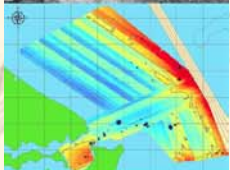


**BODKIN CREEK:
A MARITIME ARCHAEOLOGICAL
AND HISTORICAL STUDY**



Submitted to
Maryland Historical Trust
Crownsville, Maryland
Maritime Archaeological and Historical Society
Washington, D.C.

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ABSTRACT

In September 2008, the Maritime Archaeological and Historical Society (MAHS) was awarded a Non-Capital Historic Preservation Grant from the Maryland Historical Trust (MHT) to complete a comprehensive survey of the shoreline and near-shore portions of Bodkin Creek, in Anne Arundel County, Maryland. The project, entitled “Bodkin Creek Area Maritime and Terrestrial Survey and Synthesis of Prehistoric and Historic Resources,” was a notable example of a cooperative effort by volunteer, government, and commercial sectors, as it combined the work of MAHS (volunteer), MHT (government), and Geomar, LLC (a commercial firm contracted to carry out remote sensing in Bodkin Creek) in a single, coordinated effort. MAHS volunteers conducted primary and secondary archival research at libraries and archives in the United States, Canada, and England. Geomar, LLC, with assistance from MAHS, conducted a remote sensing survey of approximately 2,082 acres of previously unexamined bottom at the entrance to Bodkin Creek and in current and historical navigation channels near the creek. The survey combined side-scan sonar and magnetometer investigations along survey lanes totaling approximately 314 nautical miles in 334 individual survey transects spaced 15 meters (50 feet) apart. The survey identified a total of 92 magnetic anomalies and 252 acoustic contacts. Eight of the targets were of particular interest due to their appearance or their location. Geomar and MAHS divers investigated four of the targets, finding that one was a modern vessel and three were wooden wrecks of as yet undetermined date or type. MAHS volunteers also visited 26 previously identified terrestrial archaeological sites along or near the shoreline of Bodkin Creek and its tributaries. Where possible, general assessments of site conditions were made. And finally, the findings of the historical, terrestrial archaeological, and underwater archaeological investigations were combined in a synthetic overview of the maritime history of the estuary.

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1.0 INTRODUCTION

In September 2008, the Maritime Archaeological and Historical Society (MAHS) was awarded a Non-Capital Historic Preservation Grant from the Maryland Historical Trust (MHT) to complete a comprehensive survey of the shoreline and near-shore portions of Bodkin Creek, in Anne Arundel County, Maryland. The project was entitled “Bodkin Creek Area Maritime and Terrestrial Survey and Synthesis of Prehistoric and Historic Resources.”

1.1 Project Description and Goals

The purpose of the project was to combine underwater and terrestrial archaeological investigations with historical research to produce a synthetic overview of the maritime history of the estuary. As proposed, the project would:

- 1) compile existing data in the Maryland State Archives related to settlement in the Bodkin Creek estuary and its tributary streams;
- 2) assess the condition of a sample of previously recorded terrestrial archaeological sites along the margins of the creek;
- 3) perform new survey work in the underwater portions of the creek; and
- 4) combine the results into a single, synthetic report updating and re-evaluating the archaeology and history of the Bodkin Creek area.

The project was an important example of cooperation between volunteer, government, and commercial sectors, combining the work of MAHS (volunteer), MHT (government), and Geomar, LLC (a commercial firm contracted to carry out remote sensing work in Bodkin Creek) in a focused and coordinated effort.

The work was performed in accordance with the *Standards and Guidelines for Archeological Investigations in Maryland* (Shaffer and Cole 1994). The project was managed for the State of Maryland by Brian Jordan, Ph.D. Steven Anthony, President of MAHS, and David Shaw, MAHS Board of Directors, were co-project managers for MAHS. Dennis Knepper, Vice President of MAHS, served as project archaeologist. Jeff Morris and Stephen Bilicki conducted the remote sensing survey for Geomar, LLC. A complete list of personnel contributing to the project is contained in Appendix A.

1.2 Report Organization

This report is organized by chapters generally following guidelines established by MHT for archaeological survey reports (Shaffer and Cole 1994). After this introductory chapter, Chapter 2 contains general background material that provides context for the research, summarizing the geophysical and environmental setting of the Bodkin Creek estuary, and the cultural setting, including brief summaries of the prehistory and history of the Anne Arundel County area as currently understood. Previous archaeological and historical investigations conducted in the area are also reviewed in this chapter. Chapter 3 presents the research design supporting the project and a rationale for the synthetic study in which terrestrial and underwater research are combined into a fully integrated maritime investigation. Chapter 4 describes the methods used in the study, including the approaches used in archival research; the types and locations of repositories consulted; oral history interviews; terrestrial site observations; and maritime field work that entailed remote sensing

surveys and in-water visual identification of features. Chapter 5 details the results of the archival and field research, the latter including terrestrial site reconnaissance and assessments, as well as underwater remote sensing and in-water visual surveys of targets. Finally, Chapter 6 presents a historical review of Bodkin Creek that combines archival research with terrestrial and underwater archaeological data. A list of references cited in the report is followed by a series of appendixes.

Dennis Knepper was primary report author. Steven Anthony and Thomas Berkey wrote the Methods section; Steven Anthony wrote the Commerce and Transportation, and Recreation sections of the Results; Thomas Berkey, James Smailes, and Steven Anthony wrote the Military Activity section of the Results; and Steven Anthony wrote the Military section of the Synthesis. James Smailes and Earl Glock edited the entire document.

