MIDDLE ATLANTIC ARCHEOLOGICAL CONFERENCE
1986

Rehoboth Beach, Delaware
MIDDLE ATLANTIC ARCHEOLOGICAL CONFERENCE

PROGRAM & ABSTRACTS

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Program Chairman

April 4 - 6, 1986
Rehoboth Beach, Delaware
MIDDLE ATLANTIC ARCHEOLOGICAL CONFERENCE

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Archaeological techniques, such as flotation and pollen analysis, have been important additions to historical research into eighteenth-century plants. Archaeology has also revealed important information on stratigraphy and patterning. Overall, research has centered around collecting information on the technological, social and ideological sphere of the Mount Clare garden. Excavation at other tidewater plantations as well as knowledge of the Georgian order gave us certain expectations about the Mount Clare garden. While in sometimes surprising ways many of these expectations have been supported by our investigations, others have been changed. Our approach attempts to combine our different sources of information to see how the Georgian order functioned in a practical way at Mount Clare. While symmetry and balance are important concepts in the design of the garden, it is the visual impact which holds the key. At Mount Clare, symmetry is based on the vanishing point of the far off vista, or natural "wilderness garden". This concept of symmetry, formulated by combining archaeological findings and current landscape shapes, will be tested in further excavations at Mount Clare.

WHYTE, Thomas R. ZOOARCHAEOLOGY OF THE ADDINGTON SITE, A PREHISTORIC FISHERY OF THE LOWER CHESAPEAKE BAY.
Bone, shell, and chitin from Middle and Late Woodland contexts of the Addington site (44VB9), Virginia Beach, Virginia, represent diverse terrestrial, avian, freshwater, and, especially, marine fauna. The intrusion of anurans into open pits on the site indicates a summer seasonality of refuse deposition, although the site may have been used for much of the year. Marine fish species composition indicates a summer fishery which focused on the use of nets or weirs in shallow estuaries adjacent to the site. I conclude that the contact period subsistence pattern observed for coastal Virginia and North Carolina Algonquins was in effect by Middle Woodland times.

FRIDAY MORNING - APRIL 4, 1986
11:00 - 4:00 REGISTRATION

FRIDAY AFTERNOON - APRIL 4, 1986
1:00 - 1:10 WELCOMING REMARKS
Dennis C. Curry, President

# # # GENERAL SESSION # # #
Stephen R. Potter, Chairperson

1:10 ECONOMIC ANALYSIS AT THE BENJAMIN BANNEKER SITE. Kristen S. Peters (Maryland Historical Trust).

1:35 ARCHAEOLOGY AND ETHNOGRAPHY IN HISTORIC ANNAPOLIS. Parker B. Potter, Jr. (Brown University).

2:00 PRELIMINARY INTERPRETATIONS OF ARCHAEOLOGICAL INVESTIGATIONS AT AN EARLY 18TH CENTURY PLANTATION. Robert C. Sonderman (National Park Service).

2:25 FLORAL FLOTATION, PHOSPHORUS, POTASSIUM, AND PH AT MOUNT CLARE: TECHNIQUES, METHODS, RESULTS. Louise Akerson, Cheryl Holt, and Eileen Williams (Baltimore Center for Urban Archaeology).

2:50 Break

3:00 DRAINAGE AND FORTIFICATIONS AT FORT MCHENRY, BALTIMORE. Charles D. Cheek (John Milner Associates, Inc.)

3:50  PREHISTORIC SETTLEMENT AND POPULATION CHANGE IN THE CENTRAL VIRGINIA PIEDMONT: AN EVALUATION OF SETTLEMENT AND POPULATION HYPOTHESES. Mark Catlin, Jeffrey Hantman, Michael Klein, and Scott Parker (University of Virginia).

4:15  THE USE OF ACTUALISTIC STUDIES FOR INTERPRETING PREHISTORIC STONE FEATURES. John A. Cavallo and Shari L. Kondrup (Louis Berger and Associates, Inc.)

