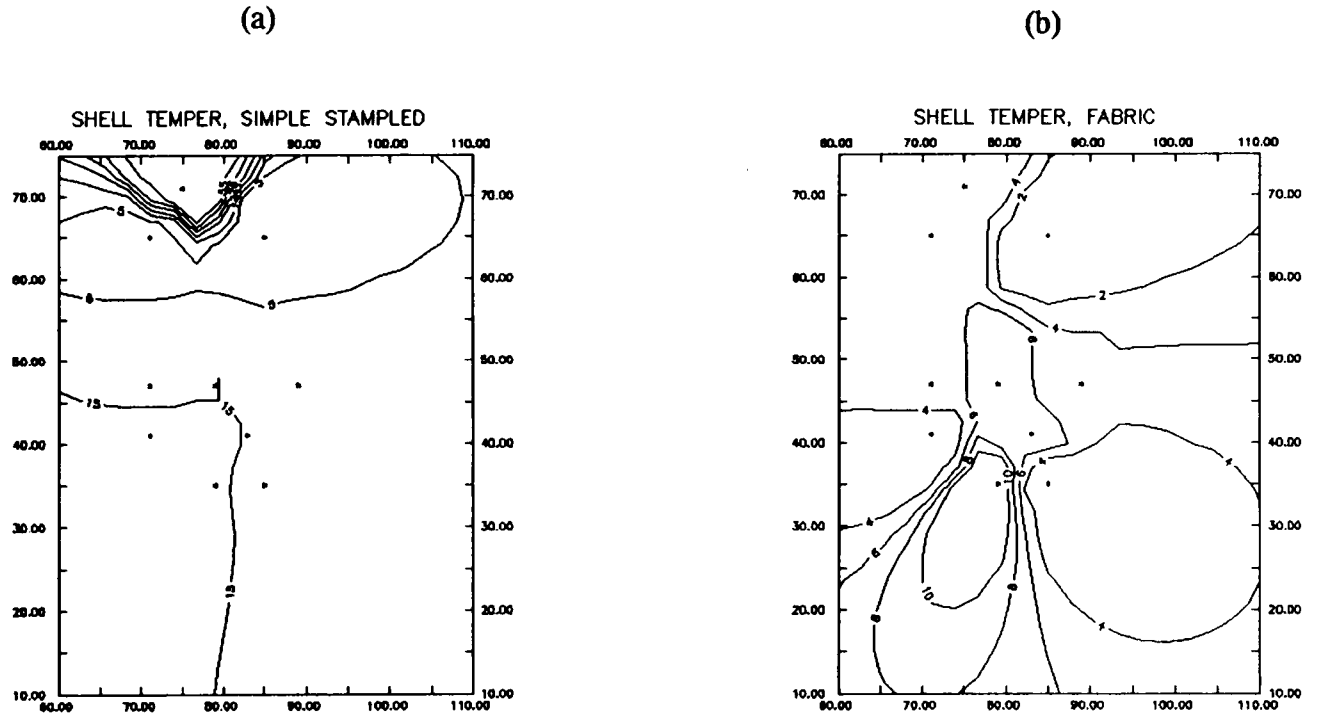


Figure 19. Spatial distribution of Late Woodland ceramics, Lot GHF16. (a) shell-tempered, simple stamped (b) shell-tempered, fabric-marked.

appearance and use of fabric-marked and incised-decorated types within the Townsend series (Egloff and Potter 1982:109-111). The evidence from Lot 16 appears to confirm these findings as well as suggest temporal differences in the use of Areas A and B. The predominance of Townsend ceramics in the fill of the two burials situated along the palisade line is surprising considering that 76% of identifiable Late Woodland sherds recovered from plowzone, interface zone, and midden levels in the initial test units on Lot 16 are simple stamped (Table 4). If collections from the fill of each of the four burials on Lot 16 are assumed to be a representative sample of trash discarded on the site prior to each interment, an earlier date is indicated for interments 18B and 25A associated with the palisaded settlement in Area A. The array of ceramics recovered from interments 16C and 29A, associated with the longhouse in Area B, more closely approximates the ratio of fabric to simple stamped sherds found in accumulated deposits at the site at the close of Late Woodland occupation.

Sherds diagnostic of the Middle Woodland period constitute at least 27% of the ceramic collection recovered from the initial test units opened on Lot 16 (Table 2), although no Middle Woodland pit features or structures were encountered in the excavation areas. Twelve percent of Middle Woodland sherds are shell-tempered and comparable to types within the Mockley series (Egloff and Potter 1982:103-104; Stephenson and Ferguson 1963:105-109).

Since the temper had leached out of the body of Mockley sherds recovered on Lot 16, the type of shell used could not be identified. The majority of sherds have a silty paste, but some have inclusions of fine sand. While surface color varies, sherds more

Table 4. Stratigraphic distribution of ceramics in test units, Lot GHF16.

CERAMIC TYPE	PLOWZONE		INTERFACE ZONE		TOTAL	
	#	%	#	%	#	%
SHELL-TEMPERED, SIMPLE STAMPED AND FABRIC	168	77.4	54	49.5	222	68.1
SHELL-TEMPERED, NET AND CORD	26	12.0	20	18.3	46	14.1
FINE SAND-TEMPERED	17	7.8	31	28.4	48	14.7
MEDIUM SAND-TEMPERED	6	2.8	4	3.7	10	3.1
TOTAL	217	100.0	109	99.9	326	100.0

commonly are of an orange or red hue than are the Middle Woodland sand-tempered wares described below.

Mockley ceramics are distinguished from Late Woodland shell-tempered types by cord- and net-marked surfaces (Figure 17). Cord-marking predominates in the collection from Lot 16. Occasional sherds are scored on the interior surface. Three rim sherds, one with a straight profile and two which curve slightly inward, are included in the analyzed collections from the test units and features listed in Tables 2 and 3. The one basal sherd in the collections is sub-conical in form. Mean wall thickness of 25 sherds recovered from Units 1 and 4 is 0.84 cm (σ = 0.16350). No decoration was identified on any of the Mockley ceramics in the two analyzed collections, although notching on the interior of the rim was noted on a sherd recovered from a surface context.

Approximately 15% of Middle Woodland ceramics from the test units on Lot 16 are characterized by the inclusion of sand in the paste, exclusive of shell (Figure 20). Among these sherds, two provisional series were distinguished in the analysis. The presence of cord- and net-marked types in each series suggests these ceramics date from the Middle Woodland period (Egloff 1985:238-239; Egloff and Potter 1982).

Those ceramics categorized as "fine sand-tempered" have a hard, compact paste containing a high proportion of sand particles smaller than 1.0 mm in diameter as well as occasional particles as large as 2 mm in diameter. While some of the ceramics feel sugary to the touch, they are not friable. Most of the fine sand-tempered ceramics are oxidized to a light orange to tan color on interior and exterior surfaces, and have a thick grey to black core. Mean thickness of 24 sherds from Units 1 and 4 is 1.1 cm (σ =

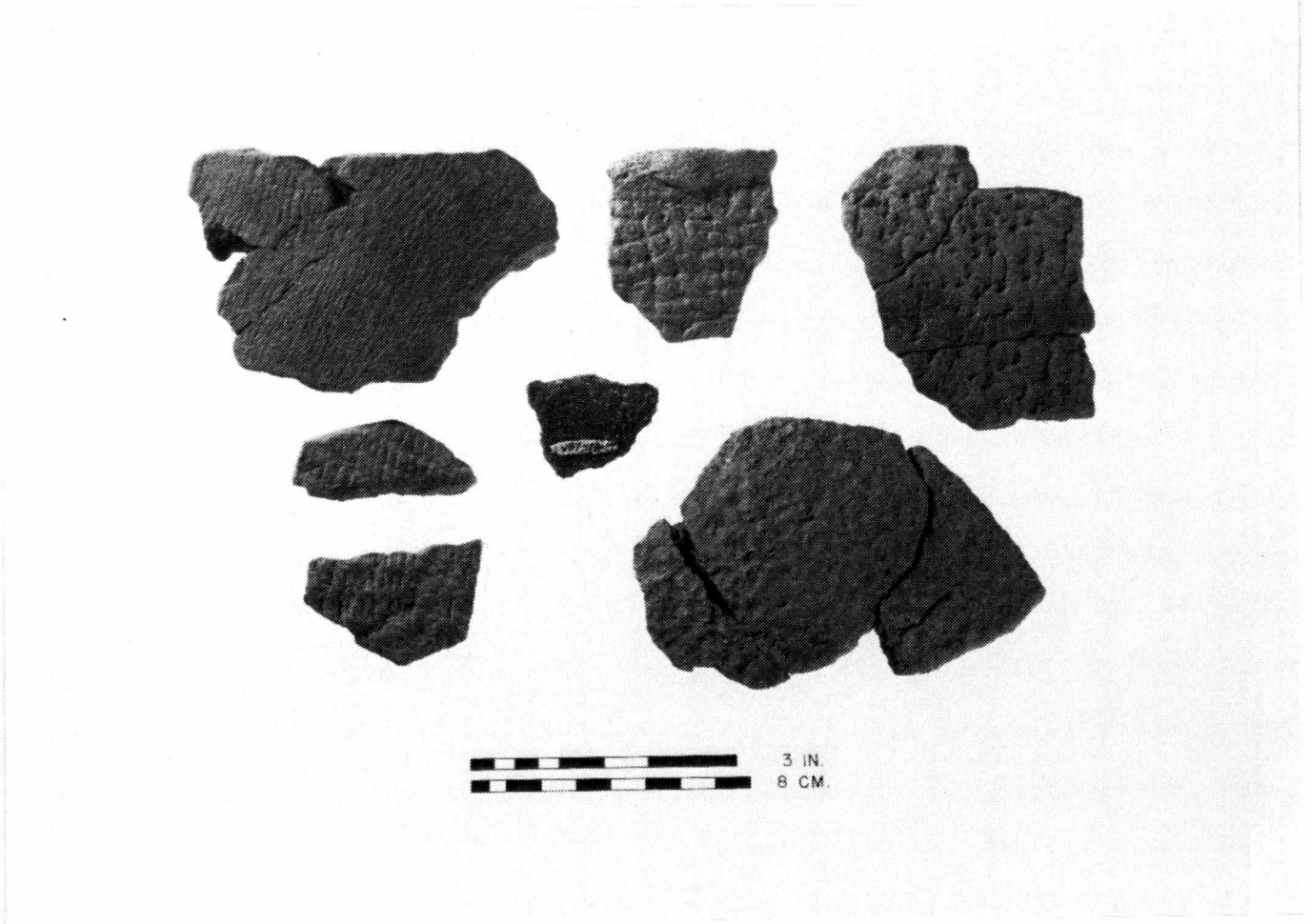


Figure 20. Sand-tempered ceramics, Lot GHF16

0.12740). Rim and basal sherds observed in the test unit collections and in unsystematic collections from Lot 16 suggest that vessels curved inward slightly at the rim and had round to sub-conical bases. In the collections from the test units, only knotted net- and cord-marked surfaces were observed. A few fabric-marked sherds are included among the artifacts collected from spoil piles from areas cleared to subsoil by bulldozing. Both a coarse wicker fabric and an open-weave, weft-twined fabric were identified. No decoration was identified in the collections.

Ceramics categorized as "medium sand-tempered" constitute only a small proportion of the collection from Lot 16. These ceramics are distinguished from the fine sand-tempered ware by a higher proportion of sand in the paste and by the larger size of individual particles, which most commonly measure 1.5-2.5 mm in diameter. The definition ignores additional variation in paste among the sherds categorized as "medium sand-tempered," but no further splitting was attempted since the size of the sample is very small. Both knotted net-marking and impressions of an open-weave, weft-twined textile were observed on exterior surfaces. The five sherds recovered in Units 1 and 4 ranged 0.8-1.2 mm in thickness (mean 1.0) .

Clues to the temporal and cultural relationships between the sand-tempered and shell-tempered Middle Woodland ceramics recovered on Lot 16 were sought by examining their stratigraphic and spatial distributions. Stratigraphic distribution of the ceramics was assessed by comparing the array of sherds recovered in plowzone contexts in the initial test units to that recovered in an interface zone of tan-brown sandy loam encountered in several of the squares between plowzone and sterile subsoil. Field

observations had suggested the interface zone represented an undisturbed deposit, since it appeared to contain both larger sherds than the overlying plowzone and a higher proportion of Middle Woodland ceramics.

As discussed earlier, more rigorous analysis of ceramics recovered from the test units confirmed the preliminary field interpretation (Table 4). The proportion of Middle Woodland ceramics (both shell- and sand-tempered) was found to be higher in the interface zone (50.4%) than in the plowzone (22.6%). The data presented in Table 4 appear to indicate a temporal difference between shell-tempered and fine sand-tempered Middle Woodland ceramics, but this may be misleading. Fine sand-tempered sherds do show a stronger tendency to be associated with the interface zone than do shell-tempered, net- and cord-marked ceramics, but this pattern is shaped largely by the 21 sherds of fine sand-tempered ceramics recovered in the interface zone in Unit 1 which appear to represent only two vessels. The fact that nine shell-tempered Middle Woodland sherds recovered in this square also derive from the interface zone suggests the difference in stratigraphic distribution may merely be the product of sampling.

Analysis of the spatial distribution of Middle Woodland ceramics on Lot 16 yielded no evidence for significant temporal differences between the Mockley ceramics and the two sand-tempered types. The distributions of shell- and sand-tempered Middle Woodland ceramics are shown in Figure 21. Sherds of both sand-tempered types were combined in the analysis since sample size for the ware with the coarser clastic inclusions is small. The plots show the highest frequencies of both sand- and shell-tempered Middle Woodland ceramics in the vicinity of Units 1 and 4. The results suggest the two

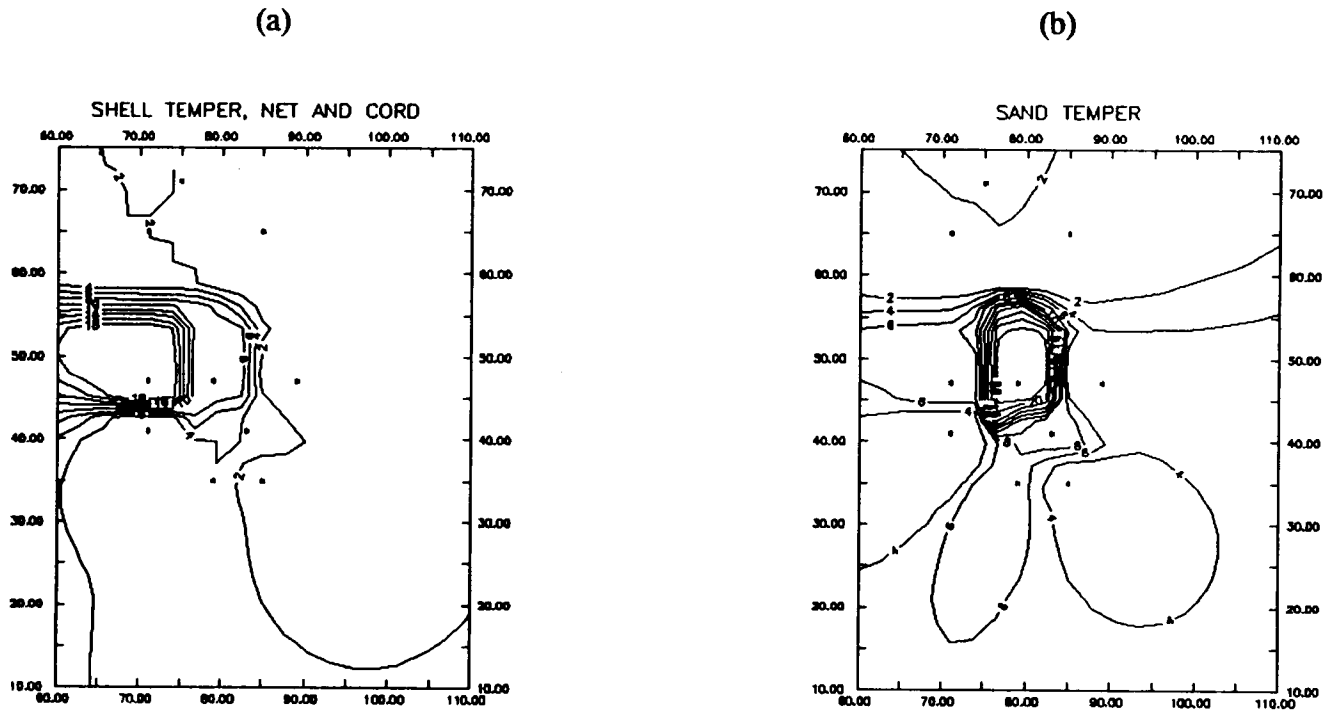


Figure 21. Spatial distribution of Middle Woodland ceramics, Lot GHF16. (a) shell-tempered, net- and cord-marked (b) sand-tempered.

types may derive from the same occupation, or are at least roughly contemporaneous. There is some variation in the frequency of the two types between Test Units 1 and 4, but, as noted above, these clusters likely represent only a few individual vessels.

Lithic Artifacts

The lithic artifacts recovered in excavations on Lot 16 provide firm evidence for only Woodland period occupation. Among the bifaces recovered from all contexts including surface, bulldozer spoils, screened plowzone and midden layers, and feature and postmold fill were nine projectile points/knives sufficiently accomplished and whole to discern the intended morphology (Figure 22, Table 5). This group includes five triangular points, four manufactured of jasper and one of quartz, which could be associated with either the Middle or Late Woodland occupations indicated by the ceramics recovered from the lot. The remaining four points most likely date from the Middle Woodland period. One is a chert, side-notched point similar to the Potts Side-Notched type, which is suspected to date from the middle of the Middle Woodland, or ca. 100 B.C. - A.D. 400. (Egloff et al. 1988:16). A side-notched point made of quartz was also found. Two of the points recovered are probably unfinished. One is a medium-sized, somewhat stemmed biface of quartzite. The other is made on a chert flake which has been retouched to form a stem or notches.

The lithic artifacts recovered from the initial test units opened on Lot 16 were examined to provide a more inclusive picture of lithic use. The information obtained

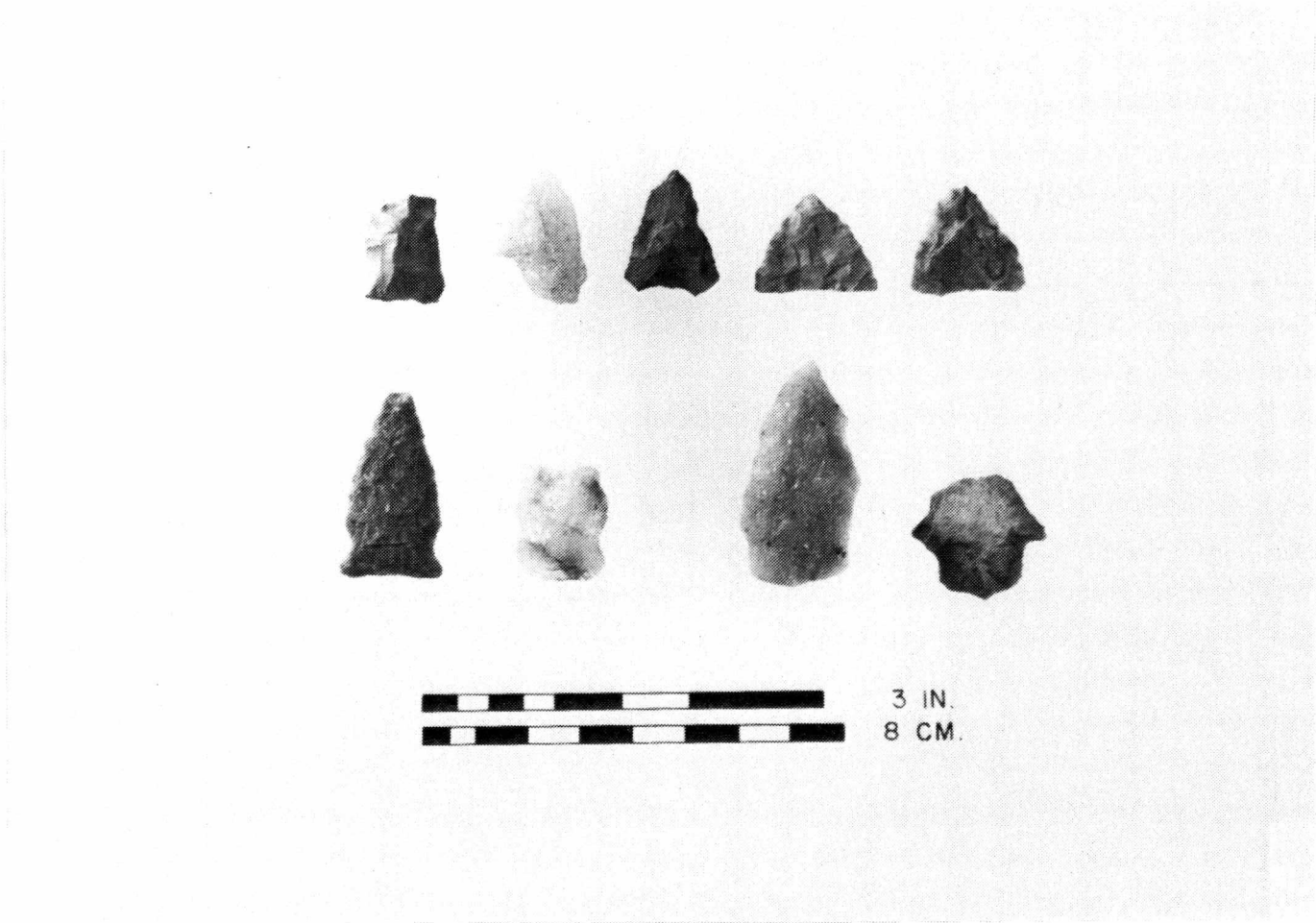


Figure 22. Projectile points, Lot GHF16.

Table 5. Projectile point data, Lot GHF16.

FORM	PROVENIENCE	MATERIAL	BASAL WIDTH	SHOULDER WIDTH	LENGTH	MAXIMUM THICKNESS
TRIANGULAR	SURFACE	QUARTZ	CA. 2.1	N.A.	3.2	0.8
TRIANGULAR	UNIT 9 INTERFACE ZONE	JASPER	1.6	N.A.	N.M.	0.7
TRIANGULAR	UNIT 9 INTERFACE ZONE	JASPER	2.3	N.A.	2.0	0.4
TRIANGULAR	UNIT 11 PLOWZONE	JASPER	2.3	N.A.	2.2	0.5
TRIANGULAR	FEATURE 18B	JASPER	CA. 1.8	N.A.	CA. 2.4	0.7
SIDE NOTCHED	SURFACE	CHERT	2.0	1.9	3.6+	0.5
SIDE NOTCHED	SURFACE	QUARTZ	1.8	1.7	N.M.	1.0
STEMMED	SURFACE	QUARTZITE	1.8	2.1	4.4	1.2
STEMMED	UNIT 8 PLOWZONE	CHERT	N.M.	2.6	N.M.	0.3

from the analysis cannot be specifically associated with the Middle or Late Woodland periods, however, since ceramics recovered from these contexts indicate they represent multiple components. Even the interface zone encountered in some test squares contained a sizable number of Late Woodland ceramics in addition to the predominant Middle Woodland sherds.

Examination of the lithic collection from the initial test squares indicated that, overwhelmingly, locally-available materials were used. The quality of these materials likely was a major factor in shaping the structure of the assemblage. Lithic materials best suited for tool manufacture are scarce in the far Outer Coastal Plain, and the materials available are present in only small cobble or pebble form.

Table 6 lists the flakes recovered from the test squares by material and size. The collection is comprised primarily of jasper flakes (this term includes all cherty materials) followed in order of decreasing frequency by quartzite and quartz. All three materials are available locally (Geier 1990:70). Only two flakes in the collection are of materials--basalt and rhyolite--which are only uncommonly found within the geological deposits of the James River drainage.

The distribution of flake size and the proportion of flakes bearing a remnant of cortical surface within each of the three major material classes very likely reflects the size of cobbles or pebbles locally available in each material. The material represented by the highest proportion of flakes in smaller size categories and the highest proportion of flakes with cortex is jasper. Sixty-three small fractured jasper pebbles, a number of which were evidently split or reduced through a bi-polar process, are also included in the

Table 6. Size, material type, and presence/absence of cortex among lithic flakes, Lot GHF16.

	JASPER		QUARTZ		QUARTZITE		OTHER	
	#	%	#	%	#	%	#	%
SIZE CATEGORY								
≤ 1 MM	52	17.2	8	13.3	8	3.7	--	--
2 MM	231	76.2	41	68.3	134	62.3	--	--
3 MM	19	6.3	9	15.0	56	26.0	2	100.0
4 MM	--	--	2	3.3	13	6.0	--	--
5 MM	1	0.3	--	--	4	1.9	--	--
TOTAL FLAKES	303	52.2	60	10.3	215	37.1	2	0.3
PROPORTION OF SAMPLE WITH CORTEX	184	60.7	24	40.0	55	25.6	--	--

Note: Table includes plowzone, interface, and midden levels. Unit 8 not included.

collection from the test units, as are three jasper bifaces directly reduced from pebble cores. Quartzite debitage had the largest proportion of flakes in larger size categories and the lowest proportion of flakes with cortex. The array of quartz debitage lies between jasper and quartzite for both flake size and cortex. The sizes of the rough bifaces of quartz (two) and quartzite (five) and of one quartzite cobble core recovered from the test units suggest these two materials were available in larger cobble form than was jasper, although small quartz pebbles were also used.

The lithic collection from the test units also included a number of tools (Table 7). Seven finished projectile points or bifacial preforms were recovered: six jasper and one quartzite. Only three of these artifacts were sufficiently complete to determine the intended form. These were described above and are listed in Table 5 (two from Unit 9, one from Unit 11). The collection also includes the seven crude quartz and quartzite bifaces and the three bifacially reduced jasper pebbles discussed above.

Flake tools with minor edge wear or retouch were not quantified in the test unit collection since the artifacts were recovered by shoveling and screening. Visual inspection of the collection without the aid of magnification did not indicate these types of tools were common, however, and no small unifacial tools such as end scrapers were found.

The only other lithic tools identified in the test unit sample are three fine-grained sandstone cobbles used as anvil stones as indicated by pecked scars on one or both faces (Figure 23). Two of these artifacts have wear along the edges which suggest they were also used as hammers and abrading stones, but since the artifacts were recovered from

Table 7. Total lithic collection from test units, Lot GHF16.

TEST UNIT	FLAKES	SPLIT PEBBLES, CORES	HAMMERSTONES, ANVILS	BIFACES	FIRE-CRACKED ROCK (GRAMS)
1	55	7	--	4	8
2	39	7	--	--	242
3	47	4	--	1	69
4	43	7	--	1	14
5	102	15	1	2	602
6	50	9	--	1	184
7	141	1	2	2	341
9	55	7	--	4	97
10	11	6	--	--	48
11	37	1	--	2	19
TOTAL	580	64	3	17	1624

the plowzone, some of this wear may be the product of impact from farm machinery. Eighty-nine fragments of fire-cracked rock totaling 1624 grams were also recovered from the test squares.

The flakes, split pebbles, and anvil stones recovered from Lot 16 suggest that bi-polar techniques were commonly employed in lithic reduction. The use of this technique was also recognized by Geier in collections from the nearby Addington site and has been examined by him in some detail (Geier, Smith, Andrews, and Buchanan 1986:255-287; Geier 1990). Although bipolar flaking does not permit the flintknapper as much control over fracturing as do some other reduction techniques, Geier has noted that several researchers have documented the use of bipolar reduction in areas where lithic materials are available only in pebble forms too small to be worked by more conventional methods (Geier 1990:56-57).

Although the artifacts recovered from backhoe spoils on Lot 16 were not acquired in a systematic fashion, two finds are mentioned since similar tools are not represented in the test unit sample. Both are ground stone tools presumably used for wood working. The spoils from Unit 27 yielded a three-quarter grooved axe made of gneiss (Figure 24). A small basalt celt was recovered from Unit 18 (Figure 24).

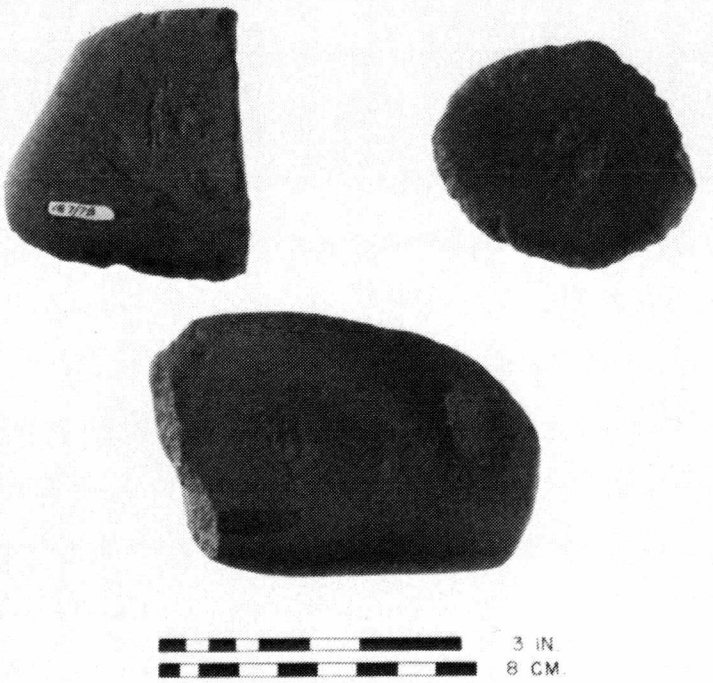


Figure 23. Anvil stones, Lot GHF16.

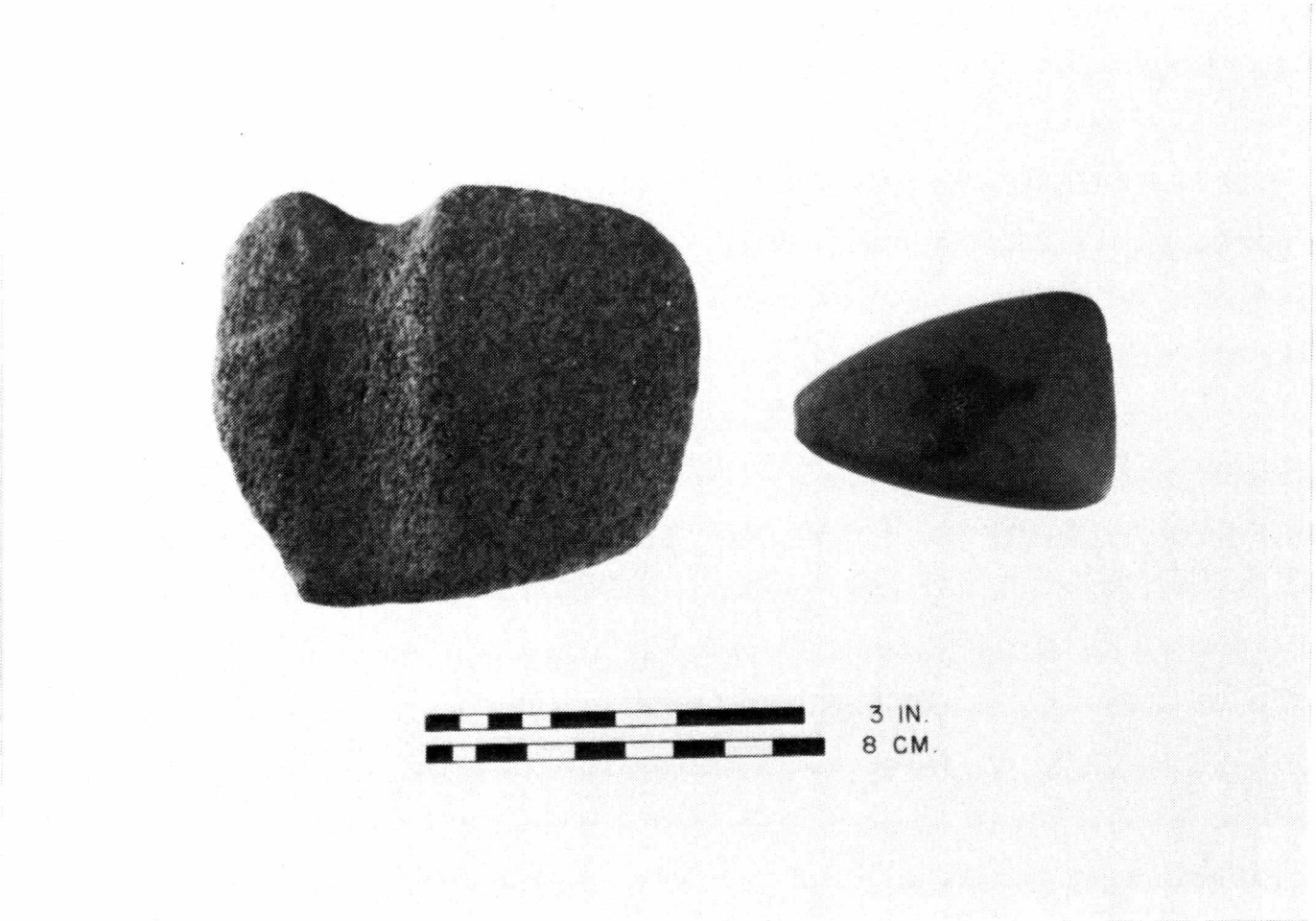


Figure 24. Three-quarter grooved axe and celt, Lot GHF16.

Ceramic Smoking Pipes

Thirty-eight fragments of clay smoking pipes (after mending) were recovered in surface, plowzone, and feature contexts from Lot 16. Three types of pipes are included in the collection: platform, tubular, and elbow forms (Figures 25, 26, and 27). Most fragments are very small, however, and could not be assigned to a particular form. For this reason, the smoking pipes from Lot 16 are discussed by first describing a few of the more complete specimens recovered.

Two platform pipes could be identified in the collection. The most complete of these was recovered from Feature 27FE, an historic posthole. A small portion of the bit end of the pipe is represented. The pipe stem is elliptical in cross section and flattened on one face. On the portion represented, the width expands from the bit to bowl end. The clay paste is shell-tempered with a smooth surface. The second platform pipe in the collection (Unit 1, plowzone) is also elliptical in cross section. Only a small portion of one side of the stem is represented. There is no visible temper in the paste, and the surface of the pipe is smooth.

The most complete pipe in a tubular form was associated as a burial good with the human interment in Feature 25A (Figure 26). The pipe is 9.94 cm long. The stem is circular in cross section and 1.01 cm in diameter at the bit end. The bore is 0.46 cm in diameter. The stem contracts slightly to a distance 0.4 cm from the mouth, and then expands to a diameter of at least 1.58 cm at the rim of the bowl. The bowl is formed by an expansion of the bore diameter ca. 6.7 cm from the bit end.



Figure 25. Miscellaneous ceramic artifacts, Lot GHF16.



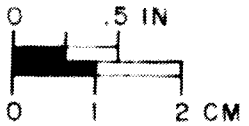


Figure 26. Tubular smoking pipe from Feature 25A, Lot GHF16.

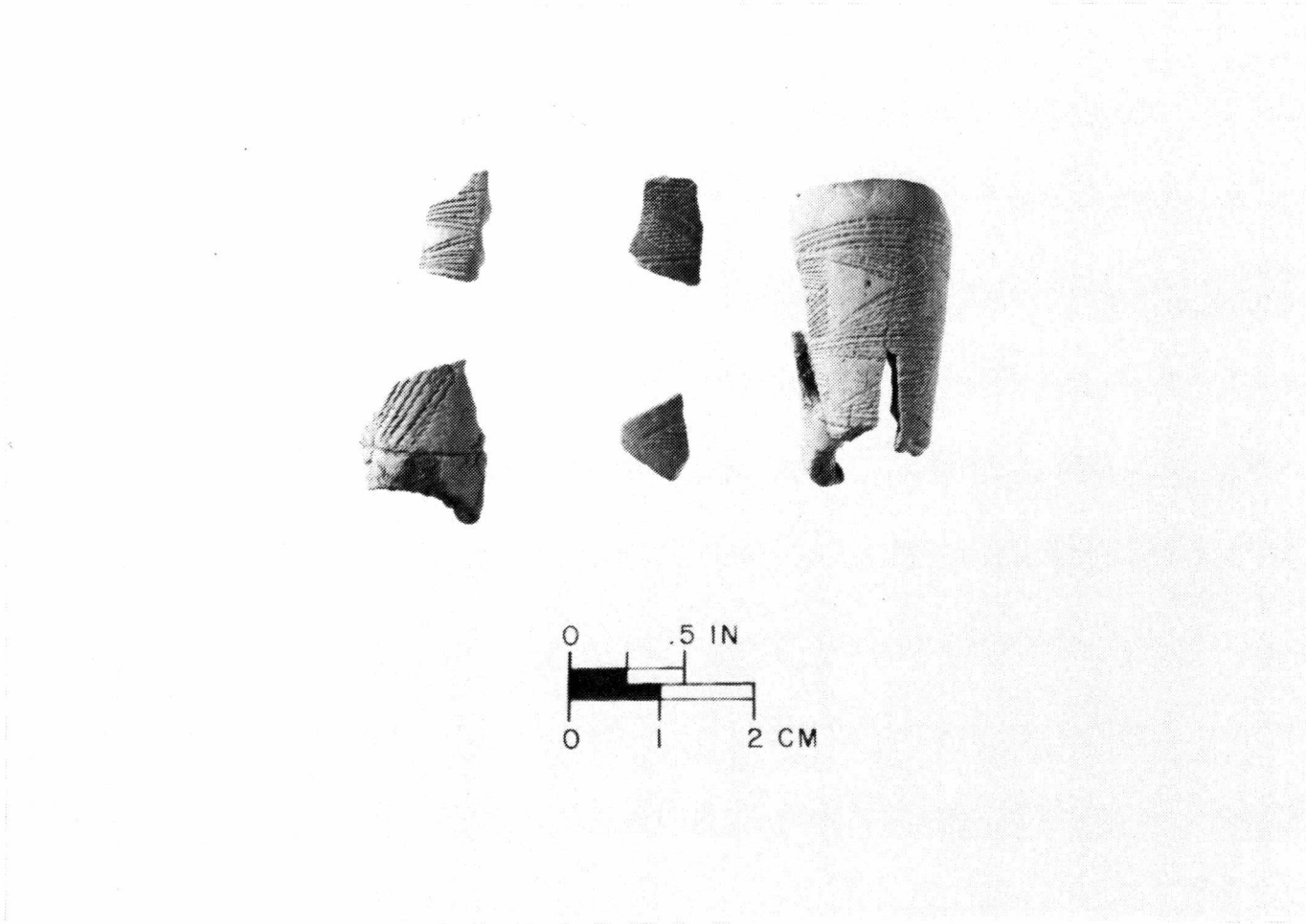


Figure 27. Roulette-decorated ceramic smoking pipes, Lot GHF16.

The pipe from Feature 25A is very well made. The profile of the rim of the mouth is squared. The bowl rim has a rounded profile and the bowl wall is only 0.14 cm thick just below the rim. No temper is visible in the clay paste. The exterior surface of the pipe is smooth, and was possibly burnished: narrow facets from smoothing the surface run parallel to the long axis of the pipe. Charred residue scraped from the interior of the bowl was identified as containing tobacco and is described further below.

Two other tubular pipes can definitely be identified in the collection. One fragment recovered from the plowzone in Test Unit 6 has a fine sandy paste. The exterior surface is smooth. The portion represented is from the section where the bore expands forming the bowl. The stem just below the bowl is at least 1.4 cm in diameter. The other tubular pipe, composed of two fragments recovered from the plowzone in Test Unit 7, is thicker and manufactured from a shell-tempered paste. The exterior surface is smooth. The portion of the stem represented expands from a diameter of 1.86 cm at one end to a minimum of 2.18 cm at the other end. The stem curves slightly.

Only one elbow pipe can definitely be identified in the collection. The specimen is composed of three bowl fragments recovered from plowzone in Test Unit 2 (2B, 2B1). The smallest fragment is from the front, basal section of the bowl. The angle formed by the exterior surface of this piece indicates the pipe was an elbow form.

The bowl of the elbow pipe expands from the base to a slight shoulder 0.35 cm below the rim. Bowl diameter is at least 1.77 cm at the shoulder, and 1.68 cm at the rim. The rim profile is squared. The wall of the pipe is very thin, ranging from 0.13-0.20 cm in thickness. The bowl is roulette-decorated below the shoulder. A design

composed of three rows of spaced triangles set on their side is executed by filling the ground around the smoothed-surfaced, triangular fields with rows of small indentations, or rouletting. The bases of some of the triangles are defined by incised lines.

The remaining 31 pipe fragments in the collection are too fragmentary to be classified to a particular form. Most are well-made with thin walls, suggesting they are more similar to the tubular pipe from Feature 25A or the elbow pipe from Test Unit 2 than to the thicker, relatively crude shell-tempered pipe from Unit 7 described above.

Of the remaining fragments not described individually above, 3 are shell-tempered and 10 are tempered with fine sand or are made from a sandy paste. No temper is visible in the paste of 18 fragments. Of 18 bowl fragments represented, 6 have portions of the rim preserved. Five rims curve inward; one is straight. Two stem fragments are other than circular in cross section. One stem from the fill of Burial 18B is rectangular in cross section. The stem appears to expand in width from one end to the other. The maximum distance between the two opposing faces preserved is 1.06 cm. The surface of the pipe is very smooth, perhaps burnished, with facets from the process running parallel to the long axis of the stem. The other stem fragment is from the fill of Burial 25A. The stem is hexagonal in cross section. The pipe is composed of a very fine sandy paste and the surface is smoothed with faceting visible.

Four of the 18 bowl fragments are decorated with designs executed by rouletting (Figure 27), with the rest having simply smooth surfaces. The design on an untempered pipe from the fill of Burial 18B appears similar to that on the elbow pipe from Test Unit 2 described above: it bears a smoothed-surfaced triangular field against a ground filled

with lines of rouletting. A small bowl fragment from the plowzone of Test Unit 5 (5C) bears a triangle filled with rouletting. This pipe has a fine sandy paste. The spoils removed by backhoe from the ossuary on Lot 16 yielded a fragment of an untempered pipe bowl (30A) on which the roulette decoration appears to form a herringbone design. The final decorated pipe was recovered from the plowzone in Test Unit 7 (7C). Not enough of the design is present on the surviving fragment of this untempered pipe to describe it.

The indentations forming the designs on three of the five roulette-decorated pipes clearly were not executed using a pseudo-cord or wrapped-cord technique. Instead, the notched edge of a thin tool is suggested. In contrast, the indentations on the specimen from Test Unit 7 are curved and sit at a slight angle to each other and may have been executed with a cord wrapped around the edge of a tool. Indentations on the specimen from Test Unit 5 are too weathered to describe accurately.

Aside from the tubular pipe which accompanied the Late Woodland period burial in Feature 25A, the different varieties of smoking pipes recovered from Lot 16 cannot unequivocally be assigned to a particular prehistoric period since the property was occupied during both the Middle and Late Woodland periods. The small proportion of Middle Woodland vessel sherds recovered from the fill of burial features 18B and 25A suggests, however, that at least the pipe fragments recovered from these two features can tentatively be assumed to date from the Late Woodland period. This small assemblage is quite diverse and includes burnished, plain-surfaced, tubular pipes with stems circular in cross-section; pipes with stems rectangular or hexagonal in cross-section; and pipe

bowls bearing roulette decoration. The clay paste of pipes from these features is either untempered or contains inclusions of very fine sand.

The roulette-decorated pipes from Lot 16 are particularly significant in light of recent research on the origin of similar artifacts found in 17th-century colonial contexts. Differing from most researchers in the Chesapeake region, Emerson (1988) has recently discounted the role Native Americans may have played in the manufacture of roulette-decorated, elbow pipes. He proposes the 17th-century pipes were a product of primarily English and African-American manufacture, and suggests similar pipes previously attributed to post-contact Native American contexts were actually derived from English colonial and African-American components represented in the supposedly mixed assemblages at these sites.

No evidence has been obtained from analysis of the artifacts recovered from Lot 16 to support the hypothesis that the latest Native American occupation on the property dates from after the period of sustained European contact in Virginia (see results of radiocarbon dating of Feature 29A and analysis of pipe bowl residue and copper). Nor were any European or American-made artifacts manufactured prior to ca. 1850 recovered from either surface, plowzone, or intact archaeological contexts on the site. Thus, the roulette-decorated, elbow pipes from Lot 16 are clearly of Native American manufacture and add to an ever-growing body of evidence from the circum-Chesapeake region that this pipe-decorating technique existed within pre-contact Native American ceramic traditions.

Other Ceramic Objects

A fragment of an interesting, but unidentified ceramic object was recovered from Feature 3E on Lot 16 (Figure 25). The item is a thick, circular ceramic disc with a perforation through the center, clearly shaped and perforated while in a plastic state before firing. The object is not a reworked fragment of ceramic vessel, as the surfaces of the two faces, the circumferential edge, and the perforation all display oxidized surfaces overlying a grey core. The item was probably circular in plan and at least 4.5 cm in diameter (based on a measurement of 2.28 cm from the circumferential edge to the nearest edge of the perforation) and 1.79 cm thick. The surfaces are smoothed, the faces more so than the circumferential edge. The paste possibly contained shell temper which has since leached away leaving only thin, flat holes in the body. The perforation suggests the item may have been a large bead.

Copper Artifacts

Copper artifacts were found in two Native American contexts on Lot 16, both Late Woodland period burials. With the interment of the adult female in Feature 18B were three copper ornaments clustered on the medial side of the distal end of the left humerus. The ornaments, which are made from thin sheets of copper, are triangular in form and each is perforated at one end (Figure 28). In situ, the perforated ends were situated nearest the humerus, suggesting the ornaments were worn on an arm bracelet

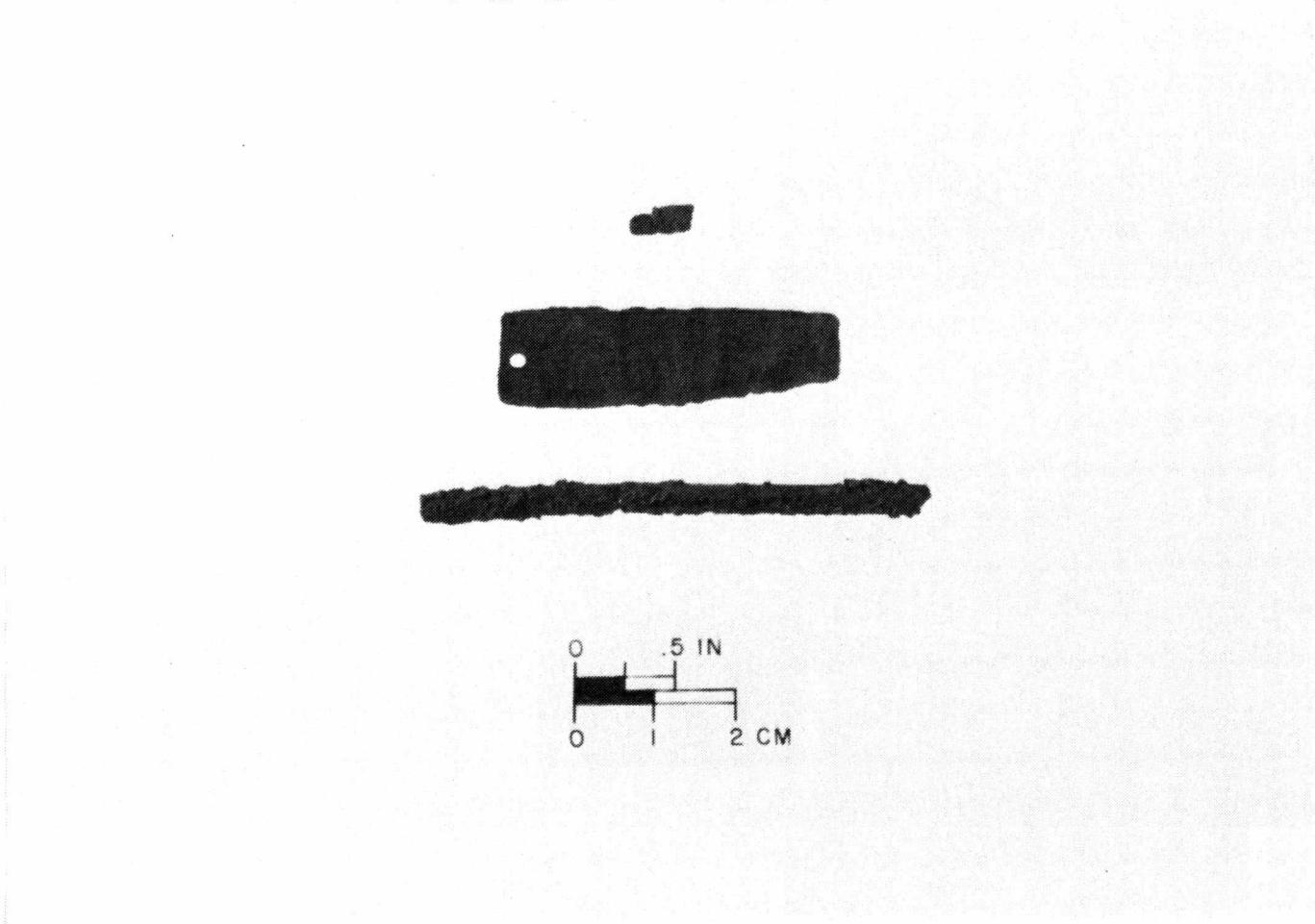


Figure 28. Copper pendant and tube beads from Features 18B and 25A, Lot GHF16.

or were attached to clothing covering the arm. The one ornament which could be completely reconstructed is 5.9 cm long and 1.4 cm wide at the base.

Copper beads were found with the adult male burial in Feature 25A (Figure 28). A complete tube bead of rolled copper, 6.4 cm long and 0.4 cm in diameter, was situated at the neck of the individual. Fragments of copper tube beads were also found under the left zygomatic bone and at the level of the skeleton 16 cm south from the left side of the cranium.

The elemental composition of one of the triangular ornaments from Feature 18B and the bead located at the neck of Burial 25A was analyzed using X-ray diffraction by Dr. Stephen Clements of the Department of Geology, College of William and Mary. In addition to copper, both artifacts were found to contain nickel, calcium, and iron, but only in trace amounts. Although not conclusive, the results of the analysis suggest the copper was originally obtained from geologic deposits in North America, since copper items of sixteenth-century European manufacture would be expected to contain a higher proportion of impurities (Stephen Clements, personal communication 1982).

Ethnobotanical Remains

Carbonized remains from three flotation samples representing two Late Woodland features--16C and 29A--on Lot 16 were analyzed by Paul S. Gardner (1990a) to determine what plant foods played a role within the subsistence economy of the native inhabitants of Great Neck. The 4.2 liters of soil processed from Lot 16 yielded a total

of 0.33 grams of plant food remains. Within this small sample, four plants were identified: hickory (Carya sp.) (0.27 g, nutshell); maize (Zea mays) (0.05 g, cupule); acorn (Quercus sp.) (trace amount, nutshell); and blackgum (Nyssa cr. sylvatica) (one seed; 0.01 g).

In addition to study of charred plant remains recovered in flotation samples, examination of paleoethnobotanical remains from Lot 16 included chemical analysis of a sample of charred residue from the clay smoking pipe associated with the human interment in Feature 25A. The analysis, conducted by Merle D. Kerby, sought to determine what plant was represented by the residue. If tobacco was indicated, it was hoped that analysis of the alkaloids would indicate whether Nicotiana rustica, the species cultivated by native peoples in North America prior to European contact, or a later import was present. The following description and assessment of the results of the analysis is drawn from correspondence with Kerby (1982a, 1982b).

A heavy residue of charred material was scraped from the interior of the pipe bowl and approximately one-half, or 0.25 grams, was analyzed for its alkaloid content. The test confirmed that residue from tobacco (Nicotiana sp.) was present in the char. The total alkaloid content of the sample was 3.0 mg with 2.4 mg nicotine and 1.0 mg nornicotine.

Analysis of the distribution of alkaloids in the sample proved inconclusive for determining the species of Nicotiana represented. The ratio of nornicotine to total alkaloid in the charred residue was 0.33. The results of modern experimental plantings suggest the ratio of nornicotine to total alkaloids in N. rustica ranges from approximately

0.40 to 1.00. Commercial tobacco smoked today is derived from the Caribbean species N. tabacum, which was introduced as a crop in Virginia in the early years of the English colony. The ratio of nornicotine to total alkaloids in modern tobacco ranges from less than 0.05 to less than 0.10. The level of nornicotine in N. tabacum grown among the English colonists would have been higher than modern tobacco, but lower than N. rustica. "Sweet Orinoko," as the import was called, was less pungent and narcotic than the native species.

The ratio of nornicotine to total alkaloids in the Great Neck sample is lower than expected levels for N. rustica, but not so low as to allow one to conclude the residue is derived from another species. The results of the analysis provide no supporting evidence for the hypothesis that the palisaded settlement on Lot 16 was occupied after European contact with the native populations of Eastern North America. A fuller understanding of the Great Neck tobacco sample, however, awaits the development of a comparative data base on the alkaloid content of tobacco from well-dated prehistoric contexts and post-contact period contexts of both English colonial and Native American affiliation.

Summary

Archaeological investigations on Lot 16 yielded evidence of Native American occupation dating from the Middle and Late Woodland periods. Because it was not a focus of the investigations, relatively little is known about the Middle Woodland occupation, which is indicated primarily by predominantly cord- and net-marked ceramics

with shell-tempered and sand-tempered pastes. The distribution of ceramic sherds recovered from initial test units indicates Middle Woodland settlement was likely focused in an area just to the northwest of Test Units 1 and 4. No Middle Woodland features or structures were identified in the areas opened for excavation by VDHR, but some evidence suggests the flexed burial (Fleming's Feature 7) found in 1980 in the far northwest corner of the lot eroding from the bank above Broad Bay may date from the Middle Woodland period. In the four known Late Woodland burials later excavated on the property, the bodies were placed in extended position. Further, Painter (personal communication 1989) has found that flexed burials are commonly associated with the Middle Woodland period at Great Neck.

The presence of both sand-tempered and shell-tempered ceramics on Lot 16 suggests at least two occupations are represented by the Middle Woodland deposits. Although differences in the stratigraphic distributions of the ceramics might indicate that the sand-tempered ceramics are earlier, similar horizontal distributions suggest that the time between the deposition of the sand-tempered and shell-tempered ceramics was not great. Both the restricted horizontal distribution of Middle Woodland ceramics and the lack of associated structures and pit features imply that the Middle Woodland deposits on Lot 16 are the product of relatively short-term settlements, such as foray camps.