1.3 Acknowledgements

A number of individuals and institutions provided assistance without which this project would not have been successful. Thanks are extended to Dr. Susan B. Langley and Dr. Brian Jordan, of MHT, who provided the initial motivation for the project and helped guide it from the grant proposal phase to the final product.

James Morrison, President of the Friends of Hancock's Resolution, and Henry Schmidt, President of the Hancock's Resolution Foundation, shared their broad knowledge of the history of Bodkin Creek and generously gave of their time showing us many of the terrestrial archaeological site locations along the creek.

Kim Nielsen, Director of the U.S. Navy Museum in Washington, D.C., provided interpretation and insight into the events surrounding the burning of the American privateer in Bodkin Creek during the War of 1812. Don Kentopp assisted MAHS volunteers with research into these events at archives in England and British Columbia. Greg MacMaster, forensic meteorologist, provided expert analysis of historical weather patterns in the days before and after the reported burning of the privateer. Scott Sheads, National Park Service Historian at Fort McHenry, similarly provided information and references on the years surrounding the War of 1812. Mary Louise de Sarran, librarian at MHT, provided valuable assistance with records searches. Edmund Nelson, volunteer at the Maryland Historical Society Library, provided assistance with ship registrations, enrollments, and related Baltimore maritime material. David Pfeiffer, Liz Gray, and Ed Barnes provided assistance with records searches at the National Archives at College Park. Al Luckenbach and Jane Cox, of the Anne Arundel County Office of Planning and Zoning and the Lost Towns Project, suggested sources for important historical information. Abe Roth, Jr., and Abe Roth III, Bayside Beach area residents, provided valuable information based on their extensive experience diving in Bodkin Creek. And lastly, Jerry Herson and Don Walker, of Pleasure Cove Marina, provided dock space for research vessels conducting the remote sensing survey and subsequent dives on underwater targets.

2.0 BACKGROUND

The following report section provides contextual information and a framework within which to view the results of the research conducted in this study. First, the physical environment of the Bodkin Creek study area is described. Next, to set the stage for examination of the prehistoric occupations within the Bodkin Creek valley, the paleo-environment and its effects on maritime adaptations along the shores of the creek are noted. Finally, the cultural context is presented in terms of our current understanding of prehistoric and historical occupations in Anne Arundel County and the region. This wider context is critical to understanding the maritime history of Bodkin Creek because life in the estuary was both shaped by and in turn shaped events in the surrounding region.

2.1 Physical Environment

Regional Geology and Geomorphology

The Bodkin Creek study area lies in Anne Arundel County, on the Western Shore of the Chesapeake Bay. Anne Arundel County hosts 431 miles of shoreline, mostly representing creeks and streams that flow into the Chesapeake Bay (Kirby and Matthews 1973:1). The county is bounded to the north by the Patapsco River and Baltimore County; to the east by the Chesapeake Bay; to the northwest by Howard County; to the west by Prince Georges County, with the Patuxent River as the boundary; and to the south by Calvert County.

For the purposes of cultural resources studies, Maryland has been divided into 24 research units that group regions with similar physiographic and cultural characteristics (Maryland Historical Trust 1986). The Western Shore of Maryland represents five units, and the Bodkin Creek estuary lies within Research Unit 7. The unit is located north of the Patuxent River basin (Research Unit 8), and includes the drainage basins of a series of smaller stream systems such as the South River, Magothy River, and Rock Creek, along with the Patapsco River and northward to the Back, Middle, and Gunpowder rivers north of Baltimore (Figure 2-1).

According to the Anne Arundel County Office of Planning and Zoning (Anne Arundel County 2008a), the Bodkin Creek drainage basin, or watershed, consists of approximately 5,200 acres, lying at the mouth of the Patapsco River (Figure 2-2). Situated roughly 15 miles (24 km) southeast of Baltimore, the area includes portions the so-called Pasadena Peninsula, including Hog Neck and Bodkin Neck (Cunningham 2001). The portion of the basin selected for study in the current investigation measured approximately 2,800 acres, including the creek and its tributaries. A 2.5-square-nautical-mile section of the Chesapeake Bay that extends outward from the mouth of Bodkin Creek to the Upper Range of the Craighill Channel was an additional but separate part of the survey.

Bodkin Creek lies in the Coastal Plain physiographic province, which is marked by gently rolling topography cut by broad, meandering watercourses. At or near the Piedmont transition, some stream channels are still comparatively deeply incised, although agriculturally induced run-off and consequent silt build-up over the last 350 years has altered the flow of most streams (Wesler et al. 1981:6). The primary water course in the estuary is

Bodkin Creek, which is a relatively short waterway less than one mile in length. To the east, between the creek and the Chesapeake Bay, lies a relatively narrow peninsula shaped vaguely like a knife, or in a term more common in the 18th century, a bodkin. This resemblance is generally assumed to be the source of the creek's name. The creek itself is headed by small tributaries known as Wharf Creek and Locust Cove. Other principal tributaries are the aptly named Main Creek (approximately 2.5 mi in length) and Back Creek (approximately 1.75 mi).