FRIDAY EVENING - APRIL 4, 1986

8:00 - 10:00  WORKSHOP. ARTIFACT TYPOLOGY AND CONTEXT: LATE ARCHAIC PROJECTILE POINT TYPOLOGY (cont'd). June Evans, Chairperson

This workshop will continue the discussion of the last two years' Friday evening sessions on Late Archaic projectile point typology. The suggestions drawn up by the Conference's Board for Typological Nomenclature will be presented and discussed, with emphasis on guidelines for "good" archaeological contexts as a basis for the firm dating of assemblages. Contributed information on assemblages from such contexts will serve as a focal point for discussion of assessment of assemblage variability and development of useful type descriptions. To facilitate this discussion, examples of biface assemblages from good contexts will be displayed.

SATURDAY MORNING - APRIL 5, 1986

8:00 - 4:00  Registration

8:30 - 9:00  Coffee

Valley. Discontinuities in soil profiles indicate one or more severe episodes of erosion between circa 6000 B.C. and 3000 B.C. Reduced vegetation cover and changes in precipitation rates or cycles are the implied conditions necessary for the erosion. Aeolian depositions occur throughout the period circa 3000 B.C. to the 18th century A.D. and suggest some degree of continuity for the conditions fostering aeolian processes. There is tentative evidence for an imbalance in these environmental conditions for the period between circa 700 B.C. and A.D. 200. These data are compared with the results of local and regional palynological studies.

WARD, H. Henry, and BACHMAN, David C. TESTING THE XEROTHERMIC MODEL ON THE DELMARVA PENINSULA: BURIED SITES IN AEOLIAN CONTEXTS.

The survey of Delaware's proposed Route 13 Relief Route has provided the opportunity to examine a 50-mile long north-south transect and to conduct subsurface testing over a wide variety of coastal plain topographical settings within the transect. All of the subsurface tests were placed in historically unplowed, undisturbed contexts. A high percentage of the test units have produced diagnostic Woodland I artifacts, debitage, and features to nearly a meter in depth below the surface and are thought to be buried in chiefly aeolian contexts. These data are felt to be further support for the xerothermic paleoclimatic model on the Delamarva Peninsula.


Charles Carroll, Barrister's plantation, Mount Clare, located now in Baltimore, Maryland, had a large "falling garden" or pleasure garden around his Georgian style home. At the Mount Clare of today, an interdisciplinary study of the landscape involving archaeological excavation ("garden archaeology"), historical research and landscape architectural analysis is attempting to understand the practical and pleasurable garden of the Georgian period.
shows activity areas correlated with structures. The farmstead buildings' arrangements is a variant on patterns noted by Carson for the Maryland/Virginia Tidewater. The Whitten Road site plan is also similar to that of a similarly dated site excavated by Thomas in southern Delaware. The Whitten Road site is of special interest because it provides a picture of rural life in northern Delaware prior to the dramatic culture changes of the mid-19th century.

SONDERMAN, Robert C. PRELIMINARY INTERPRETATIONS OF ARCHEOLOGICAL INVESTIGATIONS AT AN EARLY 18TH CENTURY PLANTATION.
During the Fall of 1985, the National Capital Region Archeology Program of the National Park Service, began a two phased archeological investigation of Harmony Hall, an early 18th century plantation in Prince Georges County, Maryland. The excavations were undertaken as part of the National Park Service Historic Leasing Program. The program is an innovative approach to Historic Preservation, during a period of shrinking government support to all but the most significant cultural resources of the National Park Service system. Harmony Hall is a classic Georgian, two story, central hall, I house, believed to have been built in 1723. The site, containing both Historic and Prehistoric components, is situated on 65 acres overlooking the Potomac River, 12 miles south of Washington, D.C. The excavations were designed to provide archeological clearance in proposed areas of development, and to investigate areas of probable dependencies and earlier occupations. The paper will discuss the preliminary results of the initial phase of excavation.