Excavations on Lot 16 yielded extensive information on use of the property during the Late Woodland period. A palisaded settlement was found to have been situated at the highest end of the property alongside Broad Bay. Approximately 12 m southwest of the palisade, the remains of a single Late Woodland structure were identified. The

predominant ceramics associated with each area are shell-tempered with simple stamped or fabric-marked surfaces, but it cannot be demonstrated that structural remains in the two areas are necessarily the product of the same Late Woodland occupation.

A radiocarbon date of A.D. 1330 $\pm$80 was obtained from a burial (29A) associated with the isolated structure. Comparison of the proportion of fabric-marked versus simple stamped sherds in burial deposits across the site may indicate the isolated structure was erected sometime after the palisade and its associated structures. No artifacts of known European manufacture were recovered to indicate that Native American occupation dating from the period of European contact in the Carolina Sounds or Chesapeake Bay region is represented on the lot.

Information about the placement of burials documented on Lot 17 suggests the enclosed settlement identified on Lot 16 was oval in plan and the palisade extended at least 40 m east-west, cutting across both lots. A substantial portion of the settlement has been lost to erosion along Broad Bay. At least two structures (Structures A and B) were enclosed by the palisade: Both were oval longhouses displaying no evidence of rebuilding. The houses were oriented parallel to each other, spaced 1.5 m apart, and were situated only a short distance within the palisade line. Remains of the palisade consisted of two roughly concentric lines of posts. Differences in the arrangement, diameter, and depth of postmolds associated with each line suggest the two overlapped to form an entrance. No subsurface features other than one ceramic cluster, two burials, and several postmolds were found within the enclosed area, while six pit features dating

to the Late Woodland period were found in areas opened to the south and west of the palisade.

The structure situated outside of the enclosed settlement was smaller than the more complete structure exposed within the palisade. The outline of Structure C is not very clear among the profusion of postmolds uncovered in Area B, but the remains do not appear to indicate rebuilding of the same structure. Instead, they suggest use of Area B for other types of activities either before or after construction and abandonment of Structure C. Two pit features were found within the bounds of the postmold pattern defining Structure C, but it is not known if the pits were contemporaneous, or functionally associated with the building.

Information on the Late Woodland pit features identified on Lot 16 is sketchy since some were only partially exposed and others had been disturbed by plowing. In general, the features were relatively shallow and, except possibly for Feature 3E, small. Six of seven features contained shellfish remains in the fill and, as noted above, were located outside of the palisaded area.

The excavations on Lot 16 provided significant information on Late Woodland mortuary practices. Both ossuary and single, primary interments were encountered in the excavations. The primary interments exhibited many similarities. Relatively large, almost circular pits ranging 1.60-2.42 m in diameter were prepared for the four burials, and each individual was placed in an extended position on his or her back. The two individuals buried along the palisade line were situated with the head at the east end of the burial pit with the face turned toward the left side, while the two individuals in Area

B were placed with the head at the north or northeast end of the burial pit with the face turned slightly to the right side. Some evidence suggests the two burials situated along the palisade were positioned at entrances into the enclosure, and the two burials outside the palisade appear to have been situated at opposite corners of Structure C in locations which may have held doorways.

Some aspects of the Late Woodland record on Lot 16 are suggestive of the nature of status and sociopolitical organization within the society. The differences in the size and spatial contexts of the isolated structure and the well-defined structure within the palisade (if these two are indeed contemporaneous) are consistent with ethnohistorical documentation on ascribed rank and its material correlates within the Powhatan chiefdom. Writing ca. 1613 about the Powhatans, Henry Spelman (Arber 1910:cvi) noted that "Kinges houses are broader and longer then ye rest." In his early 18th century account of the Virginia Indians, Robert Beverley (Wright 1969:177) observed that "They often encompass their whole Town: But for the most part only their Kings Houses." Beverley noted that palisades also enclosed "as many others [houses] as they judge sufficient to harbour all their people, when an Enemy comes against them," so the possibility that the large size of Structure A may reflect its use as a community structure, not its association with an elite class, must also be considered.

At least two levels of status are suggested by patterning among the primary interments on Lot 16, although data from these burials alone are insufficient to conclude that ascribed versus achieved rank is indicated. It is proposed that the two adult primary interments are individuals of high status as indicated by the copper ornaments associated

with the burials. Within Powhatan society, copper was highly valued, and access to the metal was controlled by the chiefs (Potter 1989; Turner 1985:201-203). The close spatial association of the interments with the palisade, a community structure, is also possibly reflective of the high economic, political, or ideological importance of these adult individuals within the society.

Relative to the two adult interments, the two subadult interments associated with the isolated structure on Lot 16 would appear to be of lesser status. The subadults are not accompanied by funerary items of any type, and they are spatially associated with a structure which presumably was not of particular symbolic or economic importance to the community as a whole.

Since the differences among the primary interments pattern by age, we cannot conclude that ascribed rather than achieved status is indicated on the basis of these four mortuary features alone. The presence of the ossuary interment on Lot 16 may help elucidate the relationship between the adult and subadult primary interments, however. The absence of funerary items in the ossuary suggests the individuals in this feature were of lesser status than the adults interred along the palisade, and the communal form of burial may indicate that the individuals in the ossuary were of lesser status relative to both adult and subadult primary interments. Since adults and subadults are represented among both primary interments and the ossuary, these two types of interments may distinguish ascribed positions of status within the society. Two levels of rank, chief (primary interments) and commoner (multiple, secondary interment), may be indicated, with differential treatment accorded to members of the ruler class on the basis of age.

CHAPTER 6

LOT 3, MEADOWRIDGE SUBDIVISION

Introduction

Archaeological field investigations were conducted on Lot 3 of the Meadowridge subdivision during the spring and late summer of 1982. The property is situated between Broad Bay and Thomas Bishop Lane roughly 300 m east of the canal connecting Broad Bay and Brock Cove. The distribution of cultural features across the lot was sampled initially through the excavation of scattered test squares and one larger unit situated near Thomas Bishop Lane. Later work focused on the excavation of several trash-filled pits dating from the Middle Woodland period and one Late Woodland period burial which were encountered in the west-central section of the property. A few historic postholes, some of which may define fencelines, were also found. Approximately 5% of the property was tested in the course of excavations.

Previous Investigations

No significant archaeological work is known to have been conducted on Lot 3 prior to the VDHR's excavations. While Floyd Painter had conducted extensive excavations on Lots M1 and M2, situated immediately to the west, this work did not extend into Lot M3.

On his map of the Great Neck site, however, Painter indicates that James Pritchard at one time conducted shovel testing on Lot 3 in the northern half of the property. A few soil discontinuities encountered in VDHR test units in this portion of the lot might be attributed to Pritchard's activities, but the evidence of previous work was minimal and in no way suggests the level of testing and excavation encountered in later VDHR excavations on Lot M5.

VDHR Excavations and Field Methods

The VDHR's field investigation of Lot 3 was conducted over two extended periods. The initial phase of the investigation was executed during the spring of 1982 beginning April 15 and continuing through May 15. Fifteen days were spent in the field during this period.

Keith T. Egloff, VDHR staff archaeologist, served as field director during the initial phase of the investigation. The excavation crew consisted of additional members of the VDHR staff, interns, and volunteers, with two to seven persons present each day. A total of 66 man-days was devoted to the field phase of the project, with 35% of this total contributed by interns and volunteers. Artifact collections from the investigation were processed and cataloged by VDHR staff, interns, and volunteers during July and August 1982.

After a metric grid was established across Lot 3, seven test units (Units 100-107), each 2 m square in plan, were opened across the property (Figure 29). The soil in each

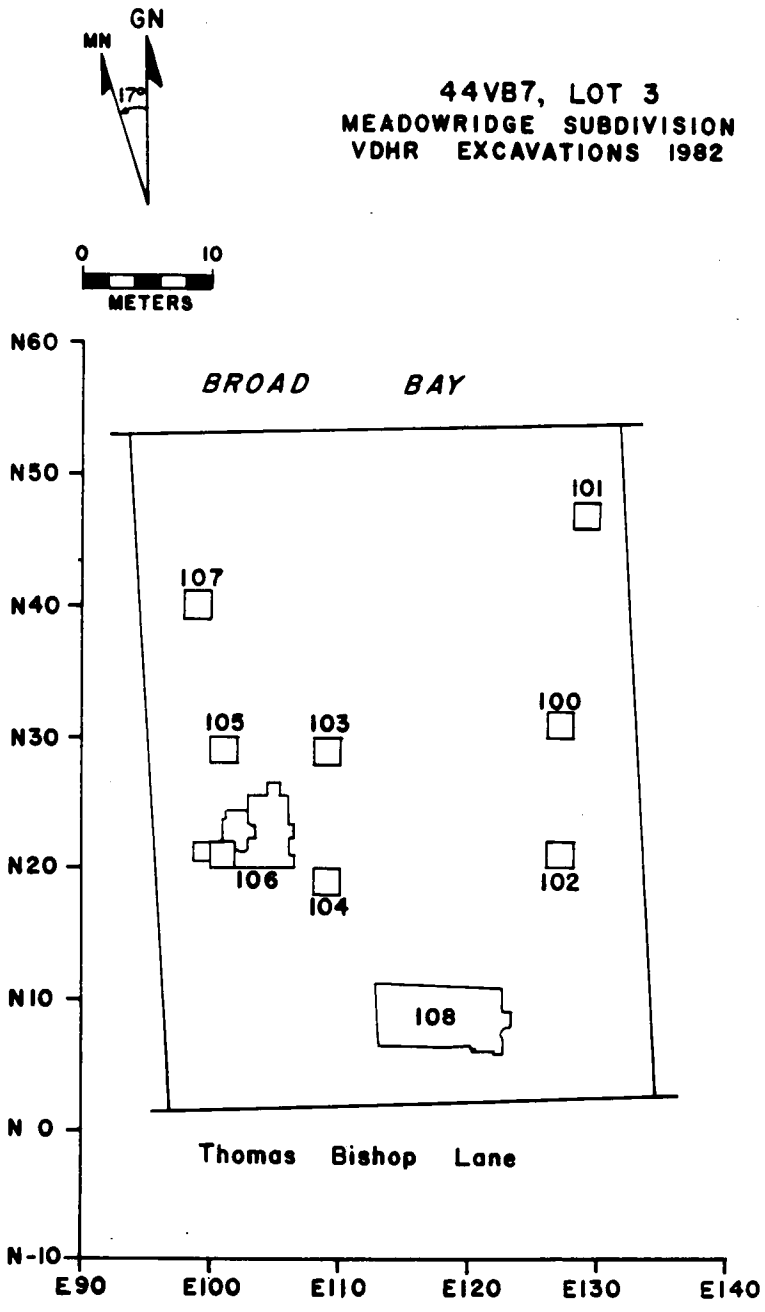


Figure 29. Plan of excavations on Lot 3, Meadowridge subdivision.

unit was removed by shovel to the sterile subsoil level and screened for artifacts through one-quarter-inch mesh. Removal of soil proceeded in approximately 5-cm levels so that any changes in stratigraphy could be noted. Each natural or cultural layer encountered was assigned a distinct provenience number, and the artifacts from each layer were kept separate. Once sterile subsoil level was reached, the surface of each square was troweled and any visible features were mapped at a scale of 1 in = 50 cm.

At the southern end of Lot 3, near the edge of Thomas Bishop Lane, a larger excavation unit (Unit 108) was opened by backhoe to a level a few centimeters above subsoil. This roughly 5 by 10 m area was then shovel skimmed to subsoil level and mapped. Soil from above subsoil level was not screened for artifacts.

Only a few possible prehistoric features, prehistoric postmolds, and historic postholes/molds were encountered within the initial excavation units. Two trash-rich prehistoric deposits were visible along the edges of Unit 106, however, so this unit was expanded to the west and northeast to fully expose the large features. For the remainder of the initial phase of the investigation, work was devoted to the excavation of these and other prehistoric features exposed in the excavation units.

The second phase of field investigation on Lot 3 was conducted during the periods August 1-19 and September 16-24, 1982, by several VDHR staff members while on leave from their positions. E. Randolph Turner, senior prehistoric archaeologist with the VDHR, directed the excavations. Field notes and artifact collections from the investigation were transferred to the VDHR, where monies from its threatened site program were made available for their analysis in 1989.

Sixteen days of fieldwork were involved in the second phase of excavations, with the crew ranging from two to six persons per day. Of the total of 60 man-days devoted to the project, 45% were contributed by volunteers from the VDHR staff and 55% from VDHR interns and volunteers from the community at large. Individuals in the latter group also cleaned and packed the artifact collection for storage at VDHR to await cataloging and analysis.

The testing conducted during the initial phase of excavations on Lot 3 had provided some understanding of the distribution of cultural features across the property. In planning for the second phase of excavations, it was clear that time was not available to expose large, continuous areas of the lot, the approach which would have been required to discern any patterning in the arrangement of prehistoric postmolds found thus far on the property. A decision was made to focus excavations in the area of Unit 106. The two large pit features excavated earlier in this area had yielded a wealth of artifacts and subsistence remains in an excellent state of preservation. The decision to expand the excavations in this area reflected a desire to both understand these features within a slightly larger spatial context and uncover additional features with similar potential to yield, for example, radiocarbon associations, subsistence data, and a well-preserved bone tool assemblage.

As the second phase of excavations was begun, Unit 106 was expanded further on the east side to encompass an additional area approximately 4 by 6 m in plan. Soil above subsoil level was removed by shovel, but not screened. After the surface of the

unit was troweled and mapped, the remainder of the investigation involved the excavation of the several pit features and postmolds exposed in the unit.

In the course of investigations on Lot 3, all larger features and a sample of postmolds exposed in the eight test units except those clearly originating from recent historic activity were fully excavated. In general, features were bisected with the first side removed as one unit or in arbitrary levels. Profiles were drawn at a scale of either 1 in = 50 cm or 1 in = 25 cm. The second half of each feature was removed in units corresponding to any cultural and natural stratigraphy discernable. All soil was screened through one-quarter-inch mesh. Samples of fill from larger features, acquired before screening, were saved for later waterscreen and flotation processing. Larger features were also photographed in black and white and color before excavation, in profile, and after excavation.

Results of Initial Testing

As discussed above, investigations on Lot 3 were initiated with the excavation of seven test units, each 2 m square in plan, scattered across the property (Figure 29). The surface of the lot is relatively flat and stands at an elevation of about 26 ft AMSL. Excavation of the test units provided information on the soil profile across Lot 3, indicating that plowing had disturbed any cultural deposits for a depth of approximately 25-30 cm below modern grade. Sterile subsoil was encountered directly below

plowzone. Two units contained an old and more recent plowzone layer, however, and deposits in the lower level were less disturbed.

The soil profile and cultural features encountered in each of the initial test squares are described below. More general information on use of the property during the prehistoric period, provided by analysis of the artifacts recovered in screening the plowzone from each unit, is also discussed.

Test Units

Unit 100: Unit 100 was situated at grid point N30 E126 (squares are called from the southwest corner) along the eastern edge of Lot 3. The soil profile in the unit was characterized by a plowzone 25 cm thick consisting of brown sandy/clayey loam overlying a sterile subsoil layer of orange clay. At subsoil level the south half of the square exhibited two linear rodent burrows. Excavation indicated that several small, circular soil stains along the eastern edge of the unit were also the result of rodent activity. Two other small stains, 100C and 100K, were confirmed as prehistoric postmolds.

Another possible prehistoric feature, 100L, was encountered along the northern edge of the square. The feature was identified at subsoil level as a area of mixed brown loam and orange clay containing ceramic sherds. The boundaries of the feature were rather indistinct, although it appeared to extend from the northern wall of the square about 0.60 m south along the west profile, and about 1.10 m south along the east profile.

Excavation suggested Feature 100L may be a tree hole filled with some prehistoric debris. Artifacts were largely confined to the upper 10 cm of fill below subsoil level and included 5 shell-tempered sherds, 2 net-marked and 3 with unidentified surface treatment; 60.3 g of ceramic fragments smaller than 1 in; a flaked quartz pebble; and 0.3 g of bone. Below this level, the fill became progressively more clayey extending to a depth of 0.45 cm below subsoil. One small ceramic sherd and some charcoal were encountered at 0.43 cm depth.

Unit 101: Unit 101 was situated in the northeast corner of Lot 3 at grid point N46 E128. Plowzone in the unit extended to a depth of 25 cm below modern grade. Remnants of plowscars running northeast-southwest were visible at subsoil level. One historic posthole/mold (101Y, not excavated) was visible along the eastern edge of the square. In plan, the posthole was ca. 16 cm (0.5 ft) in diameter. The associated postmold was 12 cm (0.4 ft) in diameter.

The southwestern corner of Unit 101 was dominated by an irregularly shaped area of relatively loose, brown fill extending 1.10 m north-south and at least 0.60 m east-west into the west wall of the square. Feature 101N exhibited an irregular profile along this wall. The outer edges were relatively shallow with the base sloping irregularly to a maximum depth of 26 cm below subsoil. A large root ran through the feature. The texture of the fill and the irregular plan and profile of the feature suggested it was not of cultural origin. Artifacts from the fill include a shell-tempered, net-marked sherd;

59.5 g of ceramic fragments smaller than 1 inch; 23.5 g of hardened lumps of sandy clay; and 10.0 g of fire-cracked rock.

Another feature, 101P, was located along the southern edge of Unit 101. The feature extended into the south wall of the unit, but if regular in plan measured 0.60 m in diameter. Fill consisted of light brown loam containing some charcoal, and extended to a depth of 12 cm below subsoil. The fill contained a few prehistoric artifacts including 2.4 g ceramic fragments smaller than one inch square; 1 quartzite flake; 1 cracked quartzite pebble; and a trace of bone. In plan and profile, however, the pit is similar to historic postholes encountered in VDHR excavations on Lot 16.

Sixteen prehistoric postmolds (101C-H, K-M, R-X) were identified in the eastern half of Unit 101. These ranged 8-15 cm in diameter and 5-27 cm in depth below subsoil.

Unit 102: The final test square placed along the eastern edge of Lot 3 was Unit 102, situated at N20 E126. The upper surface of the square was covered with a layer of sand and clay which was not screened. A plowzone layer of brown sandy loam was encountered at 20 cm below modern grade and extended 6 cm in depth to sterile subsoil. A few possible prehistoric postmolds (102C-G, not excavated) were identified at subsoil level.

Unit 103: Unit 103 was situated at grid point N28 E108 in the central portion of the lot. The soil profile was characterized by 20 cm of plowzone (Level A) consisting

of brown sandy loam overlying ca. 10 cm of brown to dark brown sandy loam (Level B) which graded into sterile subsoil. While both Levels A and B yielded significant amounts of historic artifacts, comparison of the prehistoric ceramics from each suggests Level B represented a relatively less disturbed midden deposit. Level B contained no sherds larger than one inch diagnostic of the Late Woodland period, while Level A yielded seven. The sherds in Level B also tended to be larger than those recovered from Level A.

Nine prehistoric postmolds (103C-K, M) were identified at subsoil level in Unit 103. These ranged 7-15 cm in diameter and 3-12 cm in depth. An additional feature, 103L, was also encountered. Filled with dark brown loam mottled with orange clay and yielding a few prehistoric artifacts, Feature 103L was 0.73 m in diameter. A rodent burrow or tap root identified 27 cm below subsoil suggests the feature was created or disturbed by an animal or tree.

Unit 104: Unit 104 was situated 8 m south of Unit 103 at grid point N18 E108. Plowzone in the unit had been disturbed in some areas and was only 7 cm thick. Maximum thickness of plowzone was 20 cm, at which depth sterile subsoil was encountered. One possible prehistoric postmold (104B, not excavated) 11 cm in diameter was identified in the northwest corner of the square, and an historic posthole/mold (104C, not excavated) was identified in the southwest corner. The posthole was 13 cm (0.4 ft) in diameter, and the mold 6 cm (0.2 ft) in diameter. In the eastern half of the square a number of oval or irregular faint stains (104D, E, and F) were encountered

which were judged to have originated through non-cultural means. Also in this area were three small circular stains approximately 5 cm in diameter which may have been decayed roots.

Unit 105: The final three test squares opened on Lot 3 were situated along the western edge of the property. Unit 105 was located at grid point N28 E100, 6 m west of Unit 103. The square contained two layers of plowzone. The upper layer was composed of brown sandy loam and extended to a depth of 20 cm below modern grade. Below this and extending for 5 cm to sterile subsoil was a layer of light brown sandy loam, which probably represents an older plowzone. In addition to prehistoric artifacts, the lower plowzone layer contained cinders. At subsoil level near the southern edge of the square, the outlines of two historic postholes/molds (not excavated) were identified. Posthole 105C was 16 cm (0.5 ft) in diameter; posthole 105D was 19 by 21 cm (0.6 by 0.7 ft) in plan. The postmolds in both features were 12 cm (0.4 ft) in diameter. No prehistoric features were encountered in the square.

Unit 106: Unit 106 was situated at N20 E100. Plowzone in the unit consisted of approximately 20 cm of dark brown sandy loam containing bits of shell overlying sterile subsoil. Numerous prehistoric postmolds and the edges of two trash-rich prehistoric pit features found to date from the Middle Woodland period could be discerned at subsoil level. The test unit was expanded during the first phase of excavation to fully expose the features. During the second phase of excavation, the unit

was expanded an additional 4 by 6 m to the east revealing several more Middle Woodland pit features, a Late Woodland burial, and postmolds. Features contained within the unit are discussed in a separate section below.

Unit 107: Unit 107 was situated north of Units 106 and 105 at grid point N39 E98. Like Unit 105, Unit 107 appeared to contain two layers of plowzone: a more recent layer of dark brown to black sandy loam extending in depth 20 cm below modern grade overlying an older layer of brown to light brown loam 5 cm thick. Both layers contained historic artifacts. Sterile subsoil was encountered 25 cm below modern grade. No features were visible at this level.

Cultural Affiliation and Settlement Distribution and Structure

As with Lot 16, the initial test units placed across Lot 3 provide a systematic artifact sample from which the cultural affiliation of inhabitants of the property during the prehistoric period as well as the spatial distribution of their activities can be assessed. Plowzone in all units was screened through one-quarter-inch mesh. Thus, except for the effect of differences in the volume of plowzone in each unit, the plowzone samples are a source of comparable data on the relative density of artifacts across the site. The spatial structure of prehistoric activity on Lot 3 was assessed, then, by plotting the distribution of artifacts recovered from plowzone contexts in the initial test units as shown in Table 8. Plots of the distribution of four artifact types are shown in Figures

Table 8. Artifacts recovered from plowzone in test units, Lot 3.

TEST UNIT	S.ST./FABRIC CERAMICS		CORD/NET CERAMICS		SHERDS < 1 INCH (GRAMS)		LITHIC FLAKES		FIRE-CRACKED ROCK (GRAMS)	
	#	%	#	%	#	%	#	%	#	%
100	4	16.7	23	11.0	1,283	12.7	73	11.6	107	4.1
101	7	29.2	13	6.2	1,485	14.7	129	20.4	513	19.8
103	7	29.2	113	54.3	1,725	17.1	108	17.1	514	19.8
105	3	12.5	34	16.3	2,468	24.4	92	14.6	305	11.8
106	3	12.5	11	5.3	2,093	20.7	124	19.6	868	33.5
107	--	--	14	6.7	1,055	10.4	106	16.8	285	11.0
TOTAL	24	100.1	208	99.8	10,109	100.0	632	100.1	2592	100.0

30 and 31. Samples from Units 102 and 104 are not considered in parts of the following discussion, since a large portion of plowzone in each of these units had been removed by recent activities on the property. Only the initial 2 meter test square is considered in references to Unit 106.

The collection of prehistoric ceramics recovered from the test units is overwhelmingly dominated by sherds diagnostic of the Middle Woodland period. Net- and cord-marked sherds account for 73% of the collection. Only 9% of sherds in the collection are simple stamped or fabric-marked, traits associated with the Late Woodland period. Fabric-marked and simple stamped sherds were thinly scattered across the property. Middle Woodland ceramics, in contrast, were highly clustered in one area.

The focus of the dense cluster of Middle Woodland ceramics--Unit 103--is somewhat surprising in light of information on the distribution of Middle Woodland features obtained during the course of excavations. In general, however, the distributions of cord- and net-marked sherds larger than 1 inch and all ceramic fragments smaller than 1 inch indicate an intensive Middle Woodland settlement once existed in the vicinity of Units 103, 105, and 106. Variation in the frequency or density of ceramics among these three units probably reflects differences in the types of Middle Woodland deposits in each. These differences, in turn, may provide some clues to the spatial structuring of activities within the settlement.

Given the relatively low density of features encountered in Units 103 and 105, the high densities of ceramics in the squares indicate a midden deposit had accumulated in these areas during the course of Middle Woodland settlement. Stratigraphic profiles in

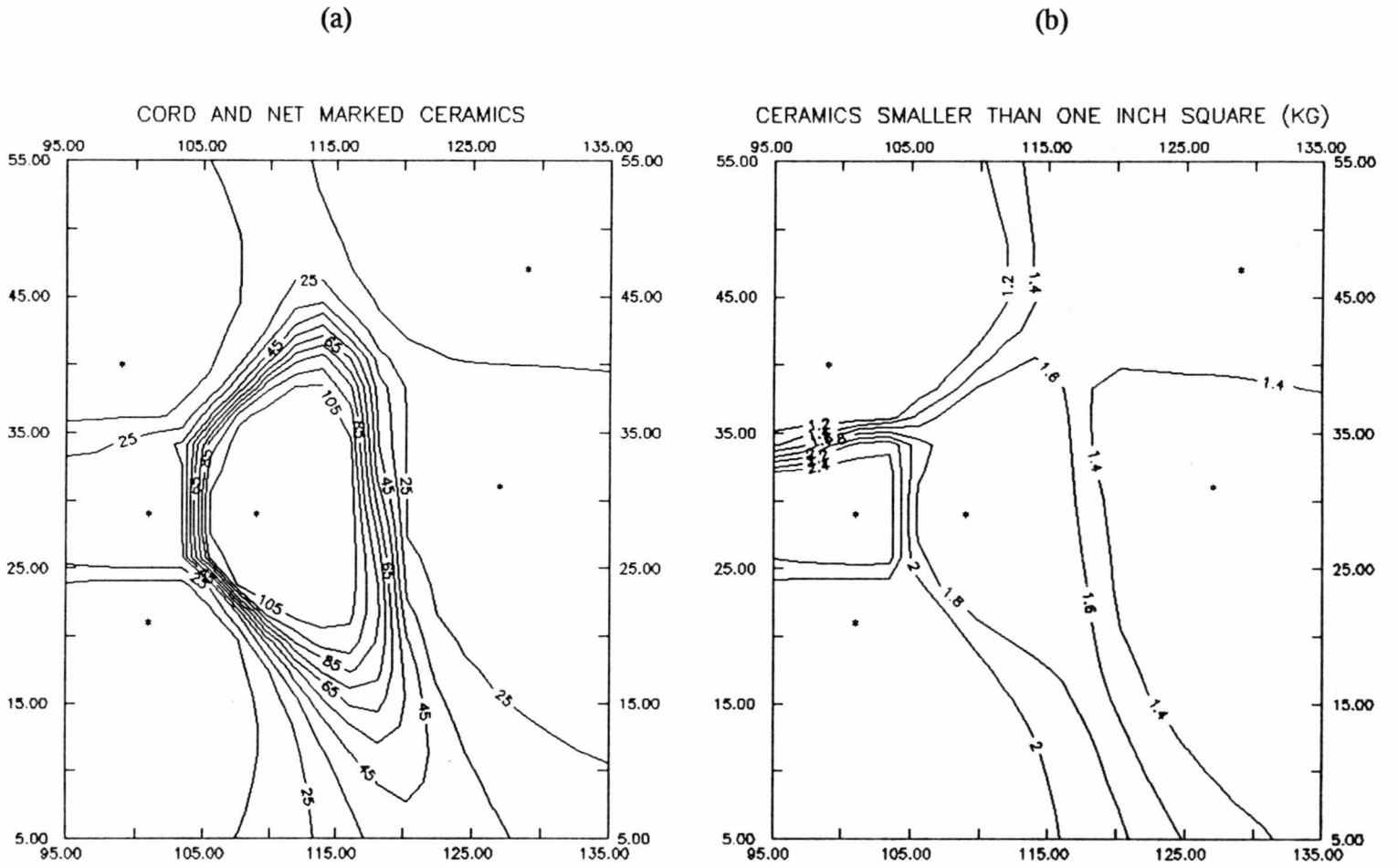


Figure 30. Spatial distribution of ceramics on Lot M3. (a) cord and net-marked ceramics (b) ceramics smaller than one inch.

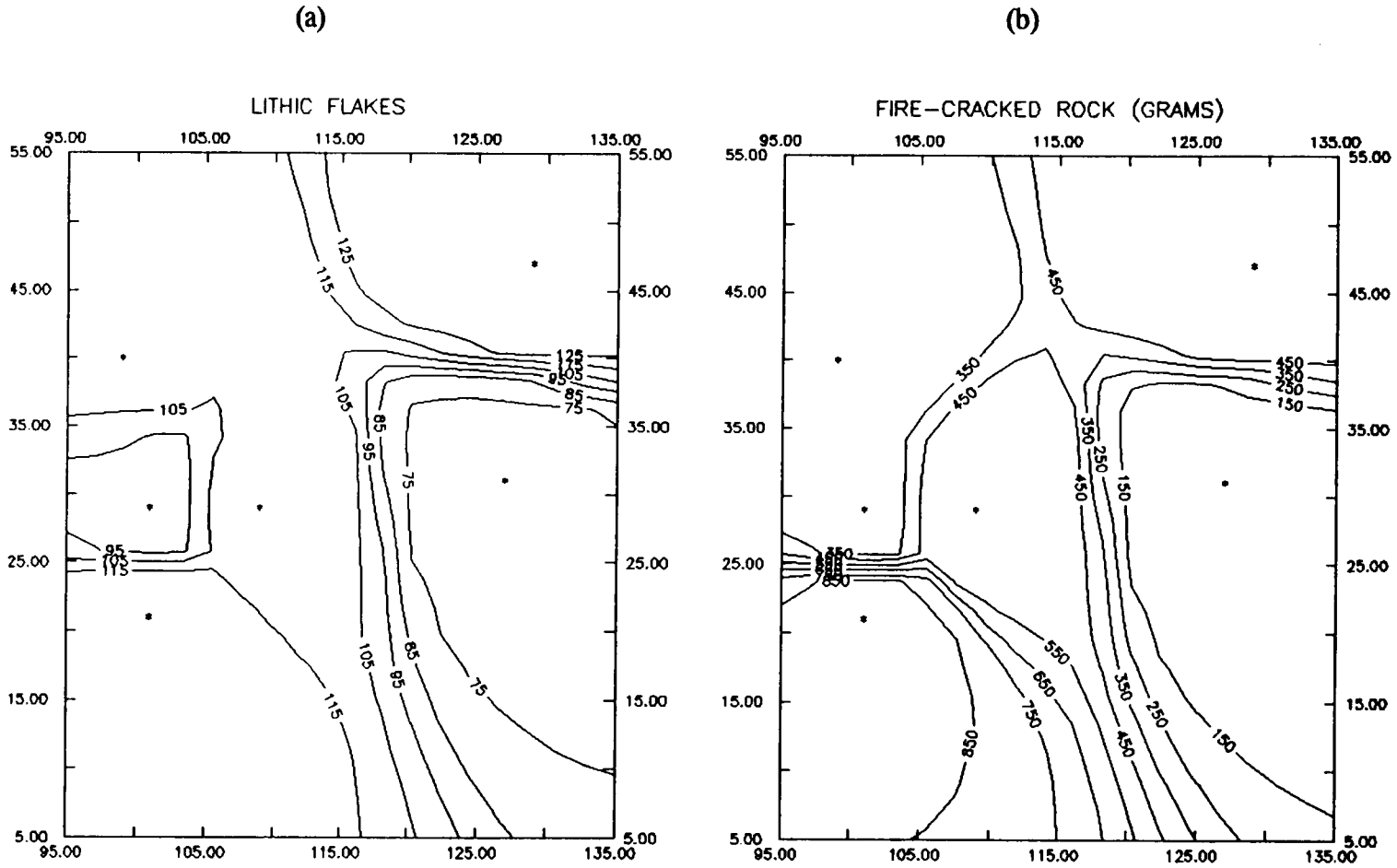


Figure 31. Spatial distribution of lithic artifacts, Lot M3. (a) lithic flakes (b) fire-cracked rock.

each unit also indicated that the lower portions of this deposit were less disturbed from plowing than upper portions. This situation explains the high frequency of Middle Woodland sherds larger than 1 inch recovered from each of the units. The significantly lower frequency of similarly-sized sherds recovered from Unit 106 is likely due to severe disturbance of any midden deposits by plowing, and, possibly, to preferential use of large pit features for trash disposal in this area. The differences in the densities of postmolds and features between Units 103 and 106 may also reflect use of the former area for primarily domestic activities. The immediate vicinity of Unit 106 may have been used more for certain types of processing activities and storage.

Data on the distribution of lithic flakes and fire-cracked rock across Lot 3 appear to confirm the findings of the ceramic analysis. While flakes and fire-cracked rock recovered in the plowzone cannot specifically be attributed to the Middle Woodland period, both artifact types display relatively high frequencies in the vicinity of Units 103, 105, and 106 where the highest frequencies of Middle Woodland ceramics were recovered. Within this pattern, the relatively high amount of fire-cracked rock in Unit 106 is particularly interesting. This artifact type may provide a clue to the function of the pit features, and indicate as well that certain processing activities were focused in this area.

The density of ceramics on Lot 3 was found to be relatively low in all areas tested outside the vicinity of Units 103, 105, and 106 located in the west-central area of the property. When the distribution of lithic artifacts is examined, however, another focus of prehistoric activity is indicated in the northeast corner of the property. Unit 101 is

this area yielded the highest frequency of flakes recovered from a test square as well as a relatively large amount of fire-cracked rock. Several prehistoric postmolds were also encountered in the unit. While it cannot be determined if the prehistoric occupation in the vicinity of Unit 101 is even roughly contemporaneous with the Middle Woodland settlement indicated in Units 103, 105, and 106, the data suggest that at least different types of activities or settlements were associated with each area.

In the course of excavations on Lot 3, the only evidence encountered for use of the property during the historic period were several postholes and a light scattering of artifacts. No structures were indicated by the patterning of postholes, but a few fence lines appear represented (see discussion of features in Unit 106 below). The artifacts recovered date generally from the mid-19th through 20th century.

Excavation Unit 106

The main focus of VDHR excavations on Lot 3 was Unit 106. The area contained several large prehistoric pits and a few prehistoric postmolds and historic postholes. The plan of the features is show in Figure 32. Larger features are described individually below, while smaller features are discussed in a following section. Ceramic artifacts and radiocarbon determinations indicate all but one of the larger features date from the Middle Woodland period. The exception, a Late Woodland burial, is described separately.

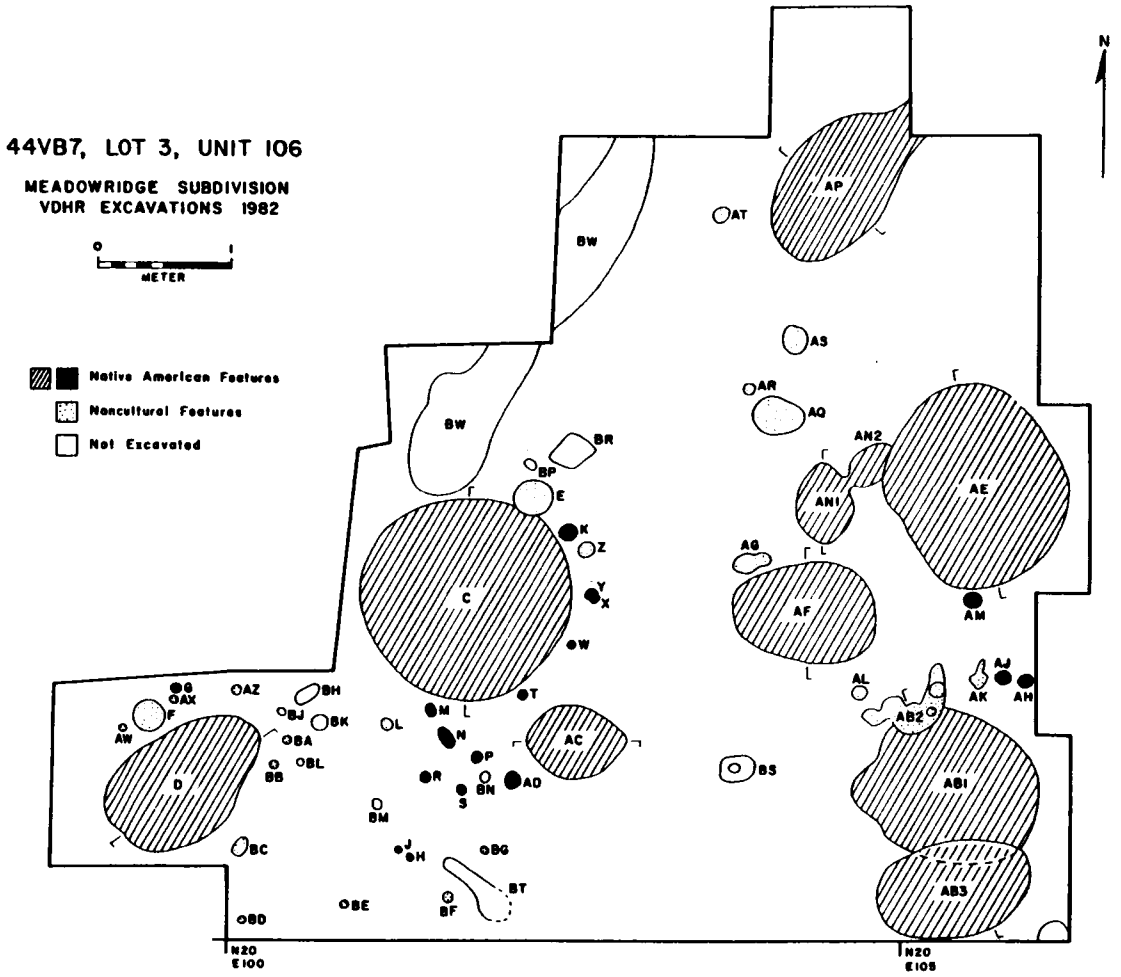


Figure 32. Plan of features in Unit 106, Lot M3.

Trash-filled Pit Features

Feature 106C (Figures 33 and 34): Feature 106C was a large, roughly circular pit, 1.65 m in plan at the surface of subsoil and extending in depth to 0.72 m below subsoil level. On the south side, the wall of the pit was almost straight-sided. The wall sloped inward at an angle approximately 27° from the vertical on the north side. The floor of the feature was flat and approximately 1.10 m in diameter.

Three layers of fill were recognized within Feature 106C. The thickest and earliest deposit, Level 3, was composed of dark brown, sandy loam containing small bits of charcoal, numerous ceramic and lithic artifacts, and dense accumulations of whole and fragmentary animal bone and shell. Around the periphery of the pit was a deposit 5-10 cm thick which contained only a few small fragments of shell and varied from a dark brown sandy loam to a lighter brown sandy loam mottled with yellow sandy clay (Level 4). This zone was likely created through the mixing of feature fill and subsoil matrix by biological agents.

No clear breaks in stratigraphy could be discerned within Level 3. In profile, however, lenses of shell could be seen which sloped down from the edges of the pit towards the interior. The position of the shell, which sloped from the side walls to the base, suggests the deposit represents several episodes of filling, with settling of the deposits between episodes.

The final deposit of fill in Feature 106C preserved below subsoil level was designated Level 2. Situated roughly in the center of the larger pit, this deposit was



Figure 33. Feature 106C after excavation, Lot M3.

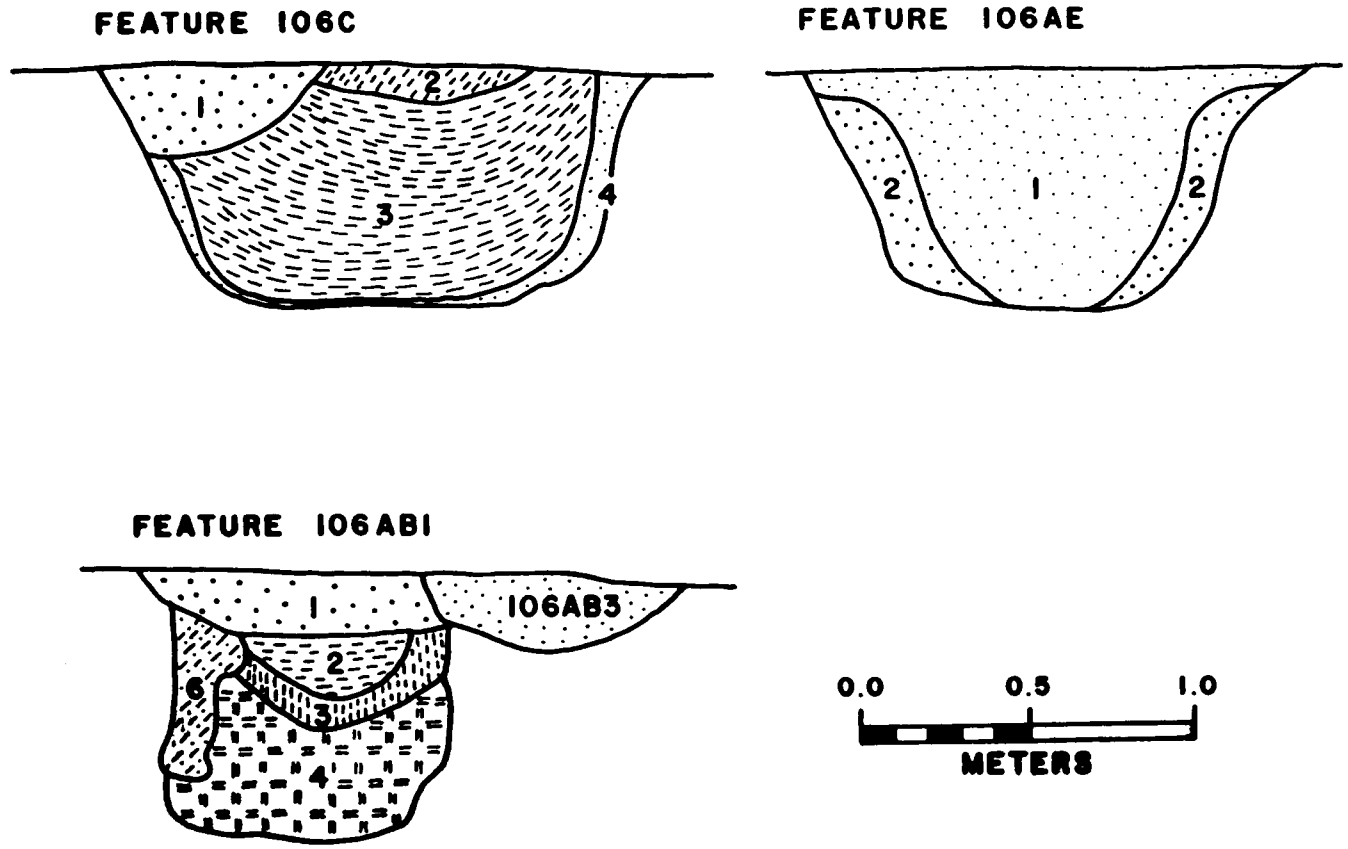


Figure 34. Profiles of larger, deeper pit features, Lot M3.

bowl-shaped, 0.65 m in diameter, and extended from subsoil level to a depth of 10 cm. The deposit could be differentiated from Level 3 as it contained significantly less, and only extremely fragmentary, shellfish debris.

The third layer of fill in Feature 106C was designated Level 1 and appears to represent an intrusive feature. Level 1 was a circular deposit situated in the northeast quadrant of Feature 106C. The deposit was bowl-shaped, 0.79 m in diameter and 28 cm deep. The fill was very similar to that of Level 2.

Ceramics recovered from Feature 106C indicate a Middle Woodland period association. The vast majority of sherds (N=366) are shell-tempered with net-marked (50%) or cord-marked (31%) surfaces. Apart from plain- and unidentified-surfaced ceramics, the collection also contains one shell-tempered simple stamped sherd which may have originated from a rodent burrow (106E) observed along the north edge of the feature. The Middle Woodland date suggested by the ceramics was confirmed by dating of a charcoal sample from Level 3 which yielded a radiocarbon age of 1690 $\pm$60 years: A.D. 260 (Beta 12119, not corrected for C-13, not calibrated). The date falls within the early end of the accepted temporal range of Mockley ceramics (Gleach 1988).

Although the faunal remains recovered from Feature 106C have yet to be quantified, the collection is dominated in terms of volume by oyster shell. A number of other shellfish species were also identified in the collection, including hard shell clam, soft shell clam, short razor clam, ark, periwinkle, welk, angel wing, ribbed mussel, slipper, marginella, and blue crab.

Feature 106D (Figure 34): At the surface of subsoil Feature 106D appeared as roughly egg-shaped, extending 1.30 m northeast-southwest and a maximum of 0.82 m northwest-southeast. Excavation revealed the pit was shallower at the narrow end, sloping across a distance of 0.37 m from the northeast end to a maximum depth of 10 cm (Figure 35). The remainder of the pit was a bowl-shaped depression, roughly 0.5 cm in diameter and extending 0.23 m below subsoil level to a flat base. The fill within the feature was a dark brown sandy loam containing ceramic and lithic artifacts, bone, and shell. The upper portion of fill (Level 1) contained the most dense concentration of shell. All 30 ceramic sherds recovered are shell-tempered: 19 net-marked, 9 cord-marked, 1 simple stamped, and 1 unidentified surface. The feature is believed to date from the Middle Woodland period. The simple stamped sherd may have been introduced from three narrow rodent burrows or root stains which intruded on the pit fill.

Feature 106AB1 (Figures 34 and 36): Feature 106AB1 was a large, cylindrical pit filled with a series of deposits containing ceramic and lithic artifacts, bone, and shell. The pit was intruded along the south side by Feature 106AB3 which contained a human burial apparently dating from the Late Woodland period.

At the surface of the subsoil, Feature 106AB1 was circular in plan. Given the intrusion from 106AB3, the size of the pit is estimated at 1.05 m in diameter. The upper layer of fill (Level 1) in Feature 106AB1 was a bowl-shaped deposit, 20 cm deep, of dark brown sandy loam with moderate amounts of bone and shell. Level 1 may actually represent an intrusion on pit fill deposited earlier. The deposits corresponding to Levels

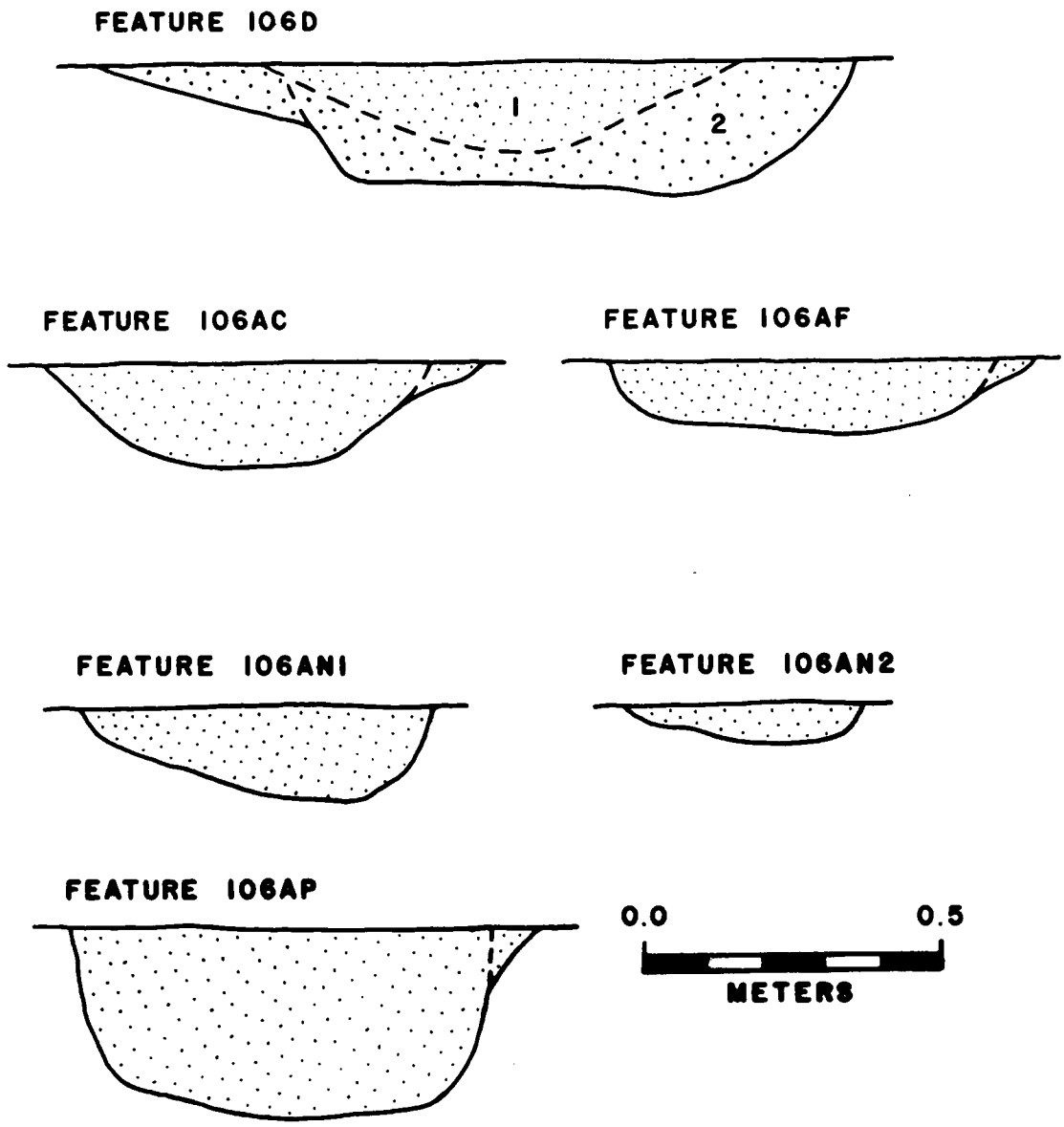


Figure 35. Profiles of smaller, more shallow pit features, Lot M3.

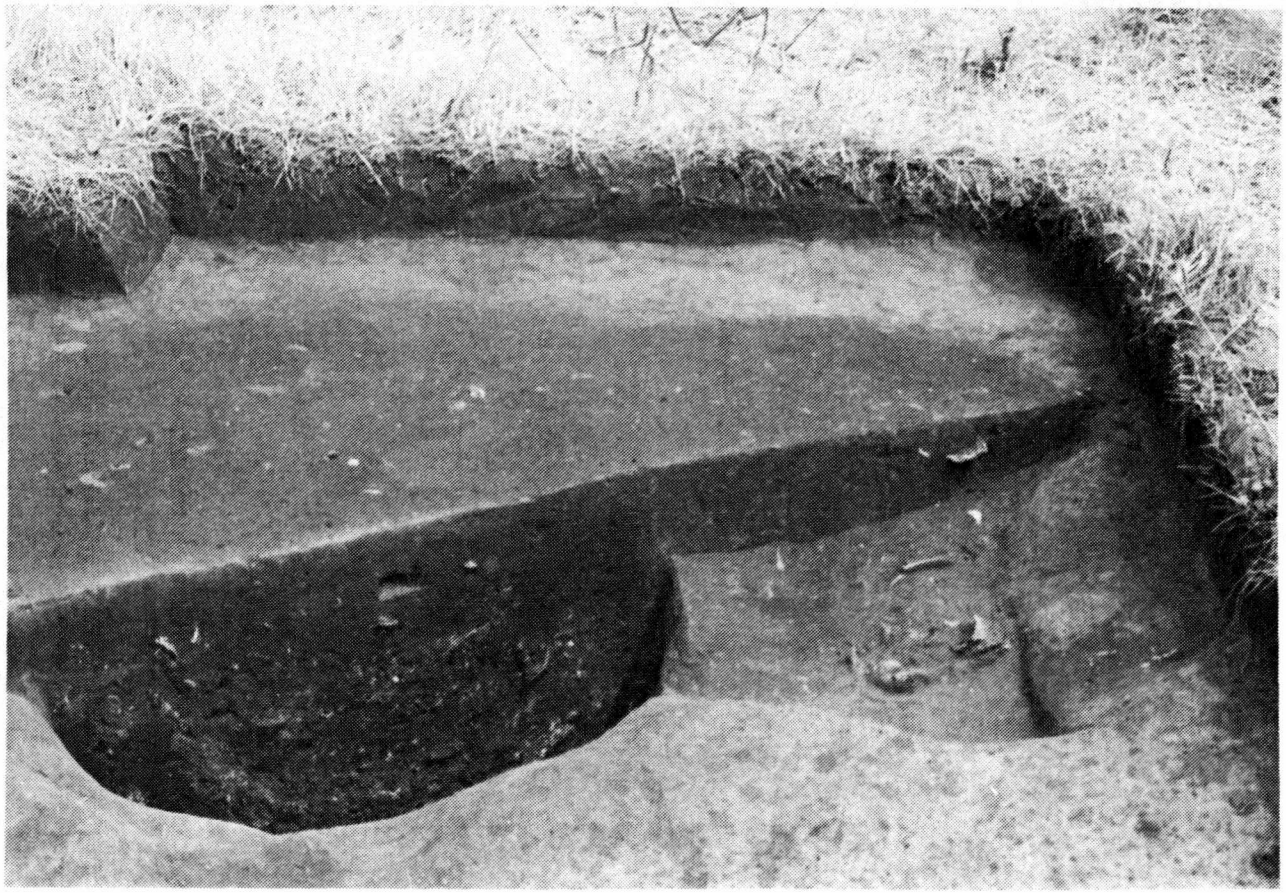


Figure 36. Profile view of Features 106AB1 and 106AB3, Lot M3.

2, 3, and 4 were sloped toward the center of the pit as if the fill were allowed to settle as more debris was added through time. In contrast, the base of Level 1 was flat and appeared to truncate deposits in Levels 2 and 3.

The fill in Level 1 also extended beyond the edge of the deposits comprising Layers 2, 3, and 4. At a depth of 20 cm below subsoil level, Feature 106AB1 was only 0.84 m in diameter. From this depth the walls of the pit were relatively straight-sided with some outward bulging on the south side. The base of the feature was flat and situated 0.82 m below subsoil level.

Three layers of fill were discernable within this more constricted area. The uppermost layer, Level 2, was a very dark sandy loam with densely packed shell. Level 3 was comprised of a grey, ashy, sandy loam with a high proportion of crushed shell. Level 4 contained large, whole oyster shells within a matrix of medium brown sandy loam. A rodent burrow (Level 6) ran through these deposits along the northern side of the pit. The burrow was connected to the rodent disturbance labeled 106AB2 on the plan drawing of the feature.