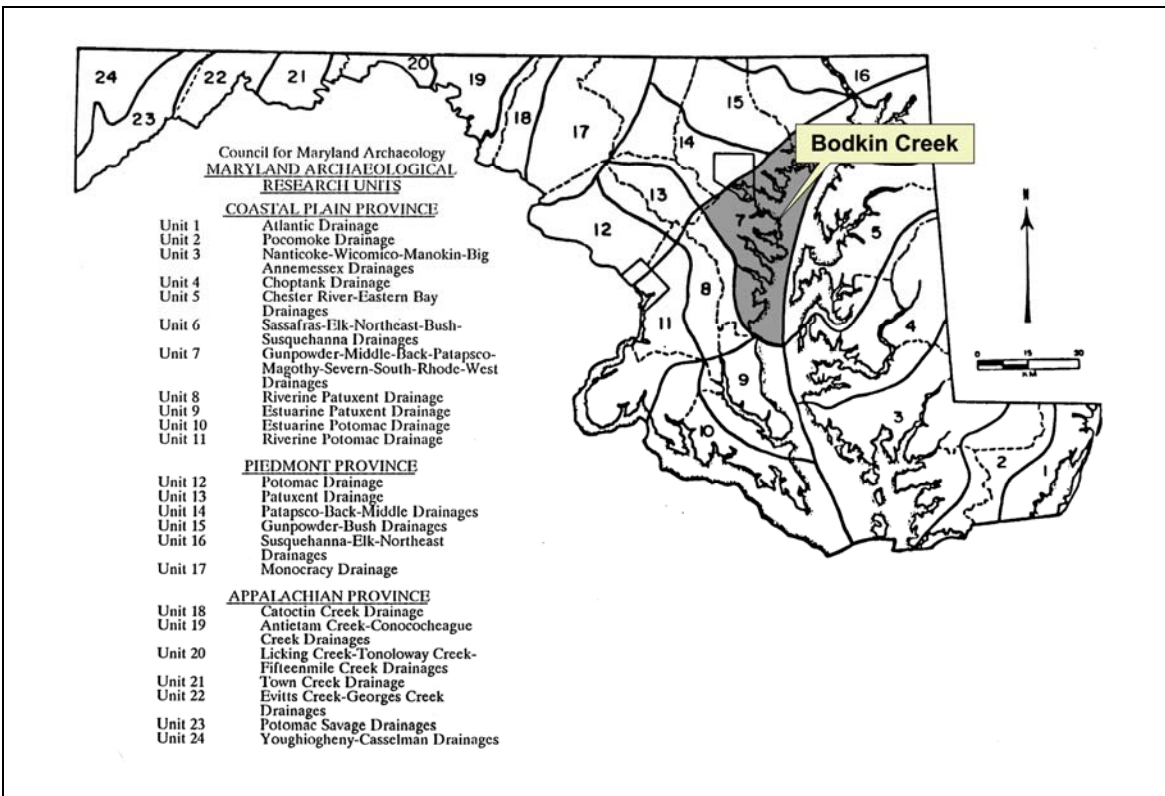


Figure 2-1. Maryland Archaeological Research Units: Research Unit 7 Highlighted (Maryland Historical Trust 1986).

The sediments that make up the soils of the Coastal Plain consist of unconsolidated gravels, sands, silts and clays that are increasingly deep to the south and east, covering hard crystalline bedrock (Shattuck *et al.* 1902; Vokes and Edwards 1974). The lowest sediments among the Coastal Plain deposits are Cretaceous in age, defined as Potomac Group clays of the Patapsco Formation. These deposits, which originated in ancient swamps and river floodplains, are progressively thicker to the east, away from the Piedmont (Mack 1962). Primary lithic resources of potential interest to prehistoric populations do not generally occur on the Coastal Plain. The later Pliocene and Pleistocene sediments, including pebbles, gravels and sands deposited by freshwater streams, are exposed as lag deposits on stream terraces in uplands within Anne Arundel County, typically at elevations above 60 meters (200 feet) (Wentworth 1930; Schlee 1957). These gravel beds include quartz, quartzite, chert, hard sandstone, or even, on occasion, rhyolite washed from the Piedmont and beyond

(Wesler *et al.* 1981; Gardner 1982; Stewart 1987). In the floodplains immediately bordering major streams, recent alluvium often provides fertile setting for horticulture or agriculture.

Elevations within the Bodkin Creek estuary range from sea level to approximately 30 meters (100 feet). The landscape is relatively low to the south, although a high bluff overlooks the upper reaches of Main Creek on the south side, and several knolls lie to the west and northwest. Bluffs also overlook the Patapsco River and Chesapeake Bay to the northeast, in the Bayside Beach area. Almost all of the Bodkin Creek area has been cleared and developed.