STEWART, R. Michael. THE NATURAL AND CULTURAL STRATIGRAPHY OF UPLAND SITES IN THE COASTAL PLAIN: IMPLICATIONS FOR PALEOENVIRONMENTAL CHANGE IN THE DELAWARE VALLEY.
Soil profiles, stratigraphic sequences of radiocarbon dates, features, ceramics, and projectiles are presented for a series of upland sites in the Delaware

# # # PLANTATION ARCHAEOLOGY # # #
Dennis J. Pogue, Chairperson
The study of plantation life is a particularly rewarding field of investigation in the Middle Atlantic as a consequence of the pervasiveness and importance of plantations throughout much of the region. For more than 300 years, plantations served as primary social and economic foci, and their self-sufficiency served to reduce greatly the role of towns in many areas. Not surprisingly, plantations have received a great deal of attention, varying from the earliest nucleated communities spreading out from Jamestown to dispersed single family tobacco holdings that became the norm, to such complex socio-cultural phenomena as Thomas Jefferson's Monticello. Recently, much attention has been focused on the study of black slave culture. But other topics of interest include the layout and evolution of the homelot, status and wealth indices, and interaction of planters and other groups.

9:00 Introduction
9:05 A CASE STUDY IN LATE 17TH-CENTURY PLANTATION LAYOUT AND EVOLUTION: THE KING'S REACH SITE. Dennis J. Pogue (Jefferson Patterson Park).
9:55 OXON HILL MANOR PLANTATION, 1710/11 - 1895. Patrick H. Garrow (Garrow & Associates, Inc.)
10:20 Break

11:20 THE WHITTEN ROAD SITE: 18TH-CENTURY SETTLEMENT IN THE DELAWARE RIVER VALLEY. Mark Shaffer (University of Delaware Center for Archaeological Research).

11:45 Discussion.
Carter L. Hudgins (Mary Washington College).

SATURDAY AFTERNOON - APRIL 5, 1986

* * * SITE CONTEXT AND ENVIRONMENT * * *
R. Michael Stewart and David C. Bachman, Chairpersons

Pollen sequences represent only a portion of the data required to reconstruct local and regional paleoenvironments. Geomorphological and pedological studies and analysis of site locations, for example, can provide significant information on past environments and are more than ancillary checks of palynological interpretations. This session presents a series of integrative studies of paleoenvironments in the Middle Atlantic Region.

1:30 Introduction. PALEOENVIRONMENTAL STUDIES AND ARCHAEOLOGY IN THE MIDDLE ATLANTIC REGION.
R. Michael Stewart (Louis Berger and Associates, Inc.) and David C. Bachman (University of Delaware Center for Archaeological Research).

1:45 EVIDENCE OF LATE HOLOCENE CLIMATIC CHANGE IN CHESAPEAKE BAY SEDIMENTS. Grace S. Brush (Johns Hopkins University).

dating to the period circa 1685-1710, and is the first plantation from that period in Maryland to be intensively investigated. Analysis of patterns in artifact distribution is combined with architectural and other preliminary artifact analyses to demonstrate the home-lot layout and its evolution. However, as the site's period of occupation is relatively circumscribed, intrasite evolutionary trends necessarily are rudimentary, and thus the site may be more profitably viewed as a case study for plantation society during this important period in the transformation of Chesapeake culture. Comparisons are made with other plantation sites and documentary evidence, to place King's Reach within a regional evolutionary framework.

POTTER, Parker B. Jr. ARCHAEOLOGY AND ETHNOGRAPHY IN HISTORIC ANNAPOLIS.
It is by now axiomatic that the archaeologist must approach the archaeological record with questions to ask of it. Appropriate and meaningful archaeological research questions have come from many different sources and have been generated by many disciplines in addition to archaeology itself. A primary source of important archaeological questions, for archaeologists using critical theory, is the ethnography of the local community in which archaeological research takes place. This paper discusses critical archaeology in Annapolis, Maryland, and the ways in which archaeological questions are derived from, and research findings presented to, members of the local community. Examples will be drawn from several different sites in Annapolis.