Analysis of ceramics and charcoal recovered from the lower levels of fill within Feature 106AB1 indicated these deposits clearly date from the Middle Woodland period. All 229 ceramic sherds recovered from Levels 2, 3, and 4 are shell-tempered: 74% net-marked and 14% cord-marked. Radiocarbon analysis of charcoal recovered from the three levels provided an age of 1490 $\pm$90 years: A.D. 460 (Beta-12120, not corrected for C-13, not calibrated).

The date of deposits in Level 1, which may be intrusive on Level 2, is unclear since Level 1 yielded both Middle and Late Woodland ceramics. Among a majority of shell-tempered, net- and cord-marked ceramics, one simple stamped sherd was also recovered. Level 1 may be either a Late Woodland feature, or a Middle Woodland feature contaminated through the intrusion of Feature 106AB3, a burial believed to date from the Late Woodland period.

Feature 106AC (Figure 35): Feature 106AC was a small oval pit with a bowl-shaped profile. At the surface of the subsoil the feature extended 0.74 m east-west and 0.55 m north-south. While the wall of the pit sloped directly to the base on the west side, on the east side the wall sloped gently to a depth of 7 cm and then dropped more abruptly. The base of the feature was flat and situated 18 cm below subsoil level.

Only one layer of fill could be discerned in the pit. The deposit was comprised of very dark brown, sandy loam containing charcoal and shell. Only three ceramic sherds were included within the fill, but they suggest a Middle Woodland date for the feature. All three sherds are shell-tempered: two cord-marked and one unidentified surface.

Feature 106AE (Figure 34): Feature 106AE was similar in shape and size to Feature 106C. At the surface of the subsoil Feature 106AE appeared oval in plan, extending a maximum of 1.45 m northwest-southeast and 1.25 m northeast-southwest. It is probable that the feature was originally more circular in plan. The upper few

centimeters of fill were disturbed and spread by plowing and yielded two nails. As shown in the profile drawing (Figure 34), an outer layer (Level 2) of mixed feature fill and subsoil matrix along the walls of the pit was discernable beginning only at a depth about 7 cm below subsoil level.

The walls of Feature 106AE sloped rather steeply to a flat base. Including the upper layer of plow-disturbed fill, the feature extended to a depth of 0.74 cm. Pit fill (Level 1) consisted of very dark brown, sandy loam with occasional inclusions of shell and charcoal. As mentioned above, a 5-8 cm thick layer (Level 2) of dark brown sandy loam mottled with yellow clay lined the walls of the pit.

Of 216 ceramic sherds recovered from Feature 106AE, all but three are shell-tempered. Sixty-two percent of shell-tempered sherds are cord-marked and 21% are net-marked. The three other sherds are sand-tempered and net-marked. Radiocarbon dating of charcoal from the feature produced an age of 1540 $\pm$60 years: A.D. 410 (Beta 12121, not adjusted for C-13), which is consistent with the date generally suggested by the ceramics.

Feature 106AF (Figure 35): Feature 106AF was a shallow, basin-shaped pit, oval in plan. The feature was 0.72 m wide north-south and 1.05 m long east-west. The walls sloped to a flat bottom 14 cm below subsoil level. In profile, a slight ledge was discernable along the south wall, somewhat similar to that seen in Feature 106D and 106AC (Figure 35). Fill consisted of brown sandy loam with occasional flecks of charcoal. Only ten ceramic sherds were recovered. These are shell-tempered, net-

marked (seven) and shell-tempered, cord-marked (three) sherds diagnostic of the Middle Woodland period.

Feature 106AN (Figure 35): Feature 106AN is comprised of two small, shallow pits excavated as one unit. Pit 106AN1 is the larger of the two. It was oval in plan, 0.60 m long and 0.42 m wide, with the long axis running north-south. The base of the feature sloped to the south to a maximum depth of 0.16 m below subsoil level (Figure 35).

Pit 106AN2 was also oval in plan. It extended 0.40 m northeast-southwest and 0.27 m northwest-southeast. The base of the pit sloped to a maximum depth of 0.07 m on the southwest end.

The temporal relationship between the pits could not be discerned through excavation. A small depression of fill 3 cm deep connects the two features. Only ceramics smaller than 1 inch were recovered from the features. These were very small and cannot be attributed to a particular type, although they are suggestive of the shell-tempered Mockley series. Pit 106AN2 was intruded by Feature 106AE, so it must date from sometime prior to this Middle Woodland period feature.

Feature 106AP (Figure 35): At the surface of the subsoil Feature 106AP appeared oval in plan, extending roughly 1.27 m northeast-southwest and 0.78 m northwest-southeast. The upper levels of feature fill appear to have been spread by

plowing, particularly in a northeastward direction. Fill at this end of the feature was quite shallow and grey-brown in color, while the fill elsewhere was dark brown.

Although smaller, the pit was roughly similar in shape to Features 106C and 106AE (Figure 35). The walls sloped rather steeply to a flat base 0.32 m below subsoil level. The fill contained only shell-tempered sherds (N=28): 57% net-marked, 14% cord-marked, with the remainder plain or unidentified.

Burial Features

One human burial, Feature 106AB3, was encountered and excavated on Lot 3. As discussed above, ceramics recovered from Feature 106AB3 suggest the interment dates from the Late Woodland period. The pit was intrusive into Feature 106AB1, a trash-filled pit dating from the Middle Woodland period.

At the surface of the subsoil, Feature 106AB3 was oval in plan, extending 1.5 m northeast-southwest and approximately 0.73 m northwest-southeast. In profile the feature was bowl-shaped. The base of the pit was rounded and extended to a maximum depth of 0.25 m below subsoil level (Figure 34).

The burial feature was filled with medium brown sandy loam mottled with orange clay which contained some animal bone and shell. The skeletal remains were situated at the base of the pit. The interment was of an infant, 9 $\pm$3 months of age (Chase 1992), placed in an extended position on its back with the cranium at the east end. The head was turned to the individual's right side.

Numerous small shell disc beads were found associated with the burial. These were scattered adjacent to the skeletal remains in the area between the temporal bone of the cranium and the base of the rib cage. The beads were most concentrated in the neck and upper thoracic region. Two articulated rows of beads, one comprised of 17 beads and the other of 10, were found in among several vertebrae near the temporal bone. The beads were positioned end on end with their flat faces touching.

Feature 106AB3 appears to date from the Late Woodland period. The ceramics recovered from the burial fill are all shell-tempered. Of a total of 15 sherds, 6 are diagnostic of the Late Woodland period.

Smaller Features

Making sense of the numerous small soil stains exposed at the subsoil level in Unit 106 is difficult because the area contained the remains of historic posts presumably set with a posthole digger as well as an extensive amount of disturbance from rodent activity. Once stains attributed to these agents are eliminated, very little evidence of prehistoric structures remains.

A number of small circular stains excavated in the vicinity of Feature 106C appeared to represent prehistoric postmolds. These include Features 106K, M, N, P, R, S, T, W, X, Y, and AD. With the exception of Features 106K and 106AD, the stains were very shallow, ranging from 2-6 cm deep, with most falling at the lower end of that range (Table 9). This group of features contains the only possible pattern of postmolds

Table 9. Dimensions of probable Native American postmolds, Unit 106.

FEATURE NUMBER	DIAMETER (CM)	DEPTH (CM)
106G	10	8
106J	6	6
106H	6	8
106K	15	19
106M	8	2
106N	9 BY 17	3
106P	6	2
106R	9	5
106S	6	2
106T	6	2
106W	7	6
106X	6	3
106Y	10	5
106AD	14	8
106AH	9	20
106AJ	10	2
106AM	10	3

identified on Lot 3. Features 106K, X, Y, W, T, and M are arranged in an arc around the periphery of Feature 106C, a large, deep pit feature, and the postmolds are somewhat evenly spaced along this arc. The distance across Feature 106C between postmolds 106K and 106M is 1.65 m. If the postmolds do represent a structure, its size appears small for domestic use, suggesting instead some type of covering over a storage facility.

Six other possible prehistoric postmolds were confirmed through excavation in Unit 106. These include Features 106G, H, and J, located in the southwest corner of the excavation area, and Features 106AH, AJ, and AM, situated between pit features 106AB1 and 106AE. The diameter and depth of each of these postmolds is listed in Table 9.

Features 106BS and 106BR (not excavated) are historic postholes/molds. The two fall in line with another historic posthole/mold, 105C, located in the southwest corner of Unit 105. The distance between 106BS and BR is 2.65 m (8.7 ft), while the distance between 106BR and 105C is 5.10 m (16.7 ft). The three posts no doubt formed part of a fenceline with uprights spaced approximately every eight feet.

It is possible that Features 106AH, AJ, and AM, previously identified as prehistoric postmolds, are instead the remains of historic posts. Features 106AH and AM fall along a line joining historic postholes/molds 105D and 104C. The distance between 106AH and 104C is 4.42 m (14.5 ft). The distance between 106AM and 104C is 5.12 m (16.8 ft). If the line were extended to 105D, the distance from 106AM to 105D would represent three segments each 7.6 ft in length. Room for three segments, each 8.4 ft long, exists between 106AH and 105D. This fenceline would run roughly

parallel to the one defined by 105C, 106BR, and 106BS, separated by a distance of 2.15 m (7.0 ft) between 106BS and 106AM.

The remaining soil stains excavated in Unit 106 were identified as rodent or root disturbances. These include 106E, F, L, AK, AL, AQ, AR, AS, AT, AW, AX, AZ, BA, BB, BC, BD, BE, BF, and BG. Feature 106BW, a linear stain of grey-brown loam in the northwest corner of the unit was not excavated, but historic ceramics could be seen in the fill. The origin of the remaining unexcavated soil stains is unknown. These include 106BH, BJ, BK, BL, BM, BN, and BP.

Excavation Unit 108

Unit 108 was a large test area, approximately 5 by 9 m in plan, situated about 40 m north of Thomas Bishop Lane. Plowzone was removed from across the unit with a backhoe to within a few centimeters of the subsoil level, so no information is available on the density or distribution of artifacts within the plowzone in this area of the lot. Two modern intrusions had disturbed portions of the excavation area. A long narrow trench (108BZ), presumably bearing a telephone cable, ran along the southern border of the unit. Cutting across the north end of the unit was a similar trench (108X, 108Y) which presumably held an electrical cable.

Only two features were excavated in Unit 108. Feature 108B was a small oval pit. At the surface of the subsoil the feature was marked by a concentration of

prehistoric ceramics, but the edges of the pit were indistinct. Excavation indicated the feature had been disturbed on one side by a tap root.

As shown in Figure 37, only a portion of the south side of the feature approximately 23 cm wide north-south was found to be intact. Pit fill in this area (Level 2) was a brown loam mottled with orange clay. The original pit had straight sides extending to what seemed in excavation to be a flat bottom 18 cm below subsoil level. The original pit was no larger than 52 by 45 cm in plan.

The disturbed portion of the feature was characterized by a brown loam containing charcoal flecks (Level 1). Below 50 cm depth, where the disturbance narrowed, charcoal was very dense and the fill very wet. Numerous ceramic sherds were recovered from the disturbed area, however. These were most concentrated in the upper 20 cm of the pit on the west side, although a few small sherds were found in disturbed fill below 50 cm depth.

Feature 108B likely dates from the Middle Woodland period, although included among the 34 ceramic sherds recovered is one with shell temper and a simple stamped surface. Of the remaining sherds, 12 are shell-tempered (6 net-marked, 1 cord-marked, 5 unidentified surface treatment) and 21 have an untempered, very fine sandy paste. The latter derive from a single vessel impressed with an open-weave textile. Ceramics similar to this type were not common elsewhere on Lot 3. Also recovered from the feature were 158.2 g of ceramic fragments smaller than 1 inch; a jasper flake; a quartzite flake; 12.9 g of animal bone; 0.1 g of shell; and a fragment of bog iron.

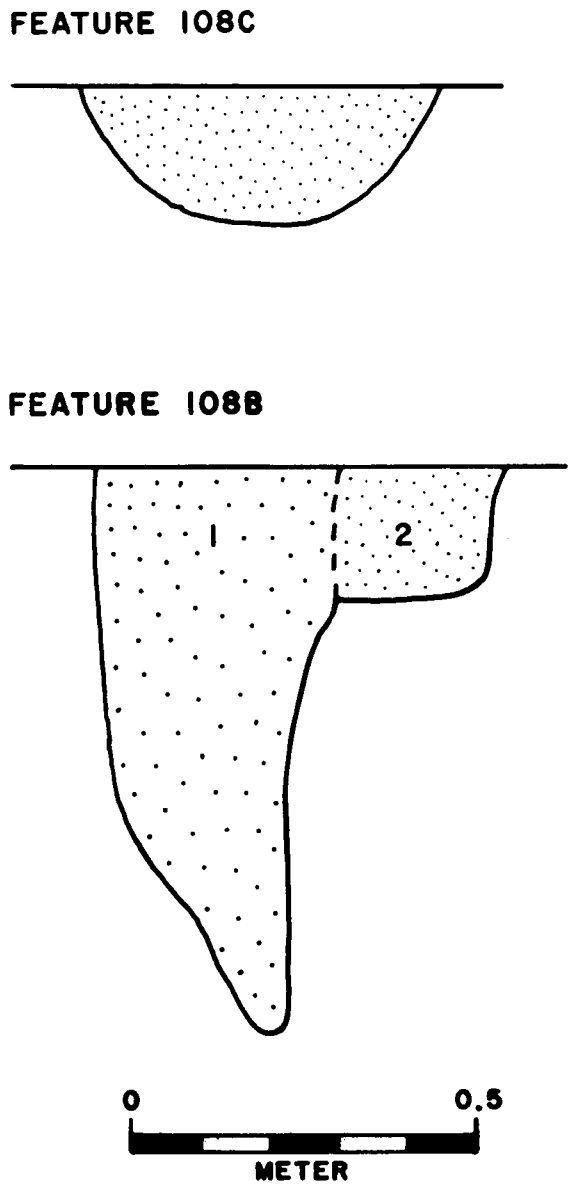


Figure 37. Profiles of Features 108B and 108C, Lot M3.

The other feature excavated in Unit 108 had also been disturbed, presumably by rodent activity. At the surface of the subsoil, Feature 108C appeared as an oval stain of brown loam mottled with orange clay measuring 52 cm by 78 cm. Darker brown fill lay along the border of the feature on the east side. Because of the mottled fill, the feature was originally suspected to be a burial pit.

Excavation indicated Feature 108C was bowl-shaped with a rounded base, extending to a maximum depth of 19 cm below subsoil level. No evidence of a human interment was found. Very few artifacts were recovered from the fill: 17.7 g of ceramic fragments smaller than 1 inch; a jasper flake; 0.3 g of shell; and a fragment of bog iron. None of the ceramic sherds was sufficiently large to permit identification to a diagnostic type.

The remaining soil stains identified within Unit 108 were not excavated. This group included a number of historic posthole/molds: 108BA, BB, BC, BD, BE, and BF. The fill or shape of other features suggested they were either very recent disturbances or originated from root or rodent activity. These include 108BG, BH, BJ, BK, BL, BM, BN, BP, BR, BS, and CA. The rest of the features, 108D-AY (the letters I, O, Q, U, and V were not used), may represent prehistoric postmolds. No clear structural features are suggested in the arrangement of these stains.

Ceramic Artifacts

Ceramics diagnostic of the Middle and Late Woodland periods were recovered in the excavations on Lot 3. Table 10 lists the ceramics recovered from plowzonecontexts in the seven test units, while Table 11 lists the ceramics from major pit features. As discussed earlier, Middle Woodland ceramics overwhelmingly predominate in the plowzone collections as well as in collections from all major features except 106AB3.

Only 8.7% of sherds recovered from the plowzone are simple stamped or marked with fabric impressions of a type commonly associated with the Late Woodland period. These shell-tempered ceramics are comparable, respectively, to the type Roanoke Simple Stamped and types within the Townsend series. Roanoke sherds were recovered more frequently.

While occasional Late Woodland ceramics were found in Middle Woodland features in Units 106 and 108, only Feature 106AB3 yielded a sufficiently high proportion of Late Woodland sherds to be ascribed to the period. Of a total of 15 sherds recovered from the feature, 5 are simple stamped, 1 incised-decorated over a roughened surface, 5 net-marked, 1 cord-marked, 1 plain, and 2 unidentified.

The vast majority of Middle Woodland sherds recovered from Lot 3 are roughly comparable to types defined within the Mockley series. While the Mockley-like ceramics

Table 10. Ceramics from plowzone contexts in test units, Lot M3.

SHERDS LARGER THAN 1 INCH	TEST UNITS								TOTAL	
	100	101	102	103	104	105	106	107	#	%
SIMPLE STAMPED	4	5	--	6	1	2	3	--	21	7.3
FABRIC	--	2	--	1	--	1	--	--	4	1.4
NET	15	8	1	100	--	29	7	9	169	59.1
CORD	8	5	--	13	1	5	4	5	41	14.3
PLAIN	1	1	--	1	--	--	--	--	3	1.0
UNID.	8	2	1	14	3	11	7	2	48	16.9
TOTAL	36	23	2	135	5	48	21	16	286	100.0
SHERDS SMALLER THAN 1 INCH (KG)	1.3	1.5	0.2	1.7	0.6	2.5	2.1	1.0	10.9	

Table 11. Ceramics recovered from Middle Woodland pit features, Lot M3.

CERAMICS	106C	106	106AB1	106AE	106AP	108B
SHELL-TEMPERED						
SIMPLE STAMPED	1	--	1	--	--	1
NET	182	169	19	45	16	6
CORD	112	31	9	134	16	6
OPEN-WEAVE FABRIC	--	2	--	--	--	--
PLAIN	9	6	--	--	4	--
UNIDENTIFIED	62	21	1	34	4	5
NON-SHELL TEMPER						
NET	--	--	--	3	--	--
OPEN-WEAVE TEXTILE	--	--	--	--	--	21
TOTAL	366	229	30	216	28	34

Note: Figures for Feature 106C include levels 1-4, west half of feature and levels 2 and 3, east half of feature. Figures for Feature 106AB1 include levels 2-4, east and west halves of feature.

recovered from feature contexts are categorized as shell-tempered in Table 11, apart from the inclusion of shell fragments, the paste of the ceramics is actually quite variable. Included in the shell-tempered type are sherds with a fine silty paste, sherds with a very sandy paste, and sherds with a paste lying somewhere between the two extremes. Sherds with a silty paste appeared more common, but this type of variability was not quantified formally. The use of ribbed mussel shell in varying proportions as temper was observed frequently in the collections.

Middle Woodland ceramics (net- and cord-marked surfaces) recovered from plowzone contexts were not categorized by temper, since their weathered condition prevented accurate description of the paste, which varied as described above. In the early stages of analysis of the plowzone collections, several sherds were originally described as having only sand inclusions in the paste, exclusive of shell. Under 7X magnification, however, many of these were found to exhibit a laminar structure in the paste, and very sparsely distributed pores with flat profiles were visible. It was later found that in similar ceramics recovered from feature contexts, shell inclusions could be seen with the unaided eye.

The use of varying proportions of shell and sand in the paste of Mockley-like ceramics has been noted elsewhere within the Virginia Coastal Plain (Egloff et al. 1989; Edwards et al. 1989). The Lot 3 collection differs from more common occurrences of Mockley ware, however, by a high frequency of vessels with flat-bottomed bases. While this vessel form has been noted in several contexts within the Virginia and North Carolina Coastal Plain, researchers have refrained from formally including it within the

definition of Mockley ware (see Egloff and Potter 1982). With the hope of generating data which may one day prove helpful in understanding variability within the type, several attributes of the Mockley-like ceramics recovered from Features 106C, 106AB1, and 106AE were examined. The description which follows is based on these three collections.

Impressions on the exterior surfaces of Mockley-like ceramics from Lot 3 were produced by simple cordage and at least three types of textiles: knotted nets; looped nets; and open-weave, weft-twined fabrics (Figures 38 and 39). Sherds marked by the first two types of textile are combined under one category in Table 11, and the relative frequency of the two was not formally quantified. While the use of looped nets was common, knotted net-marked sherds appeared to be relatively more frequent. Only two sherds marked with an open-weave fabric were noted, and these almost certainly derive from the same vessel. The total collection of Middle Woodland, shell-tempered ceramics with identifiable surface treatment from the three features is comprised of 58.8% net-marked and 41.2% cord-marked sherds, but the ratio between the two treatments varies widely between individual features.

In comparing various attributes of vessel form between cord- and net-marked ceramics in the collections, several differences were observed which may correspond to variation in the range of vessel forms associated with the two surface treatments. Mean sherd thickness associated with each surface treatment is shown in Table 12. Both mean thickness of all but basal sherds (t = 4.6726; $d.f.$ = 640; p = 1.8138E-6) and mean thickness of rim sherds measured 2 cm below the lip (t = 1.9942; $d.f.$ = 93; p =

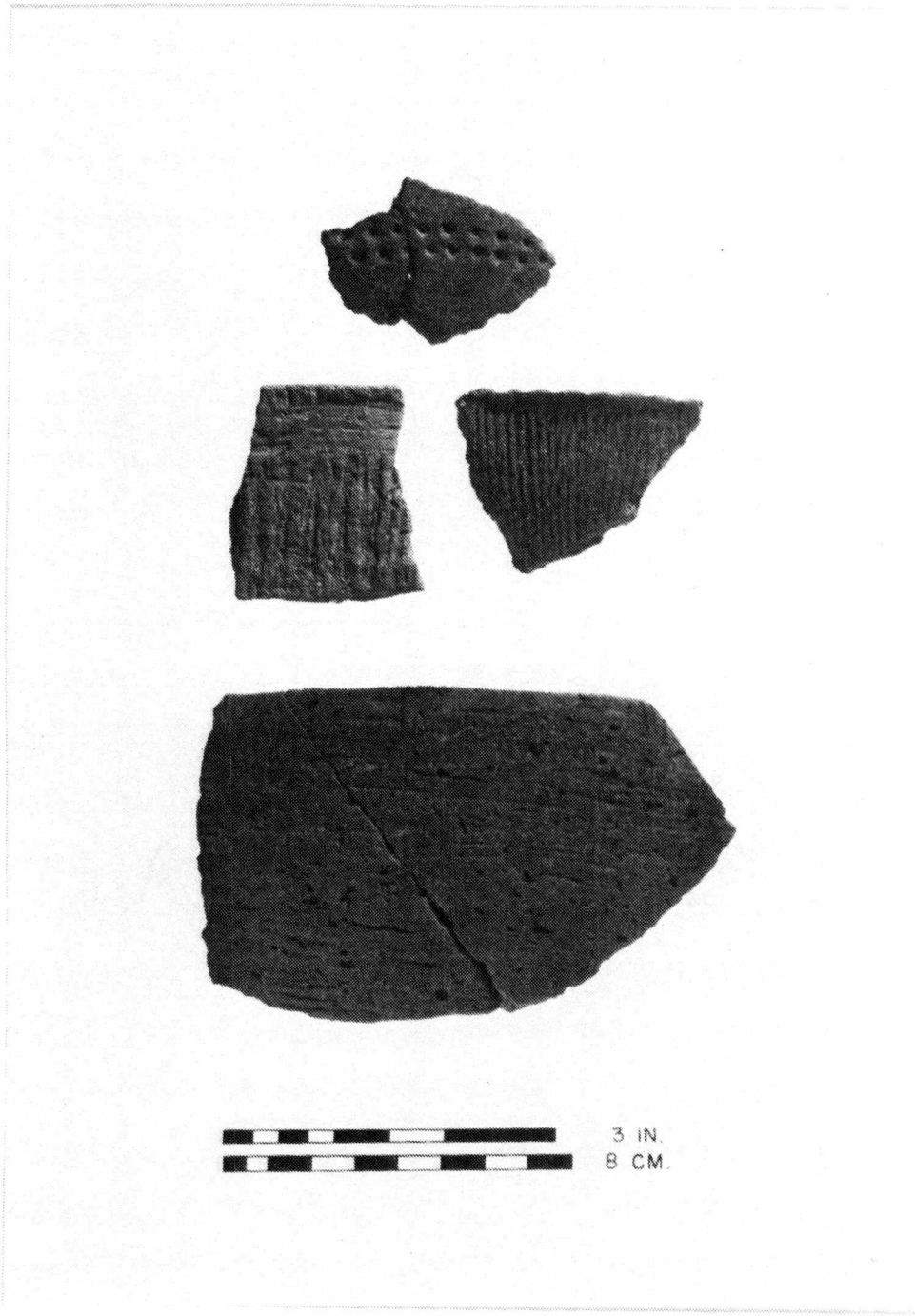


Figure 38. Mockley Cord-Marked and decorated ceramics, Lot M3.

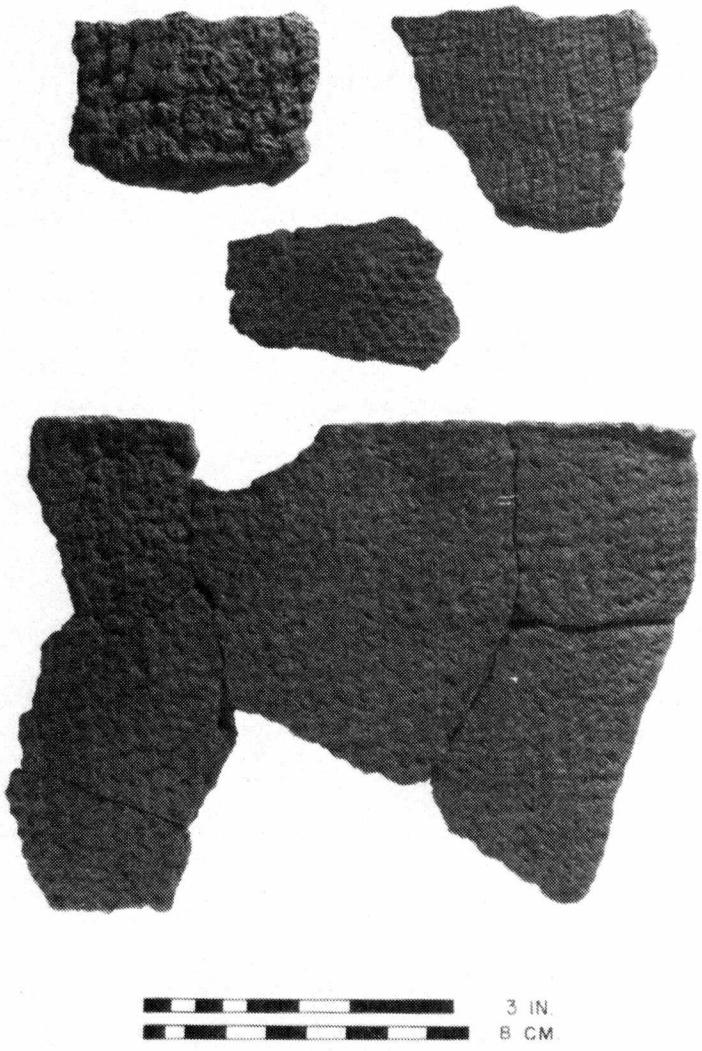


Figure 39. Mockley Net-Impressed ceramics and Mockley sherd marked with open-weave textile, Lot M3.

.0491) were found to differ significantly between cord- and net-marked ceramics, with cord-marked sherds being thinner on average. Because little reconstruction of the ceramics from the features was attempted, vessel form was analyzed further by examining the profiles of rim sherds and the shapes of basal sherds. Straight rims and rims which curve inward are common among both net- and cord-marked sherds, but a greater proportion of cord-marked sherds are incurved (Table 12). Only three rim sherds were considered sufficiently large to provide reliable estimates of rim diameter. One is a net-marked vessel from 106AB1 estimated at 32.7 cm. Two cord-marked vessels from 106AE were estimated at 21.2 and 22.5 cm diameter.

Too few basal sherds were identified in the collection to compare basal forms associated with the two surface treatments, but the bases in the collection are important for the variability they display. Bases were classified as flat-bottomed, conical, or round. Among a total of 12 bases counted in the collection, 9 are flat-bottomed, 2 conical, and 1 round (Table 12, Figure 40). The basal sherds are distributed among the features as follows: 106C, 8 flat-bottomed, 1 conical; 106AB1, 1 flat-bottomed; 106AE, 1 conical, 1 round.

The flat-bottomed bases recovered from Lot 3 correspond well to Painter's (1977:48) description of this type in collections from the Currituck site. The base of the vessel is comprised of a flat disc of clay, sometimes formed by coiling. The base and wall of the vessel meet at a fairly abrupt angle, and are welded with a rather weak join by pulling clay from the basal disc upward on the outside of the vessel and pulling clay from the wall downward on the interior. The lower edge of the vessel is commonly

Table 12. Comparison of cord- and net-marked, shell-tempered ceramics, Lot M3.

ATTRIBUTE	NET-MARKED CERAMICS	CORD-MARKED CERAMICS
WALL THICKNESS, BODY AND RIM SHERDS (CM)		
N	378	264
MEAN	0.86	0.80
STANDARD DEVIATION	0.1702	0.1414
RANGE	0.4-1.5	0.4-1.2
WALL THICKNESS, RIM SHERDS (CM)		
N	54	41
MEAN	0.78	0.73
STANDARD DEVIATION	0.1333	0.1011
RIM PROFILE (N=78)		
STRAIGHT	18	9
INCURVED	25	23
EVERTED LIP	3	—
RIM TREATMENT (N=78)		
SMOOTHED SURFACE	19	15
ROUGHENED SURFACE	13	11
NOTCHED DECORATION	13	4
PUNCTATE DECORATION	1	2
BASAL FORM (N=12)		
FLAT-BOTTOMED	7	2
CONICAL	1	1
ROUND	--	1

Note: The number of rim sherds measured for wall thickness (N=95) exceeds the total of 78 examined for rim profile and form because the latter attributes were recorded only after rim sherds from within each feature were compared to eliminate duplicate readings from the same vessel. Among all three features, however, vessels are likely duplicated.

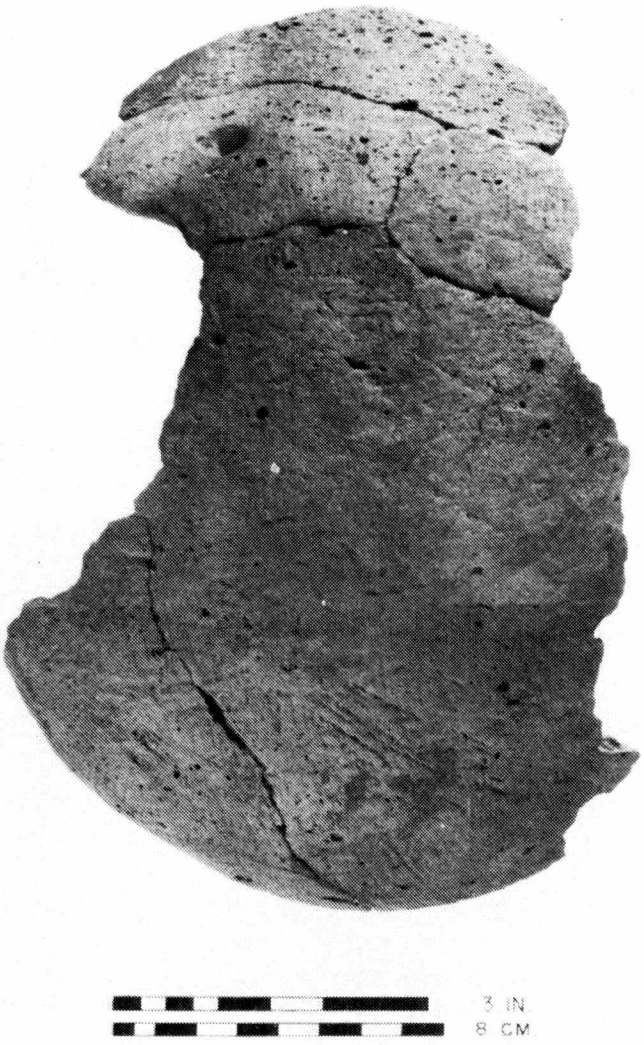


Figure 40. Mockley Cord-Marked round base, Lot M3.

thickened. Three of the sherds from Lot 3 representing flat-bottomed vessels could be measured for fairly reliable estimates of the exterior diameter of the vessel at the base: 106C, 8.9 cm; 106C, 10.6 cm; and 106AB1, 6.3 cm. A complete flat-bottomed base recovered from the plowzone in Unit 107 was oval in plan, measuring 6.1 cm by 5.3 cm.

Two shell-tempered ceramic fragments recovered from the plowzone on Lot 3 provide additional information on the forms of vessels likely included in the Middle Woodland assemblage, although not represented in the collections from the three features analyzed. The fragments are rim sherds with plain, but uneven exterior surfaces. The configuration of the sherds suggests each may represent a pouring lip similar to those described by Painter from the Currituck and Waratan sites in North Carolina (Painter 1977:48, Plate 3). Both rims are decorated. One has punctations on the top of the lip (Unit 106), and one is notched on the interior of the lip (Unit 103).

Within the collections from the three features, decorative embellishment is found only on the lips of the Mockley-like ceramics (Table 12). Only two types of decoration were observed. The most common form is some type of notching, ranging from relatively thin nicks to broader scalloping, placed along the top or inner surface of the lip. Much less common are a series of punctations along the top of the lip. On the remaining rim sherds, the upper surface of the lip is either marked with cord or net impressions or is smoothed. Sometimes the exterior surface of the rim is smoothed for a few centimeters below the lip as well.

Study of the ceramic collections from Features 106C, 106AB1, and 106AE involved determining whether the three assemblages are contemporaneous. The ratio of

cord-marked to net-marked ceramics varies widely among the three features, but comparison of only decorated rim sherds suggests that the fill of each derives from the same occupation. Fragments of two vessels, one with notched decoration, one with punctations, were identified in both Feature 106C and 106AE. Mean sherd thickness was also found to be relatively consistent among the three features (Net: 106C, 0.84 cm; 106AB1, 0.87 cm; 106AE, 0.85 cm; Cord: 106C, 0.79 cm; 106AB1, 0.80 cm; 106AE, 0.80 cm). Radiocarbon analysis of charcoal recovered from the features also suggests the assemblages may be contemporaneous. Three dates were obtained: A.D. 260 $\pm$60, Feature 106C; A.D. 410 $\pm$60, Feature 106AE; and A.D. 460 $\pm$90, Feature 106AB1. If the date of each sample is extended for two standard deviations on either side of the mean, the dates overlap in the range A.D. 290-380.

Although the paste of ceramics recovered from the three features in Unit 106 was quite variable, these collections contained only three sherds which appeared originally to have contained only sand and no shell inclusions. Each of these sherds is net-marked and could be subsumed under the description of the Middle Woodland "fine sand-tempered" ceramics from Lot 16. This type of ware was also included in collections recovered from plowzone contexts in test units. It is believed the frequency of the ware is relatively higher in these contexts than in the three features analyzed, but, because of problems in describing ceramic paste noted above, exact frequencies could not reliably be obtained.

Portions of a single vessel containing no shell in its paste were also recovered from Feature 108B in the southern section of Lot 3 (Figure 41). It would be misleading

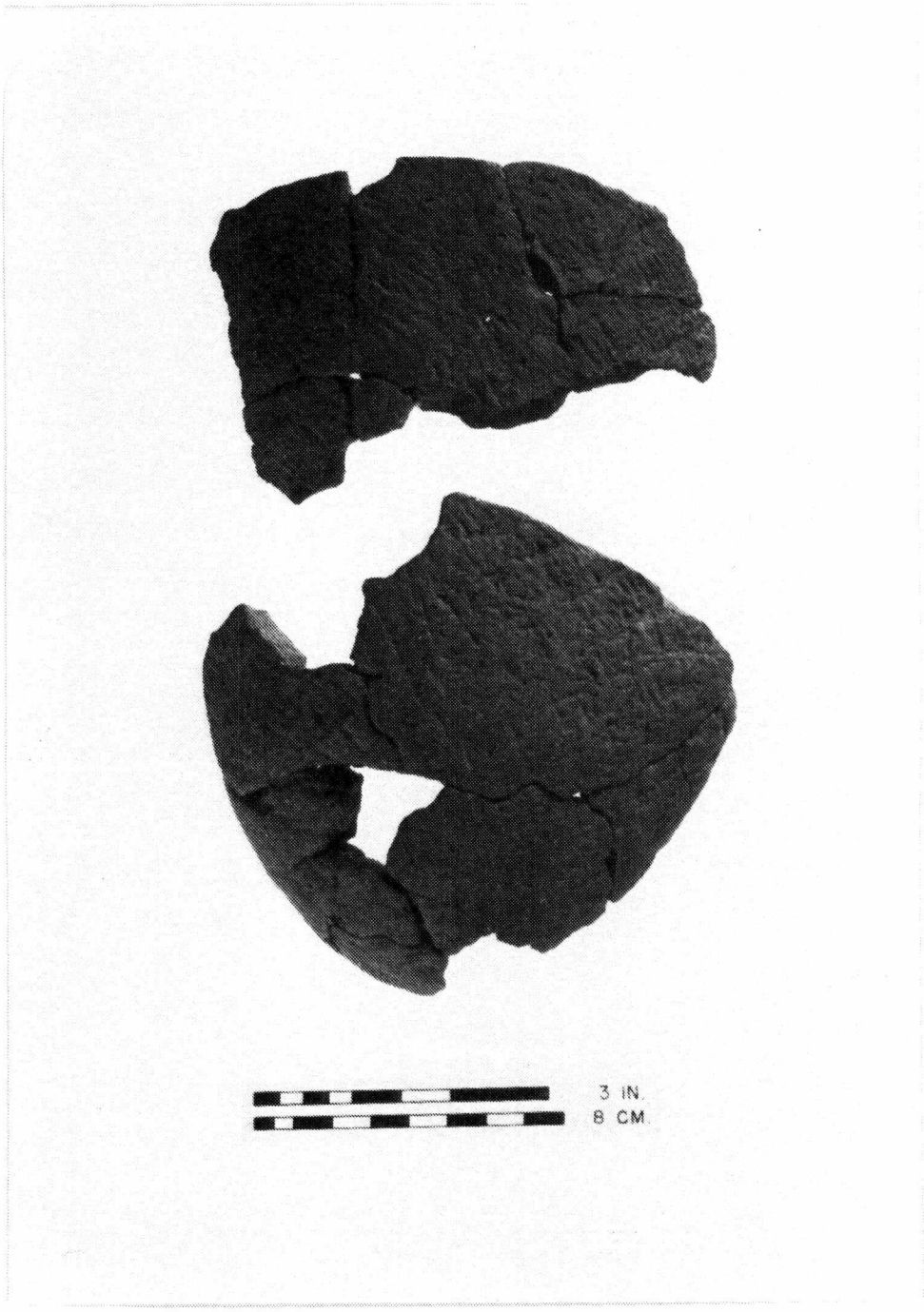


Figure 41. Non-shell-tempered ceramics, Lot M3.

to describe this vessel as "sand-tempered," however. Under 7X magnification only very sparse inclusions of sand particles 0.5-1.0 mm in diameter are visible in the hard, compact paste. Several shell-tempered sherds recovered from the same feature actually contained a higher proportion of larger sand particles in the paste.

Rim and basal portions of a small conical vessel were reconstructed from the sherds from Feature 108B which lacked shell inclusions. The vessel has a straight rim profile and is estimated to measure 15.7 cm in diameter at the mouth. Wall thickness is 0.7 cm at 2 cm below the lip, and 0.8 cm at 6 cm below the lip. The exterior surface of the vessel is marked with an open-weave, weft-twined fabric. The vessel likely dates from the Middle Woodland period.

Lithic Artifacts

Considering the volume of ceramic debris recovered on Lot 3, the lithic collection suggests stone implements were only a minor component of the Woodland period tool assemblage. From mixed Middle and Late Woodland contexts above subsoil level in the initial test squares a total of 701 flakes (46.9% jasper, 30.7% quartzite, and 22.4% quartz), 7 bifaces (4 jasper, 2 quartzite, 1 quartz), 5 anvil stones, 2 tested cobbles, 131 cracked pebbles or pebble cores, and 2742 grams of fire-cracked rock were recovered (Table 13). Included among the bifaces are fragments of two triangular projectile points (1 jasper, 1 quartz) (Table 14). The remaining bifaces either are artifacts discarded at

Table 13. Lithics recovered from plowzone contexts in test units, Lot M3.

TEST UNIT	FLAKES	SPLIT PEBBLES, COBBLE CORES	BIFACES	ANVIL STONES	FIRE-CRACKED ROCK (GRAMS)
100	73	18	1	2	107
101	129	29	1	1	513
102	22	4	--	--	89
103	108	15	2	11	514
104	47	5	--	--	61
105	92	15	1	--	305
106	124	30	--	2	868
107	106	17	2	--	285
TOTAL	701	133	7	5	2742

Table 14. Projectile points, Lot M3.

FORM	PROVENIENCE	MATERIAL	BASAL WIDTH (CM)	SHOULDER WIDTH (CM)	LENGTH (CM)	MAXIMUM THICKNESS (CM)
TRIANGULAR	105 PLOWZONE	JASPER	CA. 1.5	--	--	0.4
TRIANGULAR	106E RODENT BURROW	QUARTZITE	2.7	--	--	0.7
TRIANGULAR	107 PLOWZONE	QUARTZ	CA. 2.1	--	--	0.6
TRIANGULAR	106AE	QUARTZ	1.8	--	--	0.8
SIDE NOTCHED	106AB1	QUARTZ	--	--	4.5	0.8
STEMMED	106C	SLATE	CA. 0.7	2.7	4.2+	0.9

a relatively early stage of manufacture or are points/knives too fragmentary for description.

The lithic collection recovered from the fill of the pit features in Unit 106 is also very small. From the six major features listed in Table 15 only 143 flakes were recovered. Similar to the plowzone assemblage from Lot 16, the character of the assemblage reflects a dependence on accessible local geological deposits which contain few cobbles of large size. The assemblage is characterized by a high proportion of small flakes and a high proportion of flakes with some cortex (Table 16). The most frequent material represented is jasper. The number of split pebbles and cobbles in the collection as well as the anvil stones recovered from plowzone contexts suggest a bi-polar technique was used to reduce the material.

Three bifaces, one possible gorget blank, two ground stone tools, and a small amount of fire-cracked rock also were recovered from the larger Middle Woodland pit features in Unit 106. The bifaces (Figure 42, Table 14) include a triangular and a side-notched point, each of quartz, and a small stemmed slate point. In addition to these points and the points recovered from plowzone, the collection from Lot 3 includes only one other nearly complete projectile point. This is a triangular point of quartzite found in the fill of a rodent burrow (Table 14).

A fragment of fine-grained sandstone 0.7 cm thick recovered from Feature 106AB1 is tentatively identified as a gorget blank (Figure 42). One face of the artifact retains its original cortical surface, and short flakes have been removed from the edge. A fragment of a presumably completed but broken gorget was recovered from the

Table 15. Lithic artifacts from major Middle Woodland pit features, Lot M3.

FEATURE	FLAKES	SPLIT PEBBLES, COBBLE CORES	HAMMERSTONES, ABRADERS, MANOS	BIFACES	FIRE-CRACKED ROCK (GRAMS)	OTHER
106C	46	6	--	1	159	--
106D	3	2	--	--	--	--
106AB1	17	4	1	1	139	1
106AE	65	8	2	1	13	--
106AF	4	--	--	--	--	--
106AP	8	--	--	--	--	--

Note: Figures for Feature 106C include levels 1-4, west half of feature and levels 2-3, east half of feature. Figures for Feature 106AB1 include levels 2-4, east and west half of feature.

Table 16. Flake size, material, and presence/absence of cortex in Middle Woodland features, Lot M3. (a) flakes with cortex (b) flakes without cortex.

(a)

FLAKE SIZE	FLAKES WITH CORTEX				
	JASPER	QUARTZ	QUARTZITE	SANDSTONE	TOTAL
<10 MM	11	1	--	--	12
20 MM	48	2	5	2	57
30 MM	1	2	8	--	11
40 MM	--	--	3	--	3
50 MM	--	1	1	--	2
>50 MM	--	--	1	--	1
TOTAL	60	6	18	2	86

(b)

FLAKE SIZE	FLAKES LACKING CORTEX				
	JASPER	QUARTZ	QUARTZITE	SANDSTONE	TOTAL
<10 MM	14	4	2	2	22
20 MM	15	8	9	--	32
30 MM	--	1	1	1	3
40 MM	--	--	--	--	--
50 MM	--	--	--	--	--
>50 MM	--	--	--	--	--
TOTAL	29	13	12	3	57

Note: Tables (a) and (b) include the same collections analyzed in Table 13.

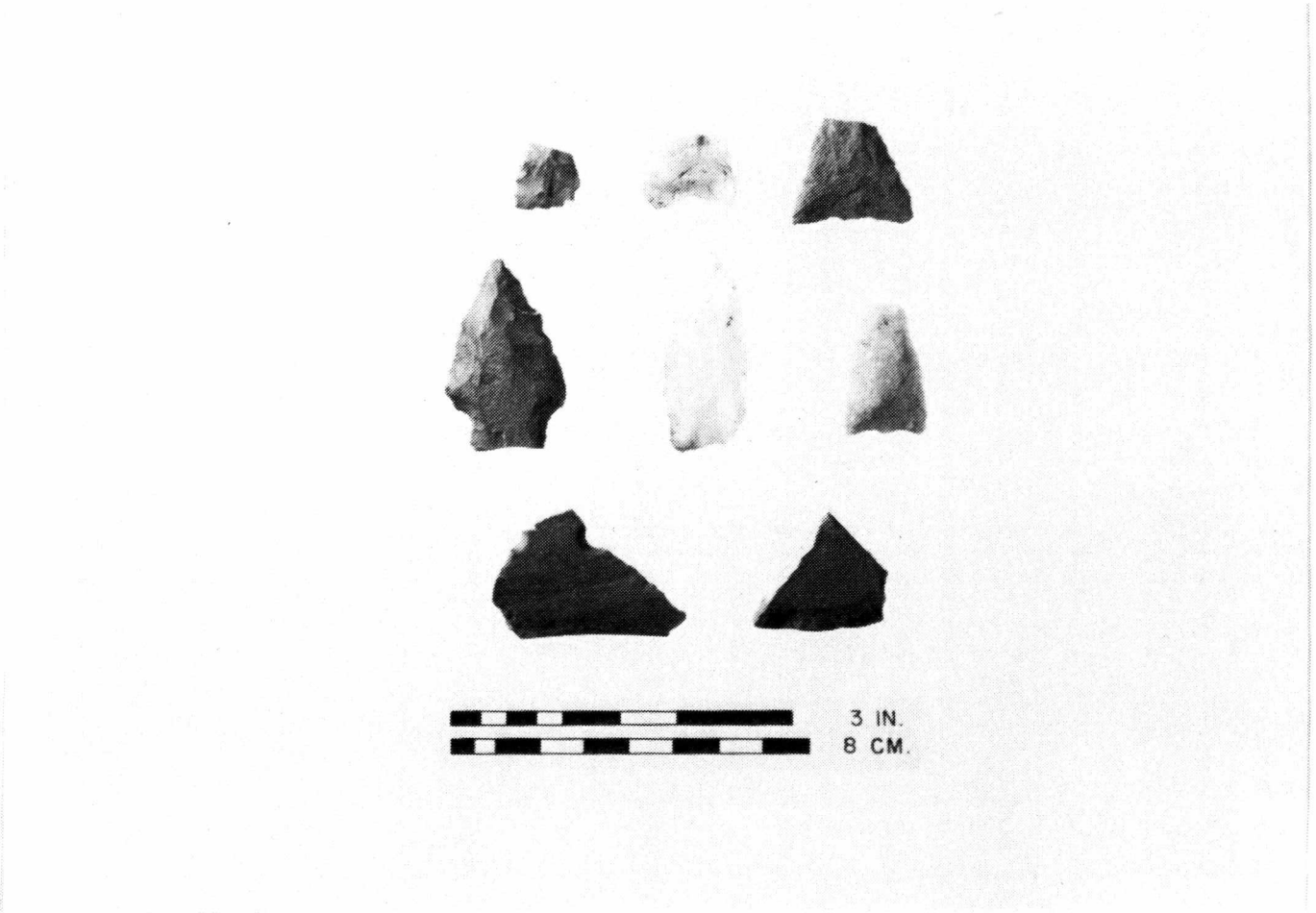


Figure 42. Projectile points and gorgets, Lot M3.

plowzone of Unit 106 as the excavation area was being expanded in the late summer of 1982. The slate artifact is ground and polished. It contains two drilled perforations and is 0.7 cm thick (Figure 42).

The remaining artifacts recovered from the five features in Unit 106 are a quartzite cobble used as a mano from Feature 106AE (maximum length 11.0 cm, width 8.3 cm, thickness 5.3 cm) and a cobble of fine-grained, green quartzite recovered from Feature 106AB1 which was used as a hammerstone and abrader (maximum length 12.5 cm, width 8.3 cm, thickness 3.6 cm) (Figure 43). Large flake scars on each artifact suggest the cobbles were tested for possible reduction prior to their later use. On the artifact from 106AE, the cortical surface of the cobble is abraded on the highest points on both faces. The green quartzite artifact is battered at both ends and is ground slightly at the broader end of one face.

Ceramic Smoking Pipes

Thirty-eight fragments of ceramic smoking pipes were recovered from all contexts on Lot 3 (Figure 44). The types, or forms of pipes derived from contexts above the subsoil level in the initial test units are difficult to identify since most fragments are very small. At least one tubular pipe (100A) and the bowl from what appears to be an elbow pipe (101B) are represented, however. The tubular pipe has a very sandy paste and is decorated with lines of punctations (now faint) running parallel to the long axis of the stem. Within each row the punctations are possibly connected by incising. Also notable

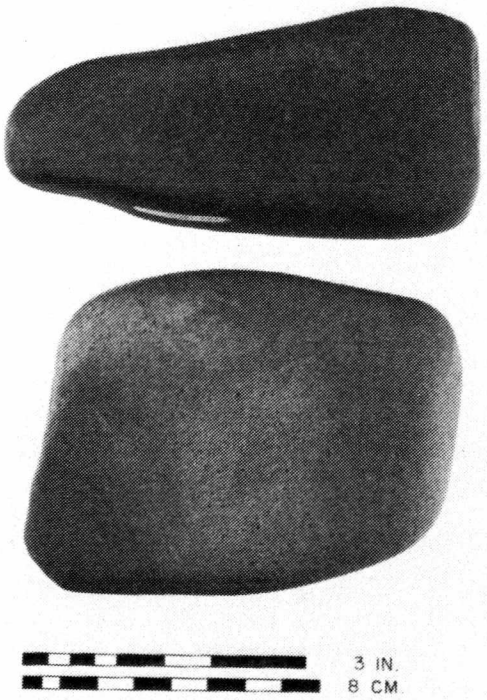


Figure 43. Ground stone tools, Lot M3.



Figure 44. Ceramic smoking pipes, Lot M3.

from this portion of the collection are two pipe stem fragments, one square and one probably hexagonal in cross-section.

Nineteen fragments of ceramic pipes were recovered from Middle Woodland period levels in five of the major pit features excavated in Unit 106: Feature 106C, 106D, 106AB1, 106AE, and 106AF. Four stem fragments can definitely be identified as tubular pipes. The form of these pipes is quite variable. Two of the pipes, manufactured from a sandy paste, expand abruptly from the bit end. One (106C3) with a diameter of 0.8 cm at the bit end expands over a distance of 2.8 cm to a diameter of 2.2 cm. The other pipe (106AB1) is decorated with closely spaced punctations aligned in rows running parallel to the long axis of the stem. A fragment of another tubular pipe (106C) expands at a more gentle angle from 1.5 to 1.9 cm diameter over a distance of approximately 3.6 cm. The paste of this pipe contains a high proportion of shell temper, now leached. The exterior surface of the lower end of the stem is roughened with what may be cordage impressions oriented perpendicular to the long axis. Beyond these markings, the exterior surface of what may be the base of the pipe bowl is smooth. The form of the two remaining pipe stem fragments in this portion of the collection cannot be positively identified. Both fragments (106AB1, 106AF1) are decorated with a row of closely spaced punctations.

The thirteen remaining fragments recovered from the five Middle Woodland features are sections of bowls, none of which can definitely be identified as deriving from a particular pipe form. Of this total, only five fragments do not bear some sort of

decoration. Four of these have a smooth exterior surface. One (106C3), which has a thickened, somewhat everted lip, is roughened, perhaps with net impressions.

Seven of the eight decorated bowl fragments are either marked with rows of small punctations or with a linear series of narrow indentations longer than they are wide. On two of the bowls (106C2, 106AE-15), large portions of the surface are covered with stacked rows of punctations oriented parallel to the rim. A third pipe (106D4A) has three lines of punctations running up or down at an angle to a similar band of decoration. In several instances, the punctations decorating these pipes appear to be connected with incised lines, a form of decoration seen also on some decorated bone artifacts recovered from the features (see below). The eighth artifact (106AB1D-11) is a fragment of a very long pipe bowl (at least 4 cm in length). A single faint line of incising cuts diagonally across the bowl. The decoration on this pipe is similar to the incised "leaf" design on a steatite pipe of elbow form recovered from the Long Creek Midden site (Pearce 1968b).

Bone and Shell Tools and Ornaments

Among the most remarkable artifacts in the collection from Lot 3 are the bone tools and ornaments, all of which described here were recovered from intact Middle Woodland period contexts. The naturally acidic soils of the Virginia Coastal Plain are not normally conducive to the preservation of organic materials. On Lot 3, however, bone subsistence remains and a variety of bone tools and ornaments were recovered in

an excellent state of preservation from the large, trash-filled pit features in Unit 106. The leaching of calcium carbonate from the abundant shellfish remains in these pits no doubt increased the alkaline content of the pit fill, creating an excellent environment for the preservation of organic materials.

A number of the bone tools recovered from Lot 3 were manufactured on deer antler and are likely projectile points similar to those described by Painter (1980) from his excavations at Great Neck. Nine possible fragments of these tools in various stages of manufacture were recovered in VDHR excavations of intact Middle Woodland deposits (Features 106C, 106AB1, and 106AE) (Figure 45).

No complete antler projectile points were recovered, but the fragments suggest the following manufacturing process for the tool. First, a section of antler was detached from the rack by cutting along the circumference of a tine several centimeters below the tip. Several specimens indicate the antler was not cut clean through, but rather the tine was scored and then snapped off. The interior of the tine was gouged out and then smoothed, presumably so the point could be fitted onto the shaft or foreshaft of a spear or arrow. The exterior surface was smoothed or shaped by scraping with a narrow gouge blade parallel to the long axis of the tine as with a draw knife. This procedure produced facets, or "flutes" along the length of the implement. Two of the specimens in the collection (106AE1-31, 106C3) exhibit a marked degree of curvature along the tine which seemingly would preclude their use as projectiles. Painter (1980) illustrates several points, however, in which one side of the tine has been cut away. This type of



Figure 45. Antler projectile points and preforms, Lot M3.

modification was perhaps used to eliminate the natural curvature of the deer tine as seen on the unfinished specimens from Lot 3.