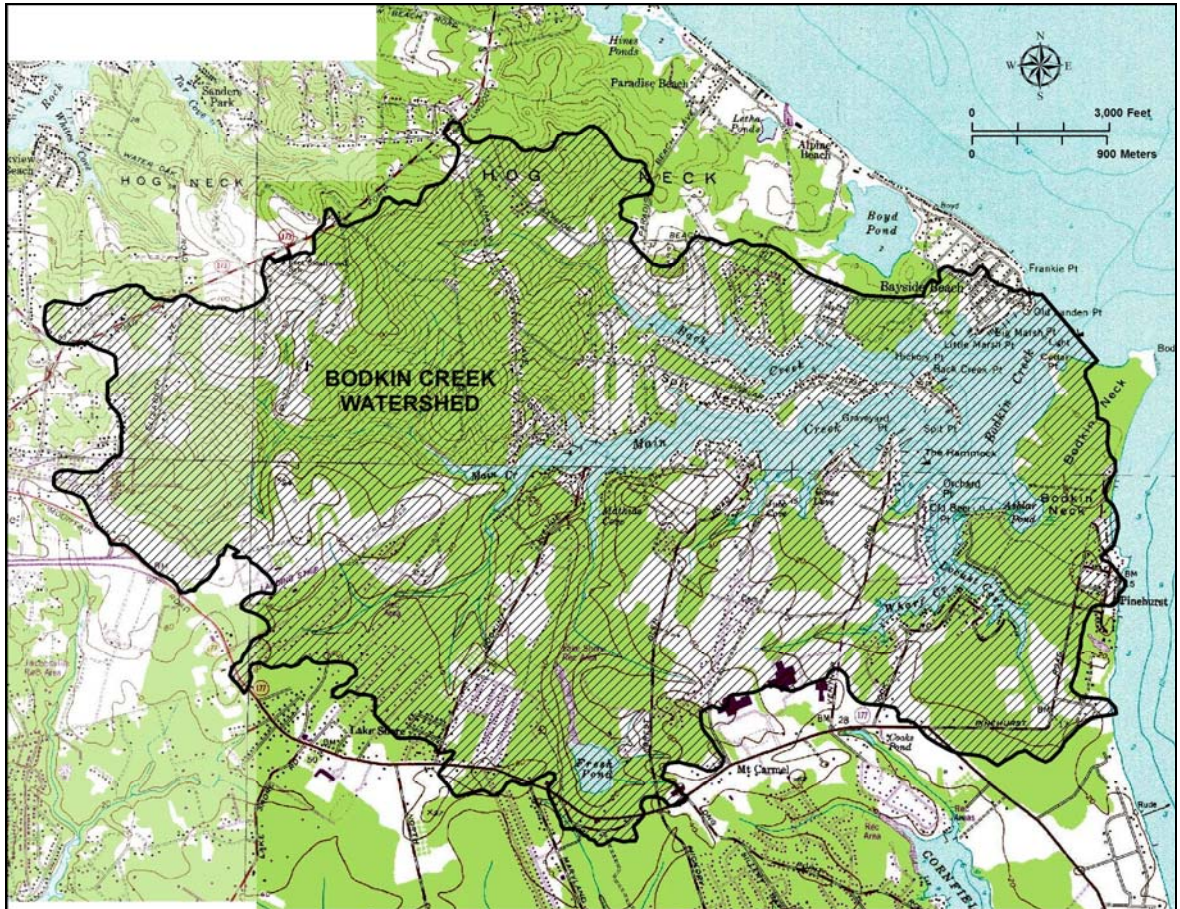


Figure 2-2. Bodkin Creek Watershed (based on Anne Arundel County 2008a).

Soils

Examination of soil types is a standard practice in cultural resource survey and evaluation studies. Certain soils are more suitable than others for agriculture, and thus would have been attractive to early settlers of the area. Likewise, some soils tend to have been associated with particular floral and faunal communities and were more likely than others to have attracted prehistoric populations seeking specific resources or settlement locales. While vegetation and wildlife have changed, sometimes dramatically, over the course of human occupation of the Anne Arundel County area, soils tend to remain relatively stable, forming and

transforming on time scales of considerably longer duration than the biological and cultural frames of reference by which human settlement patterns are measured.

Like many areas, the Bodkin Creek estuary is a mosaic of soil types. The main soil associations (areas containing groups of soils in particularly characteristic proportions), include the *Evesboro-Rumford-Sassafras association*, described as gently sloping-to-moderately steep, excessively drained-to-well drained, sandy and loamy soils with varying amounts of slowly permeable clay in their subsoils. Also included in the association are Muirkirk loam sand and various areas labeled “loamy and clayey land” that cannot be classified by soil series. The soils of this association are described as “well-suited to general truck crops” (Kirby and Matthews 1973:7), and we will note later the significance of this for the development of agriculture in the region. Marshes and wetlands form only a minor portion of the landscape in the area, generally occurring as small tidal features at the upper ends of the estuary system.

Flora and Fauna

Prior to European colonization, most of the area which now comprises Anne Arundel County was forested, containing primary stands of hardwoods such as red and white oak, sweet gum and yellow-poplar (Shelford 1963). The county also represents the northernmost extent of several arboreal species, such as loblolly pine, indicating the transitional nature of the region (Brush et al. 1977). Presently, much of the land is cleared, with some areas, particularly to the south and west away from the creek margins, exhibiting secondary growth. Virginia pine has become a subdominant species in some cleared regions. An often thick understory lies at the base of secondary hardwood stands, especially in wet or marshy areas, and includes Virginia creeper, myrtle, sumac and the seemingly ubiquitous green briar and poison ivy. A variety of grasses may also flourish in portions of cleared areas.

Deer, whose breaks are evident in clearings across the region, are the largest mammal remaining in the area, drawn particularly to woodland edges, areas that also attract raccoon, grey and red squirrel, turkey, ruffed grouse, woodcock and thrush. Open areas may attract rabbit, woodchuck, red fox, quail, dove, meadowlark, or pheasant. A variety of small mammals, birds, and reptile species also inhabit the stream margins and overlying terraces. Raccoon, muskrat, duck, geese, rail, and heron are found in wetland areas. Larger migratory fowl such as geese are generally confined to tidal or non-tidal wetlands. Small freshwater fish inhabit larger order streams. Anadromous and semi-anadromous species (saltwater and estuary species that spawn in freshwater), in particular alewife and white perch, spawn in very narrow, shallow tributaries (Lippson 1973). However, silt build-up within the tributaries, resulting from historic land clearing for agricultural and industrial use, has limited the upstream extent of these spawning areas.

Climate

Current climate in the region is described as continental, generally temperate and at times humid. Weather systems move through the area from the northwest in winter and the southeast in summer. Modern temperatures range from an average high of 87 degrees Fahrenheit (31 Celsius) in July to an average low of 25 degrees Fahrenheit (-4 Celsius) in February. Average annual precipitation totals 40-44 inches, evenly distributed throughout

the year. Bodkin Creek feels the ameliorating effects of the Chesapeake Bay which keeps temperature ranges and rainfall slightly lower than in adjacent areas to the west. In winter, higher humidity and precipitation often result from northeasterly winds off the Atlantic, while the Appalachian Mountains to the west help to moderate the coldest temperatures (Kirby and Matthews 1973; Mack 1962).