SHAFFER, Mark. THE WHITTEN ROAD SITE: 18TH CENTURY SETTLEMENT IN THE DELAWARE RIVER VALLEY.
The Whitten Road Site (7NC-D-100) is a mid-18th century to mid-19th century farmstead site located on the Christina River in northern Delaware. Salvage excavations funded by the Delaware Department of Transportation have discovered features from several post-in-ground structures, fence lines, trenches, and a wood-lined well. Spatial analysis of activity areas
In the present paper the authors use historical and archaeological evidence to explore the relationships between town and country regions in the evolving central place structure of Colonial and Federal Virginia. Architecture, inventories, and ceramics are used to enhance our understanding of the social roles of the plantations of the "Curles of the James" region during the Jamestown, Williamsburg, and Richmond eras. In addition to relationships between the country seats and capitol regions, the ties with a secondary central place - the entrepot town of Bermuda Hundred - are explored. The Colonial - Federal life histories of two plantations are presented. These are Bermuda Hundred Plantation, a home of the regionally important Eppes family, and Curles Plantation, seat of one branch of the aristocratic Randolph clan. Material culture patterns are sought using comparisons with Kingsmill plantations on the lower James; the Carters' Shirley Plantation; the Bermuda Hundred town homes of merchants John Hylton and Archibald Batte; and politician-planter-tavern keeper, Richard Henry Eppes. It is suggested that some elements of material culture are best suited to interpretations of social place and role on a colony-wide level while others reflect changes in the economic geography of the region.

PETERS, Kristen S. ECONOMIC ANALYSIS AT THE BENJAMIN BANNEKER SITE. Indications of economic decision making can be traced by using both historical documents and archeological material from the Benjamin Banneker Site located in Oella, Maryland. Recovered from this free black site, occupied from 1737 to 1806, is a large variety of artifacts. Comparisons of artifact frequencies can be made in conjunction with Banneker's personal journal and surviving store ledgers.

POQUE, Dennis J. A CASE STUDY IN LATE 17TH-CENTURY PLANTATION LAYOUT AND EVOLUTION: THE KING'S REACH SITE. King's Reach (18 Cv 83) is a tobacco plantation site...
new analytic approaches. With an emphasis upon aquatic resource usage, studies of both prehistoric and historic site materials are discussed. Subjects range from aboriginal fishing and oystering practices to seasonality and status-related differences in colonial subsistence.

9:15 Introduction

9:20 WOODLAND PERIOD OYSTER UTILIZATION ON THE UPPER DELMARVA PENINSULA. Keith Doms (University of Delaware Center for Archaeological Research).

9:45 ZOOARCHAEOLOGY OF THE ADDINGTON SITE, A PREHISTORIC FISHERY OF THE LOWER CHESAPEAKE BAY. Thomas R. Whyte (University of Tennessee).

10:10 THE VERTEBRATE FAUNAL ANALYSIS OF MATERIAL RECOVERED FROM THE SKIFF'S CREEK SITE (44NN7), NEWPORT NEWS, VIRGINIA: THE ECOLOGICAL AND METHODOLOGICAL IMPLICATIONS. Michael B. Barber (Radford University).

10:35 Break

10:45 OYSTERSHELLS AND URBAN SITES ARCHAEOLOGY. Leslie McFaden (Colonial Williamsburg Foundation).

11:10 SEASONALITY AND SUBSISTENCE: A STUDY OF AN 18TH-CENTURY RURAL COMMUNITY. Joanne Bowen Gaynor (Colonial Williamsburg Foundation).