Another antler tool (106AB5A-10) recovered from Lot 3 is modified in a similar manner as those tools identified as projectile points, but apparently served a different function. The specimen is a section of antler tine with the tip detached. The proximal end of the tool has been finished by grinding which produced an edge beveled on the interior. The distal end was cut and snapped and has not been smoothed. Similar to the projectile points, the interior of the antler has been hollowed out and the exterior surface scraped in a manner producing a faceted surface. The resulting implement, now broken, presumably was an antler tube, 3.71 cm long.

Two other fragments of antler recovered may have served as punches of some sort. On one tool the antler tip has been thinned, but only to a blunt point. On the other tool the tip is severely abraded on the underside.

One bone tool in the collection exhibits modifications similar to the antler projectile points. One end of the section of mammalian long bone shaft has been scored and snapped. The other end is fractured. The exterior cortical surface shows some traces of faceting from scraping as well as some polish. The tool was approximately 1.9 cm in diameter and of an unknown length.

Eight bone tools classified as several varieties of awls were recovered (Figure 46). One deer ulna awl with a rather short, blunt tip is included in the collection (106C3). More numerous were various narrower tools with sharper points made from the long bones of smaller mammals, some with their proximal ends unmodified. Two of these,



Figure 46. Bone tools, Lot M3.

however, display similar modifications at the proximal end (106AB5B-22, 106AE-30). One flake of bone has been removed from the proximal edge down the shaft as if to modify this end for hafting. Ten awls were produced on bone splinters (106AB1-10, 106AB5A-11). Some of these had very sharp points; on others, the tips were blunt.

Perforations through two fragmentary tools (106C, 106C2) in the collection suggest they functioned as needles (Figure 46). Fragments of three other tools recovered from the pit features on Lot 3 are thin relative to their width and may also be needles.

The collection also includes two bone beamers made on the long bones of large mammals (Figure 47). The working edges of each tool were formed by beveling the interior cortical surface through pressure flaking. The opening between the working edges of one specimen (106AE1-32) is roughly 2 cm wide. The edges have been abraded, although the flake scars have not been obliterated. Several broad flakes have also been removed from the edge on the exterior cortical surface on one side of the tool. It is suspected that the abrasion and exterior scarring are not intentional modifications, but are the product of use. The opening between the working edges of the other specimen (106AE-29) is only 1 cm wide. While a few small flakes are removed from the exterior surface on one side, the working edges are not abraded. It is evident that this tool was either used very little, or was unfinished when discarded. Painter has recovered several beamers from Great Neck produced in a manner similar to those found in the VDHR excavations. As he has noted (Painter, personal communication 1989), the Great Neck specimens differ from the type typically recovered from Late Woodland

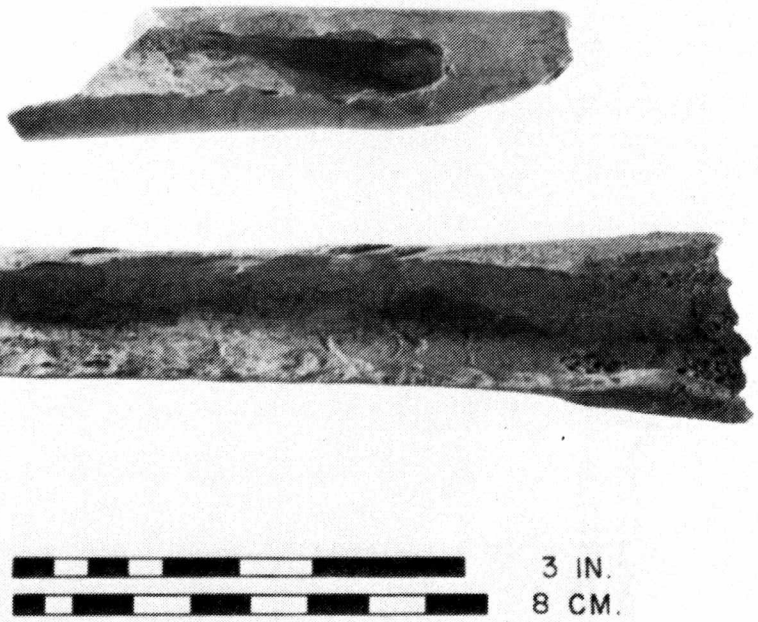


Figure 47. Bone beamers, Lot M3.

period contexts in southwest Virginia in which the working edges are ground smooth with no indication of pressure flaking being used to shape the tool.

Modified carapaces of the box turtle were also abundant in the fill from pit features on Lot 3. Fragments representing a minimum of two modified turtle shells were recovered from Feature 106AB1. Two nearly complete modified carapaces were recovered from Feature 106AE (Figure 48). Excepting one of the nearly complete shells from Feature 106AB1, the specimens show only a minimum amount of modification, specifically, scraping along the vertebral column on the interior of the shell. This type of alteration might result merely from cleaning the shell for consumption of the meat. One of the specimens from Feature 106AB1 (106AB5B-25) is abraded at several places along the exterior edges at both ends of the shell as well as at several places on the interior edge along the sides. This modification or wear indicates intended use of the carapace as a cup or scoop.

One bone fishhook was recovered in the excavations. The specimen was found in Feature 106AB1 and has a barbed point (106AB1E-16) (Figure 46).

Several types of bone ornaments were also recovered. The most notable of these are two items suggested to be hair pins, both recovered from Feature 106C (Figure 49). The artifacts appear to be modified longitudinal splinters of deer metacarpals. The back surfaces show the natural concave surface of the interior cortical surface of the bone, although the edges have been ground. Neither specimen is complete, but surviving portions of both indicate a minimum length of 11.6 cm.

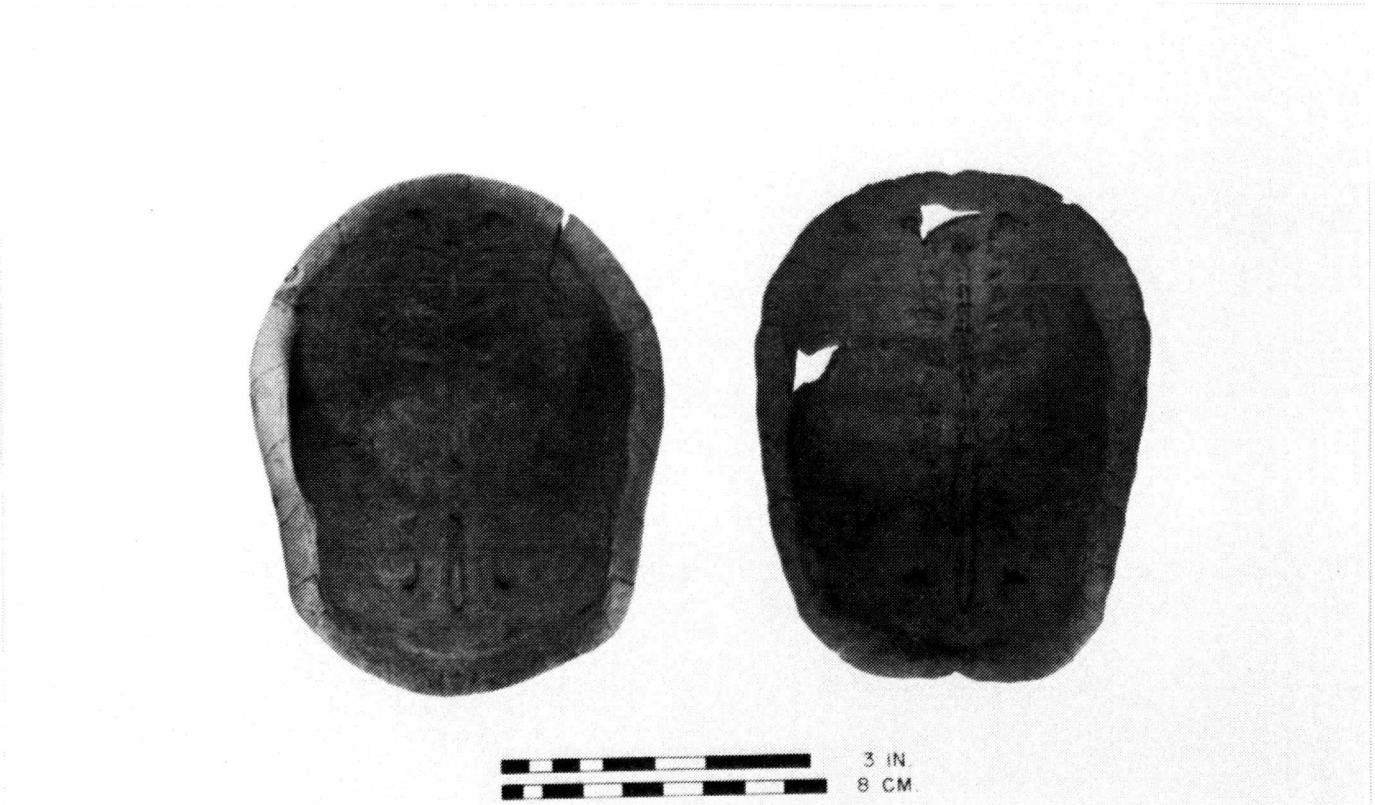


Figure 48. Turtle shell cups, Lot M3.

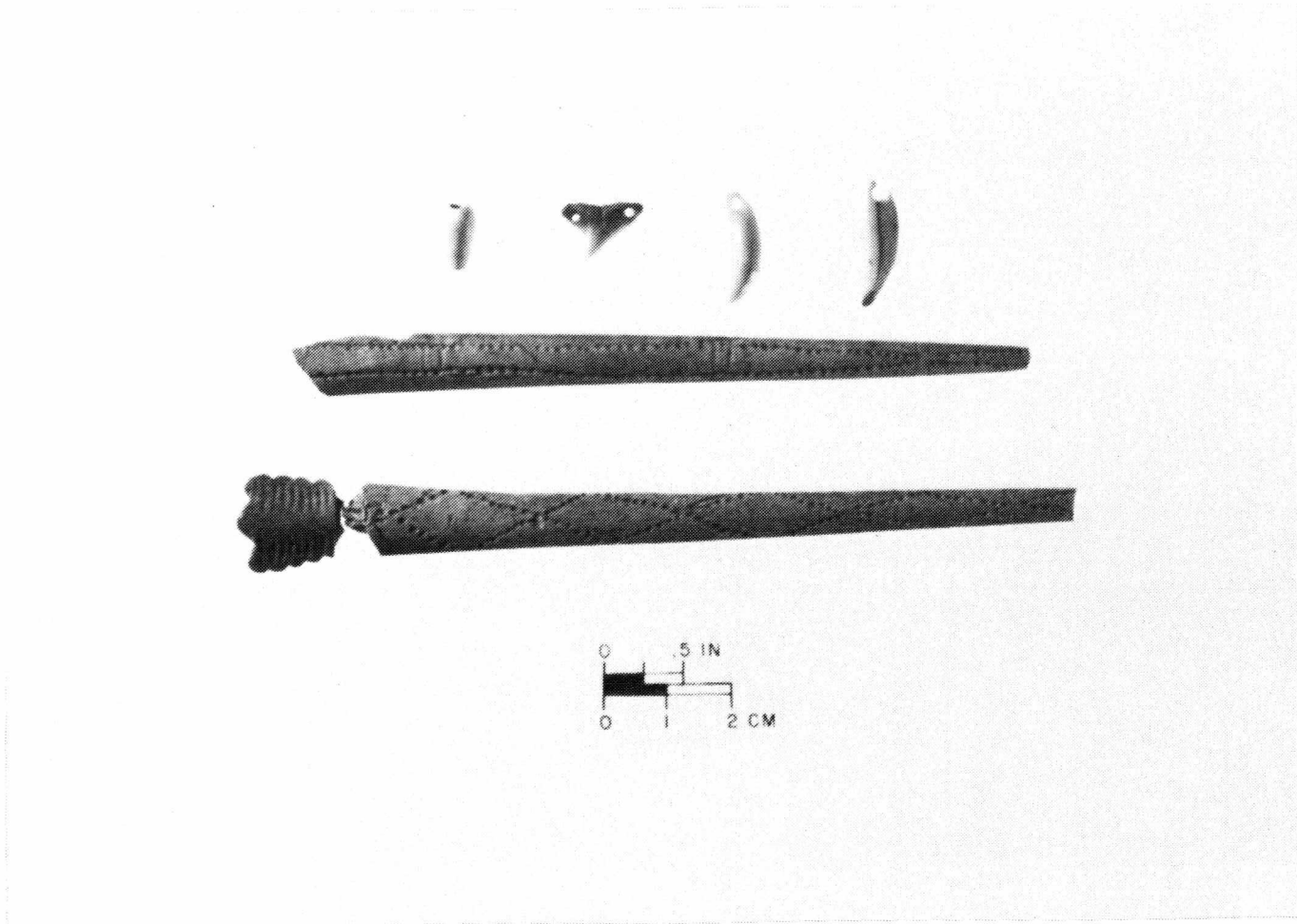


Figure 49. Bone ornaments, Lot M3.

Both ornaments are decorated with designs executed by series of irregularly-shaped punctations which are either overlain or underlain by incised lines (the order of execution is impossible to discern). On one pin, two lines of punctations and paired incising zig-zag across the width of the ornament effectively producing a series of stacked diamonds down the length. On the other, two lines of punctations and paired incising run parallel for a distance before turning towards each other and eventually crossing. At the first inflection point, the two lines of punctations are connected by two short incisions oriented perpendicular to the long axis of the pin. Two similar lines are incised at the point where the lines of punctations cross.

The fill of Feature 106AP produced a fragment of modified bone which may also be a hair pin. The shape and dimensions of the artifact are similar to the two pins described above, although it is not decorated. A fragment of another ornament recovered from Feature 106C (Figure 49) may be the base of yet another hair pin. This artifact is also manufactured on a splintered long bone. Both the basal and lateral edges of the ornament are notched. The front surface is decorated with two rows of elements running down each side of the pin along its long axis. Each row is comprised of a series of short, incised lines oriented perpendicular to the long axis. On the back of the pin, the surface is decorated with a single series of incisions extending from one lateral edge of the pin to the other.

One final type of bone ornament, perforated animal teeth, was recovered on Lot 3 (Figure 49). Feature 106C yielded a raccoon canine (106C) with a single perforation

as well as a small shark's tooth (106C3) with a hole drilled at each end of the base. Another drilled canine was recovered from Feature 106AB1 (106AB5C-19).

Shell ornaments were recovered from both Middle and Late Woodland contexts on Lot 3. One marginella bead was found in Level 4 of Feature 106C. The apex of the whorl of the shell is broken off, presumably prior to discard.

Numerous small shell disc beads were associated with the Late Woodland period infant burial in Feature 106AB3. The placement of the beads within the burial has been described above. The beads may have formed a necklace, as several were found arranged in two rows near the temporal bone of the infant skeleton.

Copper Artifacts

One copper artifact was found in excavations on Lot 3. This is a triangular ornament of sheet copper perforated at the base. The artifact was recovered from the plowzone of Unit 104. It is similar to ornaments associated with the Late Woodland burial in Feature 18B on Lot 16. The artifact from Lot 3 measures 2.7 cm in length and is 1.2 cm wide at the base.

Coprolites

Several fragments of coprolites were found on Lot 3 in the fill of Features 106C and 106AB1. Both features contained abundant shellfish remains, and the soft matter of

the feces appears to have been replaced by geological sediments cemented with calcium salts leached from the shell. The coprolites resemble hardened lumps of sandy clay, except they contain inclusions of bone and shell. The first fragment encountered when cataloging the collection was suspected to be ceramic manufacturing debris until whole fish vertebrae were seen in the matrix. The size and shape of some of the coprolite fragments suggest they are either human or dog feces.

Ethnobotanical Remains

Charred plant food remains were analyzed from 11 flotation samples representing seven Middle Woodland features on Lot 3: Features 106C, 106D, 106AB1, 106AC, 106AE, 106AF, and 106AP (Gardner 1990a). The 18.7 liters of soil processed yielded 0.89 g of plant food remains. The bulk of this total was comprised of hickory nutshell (Carya sp.) (0.84 g). Other nutshell within the samples was identified as walnut (Juglans nigra) (0.05 g) and acorn (Quercus sp.) (trace amount). The samples also contained seeds (trace amount) from two fleshy fruits: grape (1 seed), most likely the muscadine (Vitis rotundifolia) or the summer grape (V. Aestivalis), and huckleberry (Gaylussacia sp.) (1 seed). Three unidentified seeds were also present.

One flotation sample each from features 106D and 106AB1 also contained trace amounts of Zea mays (cupules). If these specimens are truly associated with the Middle Woodland occupation of the site dated ca. A.D. 290-380, then they are among the earliest confirmed evidence of the cultigen in the Eastern Woodlands. Maize has

heretofore been documented in contexts as early as the late second-early third century A.D. in eastern Tennessee and central Ohio, but is not believed to have become of widespread economic significance within the region until ca. A.D. 900-1000 (Chapman and Crites 1987; Ford 1987; Smith 1990; Yarnell and Black 1985, as cited in Gardner 1990a).

The contextual integrity of at least one of the flotation samples from Lot 3 which yielded maize is suspect. The sample is derived from Level 1 of Feature 106AB1 which, as discussed earlier, yielded one shell-tempered, simple stamped sherd among a majority of net- and cord-marked, shell-tempered ceramics. Level 1 may either represent a Late Woodland feature intrusive into a deep Middle Woodland pit or a second, more shallow Middle Woodland feature contaminated through the intrusion of Feature 106AB3, a Late Woodland burial. No firm evidence is known to exist indicating that the flotation sample from Feature 106D derives from other than a Middle Woodland context. The cultigen's association with Middle Woodland and not subsequent Late Woodland occupation on Lot 3 remains suspect, however, since it is possible that a maize specimen of such small size could easily have been incorporated into the feature through undetected means.

Summary

Subsurface investigations on Lot 3 indicated that the east-central section of the property was the site of intensive occupation during the Middle Woodland period. A cluster of at least nine Middle Woodland pit features filled with abundant ceramic, shell,

and bone debris was situated in this area. Radiocarbon determinations indicate the settlement area was occupied ca. A.D. 290-380.

Differences in the size and shape of features in this cluster suggest that at least two types of pits serving distinct functions are included in the group. Three of the features (106C, 106AB1 Levels 2-4, and 106AE) were relatively large, deep, circular pits ranging 0.84-1.65 m in diameter and 0.72-0.82 m in depth. The remaining pits (106D, 106AC, 106AF, 106AN1, 106AN2, and 106AP) were much shallower, extending only 0.07-0.32 m below the subsoil level. Even though their size varied widely, the shallower pits were also smaller and generally oval in plan (although, in some, the latter trait was exaggerated at the surface of the subsoil by plowing which had dragged the feature fill).

The functions served by the features on Lot 3 are not clearly indicated, although the larger, deeper pits are of a size and shape commonly attributed by archaeologists to storage facilities. Around the eastern edge of one of the deep pits (106C) were several postmolds which may have anchored a cover over the feature. The association of storage facilities with the settlement would imply low anticipated mobility, with occupation of the settlement intended to involve more than one season.

The shallower pit features may have been used for processing activities. No evidence, such as burned walls, was found in the excavations to suggest that either deep or shallow pit features were used for roasting. Among the seven test units excavated across Lot 3, however, the original test square placed in Unit 106 yielded the greatest amount of fire-cracked rock.

The spatial arrangement of features in Unit 106 suggests at least two groups of features may be represented, each containing at least one deep and one shallow pit. The spatial relationships between Features 106C and 106D, and Features 106AE and 106AF or Features 106AB1 and 106AF, may indicate that the deep pits and shallow pits are functionally related, and that each pair of features represents a single work or social unit. No evidence exists to support the argument that more than one occupation is represented by these major features, none of which intrude on each other. Fragments from the same ceramic vessels are known to be represented in fill from Features 106C and 106AE, and radiocarbon dates obtained on charcoal from Features 106C, 106AB1, and 106AE overlap at two standard deviations.

The large amount of ceramic debris recovered in Units 103 and 105 suggest the settlement encountered in Unit 106 extended in a north and northeast direction to include these areas. Differences in feature density and type between the north and south halves of the settlement area may indicate each half was the focus of different activities. Associated ceramics are shell-tempered with predominantly cord- or net-marked surfaces and are similar to types in the Mockley series, albeit with a higher frequency of flat-bottomed vessels. Lithic artifacts were only a minor component of the tool assemblage, which reflects a remarkable fluency in the manufacture of bone implements and ornaments.

Only very limited evidence of Middle Woodland occupation was found on Lot 3 outside the settlement area in the vicinity of Units 103, 105, and 106. Of interest, however, is Feature 108B, located at the southern end of the property. This pit was

comparable in size and shape to the shallower pit features in Unit 106, but contained a different type of Middle Woodland ceramic. A number of possible postmolds and one other pit feature were also encountered in Unit 108, but the remains do not suggest the same intensity of occupation seen in Unit 106. Also of interest is the relatively large amount of lithic debris, including flakes and fire-cracked rock, recovered from Unit 101 in the northeast corner of the lot. Since this area yielded relatively few ceramic artifacts, a different type or period of occupation seems indicated.

VDHR excavations uncovered only a very minor amount of evidence for occupation during the Late Woodland period on Lot 3. The most significant find was the primary interment of a subadult which intruded on one of the Middle Woodland pits in Unit 106. The position of the individual in the burial pit -- extended on its back with the head at the east end -- was similar to the primary, Late Woodland interments encountered on Lot 16. Shell beads, which presumably formed a necklace, were found with the infant. If the use of this type of ornamentation was confined to persons of high status, its association with a subadult might be indicative of ascribed levels of status within the society. Additional evidence of Late Woodland occupation on Lot 3 is limited to a light scatter of Townsend and Roanoke ceramics, among which the latter type is predominant.

CHAPTER 7

LOT 11, MEADOWRIDGE SUBDIVISION

Introduction

Lot 11 in the Meadowridge subdivision is located just southeast of Lot M3 on the south side of Thomas Bishop Lane. The northern boundary of the property is situated approximately 60 m south of the bank above Broad Bay. No archaeological tests or excavations are known to have been conducted on Lot 11 prior to VDHR investigations in 1986, and the property was the only area south of Thomas Bishop Lane examined by VDHR in the course of its work at Great Neck. In fact, the only other area of the subdivision situated on this side of Thomas Bishop Lane known to have been examined previously is a section of Lot M13 excavated by Floyd Painter. VDHR investigations indicated the property held several Middle Woodland pit features and, perhaps, a small structure dating from the period. Late Woodland remains on the lot included postmolds forming at least two structures, a few pit features, a human burial, and a dog burial.

Field Methods

VDHR investigations on Lot 11 were initiated in June 1986 by cutting three, 8 ft wide test trenches north-south across the property with a grade-all. This work was conducted by the Virginia Foundation for Archaeological Research under contract to

VDHR and was reported on by Paul Peebles (1986). Topsoil was removed from within the grade-all trenches, and the surface of the subsoil was troweled to reveal the presence of any archaeological features. A small collection of shell, animal bone, lithics, and both Middle and Late Woodland ceramics was made from the grade-all spoils.

The test trenching indicated that plowing had disturbed the soils on Lot 11 to a depth of 0.9-1.5 ft below modern grade. On the west side of the lot, a sterile subsoil with intrusive pit features and postmolds dating from the prehistoric period was encountered directly below plowzone. On the east side of the property, a prehistoric sheet midden deposit 0.3-0.7 ft thick lay undisturbed between the plowzone and sterile subsoil.

With the existence of cultural features on Lot 11 established, it was decided to strip the entire property of its plowzone overburden to expose an excavation area measuring 75 ft east-west by 110 ft north-south. This work was accomplished on October 3, 1986, and investigations continued over a period of three weeks ending October 24. The excavations were conducted by a crew of three persons with Christopher Egghart serving as field director. Results of the excavation were described in a report prepared by Egghart (1986) under contract to VDHR. Four additional days were spent on Lot 11 during November 1986. This work was directed by Esther White and was described in Appendix A to her report on excavations on Lot M5 (White 1987).

The investigations on Lot 11 involved testing the large midden deposit and excavating prehistoric features exposed elsewhere on the property. After the boundaries of the midden were determined and mapped, seven test squares, 2 ft on a side, were

opened in the midden. These were spaced 8 ft apart on two lines crossing at grid point N170 E260. The midden deposit in each square was excavated as one unit to subsoil level, although discrete features recognized within the matrix were given separate designations.

Outside the midden area, the surface of subsoil was troweled carefully, and the locations of cultural features were then mapped at the scale 1 in = 2 ft. (Metric equivalents of original English system measurements are provided in the text to facilitate comparison with findings from Lot GHF16 and M3). Eventually almost all pit features which appeared to be of cultural origin were tested and a large sample of postmolds was fully excavated. Smaller pit features were bisected with one half of the fill removed. Larger features were quartered. Feature profiles were drawn at the scale 1 in = 2 ft. Because of their smaller size, postmold profiles were drawn at 1 in = 1 ft. All archaeological deposits removed in the excavations were screened through one-quarter-inch mesh in the field, except for small samples reserved for flotation processing.

Archaeological Features

Prehistoric archaeological deposits encountered on Lot 11 date from the Middle and Late Woodland periods and include a sheet midden, pit features, a dog burial, and postmolds. Possibly four structures are indicated by patterning in the arrangement of postmolds. One of these is a well-defined Late Woodland longhouse spatially associated with a human burial. Another structure has tentatively been attributed to the Middle

Woodland period. These features as well as the few historic postholes exposed in the excavation are described below. A plan of the excavation area is shown in Figure 50.

Midden Deposit

Sheet midden was preserved below the plowzone in the eastern half of Lot 11. The deposit extended north and east of grid point N140 E230. South of grid line N140, the border of the midden tapered eastward toward the southeast corner of the excavation area. The deposit extended beyond the northern and eastern boundaries of the property.

The midden deposit apparently fills what is now a shallow ravine on Great Neck Peninsula which can be seen on topographic maps of the area running southeast across Lot 12 (Figure 3). Excavation of the seven test squares in the midden indicated that the base of the deposit slopes downward in the direction of the ravine. The depth of the base of the deposit below plowzone increased from 0.2 ft in Test Square 1 to 1.1 ft in Test Square 4. A similar ravine is situated to the west of Lot 11 extending southwest across Lot M10 and adjacent properties. Painter (personal communication 1989) has indicated that a rich midden was exposed when the roadbed of Thomas Bishop Lane was cut through this area.

No cultural or natural stratigraphy could be discerned within the midden deposit from soil color and texture. Instead, the deposit was a relatively consistent, dark grey-brown loam containing some bone, but nearly devoid of shell. Below the midden layer was a thin zone of eluviated, sandy loam containing some cultural debris and varying in

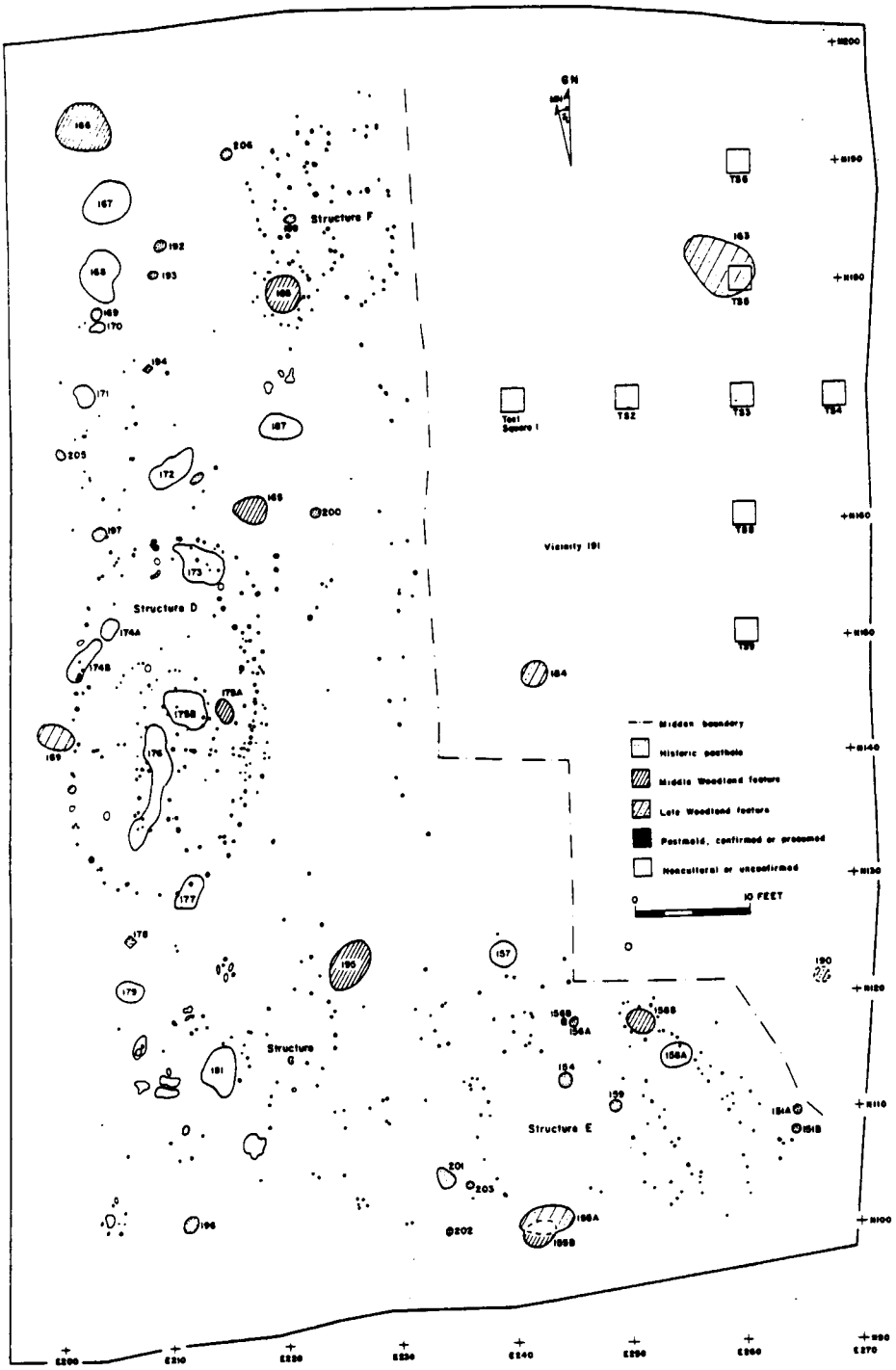


Figure 50. Plan of archeological features, Lot 11, Meadowridge subdivision.

thickness in direct proportion to the thickness of the overlying midden. In the deepest sections of the midden this zone was stained with organic material leached from above. Sterile subsoil was encountered below this zone.

Fill excavated from the midden deposit contained very few lithic artifacts: only a few flakes and small fragments of fire-cracked rock were recovered. Ninety-five percent of the 59 ceramic sherds are shell-tempered, with the majority of these diagnostic of the Late Woodland period. Forty-one percent of the shell-tempered sherds are simple stamped, 15% fabric-marked, 15% cord-marked, 12% net-marked, and 12% unidentifiable. The remaining three sherds are sand-tempered ceramics diagnostic of the Middle Woodland period: two net-marked and one cord-marked.

Except where intrusive pit features could be recognized, the midden deposit in each square was excavated to the sterile subsoil as a single unit. This approach precluded studying the vertical distribution of ceramic artifacts to determine if the midden deposits were stratified culturally. It is known, however, that the composition of the midden did vary horizontally and vertically in other ways. A discrete layer was encountered in Test Square 3 which yielded an abundance of bone relative to the amount recovered in most other test squares. Late Woodland period simple stamped and fabric-marked sherds were found to be relatively more abundant in Test Square 9, and a Late Woodland pit feature (Feature 163) intrusive into the midden was encountered in Test Square 5.

Pit Features

Feature 155A (Late Woodland) and 155B (possibly Middle Woodland) (N101 E243) (Figure 51): At the surface of subsoil, Feature 155A was oval in plan, measuring 4.8 ft (1.46 m) east-west and approximately 2.3 ft (0.70 m) north-south. The pit was bowl-shaped with sloped sides and a rounded bottom extending a maximum of 1.1 ft (0.34 m) below subsoil level. Fill consisted of a light, grey-brown loam. Only the west half of the feature was excavated. Six refitted sherds of shell-tempered, fabric-marked ceramic diagnostic of the Late Woodland period were recovered.

Feature 155B, a smaller pit, was situated along the south side of Feature 155A and appeared to intrude it. The fill of the two features could not be distinguished until a depth a few inches below subsoil was reached. Here, the fill of 155B was darker, contained more charcoal, and was less compact than 155A.

Feature 155B appeared oval in plan and measured 2.4 ft (0.73 m) northeast-southwest by 2.0 ft (0.61 m) northwest-southeast. Its walls sloped to a maximum depth of 0.6 ft (0.18 m) below subsoil to a flat bottom. The six diagnostic sherds recovered are shell-tempered, net-marked ceramics diagnostic of the Middle Woodland period, leaving open to question whether the feature did indeed intrude into and, thus, postdate Feature 155A. In addition to the ceramics, the fill of Feature 155B also yielded two lithic flakes (one quartz and one quartzite).

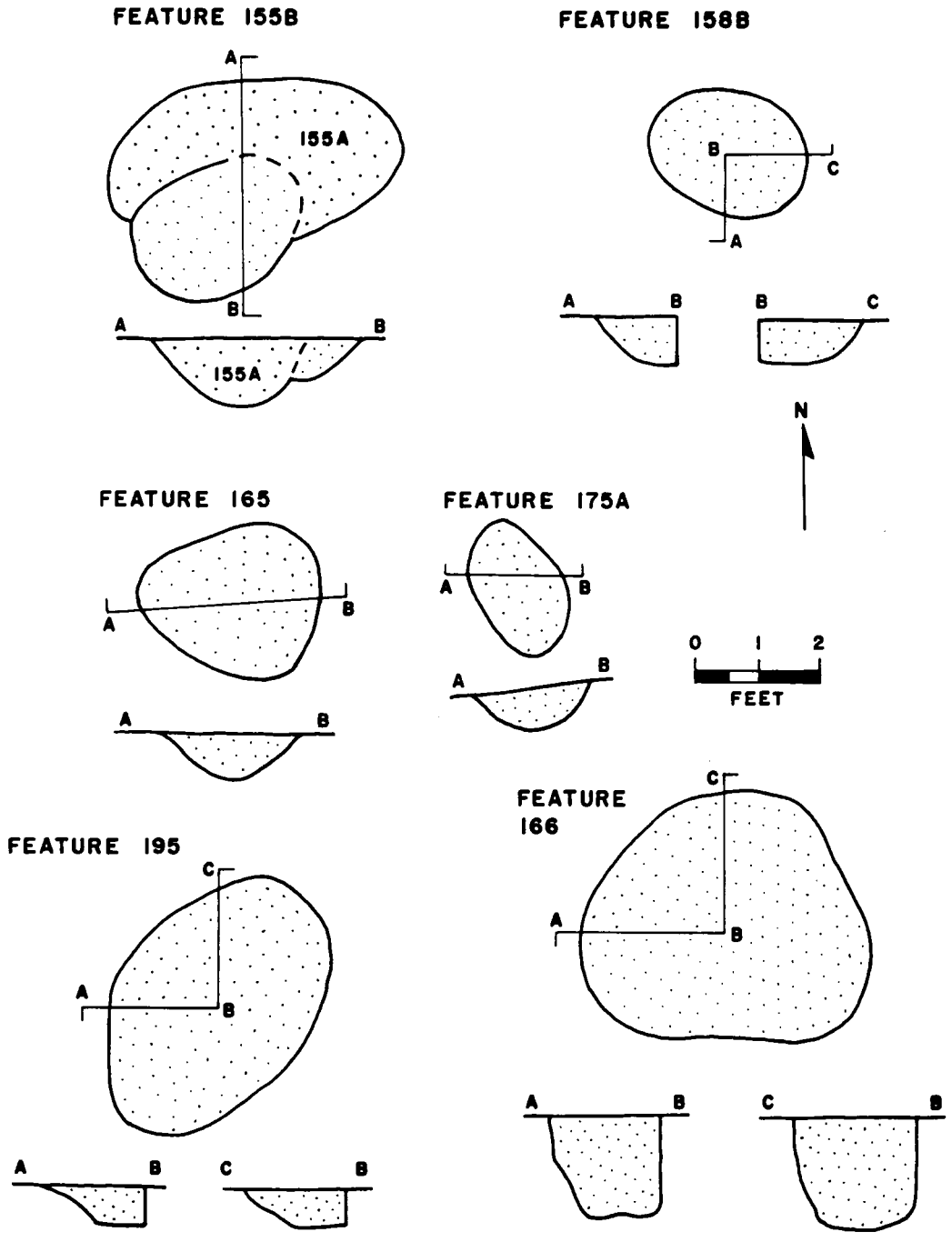


Figure 51. Plans and profiles of Middle Woodland pit features, Lot M11.

Feature 158B (Middle Woodland) (N117 E251) (Figure 51): Feature 158B was a small deposit measuring 2.5 ft (0.76 m) northwest-southeast by 2.0 ft (0.61 m) northeast-southwest in plan. The walls of the feature sloped to a flat bottom situated 0.6 ft (0.18 m) below the surface of subsoil. The fill was a grey sandy loam containing small bits of charcoal. Only the southeast quadrant of the feature was excavated. Three shell-tempered, net-impressed ceramics diagnostic of the Middle Woodland period were recovered. The deposit may represent a prehistoric pit or fill associated with tree hole disturbances noted in the area.

Feature 163 (Late Woodland) (N182 E260) (Figure 52): Feature 163 was a large, trash-filled pit. At first, only the southeast section of the pit exposed in Test Square 5 was excavated. Later, while conducting excavations on Lot M5, VDHR staff returned to Lot 11 to remove the remainder of fill from the feature.

Feature 163 intruded into the midden deposit preserved in the east half of Lot 11 and was visible after a thin layer of plowzone was removed from the surface of Test Square 5. The feature was oval, extending a maximum of 6.1 ft (1.86 m) northwest-southeast and 4.7 ft (1.43 m) northeast-southwest. The base of the pit was irregular, sloping from south to north along the west wall of the test square and from west to east along the north wall. Fill extended to a maximum depth of 1.0 ft (0.30 m) below the base of the plowzone. The configuration of the pit walls was not recorded.

Fill of Feature 163 consisted of brown sandy loam containing an abundance of shell and animal bone. One hundred fifty ceramic sherds were recovered. Of these,

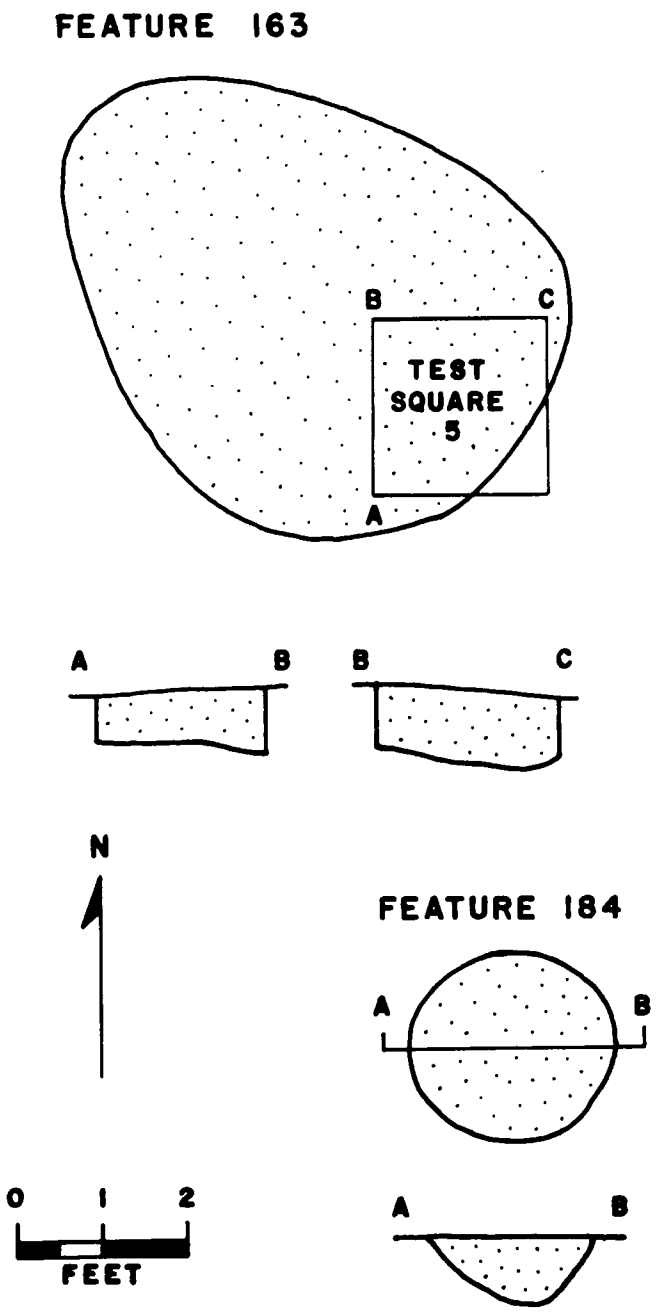


Figure 52. Plans and profiles of Late Woodland pit features, Lot M11.

89% are shell-tempered, simple stamped and 3% shell-tempered, fabric-marked. The ceramics indicate a Late Woodland period date for the feature. Apart from the ceramic sherds, the only other artifacts recovered are a small shell disc bead and a jasper flake. A radiocarbon assay on charcoal recovered from Feature 163 yielded a date of 470 $\pm$50 years: A.D. 1480 (440 $\pm$50 years: A.D. 1510 adjusted for C-13; Beta-38915).

Feature 165 (possibly Middle Woodland) (N162 E218) (Figure 51): Feature 165 was a small pit 2.2 ft (0.67 m) in diameter with sloping sides and a rounded bottom. Maximum depth was 0.7 ft (0.21 m) below subsoil. (The feature appeared, and was mapped, slightly larger in plan when first exposed. It is suspected that feature fill had been smeared across the surface of subsoil by the plow or grade-all.) Fill consisted of a medium grey, compact, sandy loam containing some charcoal. Surface treatment cannot be identified on the two shell-tempered sherds larger than one inch square recovered from the feature. One shell-tempered, net-marked sherd can be identified among the smaller ceramic fragments recovered, however, suggesting a Middle Woodland period date for the deposit. Field notes indicate that a few fire-cracked rocks were also recovered. Feature 165 might represent a prehistoric pit, or it might be a pocket of fill associated with several non-cultural disturbances identified in an adjacent area.

Feature 166 (Middle Woodland) (N195 E204) (Figure 51): Feature 166 was a large, roughly circular pit, 4.0-4.5 ft (1.22-1.37 m) in diameter at the surface of the

subsoil. The walls of the feature were nearly straight and the base was flat. Maximum depth was 1.8 ft (0.55 m) below subsoil. Only the northwest quadrant of the feature was excavated. The pit fill was a grey-brown loam containing flecks of charcoal. Ceramics recovered are diagnostic of the Middle Woodland period. All 13 sherds are shell-tempered: 4 net-marked and 9 cord-marked.

Feature 175A (Woodland) (N145 E215) (Figure 51): Feature 175A was a small deposit, oval in plan, extending 2.1 ft (0.64 m) northwest-southeast and 1.5 ft (0.46 m) northeast-southwest. The walls of the feature sloped to a rounded bottom 0.8 ft (0.24 m) below subsoil. The south half of the pit was excavated. Four ceramic sherds smaller than one inch square were recovered from the fill, but these are in poor condition and provide no information to date the deposit. Feature 175A might be a prehistoric pit intrusive into the fill of a tree hole, but it is likely that it merely represents another layer of non-cultural origin within that disturbance.

Feature 184 (Late Woodland) (N148 E242) (Figure 52): Feature 184 was a small, bowl-shaped pit measuring 2.0 ft (0.61 m) in diameter and 0.8 ft (0.24 m) deep which intruded on the midden. The base of the feature was rounded. The pit was filled with a dark grey, sandy loam containing an abundance of burned and unburned oyster shell and a few fragments of animal bone. Only the south half of the pit was excavated. Two shell-tempered, fabric-marked and two sand-tempered, cord-marked sherds were

recovered. The former ceramics suggest the feature dates from the Late Woodland period.

Feature 185 (possibly Middle Woodland) (N180 E221): Feature 185 was a circular pit 3.1 ft (0.94 m) in diameter. The northwest quarter of the pit was excavated, but, apparently, no profile drawing was made. The feature was filled with moderately compact, grey sandy loam. All six ceramic sherds recovered are shell-tempered, but surface treatment could not be identified on any. It is believed the ceramics date from the Middle Woodland period, however. One quartz cobble was also recovered. The artifact bears flake scars presumably resulting from tests to see if the material was suitable for tool manufacture.

Feature 191 (Late Woodland): Feature 191 was a circular pit, intrusive into the sheet midden and situated somewhere within the ten foot square defined by the northwest corner point N160 E240. One half of the pit was excavated, but the feature was not plotted on the overall site plan and no profile was drawn. Egghart (1986:14) reported the pit was "nearly identical to" Feature 184. Feature 191 was filled with dark loamy sand with an abundance of unburned oyster shell. The fill yielded one shell-tempered, fabric-marked sherd indicating a Late Woodland period date for the feature.

Feature 195 (Middle Woodland) (N123 E226) (Figure 51): Feature 195 was an oval pit, 4.6 ft (1.40 m) northeast-southwest by 3.0 ft (0.91 m) northwest-southeast in

plan at the surface of subsoil. The pit extended a maximum of 0.6 ft (0.18 m) deep and had sloped walls and a somewhat flattened bottom. The fill was a light, grey-tan sandy loam. Only the northwest quarter of the pit was excavated. One sand-tempered, net-marked sherd diagnostic of the Middle Woodland period was recovered.

Human Burials

One human burial, Feature 189 (N143 E201), was identified on Lot 11. Once it was determined that human remains were present in the pit, the VDHR filed a petition with the Circuit Court of the City of Virginia Beach requesting permission to remove the remains and place them in an archaeological curation facility for scientific study. The Court denied the request. The presiding judge noted that the petition sought a relief different from that then permitted under Virginia law, which, in his interpretation, authorized the Court to permit only the removal and reinterment of human remains, not their study or testing. (In 1989, the Virginia Antiquities Act was amended by the General Assembly, giving the VDHR authority in granting permits for the archaeological excavation and study of human remains.)

While Feature 189 was not excavated, the human remains were situated near the top of the pit and a few characteristics of the interment could be determined. The burial pit was oval in plan, extending 3.3 ft (1.00 m) northwest-southeast by 2.1 ft (0.64 m) northeast-southwest. The human remains had been damaged by plowing and grading, but it was apparent that a single individual was represented. The interment was a

subadult whom the excavator's suggested was perhaps 6-8 years of age. The individual was placed in a flexed position with the head at the southeast end of the pit. Three ceramic sherds smaller than one inch square were recovered from the pit fill. Two of these can be identified as shell-tempered, simple stamped ceramics diagnostic of the Late Woodland period. The position of the burial with respect to Structure F, a longhouse pattern dating from the Late Woodland period, suggests the two features are associated. The burial was eventually backfilled, and care was taken to ensure that it was not damaged during construction on Lot 5.

Animal Burials

A dog burial, Feature 190 (N121 E267), was identified on Lot 11 while excavating the test trenches placed across the property. The feature was encountered directly below plowzone at the upper surface of the midden deposit in the east half of the lot. Grading had damaged and scattered most of the skeletal remains associated with the feature, but a few vertebrae remained in situ in articulated position. No evidence that the dog was contained within a pit was visible. The stratigraphic placement of the dog burial in relation to the midden suggests the feature dates from the Late Woodland period. No diagnostic artifacts were directly associated with the skeletal remains, however.

Historic Features

The configuration and fill of at least 19 features encountered on Lot 11 suggested they are historic postholes/molds (Table 17). These features were most commonly circular in plan, about 1.0 ft in diameter at the surface of subsoil level. Very few were excavated.

The remains of at least one historic fenceline running north-south can be identified within the west half of the lot. The fenceline is comprised of Features 178, 194, and 193. Features 178 and 194 were roughly square in plan, while Feature 193 was circular. Excavation of Feature 178 indicated it was 0.8 ft wide and extended 0.2 ft below subsoil The walls were straight and the base flat. Features 178 and 194 lie 48 ft apart. Feature 193 lies an additional 8 ft north from 194. The remainder of the features which likely represent historic postholes/molds were concentrated primarily in the northwest and southeast quarters of the lot.

Non-Cultural Disturbances

Apart from the cultural features identified on Lot 11, a number of disturbances believed to have originated through non-cultural processes were found to extend below the surface of subsoil level. Those disturbances assigned provenience numbers are included on the site plan as well as listed in Table 17, where it is noted whether they

Table 17. Historic features and noncultural disturbances, Lot M11.

FEATURE NUMBER	LOCATION	EXCAVATED	INTERPRETATION
151A	N100 E265	NO	HISTORIC POST
151B	N108 E265	YES	HISTORIC POST
154	N113 E245	YES	NONCULTURAL
156A	N118 E245	YES	NONCULTURAL
156B	N118 E244	YES	NONCULTURAL OR HISTORIC POST
157	N123 E240	YES	NONCULTURAL
158A	N115 E255	YES	NONCULTURAL
159	N110 E249	YES	HISTORIC POST
167	N188 E206	NO	NONCULTURAL
168	N182 E205	NO	NONCULTURAL
169	N179 E205	NO	HISTORIC POST
170	N179 E205	NO	NONCULTURAL
171	N172 E203	NO	NONCULTURAL
172	N165 E211	YES	NONCULTURAL
173	N158 E214	YES	NONCULTURAL
174	N151 E204	YES	NONCULTURAL
175B	N145 E212	YES	NONCULTURAL
176	N140 E210	YES	NONCULTURAL
177	N129 E212	NO	NONCULTURAL
178	N125 E207	YES	HISTORIC POST
179	N121 E207	NO	NONCULTURAL
181	N114 E215	NO	NONCULTURAL
182	N125 E220	NO	NONCULTURAL
187	N169 E221	NO	NONCULTURAL
192	N185 E210	NO	HISTORIC POST
193	N182 E210	NO	HISTORIC POST
194	N176 E209	NO	HISTORIC POST

Table 17. Continued.

FEATURE NUMBER	LOCATION	EXCAVATED	INTERPRETATION
196	N100 E212	NO	HISTORIC POST
197	N160 E205	NO	HISTORIC POST
199	N187 E222	NO	HISTORIC POST
200	N162 E223	NO	HISTORIC POST
201	N104 E234	NO	HISTORIC POST
202	N100 E234	NO	HISTORIC POST
203	N104 E236	NO	HISTORIC POST
204	N165 E213	NO	HISTORIC POST
205	N167 E201	NO	HISTORIC POST
206	N192 E116	NO	HISTORIC POST

were excavated or not. The remainder of the disturbances which were neither excavated nor assigned provenience numbers are merely indicated on the site plan (Figure 51).

In some areas of the site, natural disturbances were quite extensive. They were commonly indicated by a light grey or olive-brown staining of the soil which graded gradually into the subsoil matrix. Some had smaller, darker core areas of fill. It is likely that several of the disturbances are filled tree fall depressions. An irregular, light soil stain was noted, for example, in the area encompassing Features 158A and 158B. Excavation of 158A indicated it was a filled tap root hole. Feature 158B appeared to be an intentionally dug pit, but it could merely be a midden deposit which filled in a portion of a larger tree fall disturbance. Features 172 and 187, with their darker core areas surrounded by lighter staining, might also be filled tree holes. The stain marking Feature 182 was lighter and less distinct, suggesting it may have been another type of natural depression in the landscape in which a thin remnant of sheet midden deposit was preserved below plowzone.

The identification of non-cultural disturbances on Lot 11 is of some importance since a number of them were encountered within the oval postmold pattern defining Structure F, a Late Woodland period longhouse. It is clear, however, that these disturbances predate the structure. Postmolds associated with the longhouse intrude on the outer boundaries of Features 173, 174, 175, and 177. The only identifiable ceramics recovered from excavated portions of Features 173, 174, 175, and 176 are shell-tempered wares diagnostic of the Middle Woodland period.

This is not to say, however, that the disturbances situated within the bounds of the house pattern are cultural features dating from the Middle Woodland period. Instead the evidence suggests these disturbances were created through non-cultural processes. Features 174 and 176 resemble rodent burrows. The configuration and low organic content of Features 173, 175, and 177 suggest they are tree holes. A number of smaller, postmold-size features in the vicinity were also identified as natural disturbances. Postmolds 97, 98, 99, and 100 and Postmolds 125, 126, 127, and 128 were found to be rodent burrows. Postmolds 86, 143, and 144 were determined to be root stains. Among the larger features encountered within the longhouse pattern, only Feature 175A may possibly represent a prehistoric pit as suggested by its regular shape and high charcoal content.

Structures

The remains of possibly four structures were identified on Lot 11. Two of the structures unquestionably date from the Late Woodland period, while one may date from the Middle Woodland. The age of the fourth structure cannot be definitely determined.

The clearest structural pattern identified on Lot 11, designated Structure D, is defined by a very obvious, oval arrangement of postmolds in the west-central section of the property in the vicinity of grid point N145 E210 (Figure 53). A detailed plan of the structural remains with all postmolds numbered is provided in Figure 54. The structure is 30.7 ft (9.36 m) long and oriented roughly north-south along its long axis. Length



Figure 53. View of longhouse after excavation, Structure D, Lot M11.