Paleo-Environment

The climate and general environmental conditions that we experience in the region today have not, of course, been the same for the entire 12,000 or so years that humans have occupied the North American continent. In order to properly assess natural resource distribution and the implications of human settlement through time, it is necessary to consider how the region's climate and environment have changed. While these environmental transformations will be examined in more detail during consideration of the actual record of prehistoric land use in the area, it may be noted here that the environment has remained relatively stable for the past 3,000 years. Prior to that time, two major trends have been noted in the climatic record—gradual warming and a rise in sea level—both phenomena interrelated with the retreat of the last continental glaciers during a period that generally coincides with the arrival of man in the Middle Atlantic.

At the end of the last glaciation, the region was considerably colder and wetter than at present, with open tundra and boreal forest environments extending throughout the region. Sea level is estimated to have been as much as 130 meters (430 feet) below current levels (Milliman and Emery 1968), with estuaries such as the Chesapeake Bay, which have been important to human populations for the last 5,000 years, yet to form. Maximum low sea level occurred between 18,000 and 14,000 B.P. (Edwards and Merrill 1977). The rate of sea level rise since that time has not been steady. The best data we have available are from studies in the Delaware Bay (Kraft 1967; Kraft and John 1978) that show a continuous rise since about 15,000 B.P. The rate increased after 8,000 B.P., then gradually slowed between 5,000 and 2,000 B.P., and even further following that. The marine transgression, or the submersion of coastal areas by rising sea water, was too rapid to allow extensive development of coastal marshes or stable estuary systems until about 3,000 years ago (Newman and Rusnak 1965).

The ancestral Susquehanna River, portions of which would eventually become the Chesapeake Bay, ran through a deep valley that extended to what is now the mouth of the Bay and out onto the exposed Continental Shelf. Studies have shown that as the ice sheets retreated, rivers throughout the region carried significant amounts of glacial melt water and had much greater flow rates and more deeply incised channels than at present. The base of the ancestral Susquehanna was as much as 200 feet lower than at present, and the river would have presented a relatively steep-walled valley, impeding the formation of marshes (Hack 1957). As melt waters fed the rise in sea levels, river mouths were inundated forming bays and extensive estuary systems: the Chesapeake Bay, formed at the mouth of the Susquehanna, is the largest example.

The gradual warming trend also led to the replacement of northern forests and animal communities with varieties more typical of southern temperate zones. Inland estuary formation began to slow around 5,000 years ago as the rate of sea level rise diminished.

Within the next 2,000 years, modern climatic and environmental conditions had essentially become established.

The rising sea levels during this period have had a substantial effect on the archaeological record in the region. Many early coastal sites and sites along streams and stream terraces are now underwater, generally inaccessible and unrecorded given current investigative techniques. As Maryland researchers have noted:

Early postglacial sites of marine adapted peoples along the Atlantic Coast have been inundated; this may include the vast majority of such sites as late as 3000 B.P. Similarly, drowning of the ancestral Susquehanna River Valley meant the inundation of early riverine and estuarine groups on the Western Shore, now under the waters of the Chesapeake Bay or its tributaries...A land-oriented bias in our information for early cultural manifestations will thus be heavily evident (Wesler et al. 1981:14).

2.2 Cultural Environment

History is usually defined as a narrative or a record of past events, and in this definition is the implication that the record of the historical past is written. In formal historiographical terms, that is, history begins with writing. The change from prehistory to history thus varies in different parts of the world. Under this definition, history began in Mesopotamia and Egypt thousands of years ago, while as far as can be determined, it began in North America with the arrival of Europeans in the 16th and 17th centuries. This is admittedly a Eurocentric perspective and does not imply that nothing happened in North America prior to European exploration and settlement. Far from it, human occupation of the continent extends back at least 12,000 years and probably even further. We merely refer to most of that span of time as prehistory.

Prehistory

In the absence of written records, our knowledge of the prehistory of the region comes solely from archaeology, the study of the human past based on material remains—the artifacts and features that people have left behind. Our view of the prehistory of the Middle Atlantic region generally follows a model established in the mid-20th century by James B. Griffin (1967), which proposes a developmental sequence on the basis of changes in the natural environment, subsistence patterns, and technology. These periods include the Paleo-Indian Period (ca. 10,000-7500 B.C.), the Archaic Period (ca. 7500-1000 B.C.), and the Woodland Period (ca. 1000 B.C.-A.D. 1650). The Archaic and Woodland periods are further divided into Early, Middle, and Late sub-periods

North America was populated late in the span of human occupation of our planet. While an increasing amount of evidence suggests that people may have arrived on the continent 20-30,000 years ago, current consensus is that the earliest confirmed populations arrived 12-14,000 years ago. Population density in the Middle Atlantic region was low at that time. Groups inhabiting the area are usually considered to have been highly mobile hunters, armed with spears tipped by points made from finely crafted cryptocrystalline stone such as chert or jasper. Widely scattered nomadic groups may have been in Anne Arundel County this early,

as attested by Paleo-Indian sites such as Katcef (18AN57, 18AN58) and Higgins (18AN489), both in the western part of the county. Yet, relatively little direct data from the Paleo-Indian period in the region is available for study. This may be a function of the generally low population, resulting in few sites overall, as well as the disappearance of many stream-side settings with the rise of sea level and the formation of the Bay, so that many Paleo-Indian sites are currently underwater. The interpretation of Paleo-Indian settlement/subsistence is thus based largely on models of big game hunters proposed by researchers in the western part of the continent. The analogy may not in fact be directly applicable, since most big game animals were gone from the region by the time the Chesapeake Bay area was first occupied (Wesler et al. 1981).