11:35 ECONOMIC STATUS AND SUBSISTENCE PRACTICES: A COMPARISON OF FAUNAL REMAINS FROM EARLY 18TH-CENTURY LANDOWNER AND TENANT SITES ON THE POTOMAC RIVER. Henry M. Miller (Historic St. Mary's City).

12:00 Adjournment

This paper will attempt to examine this continuity and relate the archaeological discoveries to the historic record.

MCFADEN, Leslie. OYSTER SHELLS AND URBAN SITES ARCHAEOLOGY. This paper will examine recently established methods of oyster shell analysis as applied to urban archaeological sites excavated in the "Historic Area" at Colonial Williamsburg in Virginia. The "Historic Area" has supported a fairly dense population continuously since the eighteenth century, resulting in archaeological contexts routinely more disturbed than those of isolated and less populated prehistoric and historic sites. The quantity and relevancy of oyster shell data from such contexts will be compared with the information that has been obtained from similar analyses conducted by the University of Delaware and Historic St. Mary's City.

MILLER, Henry M. ECONOMIC STATUS AND SUBSISTENCE PRACTICES: A COMPARISON OF FAUNAL REMAINS FROM EARLY 18TH-CENTURY LANDOWNER AND TENANT SITES ON THE POTOMAC RIVER. This paper explores the differences and similarities in animal use at colonial sites in the Chesapeake region. Faunal samples dating to the c. 1720-1740 period from landowner and tenant sites on the lower Potomac river are compared. Domestic animal usage, game exploitation, and fishing and oystering practices are investigated. To better understand the reasons for the variations observed in resource usage, data on domestic animal ownership and the distribution of procurement technology in over 500 colonial households are employed. This information derives from St. Mary's County, Maryland, probate inventories dating between 1720 and 1740.

represents the architectural statement of elite status by one of the wealthiest landowning and slaveholding families on the Delmarva Peninsula. However, within thirty years of its construction, this house was occupied by tenants. Except for a few periods during the Revolutionary War, it remained so until the 1950s, when it was acquired by the State of Delaware for a house museum. During John Dickinson’s lifetime, the usual tenant at his "Home Farm" was his principal overseer and land manager for his Kent County, Delaware, farms. As a group, the men who occupied this position were also men of some wealth and status, often owning large farms themselves. After John’s death, the average status of the tenants seems to have declined. Thus, attempting to study the issues of socio-economic status and material lifestyle at this particular site is considerably complicated.

Excavations so far have concentrated on defining the limits of the farmyard and outbuilding locations within those limits, and on a small undisturbed, artifact-rich midden immediately associated with the main block of the house. Analysis of the features and artifacts associated with the farmyard demonstrate a long continuity of building and fence types and function. Few fundamental changes appear to have taken place in the physical layout, beyond the continual replacement of fences and buildings. Artifact analysis of the midden has not been completed, but does reveal some information relating to the fire of 1803, which gutted the oldest part of the structure, and presents an interesting artifact assemblage, generally dating from the first half of the nineteenth century. After that point, it appears that artifact disposal began to take place at a greater distance from the building, in what is now known as the kitchen garden. Test excavations here have discovered a midden with artifacts dating to the late nineteenth and early twentieth centuries.

Some differences over the centuries appear to have taken place, but the overwhelming impression is of an essential continuity of rural practices and lifestyle.

AKERSON, Louise, HOLT, Cheryl, and WILLIAMS, Eileen. FLORAL FLOTATION, PHOSPHORUS, POTASSIUM, AND PH AT MOUNT CLARE: TECHNIQUES, METHODS, RESULTS. The Baltimore Center for Urban Archaeology (BCUA) is working on a five-year research and restoration project at Mount Clare Mansion, a colonial mansion in the city of Baltimore, Maryland. Archaeological excavations conducted during the spring and summer of 1985 concentrated on the historically located orchard area. In order to restore the orchard as Charles Carroll the Barrister planted it, historic and ethnobotanical research was combined with excavation, flotation, soil testing, and phytolith techniques. Although the BCUA had collected soil for flotation in the past, this was the first time the Center attempted to process the soil on its own. Difficulties encountered in methodology and identification are discussed. Additionally, soil was collected for chemical and phytolith analyses. Both of these techniques were explored, but did not produce viable data. Data procured from flotation however, contributed to the final analysis of the Mount Clare orchard excavations.