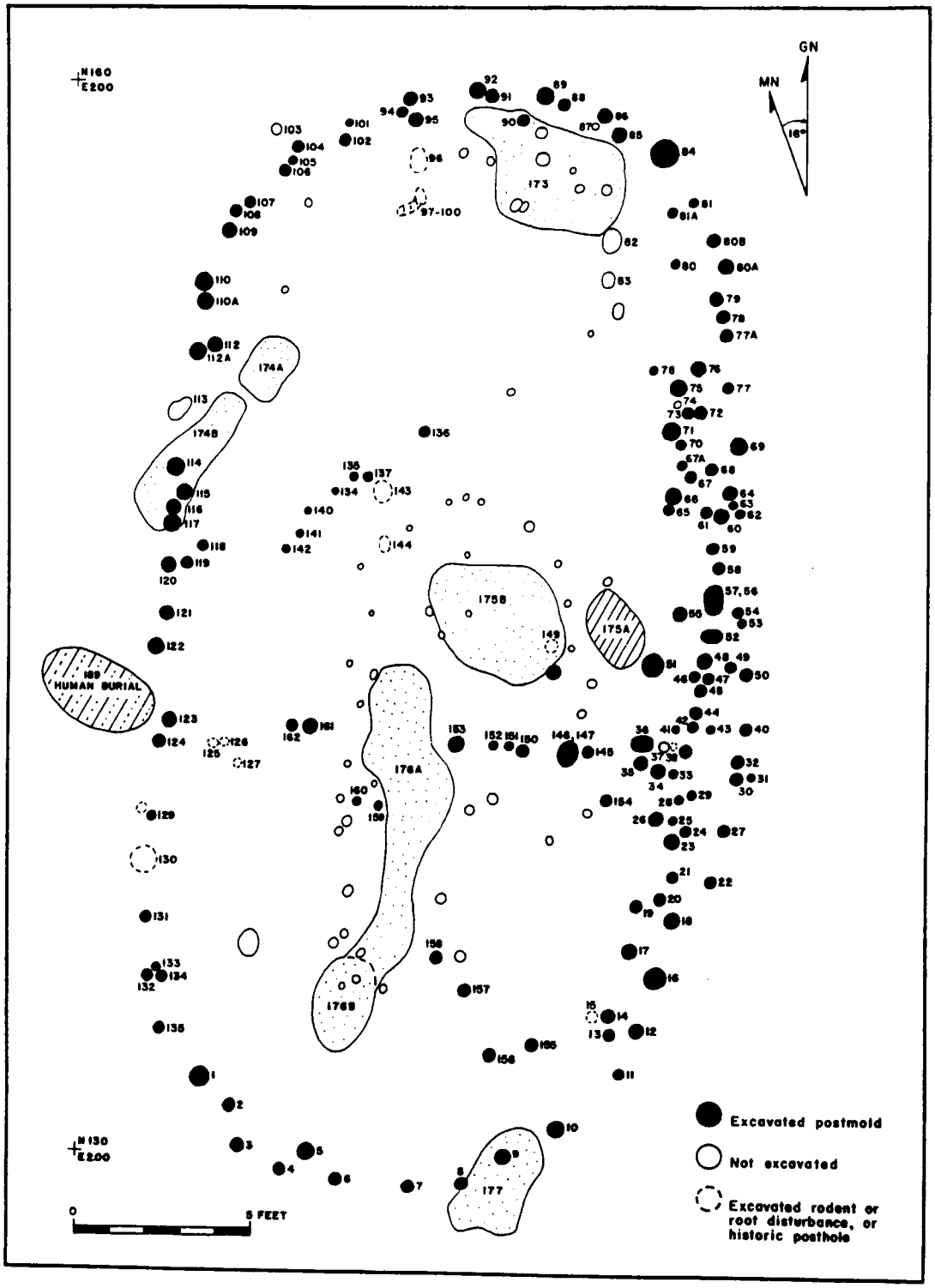


Figure 54. Plan of Structure D, Lot M11.

was determined by measuring between the midpoints of lines drawn between Postmolds 89 and 92 at the north end of the pattern and Postmolds 6 and 7 at the south. Midway down its length, the structure is 15.0-15.5 ft (4.57-4.72 m) wide.

Unlike Structures A and B on Lot 16, the profusion of irregularly-spaced postmolds along the outer wall of Structure D indicates that it had been repaired or reinforced over time. Signs of repair are most evident along the northwest, north, and east walls. The northwestern and northern sections of the outer wall are comprised of spaced clusters of postmolds, each apparently representing an original post and replacements or reinforcements (eg. 112, 112A; 110, 110A; 107, 108, 109; 104, 105, 106; 101, 102; 93, 94, 95; 91, 92; 88, 89; 85, 86). No clear clustering of postmolds is evident along the east side of the structure where even the line of the wall is hard to identify. There is some evidence of repair to the far south half of the structure (eg. clustering of Postmolds 132, 133, 134; 12, 13, 14); however, the greater evidence along the northwestern, northern, and eastern sections of the outer wall suggests repair or reinforcement was necessitated, perhaps, by heavy winds associated with storms out of the northeast which are frequent in the region during the fall, winter, and spring (Hatch et al. 1985:2).

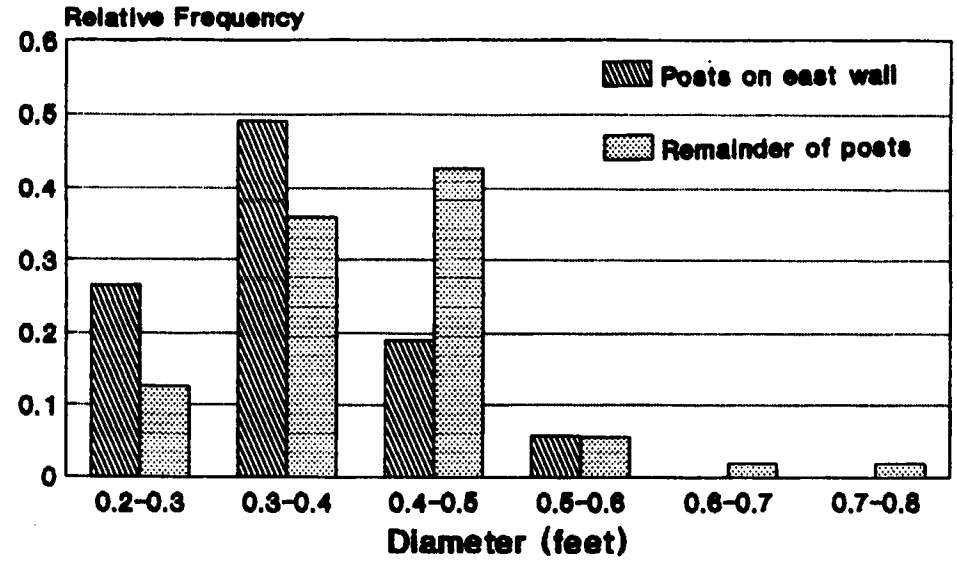
The arrangement of postmolds along the east wall of Structure D suggests a bench may have existed along the inside of the wall. The inner edge of a bench may be defined by a line of postmolds situated about 1.5 ft (0.46 m) west of the east wall. The line includes Postmolds 35, 36, 51, 71, and 75. A somewhat narrower bench may be

represented in the south half of the structure by Postmolds 14, 17, 19, and 26. There is no evidence for similar furniture on the west side of the building.

Differentiating between wall and bench posts along the east side of Structure D is difficult, as is identifying which posts are original to the structure and which represent replacements or repairs. Attempts to sort postmolds along the wall by size and depth to see if any patterns representing original, repair, or furniture posts were apparent proved unsuccessful. It was found, however, that the postmolds within the most densely packed section of the east wall (from Postmold 20 north to Postmold 76) are, on average, smaller and shallower than the remaining posts along the wall of the structure (Figure 55, Table 18). Analysis of variance indicated that both diameter ($F = 7.851$; $d.f. = 1$; $p \leq .0060$) and depth ($F = 10.610$; $d.f. = 1$; $p \leq .0015$) of postmolds differ significantly between the two sections of the wall. These differences could be due to a higher proportion of furniture or repair posts, or both, within the east section of the wall. On average, the postmolds along the walls of Structure D were smaller and more shallow than those in Structure A on Lot 16 (see Table 19).

Because of repairs to Structure D, it is also difficult to establish the exact placement of doorways. There is evidence to suggest the corners and at least one side wall held entrances. A doorway in the southeast corner of the structure may be indicated by the 2.4 ft (0.73 m) gap between Postmolds 10 and 11. The 2.2 ft (0.67 m) gap between Postmolds 1 and 3 or the 4.0 ft (1.22 m) gap between Postmolds 135 and 3 may represent entrances in the southwest corner. Another doorway may have existed in the northeast corner between Postmolds 81 and 85 which are situated 3.5 ft (1.07 m) apart.

(a)



(b)

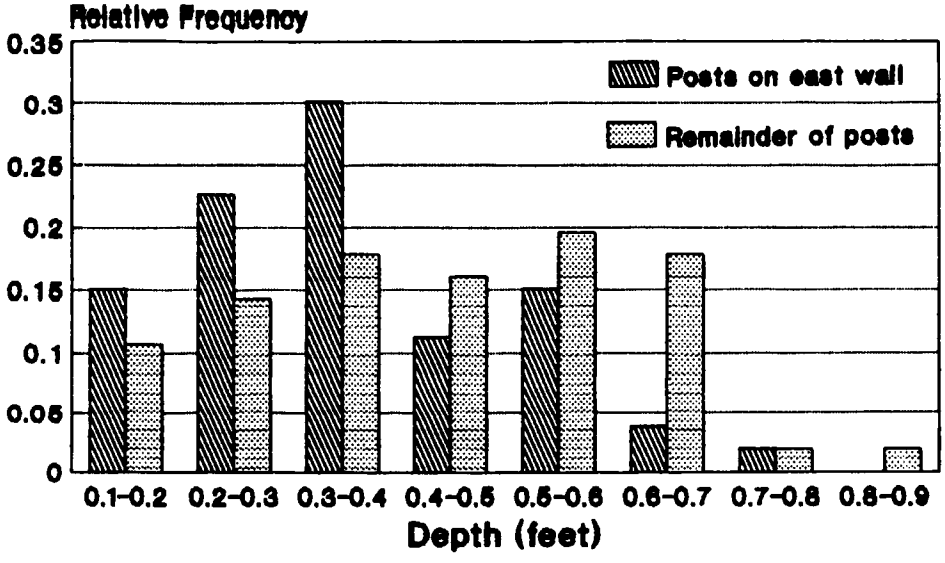


Figure 55. Histogram of postmold diameter and depth, Structure D, Lot M11. (a) diameter (b) depth.

Table 18. Diameter and depth of postmolds along wall of Structure D, Lot 11.

	EAST WALL	REMAINDER OF STRUCTURE	TOTAL	
	FT.	FT.	FT.	CM.
DIAMETER				
N	53	56	109	109
MEAN	0.33	0.38	0.35	10.7
STANDARD DEVIATION	0.0829	0.0968	0.0931	2.8376
RANGE	0.20-0.55	0.20-0.75	0.20-0.75	6.10-22.86
DEPTH				
N	53	56	109	109
MEAN	0.31	0.41	0.36	11.0
STANDARD DEVIATION	0.1471	0.1728	0.1678	5.1145
RANGE	0.05-0.70	0.10-0.85	0.05-0.85	1.52-25.91

Table 19. Diameter and depth of postmolds associated with Structures D, E, F, and G, Lot M11.

	STRUCTURE D	STRUCTURE E	STRUCTURE F	STRUCTURE G
DIAMETER (FT)				
N	109	10	12	8
MEAN	0.35	0.35	0.26	0.34
STANDARD DEVIATION	0.0931	0.1247	0.0483	0.0496
RANGE	0.1-0.75	0.2-0.6	0.2-0.35	0.3-0.4
DEPTH (FT)				
N	109	10	12	8
MEAN	0.36	0.30	0.16	0.24
STANDARD DEVIATION	0.1678	0.1423	0.0597	0.1294
RANGE	0.05-0.85	0.1-0.5	0.1-0.3	0.05-0.4

If Postmolds 104 and 108 in the northwest corner of the structure are contemporaneous, then the 2.5 ft (0.76 m) gap between them may represent another doorway. There are also some relatively large gaps between postmolds along the central section of the west wall of the structure, specifically between Postmolds 129 and 131 (2.8 ft or 0.85 m) and Postmolds 122 and 124 (2.6 ft or 0.79 m).

Ethnohistoric sources from coastal North Carolina provide some information on house plans to suggest tentatively that the gaps along the west wall of Structure D may represent entrances. The structures depicted in John White's watercolor drawing of the Native American village of Pomeiock (Figure 12) display considerable variation in the placement of entrances and the treatment of the walls. In the structures in the foreground of the drawing, the walls are fully covered and doorways are positioned at the ends, either centered or slightly off-center on the end wall. In several structures in the background of the drawing, however, large sections of both side and end walls are uncovered. Entrances are located long the side walls and possibly at the ends of the structures. The fact that White shows arched roofs overhanging the entrances on some of these structures suggests his depiction of this more open, structural form is not merely an artistic convention enabling him to reveal interior furnishings. It is possible that differences in the plans and wall coverings of the structures depicted in White's drawing of Pomeiock are reflective of functional differences relating to seasonal use of the buildings. The structures depicted in the foreground of the picture may have been used for cold weather occupancy, while those in the background may have been used primarily during the warmer seasons. The use of dual summer and winter dwellings has been

documented both ethnographically and archaeologically in some portions of the Southeast and Midwest (Faulkner 1977).

While, again, it is difficult to determine the exact placement of doorways in Structure D since the structure apparently was repaired overtime, it is tentatively suggested that the building was similar in plan to those structures depicted in the background of White's drawing of Pomeiock, with entrances located both along the west wall and in the corners. It is interesting that Feature 189, a human burial, is situated along the west wall of Structure D in the vicinity of some of the gaps between postmolds believed to represent entrances. On Lot GHF16, the two burials associated with Structure C are situated in the corners of the structure in areas also suggested to have held doorways. Similar mortuary patterns involving at least short-term interment of the dead in the doorways of presumably residential structures may be indicated by the remains from Lots 16 and 11.

The location of the burial associated with Structure D also coincides with the north-south position of a line of postmolds which may represent an interior partition or, perhaps, roof support posts. The line extends from the southern end of the possible doorway between Postmolds 122 and 124, and is comprised of Postmolds 35, 145, 146/147, 150, 151, 152, 153, 161, and 162. Mean diameter of these nine postmolds is 0.34 ft (standard deviation 0.0846), while mean depth is 0.317 ft (standard deviation 0.1696).

Another apparent line of postmolds (136-142) within the structure may be at least partly comprised of natural disturbances. Since excavators were unable to determine the

bases of Postmolds 138, 140, and 142, it is suggested they are root stains. Disturbances 143 and 144, situated nearby, were identified as root stains in the field.

Artifacts recovered from the fill of postmolds associated with Structure D clearly indicate the building dates from the Late Woodland period. Seventeen of the postmolds yielded prehistoric ceramics. Of the 10 sherds recovered which are larger than 1 inch, one is sand-tempered and cord-marked, while the remainder are shell-tempered: four simple stamped; four (mended) fabric-marked; and one cord marked. Fourteen sherds recovered are smaller than 1 inch: five shell-temper, simple stamped; one shell-temper, net-marked; and eight unidentified. Several fragments of animal bone, a few lithic flakes, and one triangular projectile point were also recovered from the fill of postmolds associated with Structure D.

At least one other Late Woodland structure, Structure E, can tentatively be identified within the excavation area on Lot 11. The structure is located in the southeast corner of the lot, situated between grid points N110 E250 and N110 E260. A complete structural pattern is by no means evident, but two linear arrangements of posts running roughly parallel to each other in a northwest-southeast direction and situated 2-3 ft apart are suggested. A sample of ten postmolds was excavated from along these two lines (Table 19). The five ceramic sherds larger than 1 inch which were recovered from these postmolds and four other postmolds in the immediate vicinity are shell-tempered: three simple stamped; one net-marked; and one unidentified. Of eight sherds smaller than 1 inch, six are shell-tempered, simple stamped and two unidentified. Fill in the postmolds also yielded some shell and bone.

Another structure, designated Structure F, appears indicated by a cluster of postmolds in the vicinity of grid point N185 E225. An oval structure measuring roughly 15 ft (4.57 m) northwest-southeast by 11 ft (3.35 m) northeast-southwest is suggested. The posts are small and especially shallow when compared to those which comprise Structure D. A sample of 12 postmolds associated with Structure F was excavated (only a few of the postmolds are from along the outer edge of the pattern) (Table 19). The only artifact recovered from the postmolds is one modified fragment of deer antler.

It is possible that Feature 185 and the somewhat rectangular arrangement of postmolds which surrounds it are associated with Structure F and represent a storage facility attached to the larger building. Feature 185 was 3.1 ft (0.94 m) in diameter at the surface of the subsoil. Its depth and the configuration of its walls were not recorded. The postmolds surrounding the pit feature form an enclosure approximately 5 ft (1.52 m) northeast-southwest by 4 ft (1.22 m) northwest-southeast. The northeast wall would appear to lie slightly inside the exterior wall of Structure F, a fact which may argue against the suggestion that the two features are contemporaneous. The sample of five postmolds excavated along the walls of the enclosure has a mean diameter of 0.29 ft (range 0.20-0.35) and a mean depth of 0.12 (range 0.10-0.15). No artifacts were recovered from the postmolds. As discussed above, ceramics recovered from Feature 185 suggest the pit dates from the Middle Woodland period.

The only other possible structural pattern which can be discerned among the postmolds uncovered on Lot 11 is designated Structure G and is situated in the vicinity of grid point N115 E220. A small, oval structure 9 ft (2.74 m) northeast-southwest by

7 ft (2.13 m) northwest-southeast is suggested, but the arrangement of posts is not regular. A sample of eight postmolds from along the walls of the structure was excavated (Table 19). No artifacts were recovered from the fill of the postmolds.

It should be noted that data on the existence and spatial arrangement of structures on Lot 11 are derived from only one half of the property. No postmolds could be discerned directly below plowzone at the surface of the sheet midden deposit which covers most of the east half of the property. One prehistoric postmold was revealed at subsoil level in Test Square 2, however. The fill of the postmold contained one sherd of shell-tempered, simple stamped ceramic smaller than one inch square.

Collections

Ceramic Artifacts

The ceramic collection recovered in excavations on Lot 11 is comprised of the same types diagnostic of the Middle and Late Woodland periods recognized on other lots tested by the VDHR at Great Neck. Middle Woodland ceramics from Lot 11 include shell-tempered, net- or cord-marked wares comparable to types within the Mockley series as well as a few sherds of fine or medium sand-tempered, net- or cord-marked ceramics similar to the types recovered on Lot GHF16. One base from a flat-bottomed vessel was identified within the collection of shell-tempered, or Mockley-like, sherds.

Only a few possible Middle Woodland features were identified on Lot 11, and the small collection of ceramics recovered in the excavations supports indications that the property lay beyond the main focus of Middle Woodland settlement at Great Neck. Only 16 sherds diagnostic of the Middle Woodland period were recovered from the eight test units excavated into the midden preserved on the east half of the property (Table 20). Excavation of one half or one-quarter of the fill from the seven possible Middle Woodland features exposed on the lot yielded only 28 identifiable sherds dating from the Middle Woodland (Table 21). These samples were considered too small to warrant further analysis.

Late Woodland ceramics recovered from Lot 11 include shell-tempered sherds of the type Roanoke Simple Stamped (Figure 56) and shell-tempered, fabric-marked ceramics of the Townsend series (Tables 20 and 21). Only Roanoke ceramics were examined beyond identification of temper and surface treatment since the Townsend collection from midden test units and features consisted of only 17 sherds.

Feature 163 is the only deposit excavated on Lot 11 which yielded a sizable sample of Roanoke ceramics. Of a total of 150 sherds recovered, 89% are shell-tempered, simple stamped. The Roanoke ware recovered from the feature is similar to that found elsewhere in VDHR excavations at Great Neck. The paste of the sherds is comprised most commonly of a silty clay containing moderate to high proportions of crushed fragments of ribbed mussel shell. Impressions on the exterior surfaces of the ceramic are usually made with a relatively wide, untwisted fiber. Interior surfaces are often scored.

Table 20. Artifacts recovered from test squares in midden, Lot M11.

ARTIFACT TYPE	TEST SQUARE							TOTAL	
	1	2	3	4/5	6	8	9	#	%
CERAMIC SHERDS LARGER THAN 1 INCH									
SHELL-TEMPERED	--	--	3	4	1	1	15	24	40.7
FABRIC	--	--	2	1	1	1	4	9	15.2
NET	--	--	4	--	2	--	1	7	11.9
CORD	--	--	1	5	--	2	1	9	15.2
UNID.	--	--	1	4	--	2	--	7	11.9
FINE SAND-TEMPERED									
NET	--	--	--	--	1	--	1	2	3.4
MEDIUM SAND-TEMPERED									
CORD	--	--	--	--	--	--	1	1	1.7
TOTAL	--	--	11	14	5	6	23	59	100.0
CERAMIC SHERDS SMALLER THAN 1 INCH	12	7	42	180	20	47	25	333	
CLAY PIPES	--	--	--	1	--	--	--	1	
LITHIC ARTIFACTS	1	--	2	7	--	1	6	17	
BONE/SHELL TOOLS OR ORNAMENTS	--	--	--	1	--	--	--	1	
EUROPEAN-AMERICAN ARTIFACTS	2	--	--	1	--	--	--	2	

Note: Collections from Test Squares 4 and 5 were combined inadvertently in the field.

Table 21. Artifacts recovered from pit features, Lot M11.

ARTIFACT TYPE	FEATURE										
	155A	155B	158B	163	165	166	175A	184	185	191	195
CERAMIC SHERDS LARGER THAN 1 INCH											
SHELL-TEMPERED											
SIMPLE STAMPED	--	--	--	133	--	--	--	--	--	--	--
FABRIC	6	--	--	5	--	--	--	2	--	1	--
NET	--	6	3	2	--	4	--	--	--	--	--
CORD	--	--	--	--	--	9	--	--	--	--	--
UNIDENTIFIED	--	1	-	9	2	--	--	--	--	6	--
FINE SAND-TEMPERED											
NET	--	--	--	--	--	--	--	--	--	--	1
CORD	--	--	--	1	--	--	--	2	--	--	--
TOTAL	6	7	3	150	2	13	--	4	6	1	1
CERAMIC SHERDS SMALLER THAN 1 INCH	3	5	12	73	10	32	4	2	23	2	5
LITHICS											
FLAKES	--	2	--	1	--	1	--	--	--	--	--
TESTED COBBLES	--	--	--	--	--	--	--	--	1	--	--
UNMODIFIED COBBLE/PEBBLES	--	--	--	--	--	3	--	--	--	--	--
BONE/SHELL TOOLS OR ORNAMENTS	--	--	--	1	--	--	--	--	--	--	--

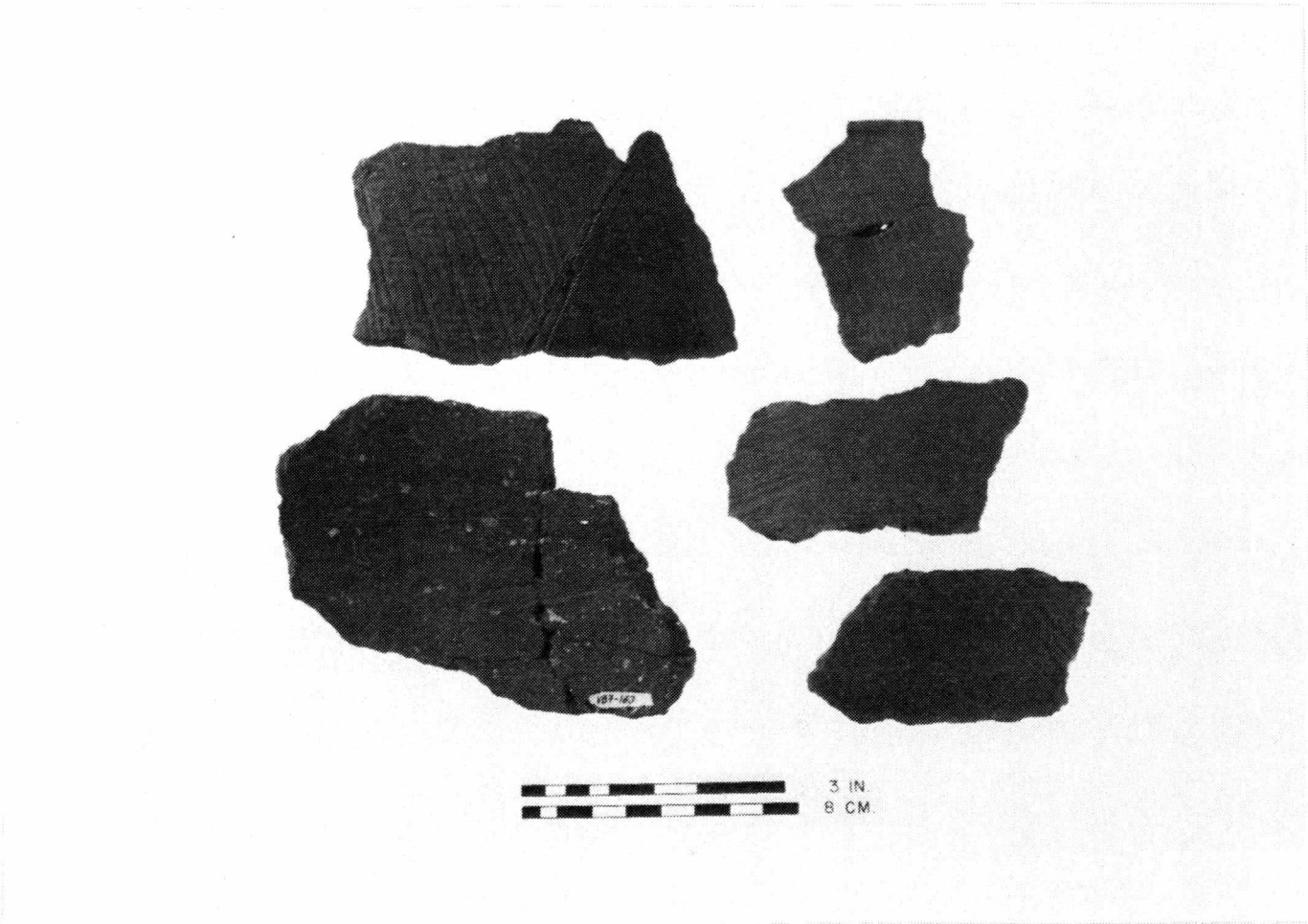


Figure 56. Roanoke Simple Stamped ceramics, Lot M11.

Ten rim sherds are included in the collection of Roanoke ware from Feature 163. Eight rims exhibit straight profiles. Two flare outward slightly at the lip. Nine of the rim sherds are marked with stamping of the top of the lip. On one rim the lip is smooth. Mean thickness of Roanoke sherds from Feature 163 is 7.65 mm (n=132, standard deviation 1.2600). Thickness of rim sherds measured 2 cm below the lip ranges from 5.0-7.0 mm. No basal sherds are included in the collection.

Five (3.8%) of the 133 Roanoke sherds are decorated. Only incised decoration was observed. Two of the sherds bear a series of parallel incised lines oriented at an angle to the rim. The incised design overlies stamped impressions oriented parallel to the rim. On one of these sherds (two mended rim fragments counted separately above) the lines are interrupted by incised lines forming a chevron or triangle, a motif found also on a third sherd in the collection. The final example of decoration is found on a rim sherd which is marked with a band of shallow, thin incised lines situated directly below the lip and oriented parallel to it.

The incised triangle or chevron is a common design motif on Townsend ware seen, for example, on a sherd recovered from the surface of Lot 5. On the Townsend sherd, however, the triangle motif is integrated into a band of decoration comprised of incised lines oriented parallel to the rim. The filling of the band of decoration with incisions oriented at an angle to the rim may be a design alternatively chosen on Roanoke ware in order to heighten the visual contrast between the decoration and the simple stamped background. Even with this adjustment, the elaborate design on the sherd pictured in Figure 56 (top left) does not stand out well against the stamped impressions.

The collection of Late Woodland ceramics recovered from Lot 11 is remarkably small considering that at least one, and possibly two longhouses (Structures D and E) were situated on the property during the Late Woodland. Disposal patterns within the Late Woodland settlement are intriguing. The vast majority of ceramics in the collection derive from the fill of only one of the four Late Woodland non-burial pit features identified (Feature 163), with the other three features yielding a total of only nine Late Woodland sherds (Table 21). Test units within sheet midden deposits east of Structure D and north of Structure E yielded only 33 Late Woodland sherds (Table 20). Unfortunately, the lack of plowzone samples from the immediate vicinity of the two structures prevents us from knowing whether a sheet midden had also accumulated in these areas over the course of occupation.

The results of excavation on Lot 11 provide some indications that Roanoke Simple Stamped was a late development within the material culture of Late Woodland peoples who occupied Great Neck. Three of the four features yielding Late Woodland ceramics produced only Townsend sherds; but in the collection from Feature 163, which is dominated by Roanoke Simple Stamped, the few Townsend sherds recovered, while of comparable size, are more weathered that the Roanoke ceramics. Charcoal associated with Feature 163 was radiocarbon dated to A.D. 1510 $\pm$50 (adjusted for C-13).

Lithic Artifacts

Very few lithic artifacts were recovered in excavations on Lot 11. The eight test units placed in the midden yielded a total of 14 flakes (13 jasper, 1 quartzite) and 3 small fragments of fire-cracked sandstone (Table 20). From among the 11 features listed in Table 21, a total of 4 flakes (1 jasper, 1 quartz, 2 quartzite), 1 tested quartz cobble, and 3 unmodified cobbles or pebbles (2 jasper, 1 quartzite) were recovered. One triangular projectile point of quartz was recovered from the fill of one of the postmolds associated with Structure D (Figure 57). The artifact measures 1.8 cm wide at the base, is 2.2 cm long, and has a maximum thickness of 0.5 cm. The only other artifact of note recovered is a fragment of a quartzite cobble used as a hammerstone (Figure 57). The artifact, excavated from the fill of Feature 178, an historic posthole, is battered at the end and along both edges.

Bone and Shell Tools and Ornaments

Two fragments of bone modified for use as tools or ornaments were recovered in the excavations. One is a fragment of deer antler tine (Figure 57) which may have been intended for manufacture into a projectile point. A series of cut marks made circumferentially around the tine for detaching it from the rack are visible at the proximal end of the tool. Some of the interior of the antler has been gouged out, and the exterior

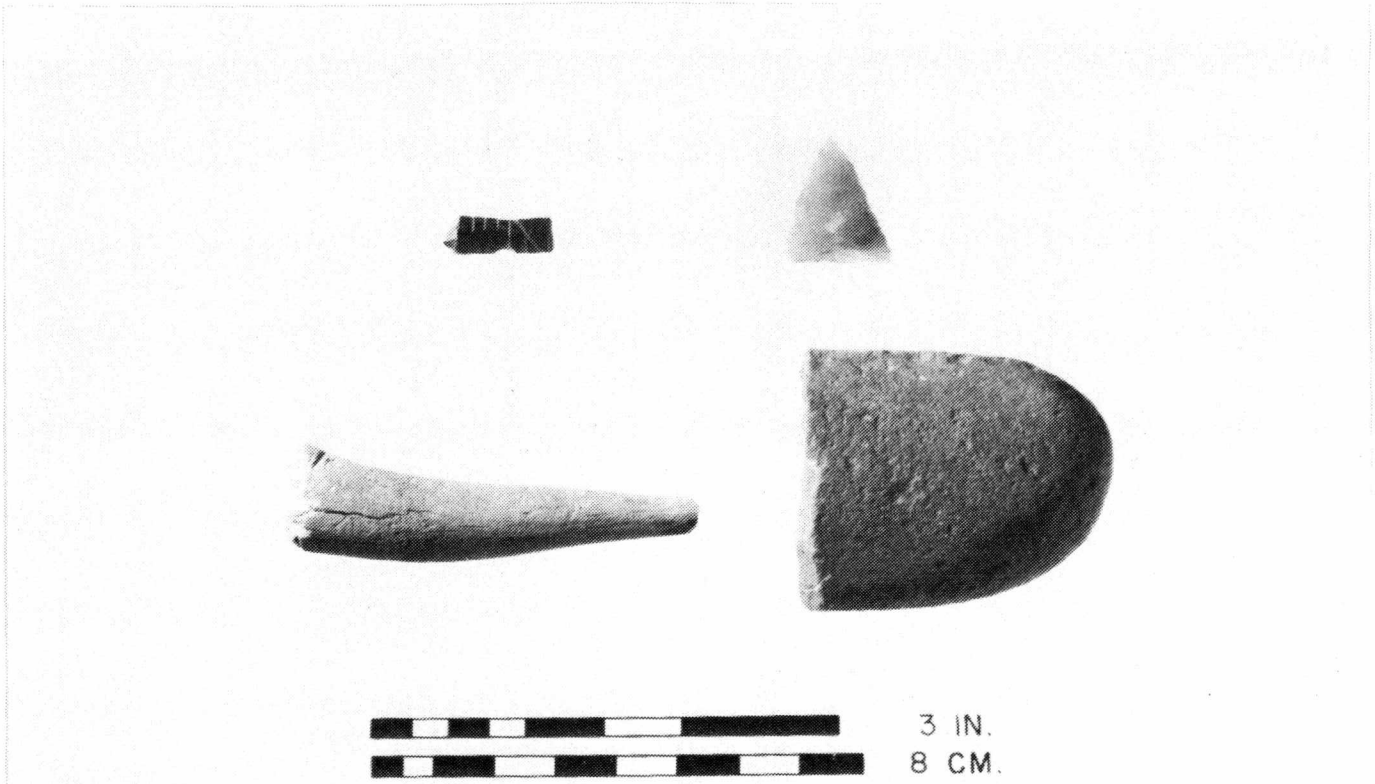


Figure 57. Lithic and bone artifacts, Lot M11.

surface has been shaved smooth. The artifact was excavated from the fill in one of the postmolds believed associated with Structure F. The other bone artifact is a small polished fragment decorated with incising recovered from Test Square 4 or 5 in the midden (Figure 57). The collection also includes one small shell disc bead recovered from the fill of Feature 163.

Ethnobotanical Remains

Charred plant food remains from nine flotation samples from Lot 5 were analyzed (Gardner 1990a). Among these are represented six Middle Woodland features--155B, 158B, 165, 166, 185, and 195--and three Late Woodland features--155A, 163, and 191. Maize (Zea mays) (0.01 g, cupule), hickory nutshell (Carya sp.) (0.29 g), acorn shell (Quercus sp.) (trace amount), and two unidentified seeds (trace) were identified among the 0.30 grams of plant food remains recovered from the 14.3 liters of soil processed from Middle Woodland features. The association of maize with the Middle Woodland period may be suspect. The maize was recovered from Feature 158B. Although the pit yielded only Middle Woodland ceramics, the feature is shallow and is situated only 2 ft south of the mapped edge of an extensive midden deposit of mixed Middle and Late Woodland materials. The feature is also surrounded by postmolds which yielded shell-tempered, simple stamped ceramics.

The total of 0.77 grams of plant food remains recovered from the 21.2 liters of soil processed from Late Woodland features contained maize (Zea mays) (0.21 g, cupule

and kernel), cucurbit (0.01 g), hickory nutshell (Carya sp.) (0.52 g), acorn shell (Quercus sp.) (trace amount), huckleberry (Gaylussacia sp.) (1 seed), persimmon (Diospyros virginiana) (1 seed), and unidentified seeds (4). The cucurbit remains include three fragments of squash rind and four fragments of bottle gourd rind.

Summary

Similar to other lots investigated by the VDHR at Great Neck, Lot 11 was the site of both Middle and Late Woodland occupation. Archaeological remains dating from the Middle Woodland period include six pit features and, possibly, a small structure. This portion of the Great Neck site does not appear to have been occupied as intensively during the Middle Woodland as areas closer to the shore of Broad Bay. During the Late Woodland period, at least two longhouse structures were situated on Lot 11. Other features encountered which date from this period include a single burial, four pit features, and, possibly, an additional small structure and dog burial.

If Features 158B, 165, and 175A are assumed to be of cultural origin, the most common type of Middle Woodland feature encountered on Lot 11 is a relatively small and shallow, oval pit ranging 2.0-2.5 ft in length, 1.5-2.2 ft in width, and 0.6-0.8 ft in depth (this type also includes Feature 155B). One equally shallow, although larger oval pit was also found (Feature 195). While the exact function of these features is not known, their size and shape suggest they were used for processing rather than storage. The features were widely dispersed across the lot, they do not intrude one another, and

they do not appear to have been associated with any structural remains. This evidence is insufficient to determine whether single or multiple occupations are represented, but does suggest the features may be the product of relatively short-term occupation. Alternatively, the entire complex of pits may represent an activity area associated with more permanent settlements located in the more intensively occupied portions of Great Neck on the north side of Thomas Bishop Lane.

The latter interpretation is partially supported by the Middle Woodland features encountered in the far northwest corner of Lot 11. This area holds two larger features (Features 166 and 185), one of which is also known to have been deeper, which might represent storage pits. Feature 185 and the small rectangular postmold pattern which surrounds it were spatially associated with an oval structure. This building is smaller than known Late Woodland structures at Great Neck (Structures A and C on Lot GHF16 and Structure D on Lot 11).

There are similarities between the complex of Middle Woodland features in the northwest corner of Lot 11 and the cluster of pit features encountered by the VDHR in Unit 106 on Lot M3, located north of Thomas Bishop Lane. In both areas, a settlement of at least multi-seasonal occupation is indicated by the presence of storage features. Relative permanency is also indicated for the settlement area on Lot 11 by the structural remains associated with one storage feature. Although the Middle Woodland structure was smaller than three Late Woodland structures documented at Great Neck, similarities in the building technologies employed during each period indicate the Middle Woodland structure was not necessarily less substantial.

In addition to their similarities, there are differences between the Middle Woodland deposits on Lot 11 and Lot 3. On Lot 3, the larger pit features were more numerous and more densely concentrated. The two storage features on Lot 11 were widely separated and, thus, may have been the product of more than one occupation, each involving a smaller population group. Ceramic debris, shellfish remains, and animal bone also were relatively more abundant in the fill of features on Lot 3 than in either the Middle Woodland pit features on Lot 11 or in the sheet midden deposit preserved in the east half of the lot. These differences may indicate that the two areas were occupied for different purposes, perhaps during different seasons of the year.

Alternatively, no difference in settlement size or function may be indicated by the contrasts between the Middle Woodland deposits on Lots 3 and 11. The low overall density of Middle Woodland features and artifacts encountered across Lot 11 may merely be a reflection of this property's position relative to Broad Bay. As noted earlier, Painter (personal communication, 1989) found that Middle Woodland features on Lot M13 were distributed less densely than those he encountered in excavations on Lot M1. Apparently, north of Thomas Bishop Lane, closer to the shore of Broad Bay, the Great Neck site was used either more intensively or more often.

During the Late Woodland period, Lot 11 held at least two presumably domestic structures (Structures D and E). The buildings were widely separated, and no evidence was found in the excavations to suggest that either was enclosed within a palisade. It is possible that other structures existed on the lot, but their remains may have been obscured by the sheet midden deposit which covered the east half of the property.

Postmolds associated with Structure D were rather shallow, so it is also possible that additional structural remains in the west half of the lot had been removed by plowing.

Structure D was similar in many respects to the Late Woodland structures documented by the VDHR on Lot GHF16 at Great Neck. Structure D was oval in plan, probably had a bench along the interior of one wall, and possibly had doorways in the corners. Unlike the other buildings, however, Structure D may also have had doorways positioned midway along one sidewall. The structure also showed evidence of repair.

The four Late Woodland pit features found on Lot 11 likely were used for processing activities rather than storage. Three of the four features were filled after abandonment with dense deposits of shellfish. Two of these (Feature 184 and 191) were relatively small and shallow, circular pits, similar to those later found on Lot M5. The third shell-filled pit (Feature 163) was also rather shallow, but quite a bit larger in plan. It may be significant that all three features were located in the northeast and east-central sections of the lot. The remains in this location, which include the sheet midden deposit, may represent a special activity area used for processing and disposal situated outside of the residential section of the settlement.

The fourth Late Woodland pit feature found on Lot 11 was relatively large, but shallow. Feature 155A was situated near a group of postmolds which may represent a longhouse structure. Although the feature may have served some type of processing function, it should be noted that the shape of the pit is similar to the Late Woodland burial identified on the property, and its position in relation to Structure E is possibly similar to the spatial relationship between the known burial (Feature 189) and Structure

D. No skeletal remains were found with Feature 255A, however, and the fill was more organic-rich than the redeposited subsoil which commonly fills burial pits.

The one burial feature definitely identified on Lot 11 (Feature 189) was an interment of a child and is likely contemporaneous with Structure D. Subadult interments were also found in association with Structure C on Lot GHF16, the structure located outside of the palisaded enclosure. These burials appeared to be positioned within doorways. A similar pattern may be displayed at Structure D if the identification of entrances along the west wall is correct.

No definite evidence is available to date two additional prehistoric features encountered on Lot 11. It is likely that Feature 190, a dog burial, is associated with the Late Woodland period since it was situated directly below the plowzone at the upper surface of the midden. Three other Late Woodland, but no Middle Woodland features were encountered at this level.

No good clues exist for dating Structure G, an oval arrangement of postmolds. The postmolds associated with the structure were similar in diameter to those associated with Structures D and E, although shallower. In contrast, the excavated postmolds associated with Structure F were smaller (however, the assignment of this structure to the Middle Woodland period is based only on its presumed association with Feature 185). If Structure G is associated with Late Woodland occupation at Great Neck, its small size would argue against its use as a domestic structure. The use of small structures such as sweathouses, watchhouses, and work huts/storage facilities is documented in the

ethnohistorical literature on coastal Algonquian peoples in North Carolina and Virginia (Callahan 1981:74-75).

The Late Woodland record on Lot 11 is consistent with patterned variation among structural remains and mortuary features encountered on Lot GHF16. It was proposed earlier that Structure A on Lot 16 may be associated with an elite class as indicated by its placement within a palisade and its larger size relative to Structure C. Structure D on Lot 11 is also smaller than Structure A, and no evidence exists to suggest the former structure was situated within a palisade. It was also tentatively proposed that primary and secondary interments on Lot 16 differentiate two levels of ascribed status. Among persons of higher status, who were buried individually in primary interments, differential treatment was accorded by age: Adults were buried in close spatial association with the palisade, while subadults were buried in association with non-corporate structures. The association of the subadult interment (Feature 189) on Lot 11 with a presumably residential structure is consistent with the pattern seen on Lot 16.

CHAPTER 8

LOT 5, MEADOWRIDGE SUBDIVISION

Introduction

Lot 5 was the last property to be investigated by the VDHR at Great Neck since housing construction had been initiated on all other lots in the Meadowridge subdivision along Thomas Bishop Lane except Lots 5 and 11 by Spring, 1986. In the course of investigations on Lot 5 it was soon found that most major prehistoric features on the property had been excavated previously by other researchers. Additional features documented by the VDHR include the possible remains of two structures and several small pit features dating from the Late Woodland period. Large samples of Middle and Late Woodland period ceramics were also recovered from fill deposits within depressions caused by two tree falls on the property. By combining the findings of VDHR excavations with information provided by other researchers, the nature of Middle and Late Woodland occupation on the property can tentatively be reconstructed.

Previous Work

A considerable amount of archaeological testing and excavation had been conducted on Lot 5 by Floyd Painter and James Pritchard prior to VDHR investigations on the property. On Painter's map of the Great Neck area, he indicates an excavation

unit was opened in the southwest quadrant of the lot (Figure 4). Excavations in this area were being conducted in the spring of 1982 when VDHR staff was working on Lot M3.

Painter's map also indicates that James Pritchard had placed shovel test holes across the entire property. The full extent of Pritchard's investigations was unknown to VDHR staff when they first began to work on Lot 5, although Pritchard had earlier donated to the VDHR a collection of artifacts he recovered from a prehistoric pit feature in the southwest corner of the lot disturbed during the excavation of a utility trench in 1982. In a later meeting with Pritchard once VDHR excavations on Lot 5 were underway, it was learned that he was aware of a number of additional prehistoric features which had been excavated on the property. On a sketch map he provided VDHR are indicated four burial features, each containing a single human interment; one burial feature containing the remains of three individuals; one burial feature containing the remains of a mature individual and a child; and fifteen refuse-filled pits. Features are attributed to both the "Chesapeake" (Late Woodland) and "Flat Bottom" vessel (Middle Woodland) cultures. The features shown on Pritchard's map are discussed in more detail below in conjunction with descriptions of VDHR finds.

VDHR Excavations and Field Methods

Excavations by the VDHR on Lot 5 were approached in a manner similar to that employed on Lot M11. During the initial testing conducted in June 1986 on Lot 11 by the Virginia Foundation for Archaeological Research, Inc., three test trenches were also

opened across Lot 5 (Peebles 1986). The test trenches were each approximately 8 ft wide and ran from north to south across the lot. Trenches 1 and 2 were centered, respectively, on grid points E275 and E310. Trench 3 was oriented slightly northeast-southwest, and was centered on E350 at the northern end of the lot and E330 at the southern end.

Each trench was stripped to the subsoil level using a backhoe. The soil profile across the lot from the surface of modern grade was characterized, in general, by a 1-2 in layer of root mass overlying a plowzone 10-16 in thick. Sterile subsoil was encountered directly below plowzone. Numerous soil stains representing shovel test pits, prehistoric postmolds, and larger features were discernable at subsoil level. Plowzone removed from the trenches was not screened, but a collection of ceramic artifacts from the backhoe spoils indicated that both Middle and Late Woodland period occupations were represented on the lot.

Based on these findings, further investigation on Lot 5 seemed warranted. House construction was planned for the near future, and the profusion of postmolds exposed in the initial test trenches indicated that large areas of the lot would need to be opened if any structural patterns were to be recognized among these features. Thus, the VDHR decided to proceed with further investigations by removing the plowzone mechanically from across the entire property.

The second phase of field investigations on Lot 5 was conducted from November 21, 1986, through January 26, 1987, with a crew of four persons. Esther White served

as field director. The results of the excavation were summarized by White (1987) in a report prepared under contract to VDHR.

After the plowzone across the lot was removed to within a few inches above the subsoil level, the surface of the site was shovel-skimmed and troweled. An overall map of the lot showing the plan of all soil stains visible at subsoil level was drawn at the scale 1 in = 2 ft (metric equivalents of original English measurements are provided where appropriate below to facilitate comparison between features on different lots).

VDHR excavations on Lot 5 were hampered by the many small disturbances into the subsoil which were the product of shovel testing conducted previously on the property. The remains of shovel test holes were most concentrated in the south half of the lot where they were spaced on roughly 3-foot centers. All disturbances intrusive into the subsoil below plowzone level were mapped. As time permitted, those disturbances whose size and fill suggested they were the remains of shovel test holes were excavated both to identify the nature of the disturbance and to reveal the remains of any prehistoric features preserved at deeper levels. Time was not available to investigate all of these disturbances, however. Thus, many of the smaller features pictured on the overall field map of the site likely are the remains of shovel test holes. Because of the time spent in removing modern disturbances, only a small sample of smaller features believed to be prehistoric postmolds were eventually excavated.

All larger features identified on Lot 5 were tested. Two large, refuse-filled depressions, Features 255 and 261, which are believed to have originated as tree falls during the prehistoric period, were tested by excavating narrow trenches across the

features. Each of the remaining features on Lot 5 was tested by excavating either a half or quarter of the deposit. Initial examination suggested that several of these were prehistoric features which had previously been excavated.

All confirmed cultural features and postmolds, whether previously excavated or not, were drawn in profile at the scale 1 in:1 ft. Samples of fill from each stratigraphic level were reserved for flotation processing, with the remaining excavated fill screened in the field through one-quarter-inch mesh.

Features Excavated by VDHR

Each of the features tested by VDHR on Lot 5, regardless of whether the feature was found intact or had been excavated previously, is described below. As much as possible, the findings of VDHR investigations are correlated with information provided by Pritchard from earlier excavations on the lot. A copy of Pritchard's sketch map of the property showing the location of features he was aware of is shown in Figure 58 along with a copy of the VDHR's site plan with only major features indicated. Features encountered by the VDHR are listed in Table 22.

Large Refuse-Filled Depressions

Feature 255 (N345 E335) (Figure 59): Feature 255 was a very large, roughly circular depression, likely originating from a tree fall, which was found to contain

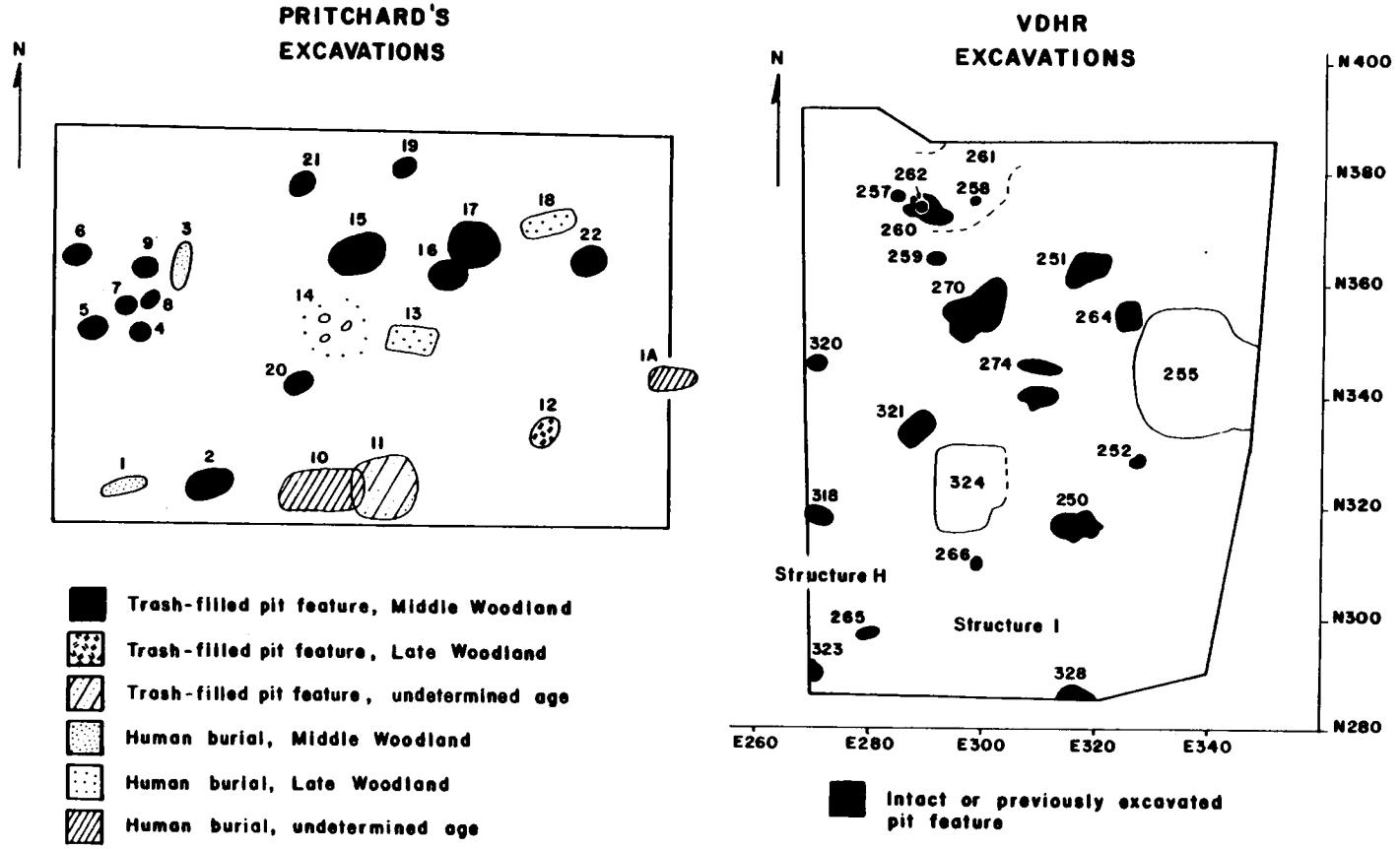


Figure 58. Major features uncovered by Pritchard and VDHR excavations on Lot 5, Meadowridge subdivision.

Table 22. Features excavated by VDHR, Lot M5.

VDHR NUMBER	CONDITION/DESCRIPTION	PRITCHARD'S NUMBER	CULTURAL AFFILIATION
250	PREVIOUSLY EXCAVATED BURIAL PIT	13	LW
251	PREVIOUSLY EXCAVATED BURIAL BIT	18	LW
252	INTACT, SMALL REFUSE-FILLED PIT	--	LW
255	INTACT, LARGE REFUSE-FILLED TREE HOLE	--	MW, LW
257	INTACT, SMALL REFUSE-FILLED PIT	--	LW
258	INTACT, SMALL REFUSE-FILLED PIT	--	LW
259	PIT, RECORDS LOST	21?	MW
260	FILLED TREE HOLE, POSSIBLY PART OF 261	--	UNKNOWN
261	INTACT, LARGE REFUSE-FILLED TREE HOLE	--	MIXED MW/LW
262	INTACT, SMALL PIT	--	PROBABLY LW
264	PREVIOUSLY EXCAVATED PIT	22	MW
265	INTACT, LARGE REFUSE-FILLED PIT	--	LW
266	INTACT, SMALL REFUSE-FILLED PIT	--	UNKNOWN
270	PREVIOUSLY EXCAVATED PIT(S)	16, 17	MW
274	PREVIOUSLY EXCAVATED PIT	16?	MW
282	INTACT, SMALL REFUSE-FILLED PIT	--	LW
289	INTACT, SMALL REFUSE-FILLED PIT	--	LW
291	INTACT, SMALL REFUSE-FILLED PIT	--	LW
309	INTACT, SMALL REFUSE-FILLED PIT	--	MW
318	PREVIOUSLY EXCAVATED PIT	5	MW
320	PREVIOUSLY EXCAVATED PIT	6	MW
321	DISTURBED AREA, BURIAL?	3	MW
322	DISTURBED AREA, PREVIOUSLY EXCAVATED PIT?	17?	MW
323	DISTURBED AREA, PREVIOUSLY EXCAVATED BURIAL?	1?	MW
324	DISTURBED AREA, PAINTER'S EXCAVATION AREA	14	--
328	DISTURBED AREA, PREVIOUSLY EXCAVATED PIT?	11?	MW

Key: MW, Middle Woodland; LW, Late Woodland.

undisturbed Middle Woodland period deposits underlying mixed Middle and Late Woodland deposits. The feature was located along the eastern edge of Lot 5, and extended to the east beyond the limits of the excavation area. At the surface of the subsoil, the deposit measured 23.6 ft north-south and a minimum of 23.2 ft east-west.

Feature 255 was sampled by excavating a test trench 5 ft wide and 30 ft long which extended north-south roughly across the middle of the deposit. As seen in Figure 59, which shows the profile along the west wall of the trench, the feature was shallow relative to its length. The walls sloped gently to a flat base 1.8-2.2 ft below subsoil level. About midway along the length of the test trench, however, the base of the feature sloped downward again to form a bowl-shaped depression approximately 6 ft in diameter, centered beyond the west side of the test trench. Feature fill extended to a maximum depth of 3.2 ft below the surface of subsoil in this area of the trench.

Six stratigraphic layers were recognized within the fill of Feature 255. The upper-most layer (Layer A) was found to have been disturbed by plowing. Plowzone extended 0.2-0.4 ft below the subsoil level across the feature, suggesting the elevation of the modern grade directly above Feature 255 had been slightly lower than surrounding areas. Once this plow-disturbed layer had been removed, it was clear that lower levels of fill in Feature 255 were intact archaeological deposits, and not secondary deposits of spoil from earlier excavations on Lot 5. Below the plowzone, both plowscars and small postmolds could be seen intruding into the underlying deposit of dark grey brown sandy loam. Lot 5 had not been plowed in recent years.