Occupation of the Chesapeake Bay region in the Early Archaic period (ca. 7500 B.C.-6000 B.C.) is often described as imperfectly understood, with a general lack of excavated archaeological sites available for study (Dent 1995). As was the case with Paleo-Indian occupation, low population, few sites, and the inundation of stream-side sites resulting from the formation of the Bay are probably major factors in this lack of information. In terms of what is known about subsistence during the Early Archaic, strategies appear to have been comparable to those of the Paleo-Indian period, with an emphasis on generalized hunting and foraging (Gardner 1974; Custer 1984, 1989). However, there is evidence to suggest that Early Archaic populations were beginning to exploit a wider array of resources associated with the new Holocene ecology, as temperatures warmed following the retreat of the continental ice sheets at the end of the Pleistocene and as northern or boreal forests were gradually replaced by temperate forests (Joyce 1988). Several coastal sites in Maryland, such as Crane Point, on the Eastern Shore in Talbot County (Lowry and Custer 1990), and sites on inland stream settings, such as Indian Creek, near Greenbelt in Prince George's County (LeeDecker and Koldehoff 1991), have produced evidence of increasing focus on the collection and use of forest mast materials (the fruit and nuts of tree species), and tuberous and starchy seed-bearing plants. The period is marked by the introduction of a number of new projectile point forms, including the corner-notched and serrated Palmer and Kirk points; the later Kirk-stemmed types; and the still later bifurcate base points, including LeCroy and Kanawha. Like Paleo-Indian points, these artifacts probably served as spear tips.

Pollen profiles from the Middle Archaic period (ca. 6000-3500 B.C.) indicate a continuing change in forest elements in the Middle Atlantic. Hemlock, typical of boreal habitats, abruptly declined about 5000 B.C., and hickory, a temperate arboreal species, continued to migrate into the area (Joyce 1988). By ca. 6000 B.C., the Chesapeake Bay began to form through inundation of the ancient Susquehanna River system. Interior marshes, estuaries, and the wetland resources associated with them became an important focus of subsistence activities (Gardner 1978). Wilke and Thompson (1977:99) reported that the exploitation of shellfish began during this period, citing dates on samples of oyster shell from middens on the Eastern Shore. Yet, the marine transgression associated with rise in sea level was rapid enough for most of the period that concentrations of shellfish, and in particular oysters, could not develop in the newly forming estuaries. Further analysis of Wilke and Thompson's data has suggested that their interpretation is problematical and probably incorrect (Custer 1989; Dent 1995). Long and broad-bladed point types, such as Guilford and Morrow Mountain, were present early in the sub-period, while side-notched Halifax points appeared somewhat

later (Coe 1964). Groundstone tools used for grinding and woodworking—including axes, adzes, and mauls—also occurred in numbers not previously seen archaeologically. An important site in Anne Arundel County that dates to the Middle Archaic period is the Magothy Quartzite Quarry (18AN760). Located near Pasadena, west of Bodkin Creek, the site consists of a large outcrop of distinctive, fine-grained metamorphic rock that was used by prehistoric Native American groups for stone tool manufacture (Clark and Luckenbach 2002). Other exposures of the formation occur at the mouths of Rock Creek and Stony Creek, north of Bodkin Creek.

By the beginning of the Late Archaic period (3500-1000 B.C.), sea level rise had begun to slow, which allowed new estuary environments to stabilize and thus to provide an increasingly reliable resource base for human inhabitants of the area. Archaeological evidence suggests that regional population increased rapidly, with sites frequently occurring near confluences of salt and fresh water: i.e., estuary habitats. Artifacts including broadspears, steatite bowl fragments, and groundstone tools recovered by Stearns from the Fort Smallwood area in the 1940s provide ample evidence of occupation of the region in the Late Archaic period (Stearns 1943:6-8).

The temperate biome that persists in the Chesapeake Bay region to this day was well established by the Early Woodland period (1000 B.C.-A.D. 200). Populations continued to make use of riverine and estuarine resources as they did during the Late Archaic, but increasingly efficient resource exploitation allowed groups to stay in the same location for longer periods of time, a development reflected in larger archaeological sites that contain more varied evidence. Around 1000 B.C., techniques for pottery manufacture were introduced across the region, a technological innovation that has traditionally defined the beginning of the Woodland period throughout the Middle Atlantic (Kavanagh 1982). Although the regional subsistence base continued to be exploited through traditional hunting and gathering means, the role of horticulture gradually assumed greater importance (Gardner 1982; Dent 1995). Ceramic artifacts are better temporal markers during the Woodland period than spear and arrow points. Some of the earliest ceramics in the Middle Atlantic region were steatite-tempered Selden Island and schist-tempered Bushnell wares (Egloff and Potter 1982), along with the slightly later, quartz-tempered Accokeek Creek ware (Stephenson and Ferguson 1963).

The Middle Woodland saw the introduction of shell as a tempering agent in ceramics, an innovation that implies a concentration of shoreline activity, both for the sustenance represented by the resources there, as well as the technological advantage provided by the new tempering material. Large shell middens begin to appear in the archaeological record at this time (Wesler et al. 1981:195). Characteristic artifacts included Mockley, a thick-bodied, shell-tempered and net-impressed ceramic; Popes Creek, tempered with sand and quartz, and marked with cord impressions; and Nomini, cord-marked or net-impressed and tempered with rounded quartz (Waselkov 1982:286, 292-3; Egloff and Potter 1982:104-106). An important Middle Woodland site was recently discovered in Anne Arundel County at Pig Point, on the Patuxent River (Luckenbach 2009). The site contains stratified deposits from the Late Woodland to at least the Late Archaic, although house patterns from the Middle Woodland are perhaps the most significant aspect of the site (Luckenbach, personal

communication 2009). Also recently discovered were two large shell middens on South River that are thought to be associated with the Middle Woodland occupation at Pig Point (Sperling 2009).