BARBER, Michael B. THE VERTEBRATE FAUNAL ANALYSIS OF MATERIAL RECOVERED FROM THE SKIFFES CREEK SITE (44NN7), NEWPORT NEWS COUNTY, VIRGINIA: THE ECOLOGICAL AND METHODOLOGICAL IMPLICATIONS. The Skiffes Creek Site represents a multi-component, Middle Woodland occupation and was excavated by James Madison University in 1982 under the direction of Dr. Clarence Geier. Consisting of artifactual and ecofactual remains, the deposit was dominated by the presence of oyster shell which, in turn, provided for good preservation of skeletal material. Numerous vertebrate species were identified suggesting a broad based subsistence pattern involving varied ec Niches as opposed to a biased riverine/marsh focus. Due to laboratory procedures, the fauna was analysed in two
parts: first, the dry screened material, and second, material recovered from wet screening. The importance of wet screening with reference to bone recovery was underscored. The Skiffes Creek vertebrate faunal assemblage was compared with other Middle Woodland sites in the general area.

BRUSH, Grace S. EVIDENCE OF LATE HOLOCENE CLIMATIC CHANGE IN CHESAPEAKE BAY SEDIMENTS.
A continuous record of pollen deposition at the heads of some Chesapeake Bay tributaries shows changes in abundance of pollen taxa indicating climatic change in the Middle Atlantic region of the United States during the last 5000 years. Detailed investigation at four sites, using time series analyses, show an irregular sequence of wet and dry conditions more or less synchronous with periods of glacial advance and recession at high altitudes. The sites include Furnace Bay in the Upper Chesapeake Bay, the Magothy River and St. Mary's River on the western shore of Chesapeake Bay, and the Nanticoke River on the eastern shore. From 4000 to 3000 years ago, the flora was dominated by black gum, sweet gum and river birch. These taxa are indicators of a wetter environment than characterized the area later. About 1500 years ago, the plants which occupy drier sites today, such as holly, chestnut, and ericaceous shrubs were dominant. The most pronounced dry period occurred between 1000 and 1200 A.D., and corresponds with a similar condition in southeast Virginia and with cooler conditions in the south central Adirondacks. Charcoal and heavy metal influxes during that time period in a core collected in the Nanticoke River suggest that the period was characterized by intermittent fires, which released metals from the soil and vegetation. The historical record of changes in precipitation over the past 200 years is also accompanied by changes in the abundances of wet and dry herbaceous taxa.

CATLIN, Mark, HANTMAN, Jeffrey, KLEIN, Michael, and PARKER, Scott. PREHISTORIC SETTLEMENT AND POPULATION CHANGE IN THE CENTRAL VIRGINIA PIEDMONT: AN

nineteenth century by Zachariah's son Thomas. The occupants of the house from the mid-nineteenth century to the point at which the manor house burned in 1895 are unclear, but may have included a succession of tenants. The economic base of the plantation in the eighteenth century was primarily tobacco, with tobacco becoming less important in the nineteenth century in favor of more diversified farming. The Oxon Hill Manor Plantation was a large and complex agricultural enterprise that sheltered and supported very affluent members of the planter class, as well as the craftsmen, overseers, indentured servants, and slaves that were necessary for the operation of that enterprise. Study of the Oxon Hill Manor site has demonstrated that the spatial organization of this site was both rigid and formal, and that the relative statuses of individuals within the plantation were reflected by their area of residence within the site. This paper explores the spatial organization of the main house complex and its associated outbuildings, farm structures, and slave quarters in light of the social and economic hierarchy operative within the site.