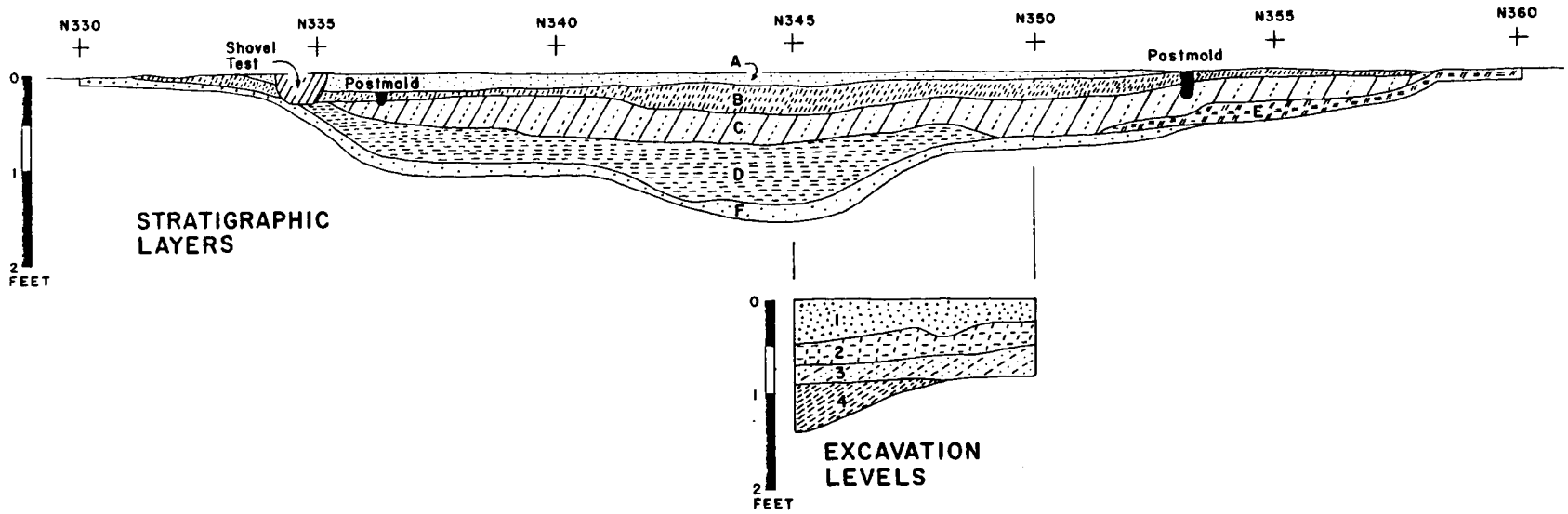


Figure 59. Profile of Feature 255, Lot M5.

In the center of the test trench and along its south end, three major stratigraphic layers could be discerned within the fill of Feature 255 below the plow-disturbed layer: Layer B was a dark, grey-brown sandy loam; Layer C, a grey-brown loam with grey sandy splotches; and Layer D, a grey-brown loam. Each of these layers sloped downward from the north, east, and south edges of the feature toward the depression in the base noted earlier. A thin zone of mottled soil (Layer F) marked the transition from feature fill to subsoil along the base of the depression.

On the north side of Feature 255, the stratigraphy was more complex. Layer D, which fills the base of the depression on the south side and in the center, appeared to be intruded on in the vicinity of N350. Underlying Layer C at the north end of the feature was a layer of light brown loam containing fragments of clay and charcoal bits (Layer E). This fill extended to the surface of subsoil and beyond the limits of the test trench.

Fill from Feature 255 was removed in four excavation levels. In Table 23, these levels are correlated to the stratigraphic layers indicated in Figure 59.

Since Excavation Level 1 included a layer of plow-disturbed fill from Feature 255, it is not surprising that a few historic artifacts (two nail fragments and a fragment of glass) were recovered in the level. Prehistoric artifacts from the level included an abundance of both Middle and Late Woodland period ceramic sherds with shell-tempered, fabric-marked and simple stamped sherds predominant. It is unknown whether the Late Woodland ceramics derive from both Layers A and B or were confined to the upper, plow-disturbed layer. The large number of ceramics suggests the feature was

Table 23. Correlation of excavation levels and stratigraphic layers in Feature 255, Lot M5.

EXCAVATION LEVEL	STRATIGRAPHIC LAYER
Level 1	Layer A and Layer B
Level 2	Layer C
Level 3	Layer E and upper 0.4 ft of Layer D
Level 4	remainder of Layer D

intentionally filled during the Late Woodland period, but there is no systematic sample of artifacts from the plowzone on Lot 5 to test the alternative hypothesis that the debris is a remnant of a sheet midden deposit removed elsewhere with the plowzone when the site was stripped by backhoe.

Only 4% of ceramics recovered in the second level of fill removed from Feature 255 can definitely be attributed to the Late Woodland period on the basis of temper and surface treatment. When compared to Level 1, the extremely low frequency of Late Woodland ceramics in Level 2 suggests that Layer C was an essentially undisturbed deposit dating from the Middle Woodland period. The ceramic collections from Excavation Levels 3 and 4 contain no ceramics resembling Late Woodland period types, and indicate that Layer D was an intact Middle Woodland period deposit. Shell-tempered, cord- and net-marked sherds are predominant in collections from Levels 2-4, with fragments of several flat-bottomed vessels represented. Some Middle Woodland sand-tempered ceramics with cord- or net-marked surfaces were recovered from Levels 2 and 3, but none were found in Level 4.

Few artifacts other than ceramics were recovered from the feature fill. While the collection from Level 1 includes 83 fragments of bone and five fragments of shell, Level 2 yielded only 7 fragments of bone. No shell or bone was recovered from Levels 3 and 4. Collections from Levels 1-3 include a total of only 28 lithic artifacts and 8 small fragments of fire-cracked rock. Level 4 yielded only 3 unmodified fragments of slate.

Each excavation level of Feature 255 also yielded a number of irregularly-shaped fragments of burned, sandy clay which may provide some clue to the origin of the

feature or its fill. The fragments vary in size up to approximately 2 in in diameter. They were most abundant in Excavation Level 3 (48 fragments) with a significant amount also recovered from Level 4 (21). Levels 1 and 2 yielded, respectively, 7 and 18 fragments. James Pritchard notes that similar objects were recovered in large numbers from his Features 17 and 22 on Lot 5 (These features are believed to correspond, respectively, to VDHR Features 270 and 264, which yielded a number of fragments of burned clay).

A number of hypotheses were initially proposed for the origin of the clay items, including that they represent waste from ceramic manufacture, hearth furniture serving the function of stone cobbles, or daub (White 1987:13, 19). While the two former hypotheses cannot be tested convincingly, the latter alternative is not supported by available evidence. Close examination of the clay indicated that only one specimen (from Level 4) bears the type of stick impression one might expect if the clay had been used as daub. Additionally, while several postmolds were recorded within Feature 255, most were first visible at the upper surface of or within Excavation Level 2, with two first visible at the top of Level 3. No postmolds were found to originate below Layers D and E, as might be expected if the two deposits, which contained a concentration of the burned clay, represented de facto destruction debris from a daubed structure. It should be noted, though, that only a small section of the base of the feature was exposed.

The most conservative interpretation of the burned clay items is that they are of non-cultural origin. Feature 255 appears to have originated as a tree fall. The configuration of the depression is less regular than one might expect if it were of cultural

origin and represented the remains, for example, of a semi-subterranean structure. Instead, the deeper depression in the center of the feature and the nature of the fill along the edges suggest a disturbance caused by the falling of a tree, subsequently altered by slumping. The burned clay items recovered from the fill possibly derive from natural processes involving lighting associated with the tree fall, or from later burning of the clayey subsoil caused by natural or human agents. In either case, the burned clay fragments were incorporated primarily into the earliest cultural deposits to fill Feature 255 and do not appear to be cultural products associated with the end of this occupation or with later occupations at the site.

Feature 261 (N375 E295) (Figure 60): Similar to Feature 255, Feature 261 was an extensive area of fill incorporating cultural debris which probably originated as a tree fall. The depression left from the root ball of the tree was eventually filled with deposits containing refuse dating from the prehistoric occupations on Lot 5. This fill was later intruded by several discrete prehistoric features.

The edges of Feature 261 were never precisely defined in the excavation, since the fill feathered out and was light in color and mottled with subsoil near the edges. The feature measured at least 18 ft east-west and 15 ft north-south in plan, extending beyond the limits of the excavation area on the north side.

Feature 261 was tested by excavating a trench 2.5 ft wide and 19 ft long which cut across the southern edge approximately midway east-west. The fill was removed in three excavation levels corresponding to the natural or cultural stratigraphy observed.

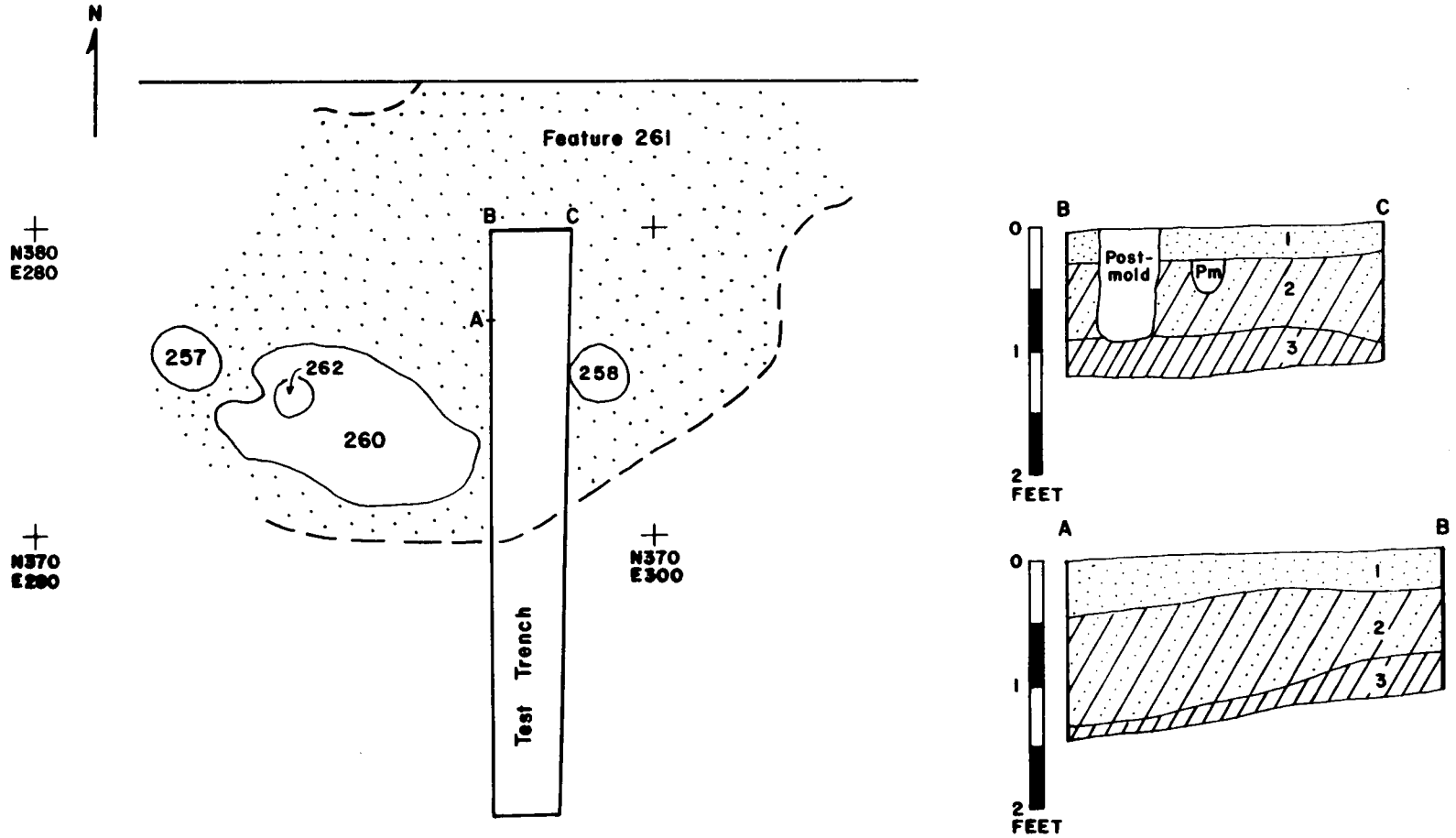


Figure 60. Plan and profile of Feature 261, Lot M5.

Profiles along the walls of one section of the test trench are shown in Figure 60. Maps prepared during the excavation suggest the southern edge of the filled depression lay at grid line N370, but no information is available on the configuration of the walls or base of the feature on this side.

Level 1 of Feature 261 was a deposit of dark grey-brown loam extending 0.29 ft below the surface of the subsoil. It is probable that Level 1, like the upper layer of fill in Feature 255, was a plow-disturbed deposit, although no historic artifacts were recovered. The prehistoric ceramic collection from the level includes both Middle and Late Woodland types, with Middle Woodland sherds predominant. Several postmolds intrusive into the surface of the feature were visible once Level 1 had been removed.

Level 2 was a dark yellow-brown loam with grey mottling in some areas. The deposit was 0.50 ft thick at the north end of the test trench, extending to 0.85 ft below subsoil. The base of the deposit sloped downward to the south. At grid line N277 along the test trench, Level 2 was 0.8 ft thick and extended to a depth of 1.3 ft below subsoil. The ceramics recovered are a mixed Middle and Late Woodland assemblage, although 63% can definitely be attributed to the Middle Woodland period and only 6% to the Late Woodland. The Middle Woodland ceramics are predominantly shell-tempered, cord- and net-marked types with the distinctive bases of flat-bottomed vessels included. A few sand-tempered sherds with net- and cord-marked surfaces are also included.

Level 3 of Feature 261 was a zone of yellow-brown loamy clay, 0.15-0.3 ft thick, which was transitional between feature fill and sterile subsoil along the base of the

depression. A small collection of Middle Woodland period ceramics was recovered at this level.

The fill of Feature 261 appears to be a relatively intact Middle Woodland deposit with some intrusion of Late Woodland artifacts. Very little bone and no shell debris was recovered from the feature. Level 2 of the deposit yielded 86 fragments of burned clay similar to the items found in Feature 255.

A number of smaller features were recognized within the boundaries of Feature 261. Feature 260, situated near the southwest edge of the feature, was identified as a tree hole. The feature was irregular in plan and profile and extended 0.6 ft deep. A few prehistoric sherds and a fragment of brick were recovered from the fill. If the latter artifact derives from some remnant plowzone removed from the upper surface of the deposit, Feature 260 might be interpreted as an upper layer of fill within the larger tree fall depression, Feature 261. Excavation of the test trench through Feature 261 indicated that the fill sloped to the south, generally in the direction of Feature 260. Additionally, Feature 260 was also intruded by, and, thus, must predate Feature 262, which appears to be a small prehistoric pit. Feature 262 and other small features intrusive into Feature 261 are discussed in the section below.

Small Refuse-Filled Pit Features

Feature 252 (Late Woodland) (N328 E327) (Figure 61): Feature 252 was a shallow prehistoric pit extending only 0.3 ft below subsoil level. Irregular in plan, the

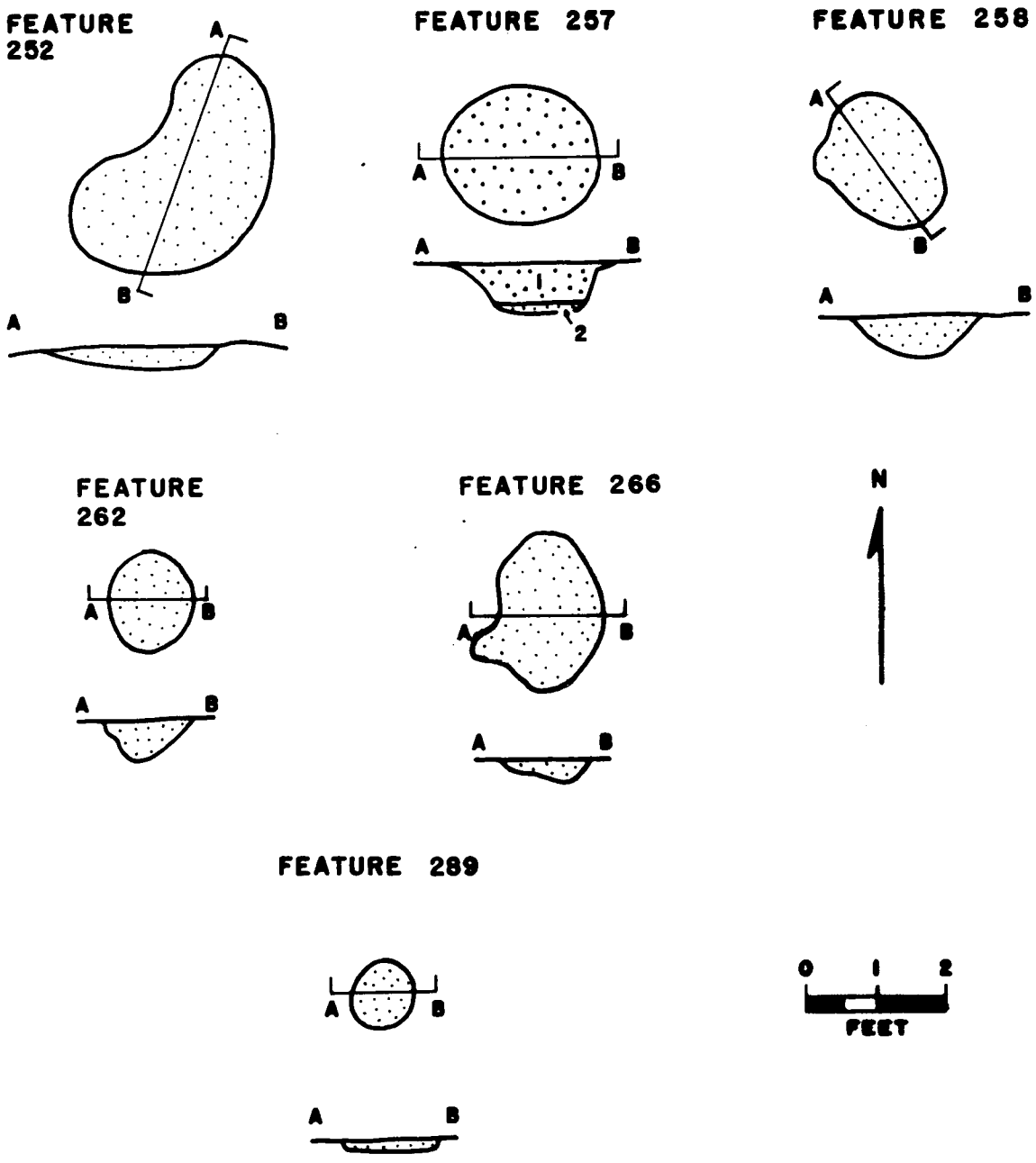


Figure 61. Plans and profiles of features, Lot M5.

feature measured 2.7 ft northeast-southwest and 2.4 ft northwest-southeast. Ceramics recovered suggest a Late Woodland period affiliation. All 11 ceramic sherds recovered from the west half of the feature are shell-tempered: 6 net-marked (4 refitted into 1 fragment), 1 simple stamped, and 4 unidentified. The fill also contained a few fragments of oyster shell and one quartz flake. The east half of the pit was intruded by three postmolds.

Feature 257 (Late Woodland) (N375 E284) (Figure 61): Feature 257 was a small pit intrusive into Feature 261, a large tree hole in the northeast corner of the excavation area. At the surface of the subsoil, Feature 257 was 2.4 ft in diameter. Fill from the south half was excavated, showing the pit to have a flat base 0.7 ft below the subsoil level. The east wall sloped steeply to the base, while the wall on the west side sloped more gently.

The upper layer of fill (Level 1) within Feature 257 was a dark brown loam with densely packed oyster shell. The lower 0.2 ft of fill (Level 2) consisted of ash and charcoal. The one diagnostic artifact recovered was a shell-tempered, fabric-marked sherd diagnostic of the Late Woodland period.

Feature 258 (Late Woodland) (N376 E298) (Figure 61): Feature 258 was very similar in shape to Feature 257, and the two features were situated approximately 11 ft apart. Feature 258 was a circular pit, 2.0 ft in diameter, which intruded on Feature 261. The pit was bowl-shaped, 0.6 ft deep, with sloping walls and a rounded base. The

fill was a dark brown loam with densely packed shell consisting primarily of oyster. The artifacts recovered from the south half of the pit indicate a Late Woodland period date for the feature. Twenty-three ceramic sherds were recovered. These are shell-tempered: 20 simple stamped, 2 fabric-marked, and 1 unidentified. No other artifacts were found.

Feature 259 (possibly Middle Woodland) (N365 E292): Feature 259 was identified as an oval pit in the field notes from Lot 5 excavations, but all other information on the feature has been lost. The location of the feature corresponds roughly to the location of Pritchard's Feature 21, which he suggests dates from the Middle Woodland period.

Feature 262 (Woodland) (N375 E288) (Figure 61): Feature 262 was intrusive into the small tree hole, Feature 260, which may in fact be a fill deposit in a larger tree fall depression recorded as Feature 261. Oval in plan, Feature 262 measured 1.5 ft north-south by 1.3 ft east-west. The south half was removed, revealing walls sloping to a rounded, somewhat pointed base. The fill within the pit consisted of about 25% shell in a matrix of dark brown loam. A few small fragments of ceramic and bone as well as one jasper flake were recovered, but none of these artifacts is diagnostic.

Feature 264 (probably Middle Woodland) (N356 E325): Feature 264 was a disturbed deposit which may correspond to Pritchard's Feature 22. As mapped by VDHR staff, Feature 264 was roughly oval in plan: 5 ft north-south by 4 ft east-west.

The southwest quadrant was excavated. The wall of the pit had been shoveled smooth. Fill was a brown loam mottled with yellow clay yielding three brick fragments in addition to prehistoric artifacts. Fill extended to a maximum of 1.2 ft below subsoil. Pritchard's notes suggest his Feature 22 dates from the Middle Woodland period. Identifiable ceramics recovered in VDHR excavations are shell-tempered, net-marked, and similar to the Mockley type. Six fragments of burned clay similar to those described for Feature 255 are also included in the collection.

Feature 265 (Late Woodland) (N297 E281): Roughly oval in plan, Feature 265 extended approximately 4.2 ft northeast-southwest by 3.5 ft northwest-southeast. The pit had sloping walls and a rounded bottom, and was 0.9 ft deep. The south half of the feature was excavated. Fill was a very dark brown sandy loam which contained some shell and an abundance of bone. Only two ceramic sherds larger than one inch square were recovered. Both are shell-tempered: one simple stamped and one net-impressed. The simple stamped sherd suggests the feature dates from the Late Woodland period.

Feature 266 (date unknown) (N310 E301) (Figure 61): Feature 266 was an irregularly shaped, roughly oval pit measuring 2.2 ft north-south and 1.3 ft east-west at subsoil level. The base of the pit sloped to the east side to a maximum depth of 0.4 ft. The pit was filled with a dark brown loam which yielded no artifacts.

Feature 270 (possibly Middle Woodland) (N355 E300): Fill of brown loam mottled with orange clay and walls shoveled smooth indicated that Feature 270 had previously been excavated. At the surface of subsoil, the deposit was irregular in plan, measuring a maximum of roughly 14 ft east-west and 8 ft north-south along the east side. The shape of the deposit suggests that two pits were originally represented. The location of Feature 270 correlates roughly with an area on Pritchard's map where two overlapping pit features (Pritchard's 16 and 17) are depicted. Pritchard suggests the features date from the Middle Woodland period. He notes that Feature 17, situated along the northeast side of Feature 16, was a large, deep pit which contained little refuse other than a number of fragments of burned clay.

Only a small section along the southern edge of Feature 270 was excavated. A relatively flat bottom was reached in this section at a depth of 1.6 ft below the surface of subsoil level. There was a pit in the base on the far east side of the feature which extended an additional 0.5 ft in depth. The fill removed from the tested section contained ceramics dating from the Middle and Late Woodland periods, animal bone, several lumps of burned clay, a plastic button, and two fragments of glass, among other items. A thin layer of brown loam with shell lined the bottom of the pit.

Feature 274 (possibly Late Woodland) (N340 E309): Feature 274 had been previously excavated. At the surface of subsoil level, the feature extended 7.8 ft east-west and 4.4 ft north-south and was roughly oval in plan. Excavation of the southwest quadrant indicated the walls had been shoveled smooth. Fill of brown loam mottled with

orange clay extended to a maximum depth of 2.3 ft below subsoil in the center of the feature. The walls were stepped, however, descending first to a relatively flat base 1.3 ft below subsoil. This level may represent the original floor of the pit.

When the location of Feature 274 is compared to Pritchard's map it corresponds to his Features 16 and 17. VDHR Feature 270 better fits Pritchard's description of these features, however. Fill excavated by the VDHR from Feature 274 contained two fragments of bone and four shell-tempered sherds: two simple stamped and two unidentified.

Feature 282 (Late Woodland) (N350 E332): Feature 282 was a small cluster of ceramic sherds within a matrix of dark brown loam exposed in Feature 255 after Excavation Level 1, a mixed plowzone deposit, had been removed. The ceramic deposit was 1.0 ft in diameter and extended for a depth of 0.5 ft. All the ceramic sherds recovered from the feature are shell-tempered: 3 simple stamped, 27 fabric-marked, 1 cord-marked, and 3 unidentified. Twenty-five of the fabric-marked sherds were mended into one large fragment. This Late Woodland period deposit also contained two fragments of burned clay and three of animal bone.

Feature 289 (Late Woodland) (N355 E339) (Figure 61): Feature 289 was also exposed below Level 1 in Feature 255. The feature was a small deposit of ashy, brown loam 1.0 ft in diameter and 0.5 ft deep. Ten fragments of animal bone were recovered. Only one of the four ceramic sherds recovered, all smaller than one inch square, is

diagnostic. This shell-tempered, simple stamped ceramic suggests a Late Woodland period date for the deposit.

Feature 291 (Late Woodland) (N349 E334): Feature 291 was a small deposit 1.0 ft in diameter and 0.8 ft deep also intrusive into Level 2 of Feature 255. One shell-tempered, simple stamped sherd was contained in the fill suggesting the feature dates from the Late Woodland period.

Feature 309 (Middle Woodland) (N352 E334): Feature 309 was visible within Feature 255 at the top of Excavation Level 3. The feature appeared to be approximately 2.2 ft in diameter, although it extended into the west wall of the test trench. Any notes on the fill or depth of the deposit have been lost. Artifacts recovered include one jasper pebble and several ceramic fragments. Only one of the latter is diagnostic. This is a shell-tempered, net-marked sherd diagnostic of the Middle Woodland period.

Feature 318 (probably Middle Woodland) (N318 E272): Feature 318 was a disturbed pit and may correspond to Pritchard's Feature 5 which he identifies as Middle Woodland. At the surface of subsoil the feature extended roughly 7 ft northwest-southeast and 4 ft northeast-southwest. Only a small section of the southeast end was excavated. Here, a mottled fill of brown loam and clay extended 1.0 ft below the surface of subsoil level. The walls of the feature were shoveled smooth. Two shell-

tempered, net-marked sherds and one fragment of animal bone were recovered in VDHR excavations.

Feature 320 (probably Middle Woodland) (N346 E271): Feature 320 had also been excavated previously, and may correspond to Pritchard's Feature 6, which he suggests dates from the Middle Woodland period. The deposit was 2.6 ft in diameter and contained redeposited fill of brown loam and orange clay to a depth of 2.0 ft below subsoil level. This fill contained several small fragments of prehistoric ceramic and 30 fragments of wire nails. It is possible that undisturbed prehistoric deposits survived below this level (as noted by the excavator), but the feature was not excavated further.

Human Burials

Feature 250 (Late Woodland) (N318 E318): At the surface of subsoil Feature 250 appeared as a roughly oval stain extending 8.0 ft east-west and 6.0 ft north-south. The feature is believed to be the remains of a burial pit excavated by James Pritchard, his Feature 13. Removal of the fill during VDHR excavations indicated that the walls of the pit had been shoveled smooth. In addition to prehistoric artifacts, the fill contained a fragment of an iron nail and a cigarette package. Several pieces (14+) of whole and fragmentary human bone were collected from the surface of the feature at subsoil level including, among other possible elements, portions of a left femur, tibia, and fibula; an

occipital fragment; a right and left talus; a fragment of a calcaneus; and three metatarsals.

Pritchard's notes on the burial indicate the pit contained the remains of two individuals: one adult and one child. The adult was placed extended with its head at the east end. The child lay in an extended position on the north side of the adult with its head at the west end. Shell beads were associated with the adult, while both shell and copper beads were associated with the child. Pritchard identifies the burial as dating from the Late Woodland period. In the fill removed by VDHR staff 12 ceramic sherds larger than one inch square were recovered. All are shell-tempered: four simple stamped, one incised-decorated, one knotted net-marked, and six unidentified. A triangular projectile point made of jasper was also included among several other artifacts recovered.

Feature 251 (Late Woodland) (N363 E318): This feature is believed to be the remains of a prehistoric burial which, according to Pritchard's notes, was excavated by Floyd Painter (Pritchard's Feature 18, Painter's Burial 7). The western half of the feature was excavated by VDHR staff. The pit was 4.6 ft wide north-south, with the walls shoveled smooth. Disturbed fill, which yielded such items as a Mountain Dew bottle, extended to a maximum depth of 1.4 ft below subsoil level. At the surface of subsoil, the pit extended a maximum of 7.6 ft east-west. The redeposited fill excavated by VDHR staff yielded 19+ fragments of human bone including first, second, and third

cuneiforms; a left cuboid; 11 phalanges; a vertebra; portions of a sacrum and the ischium of an innominate; and several ribs.

Pritchard's notes on this burial identify it as the single interment of an adult dating from the Late Woodland period. The body was placed in an extended position with the head at the east end of the pit. The 73 ceramic sherds larger than one inch square recovered in excavation of the disturbed fill by VDHR staff include 2 which are sand-tempered and net-marked. The remaining ceramics are shell-tempered: 28 simple stamped, 2 fabric-marked, 1 incised-decorated, 1 plain-surfaced, 6 net-marked, 2 cord-marked, and 31 unidentified.

Additional Features Shown on Pritchard's Map

Refuse-Filled Pit Features

At least nine pit features indicated on Pritchard's map cannot be specifically correlated with features located during VDHR excavations. Pritchard depicts a cluster of Middle Woodland pits along the west side of Lot 5. It was suggested above that Pritchard's Features 5 and 6 may correspond to VDHR Features 318 and 320, respectively. A burial situated on the northeast side of the pit cluster (Pritchard's Feature 3) may correspond to the disturbance recorded by the VDHR as Feature 321. Several shallow disturbances removed by the VDHR in cleaning the subsoil in the vicinity of grid

point N320 E280 may relate to the other pit features indicated by Pritchard in this area (Pritchard's Features 4, 7, 8, and 9).

Pritchard's Features 2 and 11 were situated along the southern edge of Lot 5. Both pits are interpreted by Pritchard to date from the Middle Woodland period. The location of Feature 11, a large, deep pit which intruded on a multiple burial, may correspond to a disturbance recorded by the VDHR as Feature 328.

A Late Woodland pit was recorded by Pritchard in the southeast corner of Lot 5 as Feature 12. No traces of the feature were uncovered in VDHR excavations. Neither was any evidence found for the location of Pritchard's Features 19 and 21, two Middle Woodland pits situated along the northern edge of the lot. It is possible, however, that Feature 21 corresponds to the pit recorded by the VDHR as Feature 259.

Pritchard's Feature 15 is also problematical. Its position in relation to the area excavated by Painter (Pritchard's Feature 14, VDHR Feature 324) suggests that it may correspond to VDHR Feature 270. Feature 270 fits more closely the characteristics noted by Pritchard for his Features 16 and 17, however. The shape of Feature 270 suggested two pits, and the VDHR recovered a number of burned clay fragments from the fill. Pritchard noted that Feature 17 had yielded a great amount of these items.

Human Burials

The notes James Pritchard provided the VDHR also indicate that at least four burial features not relocated during VDHR investigations were excavated by Pritchard

or Floyd Painter on Lot 5. All were primary interments. Pritchard's Feature 1 was an interment of a single individual placed in an extended position with the head at the east end of the pit. Pritchard suggests the burial dates from the Middle Woodland period. The feature was situated in the southwest corner of Lot 5. Its location may be represented by a disturbance noted by VDHR staff along the edge of their excavation area at grid point N290 E270 (Feature 323). Pritchard's Feature 1 is very likely the feature disturbed by the excavation of a power line along the edge of Lot 5 in May 1982. The collection made by Pritchard at this time and donated to the VDHR contains several fragments of human bone as well as shell-tempered, cord- and net-marked ceramics with recognizable sections of flat-bottomed vessels included.

Pritchard's Feature 10 is a multiple, seemingly primary, interment of three individuals placed side by side, each in extended position. The individual along the north side of the pit was oriented with the head at the east, while the two other individuals were placed with the heads at the west end. The pit was located roughly midway along the southern border of the lot. No cultural affiliation is mentioned in Pritchard's notes, although the burial was intruded by a large pit feature on the east side (Pritchard's Feature 11). No definite traces of either feature were detected within the limits of the excavation area opened by the VDHR, although a disturbance (Feature 328) was noted along the edge of the excavation limits at grid point N287 E317.

An interment of a single individual, Pritchard's Feature 1A, lay roughly one third of the way north along the eastern edge of Lot 5. The body was extended with the head at the east end. Neither cultural affiliation nor the age of the individual interred are

indicated in notes provided by Pritchard, and no deposits which may relate to this burial were recognized by VDHR staff within the limits of their excavation area.

Pritchard's Feature 3 is the only burial excavated on Lot 5 in which the individual, placed in extended position, was oriented north-south. The head was at the north end of the pit. Pritchard suggests the feature dates from the Middle Woodland period. The feature was located on the west side of Lot 5, about midway between the bank above Broad Bay and Thomas Bishop Lane. A number of Middle Woodland period refuse-filled pit features excavated by Pritchard were situated directly west of the burial. Although none of these features can be positively correlated to deposits recorded by the VDHR, the location of Pritchard's features may correspond to the vicinity of N320 E280 where a number of recent disturbances were noted. Feature 321, an area of fill noted by the VDHR at grid point N334 E289, may possibly be the remains of Pritchard's Feature 3. This was a rectangular-shaped deposit measuring 6.4 ft northeast-southwest by approximately 4 ft northwest-southeast. Excavators noted that Feature 321 was intruded by plowscars, however, and Lot 5 has not been plowed in recent years.

Structures

It is difficult, if not impossible, to make sense of the many small postmold-like soil stains which were visible at the surface of the subsoil once the plowzone was removed from across Lot 5 during VDHR investigations. As discussed earlier, many of

the small features likely are scars from shovel test holes filled with plowzone, but time was not available to carefully examine these across the entire lot.

The small features intrusive into the subsoil were examined most thoroughly in the southeast corner of Lot 5, with the result that most shovel test holes in this area could be eliminated from the site plan. The remains of two structures are possibly indicated in this area by the arrangement of what appear to be prehistoric postmolds, but which were not excavated.

Structure H is tentatively reconstructed based on a line of eight postmolds extending from N293 E270 to N306 E268. These postmolds are spaced roughly 2 ft apart, a measurement within the range of distances between posts comprising Structure A on Lot GHF16 and Structure D on Lot M11, both of which date from the Late Woodland period. The north and south ends of Structure H are recognizable only if one anticipates an arcuate arrangement of posts. These two lines define a structure 32 ft long -- similar in size to Structures C and D. No clear pattern of postmolds indicates the position of the east wall of Structure H, but a structure approximately 16 ft wide, the width of Structure D on Lot 11, is suggested.

Evidence for a second structure on Lot 5 is even more tenuous. Structure I is defined by a line of posts extending from N285 E296 to N309 E294. The line appears to curve at the north end, so the west wall of a structure is possibly indicated by the series. The line of posts which likely defines the east wall of the structure is largely conjectural. The width between the two side walls indicated is 18 ft.

Ceramic Artifacts

In VDHR excavations on Lot 5 only a few features were encountered which did not contain redeposited fill from earlier excavations. The majority of undisturbed features produced only small ceramic collections which, for the most part, are uninformative except for allowing us to roughly date the features. Four features--255, 258, 261, and 282--contained significant quantities of ceramics, however. Analysis of the ceramics from these features was conducted to understand ceramic variation across time and space. The Middle Woodland ceramics in particular were considered a potentially important sample which, through comparison to ceramics recovered from Lot M3, could possibly help define the role the Great Neck site played within prehistoric settlement systems.

Using attributes of paste and surface treatment, five ceramic series dating from the Middle and Late Woodland period were identified in the analyzed collection (Tables 24 and 25). The collections from Features 255 and 261 are dominated by Middle Woodland sherds, although the upper level of Feature 255 contained significant amounts of Late Woodland ceramics. The predominant ceramics in Feature 258 and 282 are diagnostic of the Late Woodland period.

The Late Woodland ceramics recovered from Lot 5 are exclusively shell-tempered and are equivalent to the type Roanoke Simple Stamped and types within the Townsend

Table 24. Ceramics from Features 258, 261, and 282, Lot M5.

CERAMIC TYPE	FEATURE		
	258	261	282
SHELL-TEMPERED			
SIMPLE STAMPED	20	11	3
FINE FABRIC	2	1	27
NET	--	85	--
CORD	--	45	1
OPEN-WEAVE FABRIC	--	1	--
UNIDENTIFIED	1	65	3
FINE SAND-TEMPERED			
NET	--	5	--
CORD	--	1	--
TOTAL	23	214	34

Table 25. Ceramics from Feature 255, Lot M5.

CERAMIC TYPE	EXCAVATION LEVEL				TOTAL	
	1	2	3	4	#	%
SHELL-TEMPERED						
SIMPLE STAMPED	48	3	--	--	51	6.6
FINE FABRIC	57	3	--	--	60	7.8
NET	26	55	76	35	192	25.0
CORD	15	17	57	12	101	13.2
OPEN-WEAVE FABRIC	1	--	--	1	2	0.3
UNIDENTIFIED	158	44	79	17	298	38.9
FINE SAND-TEMPERED						
NET	28	8	4	--	40	5.2
CORD	2	1	8	--	11	1.4
UNIDENTIFIED	--	1	5	--	6	0.8
MEDIUM & COARSE SAND-TEMPERED						
NET	--	--	6	--	6	0.8
TOTAL	335	132	235	65	767	100.0

series. The latter are characterized by surfaces marked with a fine weft-twined fabric. The Roanoke and Townsend ceramics from Feature 255 are derived primarily from Level 1 of the feature, a mixed deposit disturbed by plowing which contained both Late and Middle Woodland ceramics in significant numbers. It is not known if the Late Woodland assemblage was from a discrete fill deposit in the feature. It is likely that the deposit actually represents a portion of a sheet midden which would have been removed outside the boundaries of Feature 255 when the site was stripped to subsoil level. Simple stamped and fabric-marked sherds are approximately equally represented by number within the assemblage from Feature 255 (Table 25).

In contrast, Features 258 and 282 are dominated by one or the other of the Late Woodland ceramic types. Feature 258 was a relatively small pit containing densely packed oyster shell. Twenty of the 23 sherds recovered from the pit are shell-tempered, simple stamped. The remaining two identifiable sherds are shell-tempered, fabric-marked. At least 12 of the 20 Roanoke sherds appear to derive from the same vessel. Feature 282 was a very small pit intruding into the intact Middle Woodland period deposits in Feature 255. At least 25, and perhaps the total 27, shell-tempered, fabric-marked sherds recovered derive from a single vessel. Seven other sherds were recovered, all shell-tempered: three simple stamped, one cord-marked, and three unidentifiable.

In general, both the Roanoke and Townsend ceramics from Lot 5 are characterized by a very compact, hard, silty paste containing a high proportion of crushed ribbed mussel shell (Figure 62). Surface color varies widely from grey-black

to light orange. Interior surfaces are commonly scored. Relatively large vessels which may constrict slightly near the mouth of the pot and then rise to a straight or slightly everted lip are indicated. Two of seven total rim sherds in collections from the three features curve inward slightly. No bases were recovered.

Incised decoration occurs on both Townsend and Roanoke ceramics. No decoration was observed in the collections from Features 258 and 282, but seven Townsend sherds (11.7%) and 3 (5.9%) Roanoke sherds from Feature 255 are decorated with incising (Codes following descriptions of the designs refer to Griffith's [1982:55-57, Figure 8] typology of Townsend decoration). On one fabric-marked sherd only a band of parallel incised lines is visible. Three sherds of each ceramic type bear designs composed of angled lines presumably forming triangles or chevrons which, in at least two cases, terminate at a band of incised lines (similar to R14). On one of the fabric-marked sherds, angled lines overlie a band of several parallel lines (R18). Two other fabric-marked sherds are decorated with incised lines which are oriented perpendicular to the rim and which do not terminate in intersection with other lines (R16).

Townsend sherds collected from above Feature 255 during bulldozing of Lot 5 indicate that the range of decorative motifs appearing in the excavated collection does not represent the full inventory. One decorated sherd recovered during test trenching has a row of punctations below a band of incised lines (R12). Another sherd has hanging triangles incised over a band of incised lines oriented parallel to the rim (R18). In addition to the decorated sherds, the excavated collection from Feature 255 includes two



Figure 62. Townsend and Roanoke ceramics, Lot M5.

rim sherds which are marked with the edge of a wrapped paddle on the interior of the rim.

Mean sherd thickness for Roanoke and Townsend ceramics recovered from the three features is listed in Table 26. Within Feature 255, mean thickness of simple stamped and fabric-marked sherds does not differ significantly (t = 0.1720; $d.f.$ = 101; p = .8638). While the difference between thickness of fabric-marked sherds in Feature 255 and 282 is statistically significant (t = 3.2950; $d.f.$ = 79; p = .002), the result may be biased by the fact that a portion of only one vessel is represented in the collection from Feature 282. When mean thickness of Roanoke and Townsend sherds from all three features is compared, the difference between the two ceramics is not statistically significant (t = 1.4078; $d.f.$ = 144; p = .1613). The thickness of Roanoke rim sherds, measured 2 cm below the lip, ranges from 0.5-0.8 cm, while Townsend rims range 0.5-0.7 cm in thickness.

The ceramic assemblage from Lot 5 provides only equivocal evidence for determining the chronological and perhaps cultural relationship between Townsend and Roanoke wares. The condition of the ceramics recovered from Features 258 and 282 suggests that, although production of the wares overlapped, Roanoke ware was a later development. The three Roanoke sherds from Feature 282 are in good condition and could have been deposited simultaneously with the Townsend ceramics which dominate the feature. The two Townsend sherds from Feature 258 are in poor condition, which may suggest they were redeposited into the Roanoke-dominated fill sometime after initial discard. In the assemblage from Feature 255, however, the Roanoke sherds are

Table 26. Sherd thickness of ceramics from Lot M5.

CERAMIC TYPE	N	MEAN (CM)	STANDARD DEVIATION
SHELL-TEMPERED, SIMPLE STAMPED			
FEATURE 255	46	0.78	0.1095
FEATURE 258	19	0.78	0.088
TOTAL	65	0.78	0.0982
SHELL-TEMPERED, FABRIC			
FEATURE 255	57	0.78	0.1274
FEATURE 282	24	0.87	0.0624
TOTAL	81	0.91	0.1191
SHELL-TEMPERED, NET			
FEATURE 255	188	0.75	0.1385
SHELL-TEMPERED, CORD			
FEATURE 255	101	0.75	0.1412
FINE SAND-TEMPERED, NET & CORD			
FEATURE 255	49	0.81	0.1057

generally smaller than the Townsend ceramics, although the two wares appear about equally weathered. A number of plausible explanations could account for the condition of the sherds, and it cannot reliably be determined if the ceramics in this deposit were used contemporaneously.

The Middle Woodland ceramic assemblage recovered from Feature 255 is similar in many respects to the assemblage from Lot M3. The vast majority of Middle Woodland sherds are shell-tempered, and, except for the presence of flat-bottomed vessels again, are roughly comparable to types within the Mockley series (Figure 63). The following description of Middle Woodland ceramics from Lot 5 is based on close examination of the collection from Feature 255. More cursory inspection of the ceramics from Feature 261 suggested that the two assemblages are quite similar. Given limited time for analysis, the larger of the two collections was chosen for study. Since the ceramics recovered from the various layers of Feature 255 did not appear to differ significantly, they are treated as a single sample in the description below.

Among the shell-tempered Middle Woodland ceramics from Feature 255, the paste varies widely in a manner similar to that described for the ceramics from Lot 3. Some sherds contain a high proportion of sand to shell. Considering only Middle Woodland shell-tempered ceramics with identifiable surface treatment, 65% of sherds are knotted net-marked, and 34% are cord-marked. Only two sherds are marked with an open-weave fabric. No looped net impressions were identified in the collection.

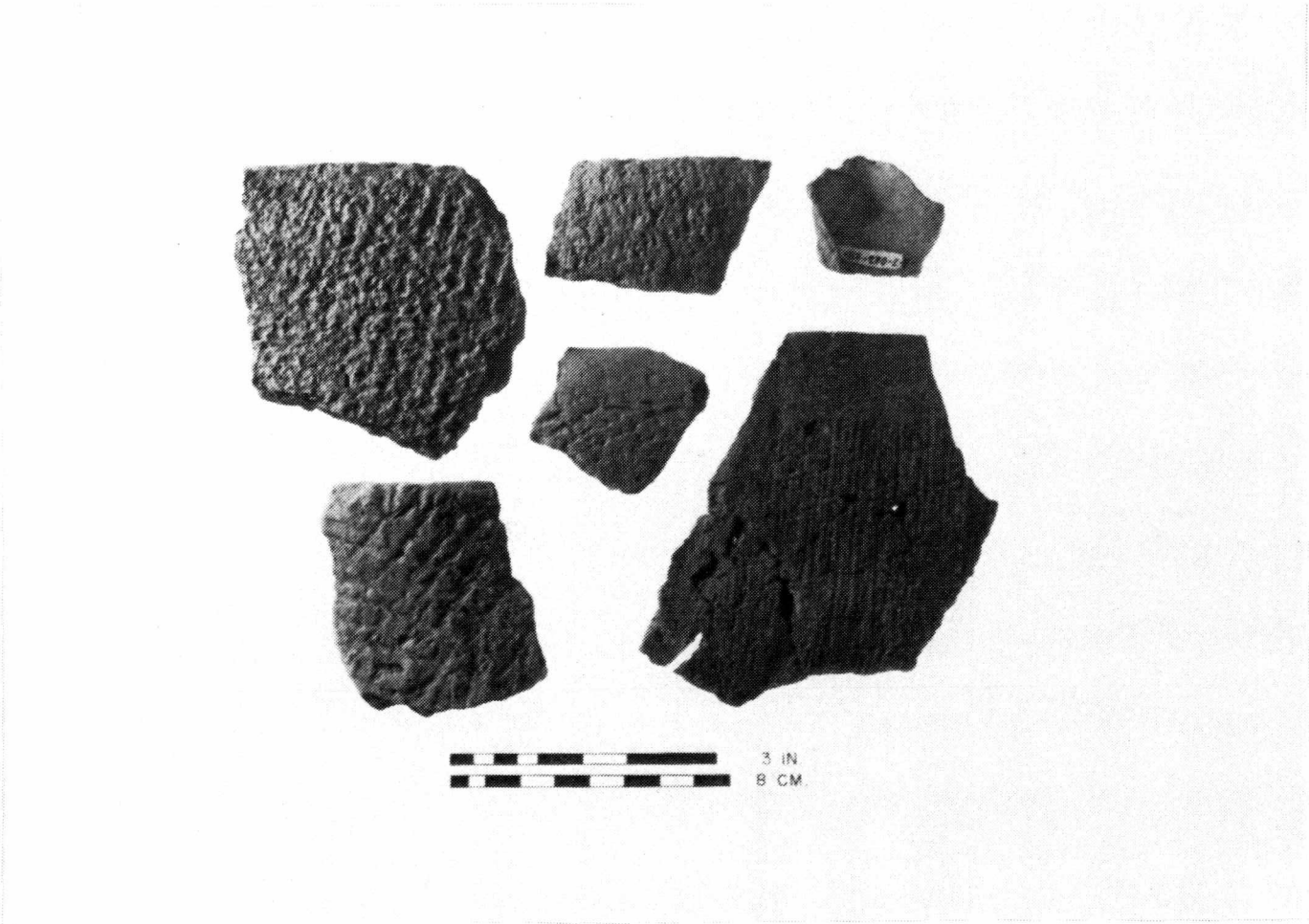


Figure 63. Mockley ceramics, Lot M5.

In contrast to the assemblage from Lot 3, few significant differences were observed between cord and net-marked, shell-tempered ceramics. Mean sherd thickness associated with the surface treatments are almost equal (t = 0.0992; $d.f.$ = 287; p = .9210) (Table 26). Mean thickness of rim sherds did tend to be less for net-marked ceramics, however (Net 0.63 cm, Cord 0.71 cm; t = 2.04428; $d.f.$ = 33; p = .04897).

Basal sherds within the assemblage provide no evidence for other than vessels of flat-bottomed form. Counting only those sherds showing the juncture of the vessel base with the wall, the collection contains 18 shell-tempered sherds from flat-bottomed bases. After mending, this number represents a maximum of 15 vessels: 6 net-marked, 1 cord-marked, and 8 unidentified. Two of the bases are nearly complete (Figure 64) and provide reliable measurements of vessel size at the base. One net-marked base measures 9.7 cm in diameter. The vessel wall is 1.0 cm thick 3 cm above the base. The other vessel (unidentified surface) is 9.3 cm in diameter at the base and 0.5 cm thick at a similar height. The basal diameters indicated by sherds of other vessels are 8.8 cm, 10.1 cm, and 12.4 cm.

The walls of Middle Woodland, shell-tempered vessels frequently curve inward at the rim (78% of net-marked rims, 67% of cord-marked rims). On a few sherds the curve is quite pronounced. Except for two cord-marked rims which have a slightly everted lip, the remainder of the rims display a straight profile (22% net, 17% cord). The lips of vessels are most commonly smoothed (83% net, 92% cord) as opposed to marked with a cord or net-wrapped paddle. Often smoothing extends for a few

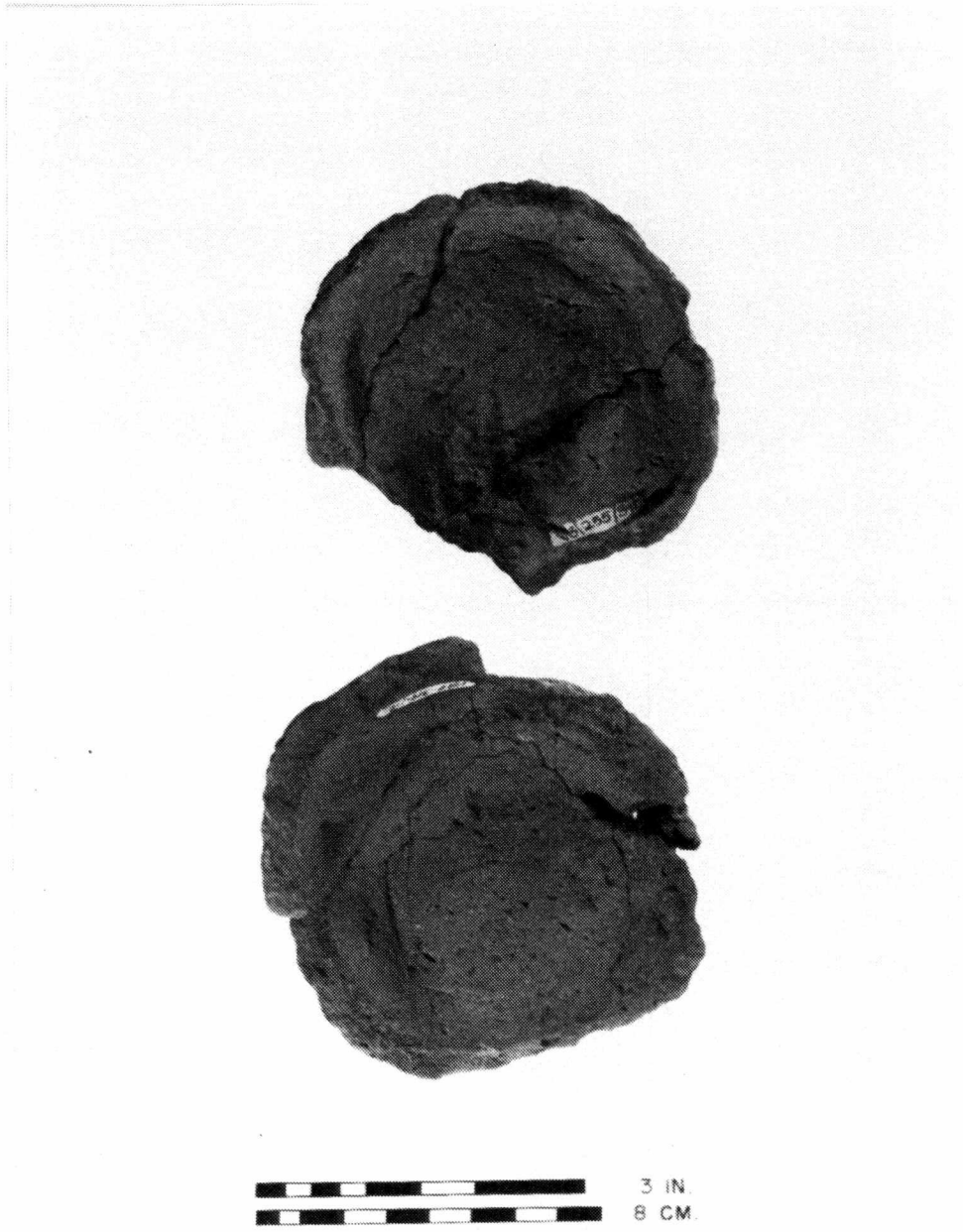


Figure 64. Shell-tempered, flat-bottomed basal sherds, Lot M5.

centimeters below the lip. Rims are also often markedly thinned in this area. As noted below, one rim sherd in the collection may represent a portion of a pouring lip. A definite pouring spout from a shell-tempered, net-marked vessel was identified in the collection from disturbed fill in Feature 270, and another may be represented by a rim sherd recovered from Feature 261.

Only one of the 35 cord- or net-marked rim sherds in the collection from Feature 255 is decorated. The cord-marked rim is notched on the interior of the lip. Four other occurrences of decoration were observed among other shell-tempered sherds in the collection which are presumed to date from the Middle Woodland. Two rims with unidentified exterior surface treatment, one of which may be a pouring spout, bear a series of small punctations along the top of the lip. A third rim sherd bears faint traces of shallow incisions against a smoothed surface. The lip of this vessel is unique within the collection as a thin edge is rolled over sharply toward the interior of the vessel. The final example of decoration in the collection occurs on a body sherd from what appears to be a small vessel. The sherd is covered with lines of small shallow punctations oriented perpendicular to coil breaks.