By the Late Woodland period (ca. A.D. 900-1650), horticulture began to play a significant role in the total subsistence system across the Middle Atlantic region (Reinhart and Hodges 1992). Large, semi-permanent and permanent villages appear in the archaeological record, with increases evident in the number and sizes of house patterns and of storage facilities, suggesting long-term, even permanent occupations. Artifacts diagnostic of Late Woodland occupation in the region include triangular points (many probably used as arrow points), shell-tempered Rappahannock ceramics of the Townsend series, and sand or crushed rock-tempered Potomac Creek.

There is relatively little evidence of Contact period occupation in the region, especially in the northern part of the county. The area appears to have been a middle ground between Algonquian groups to the south and Iroquoian groups to the north. Among the latter were the Susquehannocks and Massawomecks, who have been described as “mortal enemies” (Rountree et al. 2007:231). The Susquehannocks inhabited a widespread area that stretched from upstate New York to the upper reaches of the Chesapeake Bay. John Smith contacted a group of Susquehannocks in 1608, a band that was probably from the Susquehanna River below Conewago Falls, south of Harrisburg, Pennsylvania. The Susquehannocks apparently claimed possession of the entire valley of the Susquehanna River as well as much of the Chesapeake Bay (Jennings 1978:363), having migrated southward into the area by around A.D. 1500 (Kent 1989: 26,47). The impetus for their movement into the area may have been commercial, seeking marine shells such as the snow whelk to trade for metal tools from the French farther to the north (Rountree et al. 2007:229). The Massawomeck, in contrast, are described as warlike raiders whose home region in the late-16th century appears to have been along the North Branch of the Potomac River and from which they consistently raided settlements on the Eastern Shore.

It has been suggested that much of Anne Arundel County had become an uninhabited buffer zone by the Contact Period. At the time, John Smith observed that the region south of the Patapsco appeared to be uninhabited (Cunningham 2001:5; Rountree et al. 2007:90-91). Some researchers have noted the absence of Indian names for most of the rivers in the county, in contrast to rivers in the surrounding areas such as the Patapsco, Susquehanna, Patuxent, or Potomac, and across the Bay the Sassafras, Choptank, Nanticoke, or Wicomico. While an indirect argument, this may imply that when Europeans arrived there were no resident populations in the area to provide names for the streams (Luckenbach, personal communication 2009). Other examples of buffer zones have been noted in the Middle Atlantic region, as seen for example in the central Virginia fall line zone (Holland 1979; Mouer 1983, 1984; Turner 1978).

History

Smith's exploration of the Chesapeake Bay in 1608 heralded the beginning of the historical period in what would eventually become Anne Arundel County. The sub-periods used in the paragraphs that follow are based on an overview of the history of the county presented in a

survey of the Western Shore conducted by the Maryland Department of Transportation in the early 1980s (Wesler et al. 1981:77ff).

Initial European Settlement 1643-1645

Smith's detailed notes of the Indian villages and abundant natural resources of the Chesapeake Bay encouraged other explorers and traders to venture into the region (Barbour 1969). Wesler et al. (1981) have characterized the earliest period of Western Shore history as a generally failed attempt to replicate the economy, class structure and culture of traditional English society. Among the reasons cited for the failure were demographic (settlers were predominantly young, male, without families, and with a limited range of occupational skills); a high rate of mortality; greater opportunities for social mobility than in the more rigid English society; an unfamiliar physical environment (heavily forested, with no roads and often hostile native Indian populations); and a different economic environment, focused almost exclusively on a single crop—tobacco.

In 1632, Sir George Calvert was granted title to all of Maryland and the southern portion of Pennsylvania. The first colony to be established in Maryland was St. Mary's, in 1634 (Fausz 1988). Calvert was succeeded by his son Cecil, Second Baron Baltimore. In December of 1649, the first European settlement in Anne Arundel County was founded on the north shore of the Severn River opposite present-day Annapolis by a group of nonconformist Puritans from Virginia. The settlement was called Providence (Ware et al. 2008). The next year, 1650, saw the formal creation of Anne Arundel County, named in memory of Calvert's wife of 21 years, Anne, the daughter of Thomas Arundell, first Baron Arundell of Wardour.

As Lord of the proprietary, Cecil had the right to grant land and collect an annual fee or "quitrent." Most of the early land grants were to wealthy and influential men, merchants and planters who intended to increase their wealth through the lucrative tobacco trade. The cultivation of tobacco for trade had an overriding influence on settlement patterns and the developing social structure. Vast tracts of land were necessary for growing the plant, which rapidly depleted the soil. These tracts were located along the shores of the Patuxent, Potomac, and St. Mary's rivers, since water transportation afforded the only practical means of reaching trade centers. The great profits which could be realized from the tobacco trade gave the first immigrants the opportunity for social mobility unknown in England. During the 17th century, most landowners seated their land with indentured servants brought from England. Once these servants completed their period of indenture, they could work as free men and save enough money to purchase their own land and hire their own servants (Wesler et al. 1981:79-82).

Growth and Instability 1645-1680

Tobacco cultivation is labor intensive, and the tobacco-based economy established on the Western Shore led to rapid population growth as laborers emigrated from England. By 1667, the county had the third largest population in the colony (Wesler et al. 1981:93). But



Figure 2-3. Griffith Map of Anne Arundel County, 1795.

little heed was paid to the development of well-organized and efficient government. The new population generally consisted of unemployed or unemployable émigrés and indentures who settled on dispersed farms and plantations. They continued to experience high mortality rates and families tended to be small, all of which discouraged social and cultural continuity or stability.