GAYNOR, Joanne Bowen. SEASONALITY AND SUBSISTANCE: A STUDY OF FOODWAYS IN AN 18TH CENTURY RURAL COMMUNITY. This paper will present a study of how the seasonal availability of different types of meat in 18th century Suffield, Connecticut, depended on a number of factors, including climatic constraints, agricultural cycles, preservation properties of different types of meat, size of the animal, as well as the system of distribution of foods to individuals within the community. Through the systematic analysis of a number of farm account books from Suffield, an attempt is made to show how rural exchange networks composed of farmers, craftsmen, and laborers provided fresh meat throughout the year by exchanging among themselves small animals and meats not readily preserved.

GUERRANT, Alice H. CONTINUITY OF RURAL LIFE: THE JOHN DICKINSON PLANTATION. The John Dickinson Mansion near Dover, Delaware,
sedentary lifeways in coastal settings. They were not a year round rich resource utilized on an indiscriminate basis.

FRYE, Susan Winter. CIVIL WAR CITADEL AT HARPERS FERRY: ARCHEOLOGICAL SURVEY ON MARYLAND HEIGHTS. Harpers Ferry played a significant role in the American Civil War. Realizing the strategic importance of this border area, Union forces constructed heavy fortifications on Maryland Heights, the highest mountain overlooking the town. Throughout much of the War, thousands of Union soldiers bivouacked within the confines of this fortress. At the conclusion of hostilities, the fortifications and campgrounds were abandoned, leaving behind some of the best preserved Civil War ruins in the country. In 1963 Maryland Heights became part of Harpers Ferry National Historical Park. Recent vandalism and natural erosion of the Civil War resources have prompted Park Service officials to fund a systematic archeological survey and inventory of these resources. In addition to the Civil War, sites associated with early iron-working industries and domestic habitation are to be documented. This paper discusses preliminary results of our ongoing survey, and includes methodologies developed for documenting substantial earthworks, an extensive road network, and campground areas. The usefulness of this study for understanding material dimensions of the Civil War also is considered, as to date these sites have received little attention from archeologists.

GARROW, Patrick H. OXON HILL MANOR PLANTATION, 1710/11-1895. The earliest evidence of occupation of the Oxon Hill Manor site was in 1710/11, with construction of the manor house. The Oxon Hill Manor plantation was occupied by the Addison family through the remainder of the eighteenth century, and served as the homeplace of one of the wealthiest families of colonial America. Ownership of the property passed to Zachariah Berry in 1810, and the manor house was occupied until the mid-

EVALUATION OF SETTLEMENT AND POPULATION HYPOTHESES. Several alternative hypotheses regarding temporal change in prehistoric settlement patterns and population size in the Middle Atlantic Piedmont are presented. These hypotheses are evaluated based on analyses of Early Archaic through Late Woodland site location and site attribute data from the central Virginia Piedmont. The analyses concentrate on proposed changes over time in the location of specific site types, the settlement focus of populations with regard to riverine and interriverine environmental settings, and variability in the size of prehistoric populations. An important result of the investigation is that it presents new methods for quantitatively evaluating reconnaissance survey and limited test excavation data from the Middle Atlantic area thus permitting the assessment of existing settlement and population hypotheses.