Although the Middle Woodland assemblage from Lot 5 is dominated by shell-tempered ceramics, sherds with only lithic inclusions in the paste comprise 8% of the collection from all levels of Feature 255 (Figure 65). The majority of these ceramics are similar to the fine sand-tempered ware described for Lot GHF16. The paste is compact and hard, and the size of sand inclusions rarely exceeds 1.0 mm in diameter. The ceramics are marked with knotted net and cord impressions.



Figure 65. Sand-tempered ceramics, Lot M5.

Seven of the nine sand-tempered rims have straight profiles and two curve inward. The rim diameter of one cord-marked vessel was estimated at 10.7 cm. Another net-marked rim appears to derive from a much larger vessel. Mean thickness of rim and body sherds is 0.81 cm (Table 26). Although this value is larger than the one derived for Middle Woodland shell-tempered ceramics in the collection, comparison between the two may not be valid since at least 26 sherds of the fine sand-tempered ware very likely derive from one vessel. The one basal sherd in the collection is of conical form.

Ceramics similar to the medium sand-tempered ware described for Lot GHF16 are represented in the collection from Feature 255 by two sherds which are probably from the same vessel. The sherds are marked with a knotted net and are 1.0 cm thick. The paste contains a very high proportion of sand with numerous particles ranging from 1.0-1.5 mm in size.

The final variety of sand-tempered ware identified in the collection is represented by four refitted, knotted net-marked sherds. The paste has a moderate proportion of sand particles 0.5-1.0 mm and 2.0-3.5 mm in size. Maximum thickness of the sherds is 1.1 cm. These sherds somewhat resemble ceramics commonly found along the James River drainage in the Inner Coastal Plain which have been called Prince George by researchers (Egloff and Potter 1982:103).

Lithic Artifacts

The intact features excavated on Lot 5 yielded a very small collection of lithic artifacts. Of the 11 intact features or tree holes filled with prehistoric debris, only 5 features yielded any stone artifacts. Features 251 and 262 produced only one flake each. Only a fractured sandstone cobble was found in Feature 265.

The two filled tree holes on Lot 5 yielded larger lithic collections. The entire collection from Levels 1-4 of Feature 255 contains 21 flakes (11 jasper, 7 quartzite, and 3 quartz); 2 jasper pebble cores; a modified jasper flake which is likely a fragment from the working edge of an end scraper; a fragment of a modified quartzite flake; a section of a thin, naturally split sandstone cobble which has been edged in a few places as if tested for tool manufacture; 3 unmodified fragments of slate; a quartzite biface in an early stage of manufacture; the tip of a jasper projectile point; and 8 fragments of fire-cracked rock, one of which is a cobble fragment tested for flake or biface production. Feature 216 yielded five flakes; two jasper pebble cores; a modified jasper flake; and a fragment of fire-cracked rock, previously tested.

The nearly complete projectile points recovered in VDHR excavations derive from disturbed contexts (Figure 66, Table 27). The collection includes three triangular points and one narrow, stemmed point. Another artifact of note recovered from a disturbed context is a fragment of a possible gorget. This thin piece (0.4 cm) of ground sandstone is marked with notches along a portion of one surviving edge (Figure 66).

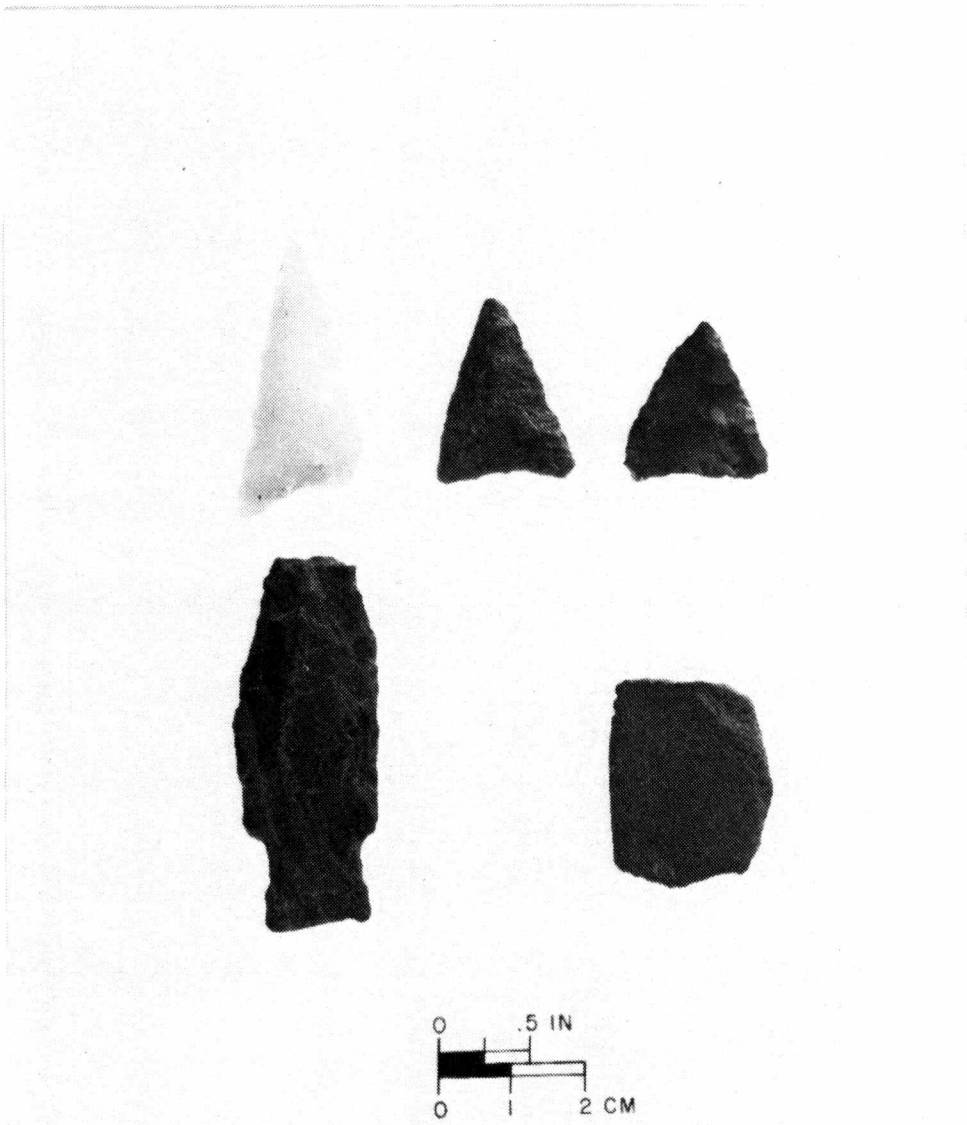


Figure 66. Projectile points and gorget, Lot M5.

Table 27. Projectile points from Lot M5.

FORM	PROVENIENCE	MATERIAL	BASAL WIDTH (CM)	SHOULDER WIDTH (CM)	LENGTH (CM)	MAXIMUM THICKNESS (CM)
TRIANGULAR	SURFACE	QUARTZ	N.M.	--	3.7	0.7
TRIANGULAR	FEATURE 250	JASPER	2.0	--	2.2	0.6
TRIANGULAR	FEATURE 270	QUARTZITE	1.9	--	2.5	0.5
NARROW, STEMMED	SURFACE	CHERT	0.5	1.9	N.M.	1.0

Ceramic Smoking Pipes

Feature 255 was the only intact deposit on Lot 5 to yield fragments of clay smoking pipes (Figure 67). Five of the total of 15 fragments derive from Level 1, a mixed Middle and Late Woodland deposit. Included in this group are fragments of two pipe stems, one of which (255-1-31) is similar to the stem of the tubular pipe associated with the Late Woodland interment in Feature 25A on Lot GHF16. The bit end of the untempered pipe is 1.0 cm in diameter. The stem contracts slightly from the bit end and then expands again, although for a maximum of only 1.1 mm in diameter on the portion represented. The surface of the pipe has been smoothed and perhaps burnished by a process leaving facets running parallel to the long axis.

One pipe bowl (255-1-33) in the collection from Level 1 is decorated similarly to several pipes from the Middle Woodland features on Lot M3. The pipe bears five rows of small punctations in a band directly below the rim, and the top surface of the lip also bears a row of punctations. Again, the punctations appear connected by an incised line. The pipe is made from a fine sandy paste.

Another decorated fragment in the collection is tentatively identified as a pipe bowl, although it could be from a small vessel. There are coil breaks at both ends of the sherd. Along one edge of the fragment can be seen two faint, closely spaced lines, probably incised, which run parallel to the coil breaks. The artifact is shell-tempered. The final fragment from Level 1 possibly derives from a platform pipe with a fine sandy paste.



Figure 67. Ceramic smoking pipes, Lot M5.

Four stem and six pipe bowl fragments were recovered from the lower levels of Feature 255. Each of the stem fragments derives from a tubular pipe. Three recovered from Level 2 are made from a sandy paste and expand gently from the bit end. The fourth stem, from Level 3, is shell-tempered and expands abruptly from the bit end. The bowl fragments from this portion of the collection all have plain surfaces and silty pastes. No form of decoration was identified on any of these specimens.

Bone and Shell Tools and Ornaments

No bone or shell artifacts modified for use as tools or ornaments were identified in the VDHR collection from Lot 5.

Ethnobotanical Remains

Charred plant food remains from two flotation samples from Feature 255, dating from the Middle Woodland, and five flotation samples representing four Late Woodland features--252, 257, 258,and 265--were analyzed (Gardner 1990a). Only 0.06 grams of plant food remains were recovered from the 4.5 liters of fill processed from Feature 255. Included were hickory nutshell (Carya sp.) (0.05 g), acorn shell (Quercus sp.) (trace amount), and maize (Zea mays) (0.01 g, cupule). The flotation sample containing the maize derives from Excavation Level 3 of Feature 255. While the ceramic artifacts recovered from this Middle Woodland deposit provide no evidence of contamination, the

site is multicomponent, and the possibility that the maize entered the deposit through the intrusion of Late Woodland postmolds cannot be eliminated.

The 9.1 liters of fill processed from the Late Woodland features on Lot 5 yielded 1.4 grams of plant food remains. Included in the samples were maize (0.12 g, cupule and kernel), hickory nutshell (1.28 g), acorn (trace amount), huckleberry (Gaylussacia sp.) (1 seed), grape (Vitis sp.) (1 seed), blueberry (Vaccinium sp.) (1 seed), and 1 unidentified seed. Seeds of two commensuals, bedstraw (Galium sp.) (1 seed) and pigweed (Amaranthus sp.) (2 seeds) were also recovered.

Summary

Based on evidence both from Pritchard's and the VDHR's excavations, Lot 5 was the site of intensive occupation during the Middle and Late Woodland periods. In addition to a few scattered Middle Woodland features identified by Pritchard and the VDHR, Pritchard's map of the property shows at least two clusters of Middle Woodland pits: one presumably centered roughly on VDHR grid point N360 E300 and one located in the vicinity of grid point N330 E270. The former cluster, Pritchard notes, was comprised of a six very large and deep pits (his Features 15, 16, 17, 19, 21, and 22) containing very little refuse. In VDHR excavations, a considerable amount of Middle Woodland ceramics was found deposited in a large tree hole (Feature 255) situated just east of the feature cluster. Two of the six pits in the cluster overlap, but it is not known which intrudes on the other.

Little information is available on the size and depth of the pits in the second cluster of features (Pritchard's Features 4, 5, 6, 7, 8, and 9), although Pritchard indicates the group included a burial (Pritchard's Feature 3). The features in this cluster are depicted on Pritchard's map as grouped more closely together than the cluster to the northeast, but none of the features intrudes on another. It is not known if any of the postmolds on Lot 5 are associated with the Middle Woodland occupation.

The pattern of Middle Woodland settlement on Lot 5 is similar to that encountered in VDHR excavations on Lot M3 in Excavation Area 106, where another cluster of pit features was found. On both properties, the large size and great depth of some pits suggest they served a storage function and imply occupation extending over the course of more than one season is represented. The close spatial arrangement of numerous pits in each cluster may indicate that each of the three settlement groups involved more than one family. The lack of overlap among features suggests that primarily only one occupation is represented by each cluster of features.

One difference between Lots 3 and 5 is the almost complete absence of shellfish and bone associated with Middle Woodland deposits excavated by VDHR on Lot 5. The features on Lot 3, in contrast, yielded an abundance of both materials. While bone might not be expected to have survived in the absence of shellfish, which reduce soil acidity, the lack of Middle Woodland shellfish deposits on Lot 5 must be a reflection of differences in site function, seasonality, or disposal patterns.

Information about the type of Late Woodland occupation represented on Lot 5 is sketchy. Two structural patterns of presumably domestic longhouses were identified on

Lot 5, but data for dating the structures, other than their size and shape, is not available. The numerous postmolds encountered across Lot 5 suggest it is likely other structures once existed on the property.

There is insufficient data available on mortuary features excavated on Lot 5 by either Pritchard or the VDHR to discuss their significance in relation to sociopolitical structure. The remaining Late Woodland features identified by the VDHR were grouped in two clusters. Three relatively small pits (Feature 257, 258, and, presumably, 262) were located in the vicinity of grid point N375 E290. These pits were roughly circular, measuring 1.4-2.4 ft in diameter and 0.6-0.7 ft in depth. Each was filled with shellfish debris. Three additional small pits lay in the vicinity of grid point N350 E335. Feature 182 was a cluster of ceramic fragments. Features 289 and 291 were 1 ft in diameter and 0.5-0.8 ft deep. The former contained a deposit comprised of ash and bone. A number of Late Woodland ceramics were also recovered from the plow-disturbed upper layer of a filled tree hole (Feature 255) in this area.

CHAPTER 9

CERAMIC ANALYSIS

Ceramic sherds are the most ubiquitous artifact recovered in VDHR excavations at Great Neck and have the potential to provide a variety of information about the Native American peoples who inhabited the site during the prehistoric period. Significant portions of Chapters 5, 6, 7, and 8 have already been devoted to describing the physical attributes of the ceramics recovered from each lot investigated by the VDHR. A simple classification system using two attributes--paste and surface treatment--was employed to link the artifacts to current regional ceramic typologies which enabled dating the prehistoric components at Great Neck within broad temporal frameworks. Spatial and contextual associations were also examined on each lot for the information they might provide on the temporal or cultural relationships among the populations who used these wares. Each of these aspects of the ceramic collections are reconsidered below with emphasis placed on synthesizing information gained from each of the four lots. Ceramic variability within a larger regional context is also examined in relation to questions of cultural affiliation and interaction among Native American populations who inhabited the Middle Atlantic area.

Middle Woodland Ceramics

Comparison of the ceramics recovered at Great Neck to existing regional typologies (e.g. Egloff and Potter 1982; Phelps 1983) indicates that the primary archaeological components at Great Neck date from the Middle and Late Woodland periods. The paste of Middle Woodland ceramics contains shell or sand inclusions, or both, and sherds are predominantly cord- or net-marked. Under the classification system used in the analysis conducted for this report, ceramics containing only shell inclusions in the paste as well as those containing both a mixture of shell and sand are referred to as "shell-tempered." The term "sand-tempered" is used to refer to ceramics containing no shell in the paste. The size and proportion of sand inclusions in both of these wares varies widely.

The shell-tempered Middle Woodland ceramics at Great Neck are roughly comparable to types within the Mockley series (Egloff and Potter 1982:103-104; Stephenson and Ferguson 1963:105-109). In general, the paste of the ceramics is tempered with moderate amounts of crushed shell, most frequently shell from the ribbed mussel. The paste often contains a significant proportion of sand inclusions as well. The vast majority of sherds are marked with impressions of cordage or knotted nets. Some sherds are marked with looped nets. Impressions of open-weave, weft-twined fabrics also occur, but are rare. Smoothing of the rim surface below the lip is common. Decoration, when it occurs, is usually confined to the lips of vessels, which may be notched or scalloped. Other forms of decoration are rare. Occasionally, the top of the

lip is marked with small punctations. One rim sherd in the collection is decorated with shallow incising on a plain surface. Another sherd is completely covered on the exterior surface with small punctations.

Our understanding of the form of Middle Woodland, shell-tempered vessels represented in the collections from Great Neck is not complete, but the most common basal form is flat-bottomed. The bases on flat-bottomed vessels are oval or circular in plan and range ca. 6-12 cm in diameter. Vessel walls expand outward as they rise from the base. This vessel form is hereinafter referred to as a "flat-bottomed, beaker vessel" following the terminology used by Painter (1977). A few conical and rounded bases are also present in the collection.

Rim profiles are most commonly straight or incurved. While some rims curve inward quite markedly, it is unknown whether bowls as well as taller jar forms are represented. Rim sherds which could be measured indicated vessel diameter ranges from 21 to 32 cm. A few rim sherds in the collections are configured in such a manner as to indicate they formed an open spout, or pouring lip.

Two of the ceramic collections described earlier in this report--samples from Lots M3 and M5--were sufficiently large to make statistically valid comparisons between some physical attributes (Table 28). Cursory examination of the collections from each lot shows them to be very similar. Both contain a high proportion of flat-bottomed, beaker vessels, and pouring rims are present in each. Several of the same decorative motifs also occur on the ceramic vessels, as well as the smoking pipes, in each collection.

Table 28. Comparison of Middle Woodland, shell-tempered ceramics from Lots M3 and M5.

ATTRIBUTE	LOT 3	LOT 5	SIGNIFICANCE
SHERD THICKNESS (BODY & RIM SHERDS)			
N	642	289	t=7.57367
MEAN (CM)	0.83	0.75	d.f.=929
STANDARD DEVIATION	0.15895	0.13944	p=2.3924 E-9
DECORATION (RIM SHERDS)			
N	78	35	Chi-square=8.28876
DECORATED	20	1	d.f.=1
NOT DECORATED	58	34	p=3.98913 E-3
RIM PROFILE (RIM SHERDS)			
N	78	35	Chi-square=3.30612
STRAIGHT/EVERTED LIP	30	19	d.f.=2
INCURVED	48	16	p=0.191463
BASAL FORM (BASAL SHERDS)			
N	12	15	
FLAT-BOTTOMED	9	15	N.A.
ROUND	1	--	
CONICAL	2	--	

Mean sherd thickness and the proportion of decorated rim sherds differ significantly between the two samples, however. Further, there is some difference in the frequency of certain rim forms associated with each sample, and only one sample contained vessels with conical and rounded bases as well as flat-bottomed forms. While the similarities between the collections indicate a shared cultural tradition, it is unclear whether the differences between the assemblages are the product of change through time or represent variation among contemporaneous sub-units of a single population.

Sand-tempered, Middle Woodland ceramics in the collections from Great Neck were classified into three generic types. So-called "fine sand-tempered" wares are the most common variety. These ceramics are characterized by a hard, compact paste containing a low to moderate proportion of very fine sand particles rarely larger than 1.0 mm in diameter. Cord- and net-marked exterior surfaces are most common, but a few vessels are marked with open-weave twined or coarse, closed-weave twined fabrics. No occurrences of decoration were identified in the collections. The few bases recovered are conical. Measurable rim sherds indicate vessel diameter ranges 11-16 cm at the mouth, but larger vessels are also probably represented.

Only small samples of ceramics classified as "medium sand-tempered" or "coarse sand-tempered" were recovered at Great Neck. The group of medium sand-tempered sherds is rather diverse, but is generally characterized by a paste containing a high proportion of sand particles ranging 1.5-2.5 cm in diameter. Exterior surfaces of sherds are marked with cords, nets, and open-weave, twined textiles. No good evidence on vessel form is available.

Only four sherds in the collection were classified as "coarse sand-tempered," and these all derive from the wall of the same vessel. The paste of this ware contains a moderate proportion of sand particles ranging 0.5-1.0 mm and 2.0-3.5 mm in diameter. The exterior surface of the vessel is marked with a knotted net.

Overall, shell-tempered wares are the predominant ceramic associated with Middle Woodland components at Great Neck, although the ratio of shell-tempered to sand-tempered wares is known to vary between areas of the site defined by current subdivision lots. In excavations by the VDHR, shell-tempered wares were found to be the predominant ceramic associated with the cluster of Middle Woodland pit features in Unit 106 on Lot M3. They also were found to predominate in Middle Woodland levels of the two large tree fall depressions (Features 255 and 261) on Lot M5. Pritchard's excavations indicated this property held two clusters of Middle Woodland pit features. Shell-tempered ceramics also constitute a significant proportion of the assemblage of Middle Woodland ceramics recovered by the VDHR on Lot GHF16, although they are outnumbered slightly by sand-tempered sherds in collections recovered from above the subsoil level in initial test squares. No Middle Woodland pit features were encountered within the areas opened during excavations on this lot, and little difference was found in the spatial distribution of shell- and sand-tempered wares across the property.

Shell-tempered wares also appear to be the dominant Middle Woodland ceramic associated with Lot M1 and the west edge of Lot M2, an area in which Painter encountered a dense array of Middle Woodland pit features in his excavations. In Green's collections from this area, 97% of Middle Woodland ceramics are shell-tempered

(Green 1987:Table 11). At the Addington site where numerous Middle Woodland pit features were encountered, 67% of vessels identified in JMUARC's study sample were classified as Mockley ceramics (Geier, Smith, Andrews, and Buchanan 1986:441-442, Table VC:1). The results of JMUARC's analysis are not directly comparable to the present analysis, however, since different classification systems were used. At least 78% of Addington vessels would likely be classified as Mockley under the system used in analysis for this report, since 8 of 25 vessels classified by JMUARC as Mount Pleasant ceramics (a Middle Woodland sand-tempered type [Phelps 1983:32-33]) were described as containing both sand and shell inclusions in the paste (Geier, Smith, Andrews, and Buchanan 1986:443, Table VC:2).

Middle Woodland sand-tempered ceramics have been recovered in at least small numbers from all lots investigated at the Great Neck site, but have been found in significant quantities in only a few areas. As noted above, sand-tempered sherds were found to slightly predominate over shell-tempered ceramics in collections recovered by the VDHR on Lot GHF16, although little difference was found in the spatial distribution of the two ceramics. In only one feature on Lot M3 were sand-tempered sherds (all from one vessel) predominant. Feature density in the vicinity of this find (Excavation Area 108) was low in comparison to Excavation Unit 106. In the collection from the small area investigated by Green on Lot M7, 93% of Middle Woodland ceramics are sand-tempered (Green 1987:Table 11). The few small pit features encountered in Green's excavations appear to be associated with the Late Woodland period. The Middle Woodland collection from the Addington site is also apparently comprised of a significant

proportion of sand-tempered sherds, although shell-tempered ceramics are predominant. Addington differs from other areas at Great Neck where sand-tempered wares are relatively abundant, since a number of Middle Woodland pit features were encountered at the Addington site.

In order to determine if the pit features at Addington were associated with sand- or shell-tempered ceramics, data on assemblages from twenty features were examined (Table 29). These features formed a linear arrangement of perhaps three clusters between grid lines N190 and N220 in JMUARC's excavation area (Figure 68). As a group, the features were found to be dominated by shell-tempered ceramics (72%). In only 6 of 20 features was the proportion of sand-tempered sherds greater than 40%, and the number of sherds recovered from these features was relatively small, ranging from 1 to 32.

Although attributes of paste and surface treatment associated with the shell- and sand-tempered ceramics reviewed above indicate the ceramics date from the Middle Woodland period (ca. 500 B.C. to A.D. 900) (Egloff 1985), radiocarbon determinations obtained by the VDHR from Great Neck provide a more precise estimate of their age. The overlap at two standard deviations among radiocarbon dates associated with three features on Lot M3 places the date of at least the shell-tempered ceramics at ca. A.D. 290-380. Two of these features contained only shell-tempered ceramics. Only 1% of sherds recovered from the third feature are sand-tempered. A fourth radiocarbon date of 1180 $\pm$100 B.C. obtained by the VDHR on Feature 255, Lot 5, is considered much too early to accurately date the Middle Woodland ceramics associated with the feature.

Table 29. Addington site ceramics.

FEATURE	SAND-TEMPERED CERAMICS		SHELL-TEMPERED CERAMICS		TOTAL
	N	%	N	%	N
180N F23	1	100.0	--	--	1
200 F1	1	100.0	--	--	1
200N F3	1	9.1	10	90.0	11
200N F6	6	23.1	20	76.9	26
200N F8	21	65.6	11	34.4	32
200N F10	53	37.8	87	62.1	140
200N F11	11	23.9	35	76.1	46
200N F17	5	71.4	2	28.6	7
200N F19	28	32.6	58	67.4	86
200N F23	7	30.4	16	69.6	23
200N F28	39	19.4	162	80.6	201
200N F33	5	16.7	25	83.3	30
200N F34	4	16.0	21	84.0	25
220N F5	13	86.7	2	13.3	15
220N F11	23	26.7	63	73.2	86
220N F12	--	--	1	100.0	1
220N F13	17	34.0	33	66.0	50
220N F22	10	16.4	51	83.6	61
220N F28	13	14.9	74	85.0	87
220N F30	9	60.0	6	40.0	15
TOTAL	268	28.4	676	71.6	944

Note: Ceramic sherd data is drawn from Geier, Cromwell, and Hensley 1986:Appendix E. Fabric-marked and simple stamped sherds are omitted. Sherds counted here as sand-tempered include the following temper categories of Geier et al.: coarse sand; fine sand; and fine sand, natural inclusions. Sherds counted here as "shell-tempered" include the following temper categories of Geier et al.: shell; shell in sandy clay; burned shell; coarse sand and shell; and fine sand with some shell.

Figure 68. Plan of archaeological features in section of the Addington site.

Adapted from Clarence R. Geier, T. Ted Cromwell, and Steven L. Hensley, Archaeological Mitigation of Two Components (44VB9 and 44VB92) of the Great Neck Site Complex, Virginia Beach, Virginia. Volume II: The Addington Site (44VB9), Report of Findings. James Madison University Archaeological Research Center, Harrisonburg, Virginia, 1986, Map 2. Postmolds and clay-domed features are eliminated from plan.

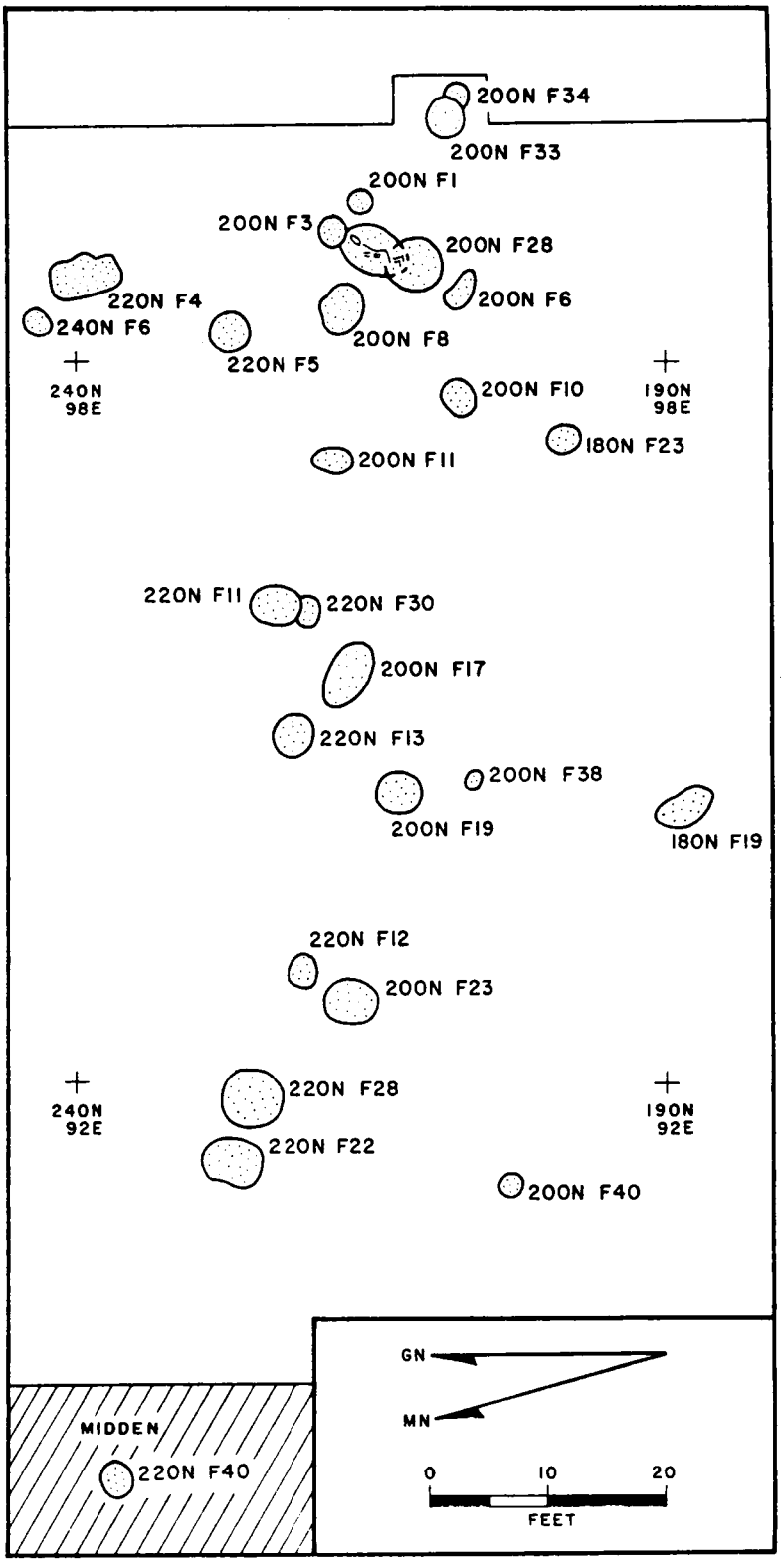

200N F34
200N F33
200N F1
200N F3
200N F28
220N F4
200N F6
240N F6
200N F8
220N F5
240N 98E
200N F10
190N 98E
180N F23
200N F11
220N F11
220N F30
200N F17
220N F13
200N F38
200N F19
180N F19
220N F12
200N F23
240N 92E
220N F28
190N 92E
220N F22
200N F40
GN
MN
MIDDEN
220N F40
0
10
20
FEET

Figure 68.

The VDHR dates from Great Neck associated with shell-tempered, Middle Woodland ceramics coincide well with two of the radiocarbon assays obtained by JMUARC at the Addington site. Feature 200N F28, dated A.D. 230 ±60, contained sherds from eight shell-tempered, net- or cord-marked vessels and two shell-tempered, fabric-marked vessels. Feature 200N F10, dated A.D. 300 ±70, contained sherds from six shell-tempered, cord- or net-marked vessels; two sand-tempered, net-marked vessels; and two shell-tempered, plain and incised vessels (Geier, Smith, Andrews, and Buchanan 1986:441-442, Table VC:1). (Only conical vessels were identified among the Middle Woodland ceramics recovered at Addington [Geier, Smith, Andrews, and Buchanan 1986:456, Table VC:15]). It should be noted that it is assumed here that JMUARC's dates are reasonably accurate, and that fabric-marked and simple stamped sherds recovered from the features are late intrusions. This interpretation differs from that of JMUARC researchers (Geier, Smith, Andrews, and Buchanan 1986:329-330).

The radiocarbon dates for Middle Woodland, shell-tempered ceramics obtained by the VDHR from Great Neck and by JMUARC from Addington fit well within the early temporal range of Mockley ceramics thus far established in the Middle Atlantic region. Mockley ware has been radiocarbon dated in Virginia, Maryland, and Delaware from ca. A.D. 200-900 (Egloff and Potter 1982:103-104). Dates within the Virginia Coastal Plain range from A.D. 20 ±70 (Edwards et al. 1989:63) to A.D. 880 ±60 (Waselkov 1982:285). The Mockley-like ceramics associated with the dated features on Lot M3 at Great Neck challenge previous understandings of change in vessel form over time, however.

Before the radiocarbon dates from Lot 3 at Great Neck were obtained, flat-bottomed, beaker vessels were generally considered to date from the late Early Woodland or the very early years of the Middle Woodland based on radiocarbon dates of 660 ±60 B.C., 660 ±85 B.C., and 810 ±260 B.C. obtained by Painter (1978) from the Currituck site in North Carolina. Currituck is located five miles south of the Virginia-North Carolina border on the west shore of Currituck Sound. Painter's (1977:47-52) description of ceramics from the site indicates that flat-bottomed, beaker vessels in jar or bowl forms are the predominant, if not only, vessel forms represented in the collection. A variety of pastes are associated with these vessels, which can contain shell, sand, or clay inclusions, or a mixture of more than one of these materials. Exterior surfaces are marked with cord, fabric, or net impressions. The rim of one vessel from Currituck is modified to form a pouring lip. Decoration on the ceramic vessels is uncommon (Painter, personal communication 1990), although tubular ceramic pipes in the assemblage are decorated with "simple lines of punctations or crude rouletting in an open cross-hatched or diamond design" (Painter 1977:60). These motifs are similar to those identified on ceramic pipes and bone ornaments associated with the Middle Woodland contexts excavated by the VDHR on Lot M3 and M5 at Great Neck.

Discrepancies between the dates obtained thus far on flat-bottomed, beaker ceramics are puzzling. Within each group of samples assayed by Painter or the VDHR from Currituck and Great Neck, the radiocarbon dates appear internally consistent. If each group is accurate, a relatively conservative ceramic vessel and pipe tradition identifiable over the course of ca. 1000 years is indicated. Changes over time include

the early abandonment of sherd, or clay-tempered wares and the eventual addition of conical vessels to the inventory of forms. While both trends conform to current understandings of ceramic development within the Virginia Coastal Plain (see Egloff et al. 1988:17-23, 28-32), it might be advisable at present to consider the vast temporal range of this tradition with some skepticism.

Middle Woodland sand-tempered wares at Great Neck can be dated only through association with the Mockley-like shell-tempered wares, since no radiocarbon determinations on contexts with a preponderance of sand-tempered wares are available. The close spatial association of Middle Woodland sand- and shell-tempered ceramics on Lot GHF16, where the two ceramics are represented in roughly equal numbers, suggests the ceramics are at least roughly contemporaneous.

It remains to be determined whether differences among the three series of sand-tempered ceramics identified at Great Neck are temporally significant, although several researchers have previously suggested that among Middle Woodland sand-tempered ceramics, the size of clastic particles increases through time (Coe 1964:99-105, Table 10; Egloff 1985:238-239; McLearen and Mouer 1989:9-11; Phelps 1983:33; Smith 1984:32). If this is true, the fine sand-tempered wares at Great Neck may date from ca. 500 B.C. to A.D. 200, a span of time comparable to Popes Creek ware in the Coastal Plain of northern Virginia (Egloff and Potter 1982:99). The medium sand-tempered ceramics may be later. These ceramics are roughly comparable to Phelps's Mount Pleasant series (Green, personal communication 1990), which has been radiocarbon dated in North Carolina from ca. A.D. 200 to 800 (Phelps 1983:32). Distinctive coarser sand-

or pebble-tempered ceramics in the Prince George series have been recovered in association with radiocarbon samples yielding dates of 420 B.C. and 690 B.C. in James City County (Hunter, Hodges, and Blanton 1993) and dates ranging from A.D. 250-480 in Henrico County (McLearen and Mouer 1989:7). The coarse sand-tempered ceramics identified at Great Neck on Lot 5 may not be directly comparable to this ware, however.

While the best information currently available indicates the various Middle Woodland ceramics represented at Great Neck are at least roughly contemporaneous, some evidence suggests that the sand- and shell-tempered wares derive from distinct ceramic traditions likely representing separate population groups. Consideration of the spatial distribution and contextual associations of shell- and sand-tempered wares at Great Neck, while not unequivocal, provides some support for this conclusion. In associations at Great Neck the two ceramics frequently co-occur, but either one or the other usually overwhelmingly predominates. Only in collections from Lot GHF16 are the ceramics about equally represented.

Differences in the proportion of shell- and sand-tempered ceramics in various areas at Great Neck are not sufficient, however, to conclude that the two represent separate population groups. Differences in ceramic paste do not necessarily reflect profound cultural differences, since clay paste may vary due to the vagaries of clay sources used by a single population within a specific locale, or from differences in sources available to a population as it travels throughout its territorial range. It is important, then, that analysis of the Middle Woodland ceramics from Great Neck indicated the existence of a number of other differences in the physical attributes of the

sand- and shell-tempered wares. Both the degree and type of variation between these two major ceramic groups appear sufficient to suggest that each represents a separate Middle Woodland population group.

Paste is not the only characteristic which distinguishes the Middle Woodland shell- and sand-tempered ceramics at Great Neck. In fact, as noted several times previously, many sherds classified in the analysis as shell-tempered contain a significant proportion of sand inclusions. The decision made early in the analysis to separate sherds containing any amount of shell in the paste from those containing only sand inclusions appears supported by later findings, however. Comparison of the two groups indicates that, in addition to their temper, sand- and shell-tempered wares are distinguished also by surface treatment, vessel form, and decoration. While the two groups share some surface treatments (marking with cord, net, and open-weave twined textiles), coarse wicker impressions are found only among the sand-tempered wares. The majority of shell-tempered basal sherds are derived from flat-bottomed vessels, a form not represented among the sand-tempered wares. Finally, while the frequency of decoration within separate shell-tempered assemblages at Great Neck varies, the types of decoration present are similar between collections. No occurrences of decoration were identified among the sand-tempered wares.

The regional distribution patterns of ceramics comparable to the sand- and shell-tempered wares recovered at Great Neck also suggest that the two traditions represent separate population groups. Sub-regional differences in the ceramic complexes of the Virginia Coastal Plain have been recognized since Clifford Evans (1955) published the

first systematic analysis of ceramics in the state. Evans divided the Coastal Plain into two ceramic areas, noting "...each area has a slightly different pottery emphasis" (Evans 1955:96). His Coastal Virginia Ceramic Area, dominated by shell-tempered wares, extended eastward from a line running southeast from the Fall Line on the Potomac and Rappahannock rivers to the Dismal Swamp. Evans noted sand-tempered ceramics predominate in his Southeast Virginia Ceramic Area, which included the drainages of the Meherrin, Nottoway, and Blackwater rivers as well as portions of the Appomattox, James, Chickahominy, and Pamunkey drainages within the Inner Coastal Plain and Fall Line Zone.

Research conducted since Evans's landmark study has confirmed the existence of sub-regional differences within the Virginia Coastal Plain, and our understanding of these has improved with additional information now available on the temporal relationships between wares. Ceramics were first produced within the Middle Atlantic region ca. 1200 B.C. Similar in form to Late Archaic vessels carved from steatite, the earliest ceramics were plain-surfaced, rectangular or oval bowls with flat bases and lug handles. Several types of these ceramics have thus far been identified in Virginia, suggesting that certain regional tendencies in choice of temper existed within the Virginia Coastal Plain even at this early date (Egloff et al. 1988:17-23; Egloff and Potter 1982; Mouer 1991).

By ca. 600 B.C., these wares were largely replaced by sand-tempered ceramics produced predominantly in forms with conical bases. North of the James River, this change is represented by Accokeek, a cord-marked ceramic dated ca. 600 B.C.- 300 B.C., which is followed by Popes Creek, a predominantly net-marked ceramic dated ca.

500 B.C. - A.D. 200. Contemporary ceramics within southeastern Virginia include types within the Stony Creek and Prince George series. Cord-, net-, and fabric-marked vessels are commonly found in these two series, and the presence of fabric-marking distinguishes this area from more northerly regions within the Virginia Coastal Plain (Egloff and Potter 1982:99). Stony Creek vessels are tempered with medium-sized sand particles, and are conoidal with straight rim profiles. Prince George is a very distinctive ware with pebble-sized temper, and decoration consisting of a row of large and deep punctations below the rim is common. Ceramic trends within the northern Coastal Plain of North Carolina at this time are similar to developments within southeastern Virginia, although the former area exhibits some additional traits which suggest more contact with populations to the south. Phelps (1983:29-31) proposes that Marcey Creek-like vessels in the northern Coastal Plain of North Carolina were replaced by the Deep Creek series, a coarse sand-tempered ceramic with cord, net, fabric, and simple stamped surfaces (Phelps 1983:29-31).

By ca. A.D. 200, sub-regional differences among the ceramics of the Virginia Coastal Plain are more pronounced. In Evans's Coastal Virginia Ceramic Area, sand-tempered wares were replaced by the shell-tempered Mockley series, which includes cord- and net-marked types. North of the James River, Mockley ceramics are found as far west as the Fall Line, but are predominant primarily in the Outer Coastal Plain, with their frequency declining above the saltwater-freshwater transition zone (Egloff and Potter 1982:103-104; McLearen and Mouer 1989:8). Ceramics in Evans' Southeast Virginia Ceramic Area at this time represent a continuation of earlier traditions in this

subregion. Recent research suggests that Prince George ware was used up through the early temporal range of Mockley ware (McLearen and Mouer 1989). Sand- and grit-tempered ceramics with cord-, net-, and fabric-marked surfaces continue to dominate the region through the second half of the Middle Woodland (McLearen and Mouer 1989; Smith 1983). During this time ceramics in the northern Coastal region of North Carolina continue to display a strong affinity to traditions found within the upper reaches of the Chowan River drainage in southeastern Virginia. In North Carolina during the second half of the Middle Woodland the predominant ceramic is Mount Pleasant, which is tempered with sand, grit, or pebbles, and marked with fabric, cord, or net impressions (Phelps 1983:32). Mockley ceramics have been found on only a few sites in this area, usually in only low frequencies (Green 1987:Tables 25-30; Phelps 1983:33-34).

The relative proportions of sand- and shell-tempered ceramics at Great Neck indicate the locale's strongest affinities during the Middle Woodland period are with ceramic traditions characteristic of the Outer Coastal Plain of Virginia north of the James River. As in this sub-region, the predominant ceramics at Great Neck are shell-tempered, and assemblages from some portions of the site (Lot GHF16 and the Addington site) are indistinguishable from the Mockley series.

Sand-tempered ceramics from Great Neck are similar to types popular along the Nottoway, Meherrin, and Blackwater River drainages in southeastern Virginia and the Chowan River drainage in the Coastal Plain of North Carolina. Some sand-tempered ceramics at Great Neck have fabric-marked surfaces, an attribute characteristic of these areas. It might also be noted that Painter has recovered grit-tempered ceramics at the

nearby Long Creek midden site which bear punctate decoration reminiscent of motifs found on Prince George ware (Painter 1967:96-98, Figures 23-24). Similar decoration has been seen by the author in a collection of cord-marked, sand-tempered ceramics recovered by an avocational archaeologist from Occracoke Island on the Outer Banks of North Carolina.

Differences in the physical attributes of sand- and shell-tempered Middle Woodland ceramics at Great Neck, differences in their relative frequency and contextual associations across the site, and their similarities to ceramics characteristic of separate subregions of the Coastal Plain suggest Great Neck was used by at least two distinct population groups during the latter half of the Middle Woodland. The site was occupied most frequently and more intensively by a primarily estuarine-oriented population which produced shell-tempered ceramics. The recurrent associations of the shell-tempered ceramics with clusters of large pit features, some perhaps used for storage, suggests Great Neck was an important locale visited again and again in the cyclical movement of these peoples within their territorial range. Areas much further south below the North Carolina-Virginia border, and to the west along the interior drainages of the Chowan River, were used only infrequently by these peoples.

The relatively low frequency of sand-tempered ceramics as well as the types of contexts with which they are associated at Great Neck suggest the population responsible for these artifacts used the locale less frequently and for periods of shorter duration. Sand-tempered ceramics are less commonly associated with pit features at Great Neck than are the shell-tempered ceramics; and in sections of the site where the ceramics co-

occur, sand-tempered ceramics most often constitute the smaller proportion of the Middle Woodland ceramic assemblage. This pattern might be contrasted against collections Green recovered from along the north shore of Broad Bay in Seashore State Park (Table 30). Middle Woodland sites in this area are relatively small and discrete when compared to the occupation area covered by the Great Neck site. Of six sites surveyed by Green on the north shore, the Middle Woodland ceramics from four are dominated by sand-tempered wares (68-85%) (Green 1987:Tables 4, 6, and 11). The sand-tempered wares at Great Neck may represent a people whose core territory was situated to the west in southeastern Virginia and who practiced an adaptation which was more interior, riverine oriented. The regional distribution of similar ceramics suggests that this population had frequent interactions with or were perhaps even identical to those situated further down the Chowan River drainage in estuarine portions of the North Carolina Coastal Plain.

While the predominance of shell-tempered, Middle Woodland ceramics at Great Neck seemingly indicates a close affinity to areas to the north within the Outer Coastal Plain of Virginia, the frequency of flat-bottomed, beaker vessels suggests the peoples who used the locale were in at least some ways distinct from these other populations. To date, flat-bottomed, beaker vessels with either shell- or lithic-tempered pastes have been reported from the Croaker Landing site (44JC70) (Egloff et al. 1988:28) and site 44JC359 (Hunter, Hodges, and Blanton 1990) in James City County; site 44PM13 in Portsmouth (Egloff et al. 1988:28); possibly site 44HT55 in Hampton (Edwards et al. 1989:61) in Virginia; and the Waratan site (31CO1) in Chowan County, North Carolina (Painter 1963). At none of these locations have flat-bottomed vessels been found to be

Table 30. Ceramic collections, north shore of Broad Bay.

CERAMIC WARE	SITE NUMBER					
	44VB11	44VB13	44VB14	44VB15	44VB16	44VB40
COLINGTON	77	227	4	12	1008	477
MOCKLEY	27	26	1	13	231	71
MT. PLEASANT	58	96	7	8	96	391
DEEP CREEK	–	–	–	–	1	1
CLAY-TEMPERED	–	–	–	–	5	–
OTHER	1	–	–	–	19	18
TOTAL	163	349	8	21	1360	958

Source: Green 1987: Table 4, 6, and 11.

as frequent as at Great Neck or Currituck, although only Waratan appears to have been occupied as intensively as these two sites. Review of these occurrences suggests the popularity of flat-bottomed, beaker forms was a sub-regional phenomenon largely restricted to the Coastal Plain of southeastern Virginia and northeastern North Carolina. At Great Neck, this phenomenon was colored by other sub-regional innovations in ceramic technology. Radiocarbon dates from the Currituck site indicate that flat-bottomed, beaker vessels were first produced by at least ca. 660 B.C. This change from the flat-bottomed forms associated with Marcey Creek-like ceramics is likely functionally comparable to the introduction of conical-bottomed vessels in areas to the north at about the same time. Collections of rim and body sherds from Great Neck analyzed for this report suggest these two vessel forms likely differ significantly only in basal structure.

Radiocarbon dates from Lot M3 at Great Neck indicate flat-bottomed beaker vessels remained popular up to ca. A.D. 400 in the Coastal Plain of northeastern North Carolina and southeastern Virginia, although conical vessels also began to be produced prior to this time. The seeming anomalous association of beaker vessels with a Mockley-like paste at Great Neck at this late date might be explained by other early developments in ceramic technology within this region. Painter's (1977:48) identification of a shell-tempered ceramic (Waterlily Plain) in forms similar to those associated with Marcey Creek has led some researchers to suggest that shell-tempered ceramic traditions spread throughout the Outer Coastal Plain of the Middle Atlantic region from early origins within the coastal areas of southeastern Virginia and northern North Carolina (Custer 1989:276-277). Recent early radiocarbon dates of A.D. 20-40 associated with Mockley-

like ceramics at Hampton (Edwards et al. 1989:63) may provide support for this interpretation. The shell-tempered, flat-bottomed beaker ceramics associated with Lot 3 at Great Neck may represent, then, an expression developed from two earlier technological traditions within this subregion.

Late Woodland Ceramics

Two types of ceramics dating from the Late Woodland period were identified in the analysis of collections from Great Neck. Both are shell-tempered ceramics distinguished from each other and from shell-tempered, Middle Woodland ceramics by exterior surface impressions which are either fabric-marked or simple stamped. Impressions on fabric-marked vessels are from relatively fine, plain weave or twined textiles. On simple stamped vessels, the edges of single, stamped impressions are crisp and straight, and the bottom surfaces relatively flat. The configuration of the impressions suggests the vessels were beaten with a carved paddle or a paddle wrapped with material similar to a leather thong. Occasionally, striations running parallel to the long axis of the impression, suggestive of wood grain or a material more fibrous than leather, are visible.

Except for differences in surface treatment, the two Late Woodland ceramics represented at Great Neck appear very similar. The paste characteristic of each ceramic is comprised of a silty clay tempered with a moderate to high proportion of crushed ribbed mussel shell. Jars with subconoidal bases are the only vessel form recognized in

the collections. Rims most commonly have a straight profile, but they may flare outward a bit at the lip. Some rims are incurved slightly. Mean sherd thickness in analyzed collections of fabric-marked sherds from Lots M5 and GHF16 ranges from 0.76 to 0.81 cm, while mean thickness of simple stamped sherds in collections from Lots M5, M11, and GHF16 ranges from 0.71 to 0.78 cm.

Each ware may be decorated with motifs executed with incising or punctation. Similar design motifs are found on the ceramics, although fabric-marked sherds (12-14%) are more frequently decorated than those which are simple stamped (3-6%). Of the twelve groups of decorative motifs defined for Townsend ware by Griffith (1980, 1982), six are represented in collections of shell-tempered, fabric-marked or simple stamped ceramics from Great Neck analyzed earlier in this report. These are motif numbers R11, R12, R14, R16, R17, and R18.

Decorative motifs appearing on both fabric-marked and simple stamped ceramics include bands of incising oriented parallel to the rim. Also common to both wares are motifs consisting of incised lines forming triangles or chevrons which may surmount, lie below, or perhaps bridge a band(s) of incising (fabric-marked sherds); overlie a band of incising (fabric); or overlie a band of decoration consisting of parallel incised lines oriented at an angle to the rim (simple stamped). On fabric-marked sherds, a row of punctations may be added below or above a band of incising. Other motifs noted on fabric-marked sherds include spaced groups of parallel incised lines extending down from and perpendicular to the rim; a triangular element filled with incising; and an isolated

open triangular element. The only other type of decoration observed on a simple stamped sherd is a line of punctations placed directly below the lip.

The Late Woodland fabric-marked or simple stamped ceramics at Great Neck are comparable, respectively, to the types Rappahannock Fabric-Impressed and Rappahannock Incised in the Townsend series (Blaker 1963:14-22) and the type Roanoke Simple Stamped (Blaker 1952). These types are equivalent to fabric-marked and simple stamped ceramics subsumed under the shell-tempered Colington series defined by Phelps (1983). Townsend ceramics have been recovered in contexts dating from A.D. 945 $\pm$65 (Outlaw 1990:85) to A.D. 1590 $\pm$120 (MacCord 1965) in Virginia. Phelps has obtained radiocarbon dates ranging from A.D. 860 $\pm$85 to A.D. 1315 $\pm$70 on Colington ceramics in North Carolina (Phelps 1982:27). Based on its recovery in early contact contexts at Fort Raleigh in North Carolina (Harrington 1948) and the Kicotan (Kecoughtan) site in Hampton, Virginia (Blaker 1952), Roanoke Simple Stamped has been suggested to be diagnostic of the late prehistoric or contact periods (Green 1987:133-134). As noted previously, Painter (1981) obtained a radiocarbon date of A.D. 1515 $\pm$70 on a pit feature containing predominantly Roanoke Simple Stamped on Lot M6 at Great Neck. More recently, a series of radiocarbon dates (not calibrated) of A.D. 1320 $\pm$90, A.D. 1470 $\pm$50, A.D. 1500 $\pm$100, A.D. 1740 $\pm$50, and A.D. 1790 $\pm$50 were obtained from the Amity site in North Carolina where 69% of Colington ceramics recovered were simple stamped, 24% plain, and 7% unidentified (Gardner 1990b:42-44, 49). Gardner has concluded that the Native American occupation represented at Amity by Colington ceramics dates from the mid-17th century, and suggests that a "sizable" proportion of

Colington Simple Stamped sherds is diagnostic of the post-contact period (Gardner 1990b:49-50).

Two new radiocarbon dates associated with Roanoke Simple Stamped ceramics were obtained by the VDHR at Great Neck. A date of A.D. 1510 $\pm$50 was derived from Feature 163 on Lot M11. Eighty-nine percent of the 150 ceramic sherds recovered from the feature are shell-tempered, simple stamped, while 3% of the sherds are shell-tempered, fabric-marked. An earlier date of A.D. 1330 $\pm$80 was obtained on Burial 29A on Lot GHF16. A sample of fill screened from the burial yielded 187 sherds (Green 1987:Table 11): 46% shell-tempered, simple stamped and 13% shell-tempered, fabric-marked. The new dates from Great Neck may provide evidence that simple stamping became popular as a surface treatment earlier than has previously been understood. The three radiocarbon dates from Great Neck overlap at two standard deviations in the range A.D. 1410-1490. No European artifacts have yet been recovered in association with aboriginal materials at Great Neck to indicate the site was occupied during the post-contact period by Native American peoples.

Several additional lines of evidence from Great Neck appear to support the proposition that the shell-tempered, fabric-marked and simple stamped ceramics derive from a single cultural tradition in which the use of simple stamped vessels became relatively more popular through time. It should be noted, however, that these arguments are dependant upon certain unproved assumptions about site formation processes. The two radiocarbon dates from Lots M11 and GHF16, for example, appear to indicate a marked increase in the popularity of simple stamped vessels relative to fabric-marked

vessels over the period represented. The later of the two mean dates is associated with the ceramic collection with the higher proportion of Roanoke sherds, but we have no evidence to demonstrate that this particular assemblage from the fill of one feature is necessarily representative of the full range of vessels in use at that time. The dates also overlap at the two sigma range.

On Lots M5 and M11, the relative age of Roanoke and Townsend ceramics was assessed by comparing the condition of the two wares in collections from four features. In features in which Townsend sherds were predominant or Townsend and Roanoke sherds were about equally represented, the fact that neither ceramic was found to exhibit more weathering than the other suggests they were used contemporaneously. In the two collections dominated by Roanoke ceramics, the few Townsend sherds were markedly more weathered. The relative condition of the two ceramics may indicate the Townsend sherds were older materials eventually incorporated into later deposits, but, again, it cannot be confirmed whether these assemblages are representative of the Late Woodland occupation. Differences in the relative proportions of Townsend and Roanoke sherds from Lot 16 recovered from the fill of two burials associated with the palisade and in plowzone contexts also may indicate an increase in the use of simple stamping through time. Fabric-marked sherds are predominant in the burials, while simple stamped sherds are predominant in plowzone contexts. The plowzone collection is presumed to be representative of the range of ceramics produced throughout the entire Late Woodland occupation on the property.