CAVALLO, John A., and KONDRUP, Shari L. THE USE OF ACTUALISTIC STUDIES FOR INTERPRETING PREHISTORIC STONE FEATURES. Binford (1981:29) has argued that archaeologists "must engage in middle-range research, which consists of actualistic studies designed to control for the relationship between dynamic properties of the past about which one seeks knowledge and the static material of properties common to the past and the present ... those things which the present shares with the past." Although such studies have been successfully employed for determinations of stone tool functions, they have rarely been directed toward the study of prehistoric features. This paper will describe the use of actualistic studies in the on-going functional analysis of over fifty circular-to-oval and rectanguloid clusters and scatters of whole and broken cobbles and pebbles. These features were excavated from two Terminal Archaic/Early Woodland floodplain sites (28Mel-B, 28Mel-D) in the Abbott Farm National Historic Landmark near Trenton, New Jersey. During excavations of 28Mel-B, these features were initially interpreted as hearths used for smoke-curing anadromous
fish. However, careful in situ examination of the features and preliminary experimentation with a variety of ethnographically documented aboriginal food processing techniques that employed stones suggested that the archaeological features were probably the residues of stone boiling activities (Cavallo and Kondrup 1985). Subsequent analyses of the stone features, associated artifacts, and experimental data from 28Mel-B were recently enhanced by the study of similar features and artifacts at 28Mel-D and more prolonged and systematic experimentation. In conjunction with ancillary archaeo logical data, ethnographic and ethnoarchaeological information, and chemical analyses, the stones within the prehistoric features appear to have been used for the rendering of oil from the flesh and/or roe of anadromous fish through stone boiling. Additional implications of these findings are also discussed.

CHEEK, Charles D. DRAINAGE AND FORTIFICATIONS AT FORT McHENRY, BALTIMORE.
Fort McHenry today is the product of the original French design and of modifications made by later attempts to strengthen or refurbish this early (1803) coastal fortification site. Both the original design and the later modifications contribute today to drainage problems. In 1984, John Milner Associates, Inc. was retained by the National Park Service, Mid-Atlantic Region to provide information on the drainage problems of various parts of the fort including the exterior fort walls and the walls of the parapet. The French military architect, Foncin, used the French measurement system and the European counterfort system of wall strengthening in the construction, but seems to have failed to have made provision for wall drains. Drainage problems on the parapet and other areas of the fort are caused by mid-nineteenth century improvements. The walls of the ravelin (1814) were not strengthened by counterforts, but by an innovative technique conceived by an American engineer; however, wall drainage was not provided for the ravelin either.

CURRY, Dennis, and STEWART, R. Michael. EXTINCT PONDS AND PREHISTORIC SITE DISTRIBUTION: IMPLICATIONS FOR PALEOENVIRONMENTS IN THE RIDGE AND VALLEY PROVINCE. Early to mid-Holocene ponds are identified in the Ridge and Valley Province through the occurrence of marl deposits in stream flood plains. Excavations into these deposits show alternating sequences of marl (produced during episodes of ponded and still water) and organic silts (representing active stream deposits and land surfaces). These profiles represent the shrinking and swelling of ponds in response to changing stream dynamics and presumably climate change. The distribution of prehistoric archaeological deposits in and around these pond features provides information on the timing and nature of paleoenvironmental changes.

CUSTER, Jay F. MAKING CULTURAL PALEOECOLOGY WORK: AN EXAMPLE FROM NORTHERN DELAWARE. Application of cultural paleoecological research designs requires the integration of diverse data sets. Nevertheless, consistent observations from one set of data, such as stratigraphic discontinuities, cannot be dismissed because another set of data, such as pollen, does not show equivalent variability. For example, stratigraphic data from more than 30 sites in the Delmarva Peninsula Fall Line Zone show consistent stratigraphic breaks, predating 2000 B.C. and post-dating 6500 B.C., over broad areas in site and non-site settings. Aeolian deposits are also present in the same area and their deposition dates to the same time period. Taken together these data indicate major environmental changes during the middle Holocene which had pronounced effects on prehistoric populations.

DOMS, Keith. WOODLAND PERIOD OYSTER UTILIZATION ON THE UPPER DELMARVA PENINSULA. Seasonal analysis of oyster remains from numerous Woodland middens and pit features show a relatively constant Late Fall-Late Spring utilization pattern. Because these are seasons of low productivity for terrestrial resources, it is suggested that shellfish may have been "survival" foods that helped to maintain