The association of Townsend and Roanoke ceramics with Late Woodland components at Great Neck fits well with what has previously been known about the regional distribution of each of these types. The distribution of Townsend ceramics is coterminous with the Mockley ceramics which preceded it, although more extensive. Townsend is found throughout the Coastal Plain of Virginia, Maryland, and southern Delaware except for some far interior portions of southeastern Virginia and, during the second half of the Late Woodland, the Inner Coastal Plain along the Potomac River drainage (Egloff 1985:235, 239-241; Egloff and Potter 1982:109; Griffith 1982:56). The distribution of shell-tempered, fabric-marked ceramics also extends southward within the Coastal Plain, beyond the boundary of shell-tempered Middle Woodland ceramics. Phelps (1983:39) suggests the southern boundary of the distribution of Colington ceramics lies along the southern side of the Neuse River estuary in North Carolina. Colington has been found in significant quantities along the Chowan drainage as far inland as the confluence of the Meherrin and Chowan rivers (Phelps 1982:12-13). It is distributed even further inland within this drainage along the Nottoway River, and is the predominant ceramic at the Hand site (44SN22) near Franklin, Virginia (Smith 1984). Colington comprises only a minor portion of collections from along the Roanoke and Cashie rivers west of Plymouth, North Carolina (Phelps 1982:27).

Roanoke Simple Stamped is not distributed as widely as shell-tempered, fabric-marked ceramics. The simple stamped ceramic has yet to be identified in assemblages in Maryland and Delaware or along the Rappahannock and Potomac drainages in Virginia. While it is increasingly being found at some presumed Protohistoric or early

Contact period sites within the Inner Coastal Plain within the James River drainage as far upriver as the fall line (Hodges 1993b; McLearen and Binns 1992), Roanoke Simple Stamped is most common in areas of the Coastal Plain of southeastern Virginia and northeastern North Carolina where shell-tempered, fabric-marked ceramics are also found (Egloff and Potter 1982:111; Green 1987:Figure 153; Phelps 1983:39).

Patterns in the distribution of Late Woodland ceramics in Virginia and North Carolina appear to confirm information derived from ethnohistoric sources on the major linguistic and cultural divisions among native populations at the time of European contact, and thus are potentially useful lines of evidence in understanding political, social, and economic interactions among these peoples. The geographic distribution of shell-tempered wares is essentially coterminous with the distribution of Algonquian-speaking peoples at the time of contact (Egloff 1983:241-242; Feest 1978b:253; Holland 1966; Phelps 1983:). West of the Fall Line, the ceramics of contemporary Siouan-speaking populations of the Virginia Piedmont are lithic-tempered wares with predominantly fabric (Albemarle [Evans 1955:39-44]), cord (Potomac Creek [Stephenson and Ferguson 1963:113-120]), or net-marked (Dan River [Coe and Lewis 1952; Gardner 1980]) surfaces. Abutting the territories of Algonquian peoples on the southeastern border of their range were Iroquoian-speakers who inhabited the outer Piedmont and Inner Coastal Plain of southeastern Virginia and northern North Carolina (Boyce 1978:282, Figure 1). The ceramics in this region are lithic-tempered and predominantly fabric-marked or simple stamped, and are defined in various subregions as Cashie (Phelps 1083:43), Branchville (Binford 1961), or Gaston (Coe 1964). Little is known

about populations in the region directly south of the Neuse River in the North Carolina Coastal Plain, although they are suggested to be Siouan speakers. The predominant ceramics in this region are shell-tempered with cord-, net-, fabric-marked, or plain surfaces (Phelps 1983:48).

The distribution of simple stamped ceramics within these regions is potentially significant in understanding alliances and interactions among Native American peoples. The high proportion of shell-tempered, simple stamped ceramics in several contexts at Great Neck suggests that populations at the site were more closely affiliated with Algonquian groups within the North Carolina Coastal Plain than with those north of the James River in Virginia. This is indeed the situation suggested by ethnohistoric sources.

By 1607 a large number of the Native American populations within the Coastal Plain of Virginia were united under the Powhatan chiefdom. Named after its paramount leader, this political entity included approximately 31 districts encompassing lands east of the Fall Line lying between the south bank of the Potomac River and the south bank of the James, and including the lower Virginia Eastern Shore (Turner 1976). Beginning with a core area comprised of six to nine districts inherited sometime during the late 1500s, Powhatan incorporated additional districts into the chiefdom through warfare or the threat of hostilities (Feest 1978a:254; Turner 1976).

Based on information obtained from an exploration party sent out from the English colony at Roanoke in the late fall of 1585, the Great Neck locale is known to have been included within the territory of the Chesapeake Indians. An engraving by Theodore de Bry of the John White-Thomas Hariot Map of the Coast of Virginia (Figure

69) indicates that the Chesapeake occupied possibly three major villages: Apasus and Chesepiooc on the Lynnhaven River and Skicoak on the Elizabeth River (Quinn 1985:107; see also McCartney [Geier, Cromwell, and McCartney 1985:207-208] who argues that Skicoak may instead be the village of the Nansemond located on an island in the Nansemond River). The Chesapeake appear to have had peaceful relations with Algonquian groups in North Carolina and may have entered into alliances with them on occasion. Ralph Lane included them when enumerating the Native American peoples who Wingina (Pemisapan), the chief of the Roanoke, was attempting to enlist in a conspiracy against the English in the spring of 1586 (Lane 1982:38). Powhatan is said to have "extinguished" the Chesapeake either shortly before or shortly after the establishment of the English colony at Jamestown (Rountree 1989:25-27; Wright and Freund 1953:104-105, 108). It is unclear whether the threat posed to Powhatan by the Chesapeake stemmed from purely indigenous developments or involved European contact and settlement near or within Chesapeake territory (Quinn 1985:360-368; Rountree 1989:140-142, 1990:10, 25; Turner 1985:209-211). Writing in 1610-11, Strachey noted that the "new Inhabitants that now people Chessapeak again (the oled extinguished as you have heard upon the Conceipt of a prophesye)" were at peace with Powhatan, but advised that they could be easily persuaded to ally with the English against the paramount chief (Wright and Freund 1953:108).

The fact that simple stamped surface treatment is found within the ceramic traditions of both Algonquian populations in northeastern North Carolina and southeastern Virginia and Iroquoian populations who inhabited regions to the west suggests these two

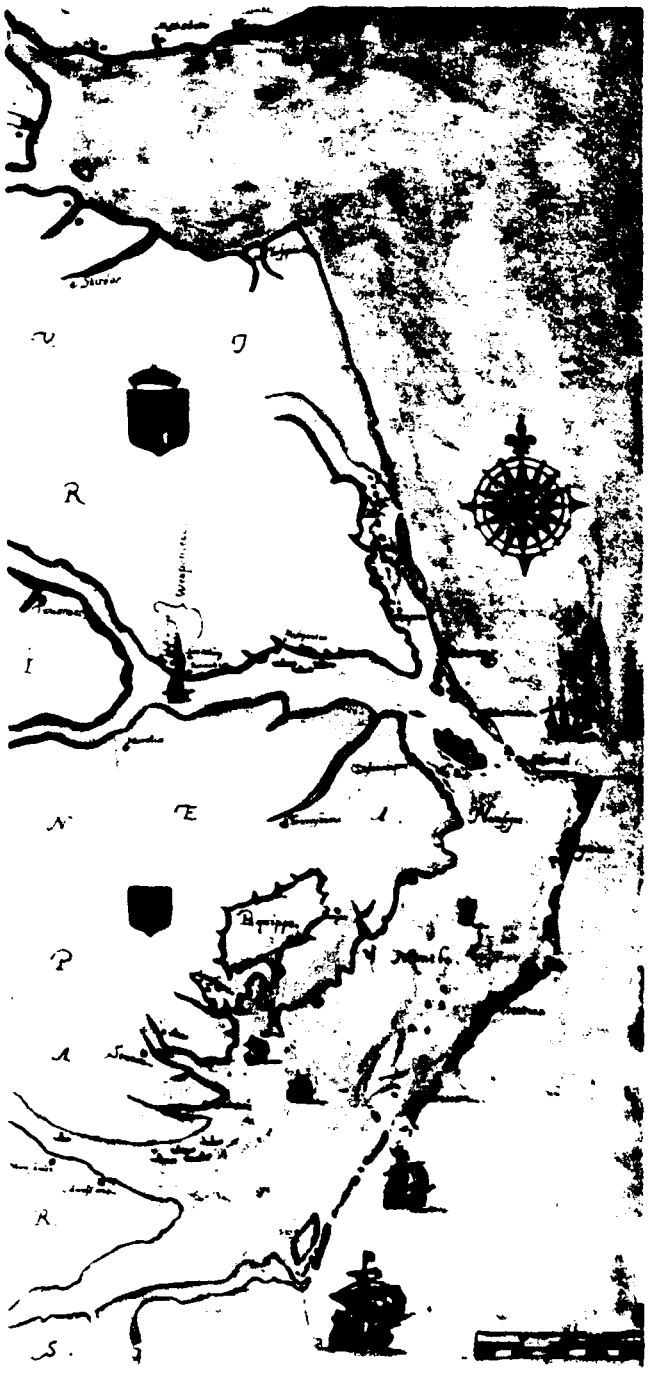


Figure 69. De Bry etching of White-Hariot map of the coast of Virginia. Source: Stefan Lorant, ed., The New World: The First Pictures of America. Duell, Sloan, and Pearce, New York, 1946, Plate 1).

groups had frequent interactions. The exact nature of these as represented by the distribution of ceramic types is difficult to interpret, however. Phelps (1982:27) has reviewed the occurrence of Colington ceramics along the Roanoke and Cashie rivers within the Interior Coastal Plain and has interpreted the Colington ceramics as vessels traded to Iroquoian groups. Similarly, Green (1987:131) has suggested Cashie ceramics recovered from Roanoke Island are a reflection of "riverine exchange between coastal Algonquian and interior Iroquoians." The results of field surveys by Smith (1984: 133-134, 143, 149, Table 17, Maps 8 and 13) indicate that ceramics believed representative of both Algonquian and Iroquoian groups are common along the entire course of the Nottoway River in Southampton County, Virginia. At present it is difficult to determine whether the co-occurrence of the two ceramics in this area is the product of expansion and contraction of Algonquian and Iroquoian peoples along a territorial border over time, or flexible and peaceful use of border areas by both groups. Interpretation of Late Woodland settlement systems in these areas is also complicated by post-contact population movements (cf. Phelps 1982:12-13), since similar ceramics were used during both periods.

Ceramics recovered from the Great Neck site provide only negative evidence of direct interactions between Algonquian groups in the coastal areas of southeastern Virginia and Iroquoian peoples from the interior, since no Late Woodland ceramics representative of the latter groups were recovered in VDHR excavations at the site. This fact may suggest that other occurrences of Algonquian or Iroquoian ceramics outside of the respective core territories of each group are indicative of the actual movements of

peoples, whether permanent or transitory, rather than the exchange of the ceramics themselves as trade goods. The ethnohistoric record indicates that peaceful contacts between the two groups did take place in southeastern Virginia. While residing within Chesapeake territory during the winter of 1585/86, an English exploration party from the Roanoke colony was visited by the Mandoaks, who are believed to be an Iroquoian people, perhaps the Nottoways or the Meherrins (Lane 1982:25; Quinn 1985:108). It does seem reasonable, however, that as exchange and other interactions occurred between Algonquian and Iroquoian peoples, these contacts would have been channeled along the major river systems of the interior. Because of their geographic position, Algonquian populations at Great Neck would have been relatively isolated from direct interactions with interior Iroquoian peoples. Still, Iroquoian ceramics might be expected to have reached Great Neck through down-the-line exchange, if these types of goods were indeed being traded.

CHAPTER 10

SUMMARY AND CONCLUSIONS

Archaeological remains yet encountered at Great Neck indicate the site was not used extensively by Native American peoples until the Middle Woodland period. At least one Paleo Indian projectile point and occasional finds of Archaic points have been reported from Great Neck (44VB7), Addington (44VB9), and other locations close by (Geier, Smith, Andrews, and Buchanan 1986:292; Green 1987:118; Painter 1979), but no other types of archaeological information is available on these periods. In VDHR excavations at the Great Neck site, no artifacts which can definitely be attributed to the Paleo Indian or Archaic periods were recovered. Ceramics believed to date from the Early Woodland period have been found in some areas, but these too are rare. At Addington, JMUARC recovered a shell-tempered, plain surfaced ceramic with lug handles, similar to Painter's Waterlily Plain type, from two relatively isolated pit features (Geier, Cromwell, and Hensley 1986:365-368; Geier, Smith, Andrews, and Buchanan 1986: 25, 29-30). Painter (personal communication 1990) has also reported finding some clay-tempered ceramics with lug handles on Lot M1 at Great Neck, but the contextual associations of these have not yet been reported. Both wares can tentatively be dated ca. 1200-800 B.C.

In contrast to these earlier periods, archaeological remains dating from the Middle Woodland period are abundant on the Great Neck Peninsula and have been encountered across an area extending at least 1.2 km along the south shore of Broad Bay from the

vicinity of Lot 17 in the Green Hill subdivision west to at least the edge of the Long Creek Midden site (44VB5). East of the canal separating the Addington and Great Neck sites, feature density is greatest in areas approximately 25-50 m south of the present edge of the bank above Broad Bay. Feature density also varies along the length of this area, and is apparently highest at the west end in the vicinity of Lots 1-5 in the Meadowridge subdivision.

Radiocarbon samples associated with Middle Woodland artifacts and features at Great Neck obtained by the VDHR date occupation during this period to ca. A.D. 290-380, and this is comparable to dates of A.D. 230 and A.D. 300 received by JMUARC on two Middle Woodland features at Addington (Geier, Smith, Andrews, and Buchanan 1986). Associated with Middle Woodland occupations at Great Neck are shell-tempered ceramics and ceramics with only sand inclusions in the paste. In addition to ceramic containers, Middle Woodland populations at Great Neck used ceramic smoking pipes and a variety of tools and ornaments made of stone, bone, antler, and shell. Tubular smoking pipes are most clearly associated with Middle Woodland contexts at Great Neck, but platform pipes and elbow pipes with a large bowl set at an obtuse angle to the stem may also have been used during the period. Smoking pipes are often decorated with punctate, roulette, or incised designs. The vessel forms and decorative motifs associated with ceramic vessels and clay pipes at Great Neck are very similar to those associated with the Currituck site in North Carolina, radiocarbon dated from 810-660 B.C. (Painter 1977, 1978).

Middle Woodland stone artifacts recovered in VDHR excavations at Great Neck include bifaces, possibly three-quarter grooved axes, manos, hammerstones, abraders, anvil stones, and gorgets. Triangular, side-notched, and stemmed projectile points of medium size appear to be associated with the Middle Woodland occupations. Overall, the lithic assemblage at Great Neck displays a dependance on materials, such as jasper, quartz, quartzite, and sandstone, which were probably acquired locally. Bipolar reduction techniques were employed so that pebbles and small cobbles of jasper and quartz could be used. Materials used which were probably not obtained locally include various grades of slate used in the manufacture of points and gorgets; gneiss used for the production of a grooved axe; and rhyolite and basalt, which were recovered in flake form in extremely low frequencies from plowzone contexts. Steatite beads and pipes have been reported from the Addington and Long Creek Midden sites, and these too may be associated with the Middle Woodland period (Geier, Smith, Andrews, and Buchanan 1986; Pearce 1968b).

The frequency of lithic tools and debitage associated with Middle Woodland contexts at Great Neck is low when the large volume of contemporary ceramic debris is considered. In contrast, some Middle Woodland contexts have yielded a high frequency of bone and antler tools, including projectile points, punches, a variety of awls, needles, fishhooks, beamers, and turtle shell cups. Bone hairpins, perforated animal teeth, and shell were used as ornaments. Some bone ornaments display a style of punctate decoration similar to that seen on ceramic smoking pipes from the period.

The floral and faunal remains recovered from Middle Woodland contexts by the VDHR at Great Neck are best interpreted as representative of a broad-based subsistence economy dependant on wild foods. Faunal collections have yet to be systematically analyzed, but are known to include remains of large and small mammals, finfish, and a variety of shellfish. Analysis of ethnobotanical remains (Gardner 1990a) indicates that at least three mast crops--hickory, walnut, and acorn--and a few fleshy fruits were utilized. Corn was identified in four Middle Woodland contexts, two of which have a relatively high degree of archaeological integrity; however, the extremely small volume of the two specimens from these features combined with the possibility of contamination from Late Woodland components prevent us from concluding that maize agriculture was practiced at Great Neck during the Middle Woodland. Apart from maize, no other cultigens such as cucurbits or the array of starchy or oily seed plants which comprised the "Eastern Agricultural Complex" were recovered from Middle Woodland contexts. It remains to be determined whether the absence of these foods is a true reflection of subsistence practices or the product of limited sampling or preservation biases in the archaeological record.

Comparison of the regional distributions of Middle Woodland shell-tempered versus sand-tempered ceramics and the contextual associations of each ware at Great Neck suggest that the wares represent separate yet roughly contemporaneous populations associated with distinct yet overlapping territories, and that the use of Great Neck by each population differed functionally. The shell-tempered, net- or cord-marked ceramics at Great Neck are comparable to types within the Mockley series. Mockley was the

predominant ceramic used within the Outer Coastal Plain north of the James River in Virginia, Maryland, and Delaware ca. A.D. 200-900 (Egloff and Potter 1982:103-104). Conical vessels are most commonly identified with Mockley in these areas, but a high proportion of flat-bottomed, beaker vessels have been found in several assemblages of Mockley-like ceramics at Great Neck.

The Middle Woodland medium sand-tempered wares at Great Neck are comparable to Mount Pleasant ceramics, which are common within the Chowan River drainage in the Outer and Inner Coastal Plain of North Carolina and Virginia. The Mount Pleasant series has been radiocarbon dated in North Carolina to ca. A.D. 200-800 (Phelps 1983:32). The fine sand-tempered wares at Great Neck may be slightly older. The coarse sand-tempered wares are suggested to date ca. 500 B.C.-A.D.500 based on their similarity to Prince George ceramics, which are found within the Inner Coastal Plain of central Virginia (Egloff and Potter 1982:103; Hunter, Hodges, and Blanton 1993; McLearen and Mouer 1989:7).

Two types of Middle Woodland features have been encountered at Great Neck: pits and, possibly, structural patterns. While some of the pit features were no doubt used for processing activities, the large size and depth of others suggest they were used as storage facilities. The amount of labor invested in the preparation of the larger features would indicate they were associated with occupations of at least several months duration. Shell-tempered ceramics are predominant in all areas at Great Neck and Addington where high frequencies of pit features occur. Because very few of the pit features are

associated with a preponderance of sand-tempered ceramics, it is suggested the groups who manufactured these wares used Great Neck on a more transient basis.

The Middle Woodland settlements at Great Neck associated with shell-tempered ceramics may be of a type similar to the macro-band base camp described by Gardner (1982). Examination of the spatial distribution of the Middle Woodland pit features at Great Neck and Addington indicate that situations in which the pits intrude on one another are rare, and the features are commonly clustered in groups of approximately four to seven. The possibility that multiple occupations are represented by each group of features cannot be eliminated with currently available data, but it is believed that the best interpretation of the feature clusters is that each represents a single occupation. Earlier, it was suggested that the cluster of features in Unit 106 on Lot M3 may represent a settlement comprised of two family or work units, each associated with at least one deep and one shallower pit feature. Comparison of the shell-tempered ceramic assemblages associated with several feature clusters at Great Neck and Addington indicated that the collections differ in such attributes as sherd thickness, the frequency of decoration, and the frequency of certain vessel forms. It is presently unclear whether variation among the assemblages is the product of temporal differences or the reflection of cultural differences among contemporaneous sub-units of a single regional population.

In his model of Late Archaic through Middle Woodland settlement patterns in the Outer Coastal Plain of Virginia, Gardner (1982) recognizes a major change between the Late Archaic and Early Woodland periods which he interprets as a shift from settlement systems involving seasonal cycles of group fusion and fission to ones involving group

sedentism. Subsistence and settlement focus also shifts from the Great Dismal Swamp to local estuaries over this period. Gardner proposes that during the Late Archaic macro-band base camps located on the fringes of the Dismal Swamp were abandoned seasonally as sub-units of the population dispersed to micro-band base camps associated with the estuarine zone. Foray camps were located in settings where the range of available resources was less diverse. By the Early Woodland, macro-band base camps were located along the shorelines of major estuaries, particularly at their junction with freshwater streams. These settlements were supplemented by micro-transient camps established along interior streams and estuarine shores, as well as by foray camps located along the estuaries.

The archaeological record at Great Neck indicates that Middle Woodland settlements associated with shell-tempered ceramics likely represent macro-band base camps abandoned for only short periods of time. Although the site does not provide clear proof that these settlements were fully sedentary and that the settlement system was not structured by seasonal cycles involving group fusion and fission, some evidence does suggest a situation somewhat similar to this pattern was in place. Both Gardner's (1990a) analysis of floral remains from Middle Woodland contexts at Great Neck and Whyte's (1990) analysis of faunal remains from Addington indicate occupation occurred during the late spring, summer, and fall. Whyte (1990) has suggested Addington was reoccupied during the late winter, at which time food cached in storage pits during the fall was utilized.

Mortuary practices associated with the Middle Woodland period at Great Neck may also provide some clues to the degree of sedentism represented by the settlements. No Middle Woodland mortuary remains were encountered by the VDHR in excavations at Great Neck, but Painter (personal communication cited by Geier, Smith, Andrews, and Buchanan 1986:371) attributes most of the approximately 170 burials he encountered in the Riding Ring section of the site to the Middle Woodland period, and has noted that most were primary interments. One secondary burial believed to date from the Middle Woodland was encountered by JMUARC at Addington (Geier, Cromwell, and Hensley 1986:85-90). Geier has noted that the number of Middle Woodland burials at Great Neck suggests a "substantial population ... which was resident long enough locally to have multiple deaths take place within a period of settlement" (Geier, Smith, Andrews, and Buchanan 1986:407). In his study of the effect of organizational variability and settlement mobility on mortuary behavior during the Archaic in Tennessee, Hoffman (1986:49) has proposed that frequency of secondary burial may be correlated with the extent of logistical mobility within a settlement and the proportion of the annual cycle spent away from primary base camps. Following this line of thinking, the low frequency of secondary burials at Great Neck may indicate that only a small proportion of the annual cycle was spent away from the Middle Woodland settlements there.

Although the archaeological record at Great Neck would support Gardner's (1982) hypothesis that an almost fully sedentary settlement system focused on estuarine resources had developed within the Outer Coastal Plain in southeastern Virginia by the Middle Woodland period, there is no evidence at Great Neck that this type of system was

established earlier than the first few centuries B.C. Elsewhere within the immediate region, the earliest excavated site which may fit this pattern is Currituck (Painter 1977, 1978) dated ca. 810 - 660 B.C. If settlement systems involving sedentary macro-band base camps situated within estuarine settings had developed by the Early Woodland period, Great Neck clearly was not a preferred locale at this time. As noted previously, very few artifacts which can be attributed to the Early Woodland have been recovered from Great Neck, and the results of JMUARC's excavations at Addington suggest Early Woodland remains at Great Neck may represent seasonal base camps involving smaller groups than those which utilized the site during the Middle Woodland. Information available on Archaic settlement at Great Neck is insufficient to determine if the Early Woodland remains represent an increase in the intensity of site use and settlement duration and size over time.

The distribution of Middle Woodland shell-tempered ceramics within the Coastal Plain of Virginia provides some clues to the subsistence focus and territorial range of populations who used similar ceramics at Great Neck. Egloff and Potter (1982:104) have noted "Mockley ware is found in great quantities throughout most of the Coastal Plain of Virginia, with the exception of Dinwiddie, Greensville, Southampton, and Sussex counties." Within southeastern Virginia, then, movement within the interior beyond the distribution of estuarine resources was limited and probably conducted on only a transient basis by groups who manufactured shell-tempered ceramics. Within the overall range of the distribution of Mockley-like ceramics, a subregional tradition confined to the Outer Coastal Plain of southeastern Virginia may be represented by a more frequent use of flat-

bottomed, beaker vessels and an earlier development of a shell-tempered ceramic technology. Comparison of the distribution of ceramics associated with Painter's Currituck culture, which are predominantly shell and clay-tempered or shell-tempered, and his Dismal Swamp culture, which employ steatite, clay, and sand temper, suggests distinct subregional traditions focused respectively on estuarine and interior freshwater settings may have developed by the beginning of the Early Woodland period in southeastern Virginia.

The fact that Mockley ceramics are infrequently found in the Coastal Plain in North Carolina raises some interesting questions about differences in adaptations and settlement systems between populations in this area and those in the Outer Coastal Plain of southeastern Virginia. The distribution of Mockley ceramics in the Middle Atlantic region has been interpreted to reflect the boundaries of a circum-Chesapeake interaction sphere among populations practicing comparable estuarine-oriented adaptations (Egloff 1985). Since similar estuarine habitats are found in the Outer Coastal Plain of northern North Carolina, the absence of a shell-tempered ceramic tradition and the development of the boundary in this area between the Middle Atlantic and Southeast culture areas is problematical.

At present our knowledge and understanding of variation among the Middle Woodland sand-tempered ceramics occurring within the Chowan River drainage is insufficient for delineating distinct population groups or for determining what, if any, territorial boundaries may have existed in this area. The similarity between ceramics found in the Outer Coastal Plain of northern North Carolina and the Interior Coastal

Plain of southeastern Virginia suggests, however, that a high degree of cultural interaction between these two areas was channeled along the Chowan River and its tributaries, and that perhaps the subsistence/settlement systems of the groups which resided along the drainage involved seasonal transhumance between coastal and interior zones.

It is proposed that the Middle Woodland sand-tempered ceramics present at Great Neck might be interpreted along this vein. As discussed earlier, review of the contextual associations of ceramics at Great Neck suggests that the groups who manufactured the sand-tempered ceramics occupied the site for periods of shorter duration than the groups who manufactured the shell-tempered wares. While the settlements associated with sand-tempered ceramics at Great Neck may represent procurement camps situated along the periphery of the territorial range of an estuarine-oriented population located in coastal North Carolina, it is also possible these settlements are associated with groups focused primarily on the interior freshwater zone whose settlement systems also involved seasonal dispersal to small base camps or procurement camps within the estuarine zone.

Radiocarbon dates available from the Great Neck site suggest the locale may not have been used extensively by Native American peoples from ca. A.D. 400 to A.D. 1300. Among a total of 13 radiocarbon samples from various excavations at Great Neck and Addington, only one has yielded a date falling within this period. This date of A.D. 1160 was obtained by JMUARC on what is seemingly a multi-component deposit containing 74% Early or Middle Woodland and 26% Late Woodland ceramics (Geier, Smith, Andrews, and Buchanan 1986). Whether abandonment of the Great Neck locale

during these years was the product of significant changes in subsistence/settlement systems or the outcome of localized phenomenon such as changes in the natural environment is not known and can only be addressed through comprehensive regional survey.

From ca. A.D. 1330 to A.D. 1510 Great Neck was the site of Native American village settlement. Maps of the Virginia and North Carolina coasts resulting from the Roanoke expedition (Figure 69) indicate that two villages of the Chesapeakes--Chesepiooc and Apasus--were located along the Lynnhaven River ca. A.D. 1585/86; however, there has yet been no evidence uncovered in excavations at the Great Neck site to indicate positively that the native inhabitants had any contact with early European explorers, traders, or colonists. Although two radiocarbon samples associated with Late Woodland remains at Great Neck have yielded mean dates of A.D. 1510 and 1515, which at two standard deviations from the mean extend as late as A.D. 1630 and A.D. 1655, no artifacts of European manufacture dating from the late 16th or 17th centuries have been found. A later radiocarbon date of A.D. 1620 $\pm$100 obtained by JMUARC at Addington is not considered reliable as it is derived from a deposit containing only Middle Woodland artifacts (Geier, Cromwell, and Hensley 1986:240-241; Geier, Smith, Andrews, and Buchanan 1986:329).

Late Woodland remains encountered in excavations at Great Neck by Pritchard, Painter, Green, and the VDHR include (from east to west across the site) a palisaded settlement with associated burials and at least two structures located on Lots 16 and 17 in the Green Hill subdivision; an ossuary burial and a third structure associated with

burials situated outside of the palisade on Lot GHF16; a few small pit features associated with Late Woodland artifacts on Lot 7 in the Meadowridge subdivision; several burials on Lots M4-M6 with at least a few structures on Lot M5; a longhouse structure and burial on Lot M11; a burial on Lot M3; and at least two burials on Lot M1. Abundant Late Woodland artifacts have also been encountered in midden deposits along the shore of the Long Creek canal at the Addington and Long Creek Midden sites, although no Late Woodland structural remains or burials have been identified in these two areas.

Given the nature and extent of the excavations which have been conducted and the accuracy of archaeological dating techniques it is difficult, if not impossible, to reliably assess the number of separate occupation episodes or the spatial structure of the settlement represented by the Late Woodland remains at Great Neck. Available information suggests that settlement was focused in at least two areas, each centered on elevated areas on the landscape. The palisaded settlement on Lot GHF16 is situated on what is presently the peak of a gently sloping terrace ridge in an area Painter has called the "Hill Top" section of the Great Neck site. Late Woodland remains in the western half of the site appear concentrated around another topographic high centered on Lots 6 and 7 in the Meadowridge subdivision. If the mean dates associated with radiocarbon samples from these two areas are accurate, and representative, at least two separate occupations may be indicated: one dated ca. A.D. 1330 and one ca. A.D. 1510-1515. Alternatively, the Late Woodland remains at Great Neck may comprise a single

settlement of internally dispersed plan. Such settlements are described in the early ethnographic literature on Virginia Indians. John Smith noted, for example:

> Their houses are in the midst of their fields or gardens, which are small plots of ground. Some 20 acres, some 40, some 100. some 200. some more, some lesse. In some places from 2 to 50 of those houses together, or but a little separated by groves of trees. [Arber 1910:363]

Robert Beverley observed that the Virginia Indians most often palisaded "only their Kings Houses, and as many others as they judge sufficient to harbour all their People, when an Enemy comes against them" (Wright 1968:177).

Late Woodland structural remains encountered at Great Neck are generally what would be expected given information on building practices among coastal Algonquian peoples in Virginia and North Carolina provided in ethnohistoric sources for the late 16th and early 17th centuries (for a thorough review of these sources see Callahan 1981:52-82 and Rountree 1989:60-62). A total of possibly seven presumably residential structures have been identified at Great Neck. The best defined of these are Structures A and C on Lot GHF16 and Structure D on Lot M11, which are each represented by an elongated oval arrangement of postmolds which defines the exterior walls. On Structure A it is clear that posts on opposite walls were paired, forming arches in a manner which several early writers compared to the construction of garden arbors in England (Hariot 1982:67; Wright and Freund 1953:78). The length of the three structures ranges from 9.4 m (30.7 ft) to over 12.20 m (40 ft). Length/width ratios range from 1.48 to at least 1.98, generally conforming to Thomas Hariot's (1982:67) observation that the length of coastal Algonquian houses were "commonly double the breadth." Doorways were most commonly located in the corners of the structures. Structure D may also have had an

entrance located in the center of one side wall. The structures at Great Neck do differ in one respect from the houses depicted in John White's late 16th-century watercolors of coastal North Carolina. The latter have straight endwalls and, thus, are rectangular in plan.

In addition to the larger, longhouse structures at Great Neck, a much smaller oval structure, measuring 2.7 m by 2.1 m, which may also date from the Late Woodland period was identified on Lot M11. The types of small structures which might be expected on coastal Algonquian sites in Virginia and North Carolina include sweathouses, watch houses, and work huts (Callahan 1981:74-74). The latter were used for food processing and storage as well as shelter.

Relatively few pit features at Great Neck can be attributed to the Late Woodland period. In VDHR excavations, no clear evidence was found to indicate that the longhouse structures contained pit hearths or below-ground storage facilities. Recent excavations at roughly contemporaneous sites elsewhere in the Virginia Coastal Plain have yielded similar results (Hodges and Hodges n.d.; Mouer et al. 1992). In contrast, storage pits are common on Late Woodland sites located in the Piedmont of North Carolina and southern Virginia (Davis and Ward 1991) and in southwestern Virginia in the Ridge and Valley Province (Buchanan 1986; Egloff and Reed 1980). Whether these patterns represent relatively insignificant cultural variation resulting, for example, from differences in local soil conditions and climate, or whether they reflect more profound differences in settlement/subsistence systems or sociopolitical structure (cf. DeBoer 1988; Ward 1985) might prove a fruitful line of investigation to pursue in future research.

Regardless of its cause, the low frequency of pit features on Late Woodland coastal Algonquian sites is an important factor to be considered in the development of archaeological research designs and excavation and sampling strategies. On these types of sites, midden as well as plowzone deposits are extremely important contexts for obtaining representative samples of material remains and information on intrasite spatial patterning.

Only a rather limited inventory of Late Woodland artifacts has been encountered in excavations at Great Neck. Ceramics associated with the period are shell-tempered, fabric-marked ceramics of the Townsend series and the shell-tempered Roanoke Simple Stamped type. Both fabric-marked and simple stamped vessels are sometimes decorated with incised or punctate motifs, but decoration is less common on simple stamped sherds. The only vessel form clearly indicated in VDHR ceramic collections is a jar with a conical or sub-conical base and straight or slightly flaring walls. Both contextual evidence and radiocarbon dates associated with ceramic assemblages at Great Neck indicate that simple stamped ceramics increased in popularity over time relative to fabric-marked ceramics.

The collection also includes a number of clay smoking pipes. Tubular pipes such as the one associated with Burial 25A on Lot GHF16 were clearly made during the Late Woodland period. The stems of tubular pipes can be circular, rectangular, or hexagonal in cross-section. Clay elbow pipe forms also are almost certainly associated with the period, as is a type of pipe decoration executed with rouletting and involving designs with triangular or herringbone elements. The latter finding, in particular, has

significance in the current debate over the ethnicity of pipes with similar decoration recovered in 17th-century colonial contexts in Virginia, which at least one researcher has suggested were largely the product of African American manufacture (Emerson 1988).

Since Great Neck is a multi-component site, no definite Late Woodland lithic assemblages can be isolated. The low frequency of lithic artifacts and debris recovered from Late Woodland contexts indicates relatively limited use of stone for tool manufacture during the period, however. Specific artifacts which may date from the Late Woodland are small triangular points made of jasper and quartz and a celt made from basalt. No bone tools were recovered in clearly Late Woodland contexts, but small disc beads made from shell were found associated as funerary items with one Late Woodland burial and were recovered from the fill of two other features.

The subsistence practices of the populations who settled at Great Neck during the Late Woodland period clearly involved agriculture as well as the use of wild plant and animal foods. The remains of hickory nut, acorn, and a few fleshy fruits were recovered in Late Woodland contexts. Cultigens recovered include maize, squash, and bottle gourd. No evidence for the use of any wild or domesticated seed crops other than maize was found, although this may be due to the limited number and size of samples analyzed or sampling bias (Gardner 1990a).

Significant information on the mortuary practices of the Native American peoples who inhabited the Coastal Plain of North Carolina and Virginia during the Late Woodland was acquired in VDHR excavations at Great Neck. Two forms of burial were encountered at Great Neck: ossuary burial and single, primary interment. On Lot

GHF16, primary burials of two adults accompanied by copper funerary items were situated along the palisade line, while an small ossuary containing a minimum of three individuals and primary burials of two subadult burials associated with a longhouse were located outside the palisade. A primary burial of a subadult accompanied by shell disc beads was encountered on Lot M3, and another primary burial of a subadult was found on Lot M11 just outside the wall of a longhouse.

Early ethnographic sources on coastal Algonquian peoples in Virginia and North Carolina describe two forms of burial, but the practice of ossuary interment is not mentioned. In his writings, for example, John Smith noted that after elaborate preparation the bodies of "kings" were laid on a scaffolding within a mortuary temple where they were maintained by priests. "For their ordinary burials, they digge a deep hole in the earth with sharpe stakes; and the corpse being lapped in skins and mats with their jewels, they lay them upon sticks in the ground, and so cover them with earth" (Arber 1910:75).

Ossuary burial may be referred to in a 1678 document from Maryland in which most of the Piscataway "great men" were said to have been absent from a meeting because they "were very busie in gathering together their dead bones" (Browne 1896:185); but our understanding of this mortuary practice in North Carolina and Virginia is based largely upon early ethnographic descriptions of the Huron, an Iroquoian-speaking people who inhabited the Saint Lawrence Lowlands region. At 8 to 12 year intervals, in anticipation of relocating their villages, the Huron gathered together the remains of those individuals who had died during this period and deposited them in

a common grave. The Feast of the Dead associated with this ceremony sometimes involved only one village, although more often several villages with strong social ties participated together (Heidenriech 1978:374-375). If the interval between the ceremonies associated with ossuary interment in the Middle Atlantic was equally as long, it is not surprising that it may not have been witnessed by the English.

The close spatial association of mortuary features with structural patterns at Great Neck is a pattern not yet documented archaeologically elsewhere within the Coastal Plain of Virginia. Writing in the early 17th century, Henry Spellman described a mortuary custom with some resemblance to this pattern:

> If he dies his buriall is thus ther is a scaffould built about 3 or 4 yards hye from the ground and the deade bodye wraped in a matt is brought to the place, wher when he is layd ther on, the kinsfolke falles a weopinge and make great sorrow...if any of ye kindreds bodies which haue bin layed on ye scaffould should be consumed as notheing is leaft but bonns they take thos bonns from ye scaffould and puttinge them into a new matt, hangs them in ther howses, wher they continew whille ther house falleth and then they are buried in the ruinges of ye house. [Arber 1910:cx]

Although describing what archaeologically would be encountered as a secondary burial, Spellman's account does note a connection between interments and structures while also emphasizing familial associations. The latter suggests that variation in the location of primary interments on Lot GHF16 might be understood in terms of family versus community relationships. Adults, whose economic value to the community as a whole is expected to have been higher than that of subadults, were interred along the palisade, a public structure. The primary interments associated with the residential structures on both Lot GHF16 and M11 are subadults. The distribution of high status funerary items among these five burials also patterns by age. Copper was highly valued

among coastal Algonquian societies in North Carolina and Virginia, and access to and redistribution of the material was controlled by the chiefs (Potter 1989; Turner 1985:201-203). It is unclear if high status is indicated by the shell beads which accompanied the subadult burial on Lot M3.

Patterned variation among the primary burials at Great Neck by age, location, and the presence/absence of copper funerary items could be considered reflective of achieved levels of status. Other aspects of the mortuary practices encountered at the site, particularly the use of ossuaries, suggest that members of the society were ranked by levels of ascribed status as well. Archaeologists in the Middle Atlantic have generally assumed that individuals interred within ossuaries represent the "common folk" because, at least in precontact contexts, few funerary items of a type believed associated with high status have been recovered from ossuaries (Potter 1989; Turner 1992:116). Similarly, the absence of funerary items in the ossuary on Lot GHF16 suggests the individuals in this feature were of lesser status than the adults interred along the palisade. The communal form of the secondary burial may indicate that the individuals in the ossuary were also of lesser status relative to the subadults interred in the primary, single burials on the property.

Since adults and subadults are represented among both primary interments and the ossuary at Great Neck, these two forms of burial may distinguish ascribed positions of status within the society. Among members of the higher class, who were interred in primary burials, the status of individuals may also have been differentiated by age. The existence of ranked status may also be indicated at Great Neck by the difference in size

between the structure located within versus those located outside the palisade, although the structure inside the palisade may be larger because it served the entire community.

The ossuary burial at Great Neck may also provide some clues to the level or nature of inter-community organization among native populations of southeastern Virginia during the Late Woodland period. The number of individuals interred within the ossuary is low and contrasts markedly with two sites located in the Inner Coastal Plain within the Potomac River drainage. At the Potomac Creek site (44ST2), the number of individuals in five excavated ossuaries was 41, 57, 77, 181, and 287 (Potter 1989:161-166). Ossuaries I and II at the Juhle site (14CH89) in Charles City County, Maryland, contained 124 and 173 individuals, respectively (Ubelaker 1974). Ubelaker (1974) has suggested that the ossuaries at the Juhle site may represent the combined remains of several affiliated settlements.

The ossuary at Great Neck is most similar to those associated with sites located closer to the core area of the Powhatan chiefdom. In a sample of approximately 25 ossuaries from 10 Late Woodland sites within the James and York River drainages and on the Eastern Shore, the number of individuals represented in each most commonly ranges from 10 to 20 (Turner 1992:118). Ossuaries excavated in coastal North Carolina have contained approximately 30-58 individuals each (Phelps 1980). The ossuary at Great Neck presumably represents the deceased from only one settlement. Its similarity to ossuaries closest to the Powhatan core area suggests some correspondence in the size of individual settlements and the nature or degree of inter-community organization within individual districts between these two areas.

The sizes of longhouses at Great Neck, however, suggest that some aspects of social organization at the community level were more similar to populations in coastal North Carolina. Data on the length of longhouse patterns uncovered at six other sites within the North Carolina and Virginia Coastal Plain are shown in Table 31. Three sites--Governor's Land at Two Rivers (44JC308), Flowerdew Hundred (44PG65), and Jordan's Point (44PG300, 302, 303, and 307)--are located on or near the James River within the Inner Coastal Plain between the mouth of the Chickahominy River and Hopewell. The remaining three sites--Amity (31HY43), Uniflite (31ON33), and Permuda Island (31ON196)--are situated within the coastal region of North Carolina. The sample of structures from the coastal locations, including Great Neck, is small, but house sizes are relatively large when compared to those from settings within the Inner Coastal Plain of Virginia. A considerable range in structure size is displayed within the large samples from the Jordan's Point sites and the Governor's Land at Two Rivers, and only the largest structures at these two locations approach the size of structures which have been excavated thus far in the coastal regions. The smaller size of the structures at the Inner Coastal Plain sites may indicate that they housed smaller or different types of social units than those in the coastal locations.

Few other differences suggestive of variation in social structure or indicative of distinct ethnic groups are yet apparent in comparisons between the archaeological record at Great Neck and sites located closer to the Powhatan core area in the James River drainage. For example, both single, primary burials and ossuaries are present at Jordan's Point and the Governor's Land at Two Rivers (Hodges and Hodges n.d.; Mouer et al.

Table 31. Late Woodland longhouses at seven sites within the Coastal Plain of Virginia and North Carolina.

ARCHAEOLOGICAL SITE	N	LENGTH IN FEET	
		MINIMUM	MAXIMUM
GREAT NECK, 44VB7	3	30.7	40+
JORDAN'S POINT			
44PG300	5	18.8	27.2
44PG302	9	15.0	27.5
44PG303	11	16.9	32.0
44PG307	1	17.2	17.2
GOVERNOR'S LAND AT TWO RIVERS, 44JC308	19	14.4	30.7
FLOWERDEW HUNDRED, 44PG65	3	21.0	22.0
AMITY, 31HY43	2	29.5	45.9
UNIFLITE, 31ON33	1	42.6	42.6
PERMUDA ISLAND, 310N196	1	26.2	26.2

Sources: Jordan's Point (Mouer et al. 1992:Table 2; VDHR Archives); Governor's Land at Two Rivers (Hodges and Hodges n.d.); Flowerdew Hundred (Charles T. Hodges, personal communication 1992); Amity (Gardner 1990b:40); Uniflite (Loftfield 1979 as cited in Gardner 1990b:40); Permuda Island (Loftfield 1985 as cited in Gardner 1990b:40).

1992; VDHR Archives). At the latter site, the configuration and size of the burial pits as well as the placement of the bodies within the graves are markedly similar to the Great Neck burials (Hodges and Hodges n.d.).

Turner (1993) has suggested that the distribution of Roanoke Simple Stamped ceramics may be significant in defining group territories and understanding regional interactions relevant to understanding the evolution of the Powhatan chiefdom. As reviewed earlier, ethnohistoric sources indicate that during the late 16th century Great Neck was situated within the territory of the Chesapeakes, who at the time had peaceful relations and may have been loosely allied with coastal Algonquian groups in northeastern North Carolina. Until very recently, the presence of Roanoke Simple Stamped ceramics at Great Neck and in coastal northeastern North Carolina was interpreted as further evidence of the political or cultural affinity between populations in the two areas. Other districts within the Powhatan chiefdom located on the James or York rivers were distinguished from the Chesapeake and Nansemond districts in southeastern Virginia by the presence of predominantly Cashie Simple Stamped or Townsend ceramics. Research conducted over the past two years indicates, however, that Roanoke Simple Stamped is also the predominant ceramic in village assemblages at the Governor's Land at Two Rivers (Hodges 1993b) and the Tree Hill Farm (44HE674) sites. The latter is located just below the falls of the James River (McLearen and Binns 1992). The Governor's Land at Two Rivers site has been radiocarbon dated to A.D. 1560 $\pm$ 60 and A.D. 1700 $\pm$ 70 (adjusted for C-13, uncalibrated) (Hodges and Hodges

n.d.), and it and Tree Hill Farm both correlate well with village locations shown on the John Smith (1612) and Zuniga (1608) maps of Virginia.

Although investigations at Great Neck have provided important new data on the nature of sociopolitical organization and cultural variation among coastal Algonquian populations in Virginia during the Late Woodland, additional regional research is required before the roles these factors played in the development and evolution of the Powhatan chiefdom are understood. If ethnic variation did exist among the groups eventually incorporated into the paramount chiefdom of the Powhatans, archaeologists will likely need to develop new approaches to detect its presence. As is true of most archaeological investigations, one of the most important contributions of recent research at Great Neck may be the recognition that an equal degree of complexity is involved in cultural behavior and processes and in teasing the reflection of these out of the archaeological record.

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APPENDIX

APPENDIX
INVENTORY OF ILLUSTRATED ARTIFACTS

Figure 17: Townsend, Roanoke, and Mockley ceramics, Lot GHF16.

Top row, from left: shell-tempered, net-marked rim (14A); shell-tempered, net-marked rim (18B); shell-tempered, cord-marked rim (14A); shell-tempered, cord-marked sherd (4C).

Middle row: shell-tempered, fabric-marked rim with incised and punctate decoration (7E); shell-tempered, fabric-marked sherd with incised chevron motif; shell-tempered, simple stamped rim with punctate decoration; shell-tempered, simple stamped sherd (3E).

Bottom row: shell-tempered, fabric-marked sherd with incised and punctate decoration (16C1); shell-tempered, fabric-marked rim with incised and punctate decoration (18B); shell-tempered, simple stamped sherd (3E).

Figure 18: Townsend vessel fragment from Feature 17C, Lot GHF16.

Shell-tempered, fabric-marked vessel fragment with rim, partially reconstructed (17C).

Figure 20: Sand-tempered ceramics, Lot GHF16.

Top row, from left: fine sand-tempered, cord marked sherd (1C); fine sand-tempered, net-marked rim (27A); fine sand-tempered, net-marked rim (1C).

Middle row: fine sand-tempered sherd marked with open-weave textile (27A); medium sand-tempered, net-marked sherd, interior view (1A).

Bottom row: fine sand-tempered sherd marked with wicker fabric (27A); medium sand-tempered, net-marked sherd (18A).

Figure 22: Projectile points, Lot GHF16.

Top row, from left: triangular point, jasper (9C); triangular point, quartz (surface); triangular point, jasper (18B); triangular point, jasper (9C); triangular point, jasper (11B).

Bottom row: side-notched point, Potts Side-Notched, chert(18A); side-notched point, quartz (surface); stemmed point or preform, quartz (surface); stemmed preform, chert (8C).

Figure 23: Anvil stones, Lot GHF16.

Top row, from left: anvil stone (7B); anvil stone (5A).
Bottom row: anvil stone (7B).

Figure 24: Celt and three-quarter grooved axe, Lot GHF16.

From left: three-quarter grooved axe, gneiss (27); celt, basalt (18A).

Figure 25: Miscellaneous ceramic artifacts, Lot GHF16.

From left: tubular clay smoking pipe (7D); platform clay smoking pipe (27FE); unidentified ceramic object (3E).

Figure 26: Tubular smoking pipe from Feature 25A, Lot GHF16.

Tubular clay smoking pipe (25A6).

Figure 27: Roulette-decorated ceramic smoking pipes, Lot GHF16.

Top row, from left: bowl, roulette decoration, smooth-surfaced triangular field (18B); bowl, roulette decoration, herringbone design (30A); bowl, roulette decoration, smoothed-surface triangular field (2B, 2B1).

Bottom row: bowl, roulette-like decoration (7C); bowl, roulette-filled triangle (5C).

Figure 28: Copper pendants and tube beads, Lot GHF16.

From top: copper tube bead fragment (25A4); triangular pendant of sheet copper (18B1A); copper tube bead (25A7).

Figure 38: Mockley Cord-Marked and decorated ceramics, Lot M3.

Top row: shell-tempered sherd with punctate decoration (106C).

Middle row, from left: shell-tempered, cord-marked rim with smoothed rim (106C3); shell-tempered, cord-marked rim with notched lip (106C3).

Bottom row: shell-tempered rim with cord-marked surface smoothed over (106AE-8).

Figure 39: Mockley Net-Impressed ceramics and Mockley sherd marked with open-weave textile, Lot M3.

Top row, from left: shell-tempered, knotted net-marked sherd (106AB5B-1); shell-tempered sherd marked with open-weave textile (106AB1B-12).

Middle row: shell-tempered sherd marked with looped net(106AB5B-1).

Bottom row: shell-tempered, knotted net-marked rim sherd(106AB5A-3).

Figure 40: Mockley Cord-Marked round base, Lot M3.

Shell-tempered, cord-marked basal sherd (106AE1).

Figure 41: Non-shell tempered ceramics, Lot M3.

Top: fine sand-tempered rim sherd marked with open-weave textile (108B).

Bottom: fine sand-tempered basal sherd marked with open-weave textile, presumably same vessel as above (18B).

Figure 42: Projectile points and gorgets, Lot M3.

Top row, from left: triangular point, jasper (105A); triangular point, quartz (107A); triangular point, quartzite (106E).
Middle row: stemmed point, slate (106C3); side-notched point, quartz (106AB5B-19); triangular point, quartzite (106AE1-12).

Bottom row: gorget fragment, slate (106AA-4); gorget blank, slate (106AB1E-11).

Figure 43: Ground stone tools, Lot M3.

Top: hammerstone, quartzite (106AB1-6).

Bottom: mano, quartzite (106AE1-23).

Figure 44: Ceramic smoking pipes, Lot M3.

Top row, from left: bowl, incised decoration (106AB1D-11); bowl, elbow pipe (101B); bowl rim with roughened surface (106C3); bowl with punctate decoration (106C2).

Second row: bowl with punctate decoration (106D4A); bowl with punctate and incised decoration (106AE-15).

Third row: tubular pipe with punctate and incised decoration (106AB5C).

Fourth row: tubular pipe (106C3); tubular pipe (106C).

Bottom row: tubular pipe with punctate decoration (100A); shell-tempered, cord-marked, tubular pipe (106C).

Figure 45: Antler projectile points and preforms, Lot M3.

From left: antler tube (106AB5A-10); point blank (106AE1-31); (upper) point, distal end (106AB5B-24); (lower) point, proximal end (106C); point blank (106C3); cut antler tine (106AB5B).

Figure 46: Bone tools, Lot M3.

Top row, from left: fishhook (106AB1E-16); needle (106C); needle (106C2).

Second row: splinter awl (106AB1-10); awl (106C).

Third row: awl (106AB5C); awl (106AE-30).

Fourth row: splinter awl (106AB5A-11); awl (106AB5B).

Fifth row: awl (106AB5B-22).

Bottom row: awl, deer ulna (106C3); antler with worn tip (106C).

Figure 47: Bone beamers, Lot M3.

Top: beamer (106AE-29).

Bottom: beamer (106AE1-32).

Figure 48: Turtle shell cups, Lot M3.

From left: cup (106AB5B-25); cup (106AE, 106AE1).

Figure 49: Bone ornaments, Lot M3.

Top row, from left: marginella shell bead (106C4); perforated shark's tooth (106C3); perforated canine tooth (106AB5C-19); perforated canine tooth (106C).

Middle row: hairpin (106C).

Bottom row: hairpin, proximal end (106C); hairpin (106C).

Figure 56: Roanoke Simple Stamped ceramics, Lot M11.

Top row, from left: shell-tempered, simple stamped sherd with incised decoration (163-2); shell-tempered, simple stamped rim sherd with incised decoration (163-1-6).

Bottom row: shell-tempered, simple stamped sherd, interior (163); (upper) shell-tempered, simple stamped sherd (163-1); (lower) shell-tempered, simple stamped sherd (163).

Figure 57: Lithic and bone artifacts, Lot M11.

Top row, from left: incised bone (150A5-11); triangular projectile point, quartz (164 "0").

Bottom row: modified antler tine (186G); hammerstone, quartzite (178-1).

Figure 62: Townsend and Roanoke ceramics, Lot M5.

Top row, from left: shell-tempered, fabric-marked rim with incised decoration (255-1-6); shell-tempered, fabric-marked sherd with incised decoration (255-1-6); shell-tempered, fabric-marked rim with incised decoration (149A3A-2).

Bottom row: shell-tempered, simple stamped rim (258-1); shell-tempered, fabric-marked sherd with incised and punctate decoration (149A3A-1).

Figure 63: Mockley ceramics, Lot M5.

Top row, from left: shell-tempered, net-marked rim (319-1A-2); (upper) shell-tempered, net-marked rim (319-1A-2); (lower) shell-tempered, net-marked rim (255-3-2); shell-tempered, net-marked pouring lip, interior view (270-2).

Bottom row: shell-tempered rim marked with open-weave fabric (255-1-17); shell-tempered, cord-marked rim with smoothed lip (255-3-5).

Figure 64: Shell-tempered, flat-bottomed basal sherds, Lot M5.

Top: flat-bottomed, basal sherd, interior view (255-3-13).

Bottom: flat-bottomed, basal sherd, interior view (319-1-2).

Figure 65: Sand-tempered ceramics, Lot M5.

Top row, from left: fine sand-tempered, net-marked rim (255-1-27); fine sand-tempered, cord-marked rim (155-1-29); fine sand-tempered, cord-marked rim (255-3-17).

Middle row: medium sand-tempered, interior (255-3-24); fine sand-tempered, interior (255-3-14); coarse sand-tempered, interior (255-3-14).

Bottom row: medium sand-tempered, net-marked (255-3-14); coarse sand-tempered, net-marked (255-3-14).

Figure 66: Projectile points, Lot M5.

Top row, from left: triangular point, quartz (221A-1); triangular point, quartzite (270-1-11); triangular point, jasper (250-1-7).

Bottom row: stemmed point, chert (221E-1); notched gorget, sandstone (220-27).

Figure 67: Ceramic smoking pipes, Lot M5.

Top row, from left: bowl, punctate decoration (255-1-32); bowl, punctate decoration (255-1-33); bowl (255-3-23).

Middle row: tubular pipe (255-3-24); stem (255-1-31).

Bottom row: tubular pipe (255-2-27); tubular pipe (255-2-27); tubular pipe (255-2-17).

VITA

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