Transition to an Established Colony 1680-1720

By the turn of the 18th century, the majority of Maryland's Euro-American population was native born, outnumbering new immigrants. A better demographic balance along with a decrease in mortality rate allowed the development of family and social structures. Population growth continued and by 1694, Anne Arundel was the most populous and wealthiest county in Maryland (Riley 1905:42). The period also saw a degree of agricultural diversification in some areas, along with Town Act legislation that included the designation of port-of-entry towns to promote mercantile centers.

Concomitantly however, opportunities for social mobility declined and social structures came to be increasingly stratified. An elite class had emerged from the original population and continued to consolidate its economic and political dominance. A further decline in the number of new immigrants and indentured servants was caused in part by a labor shortage in England after 1680. To meet the labor demands in the colony, slaves were imported from Africa and soon became an integral element in the pervasive tobacco economy (Carr and Menard 1979:261). Slavery also contributed to the ongoing social stratification within white society, since it led to a decline in the status and economic opportunities for free white laborers (Wesler et al. 1981:84).

Economic and Social Stability 1720-1860

Often thought of as the golden age of tobacco economy, the 18th and early-19th centuries also saw an increase in the cultivation of grain crops throughout the region. Tobacco cultivation is not only labor intensive, but also quickly exhausts the nutrient levels of the soils. Wheat soon became an important alternative commodity, especially on the Eastern Shore. Notwithstanding, tobacco remained the primary crop on the Western Shore, enabled by the deeply-rooted system of slave labor. By 1810, when the slave population had dropped markedly in the rest of Maryland, slaves accounted for 40-60 percent of the total population in each of the five Western Shore counties—44 percent in Anne Arundel County (Wesler et al. 81:87, 102).

Settlements had initially focused on areas along streams for the transportation access they represented. During 18th and early-19th centuries, areas between streams were settled. While population continued to increase, Anne Arundel County lost approximately one-third of its land when Howard County was created in 1851. Roads were constructed in the central part of the county connecting Annapolis to Bladensburg, Rockville, Frederick, and Baltimore, while a stage ran three times a week between Baltimore and Annapolis (Leviness 1958 in Wesler et al. 1981:97; Riley 1905:83). Steamboat service connected the Western Shore to Baltimore and Alexandria: the Weems line was established 1817, running between Baltimore and landings on the Patuxent River; and the Potomac River steamboat service began routes between Baltimore and Alexandria in 1828, stopping in Charles, Prince George's, and St. Mary's counties (Burgess and Wood 1968:20).



Figure 2-4. Martenet's Map of Anne Arundel County, 1860.

Adaptation to Changing Social and Economic Conditions 1860-1930

Although no battles were fought in Anne Arundel County during the Civil War, the conflict had a profound impact on the region, dramatically altering its economic and social structure. Pro-southern sentiments ran high across Maryland, and Annapolis and Baltimore were occupied by the Union Army during the War to safeguard against Maryland seceding (Ware et al. 2008). Annapolis was an important embarkation point for Union troops, and a camp was built west of the city as a recovery and retraining facility for troops paroled and repatriated from southern prisons or for prisoners awaiting exchange. The name of the camp, Camp Parole, survives as a place name near Annapolis today. The large troop presence in the county increased the demand for produce and other foodstuffs from area farmers, which encouraged the eventual development of truck farming, especially in the northern part of the county (Mumford 2000:3).

The War and the Emancipation that ensued also began a fundamental reorganization of the entrenched plantation society, as planters were deprived of the slave work force on which they depended. Following the end of the Revolutionary War, Baltimore had superseded Annapolis as the commercial center of the state largely due to its better situation as a port. Many freed slaves left Anne Arundel County after the war for the urban-industrial center that Baltimore represented, causing a distinct labor shortage on farms and plantations. This shortage was soon manifested in harvest figures, as yields were cut in half, from more than 6 million pounds in 1860 to just over 3 million pounds in 1870, and 2.1 million in 1890 (Wesler et al. 1981:105).

A system based on tenant farming came to replace the slave system throughout the American South (Orser 1988). The southern counties on the Western Shore adopted share-cropping to maintain their tobacco-based economy. In contrast, farmers in Prince George's and Anne Arundel counties diversified both the crops they cultivated and the markets to which they sent their produce. Wheat had already been grown in rotation with tobacco on some exhausted farm land in the counties since the 18th century. Banks in Washington and Baltimore provided loans for farmers, which encouraged diversification and a transition from large plantations to smaller, independent farms. And yet, while farmers in Anne Arundel County cultivated potatoes, fruit, and corn, as well as producing some dairy products, which were marketed in the growing urban center of Baltimore, tobacco remained ingrained in the economy, even into the twentieth century. As late as 1973, the U.S. Department of Agriculture's Soil Conservation Service noted that tobacco was the most important crop in Anne Arundel County (Kirby and Matthews 1973:1).

The soils of Anne Arundel County are sandy and are considered ideal for growing produce (Kirby and Matthews 1973:7). Although still in competition with tobacco, truck farming became increasingly important throughout the 20th century. Truck farming consists of the cultivation of produce on a relatively large scale for transport to distant markets. In contrast to market farming, in which a wide range of crops is grown for local markets and for direct consumption, truck farming involves a more limited variety of produce. The term may derive from an earlier meaning of the word truck, denoting small or miscellaneous items, or alternatively from the source of transport in later years. Ironically in the present case, boats were still the main means of transport well into the 20th century. At first promoted by

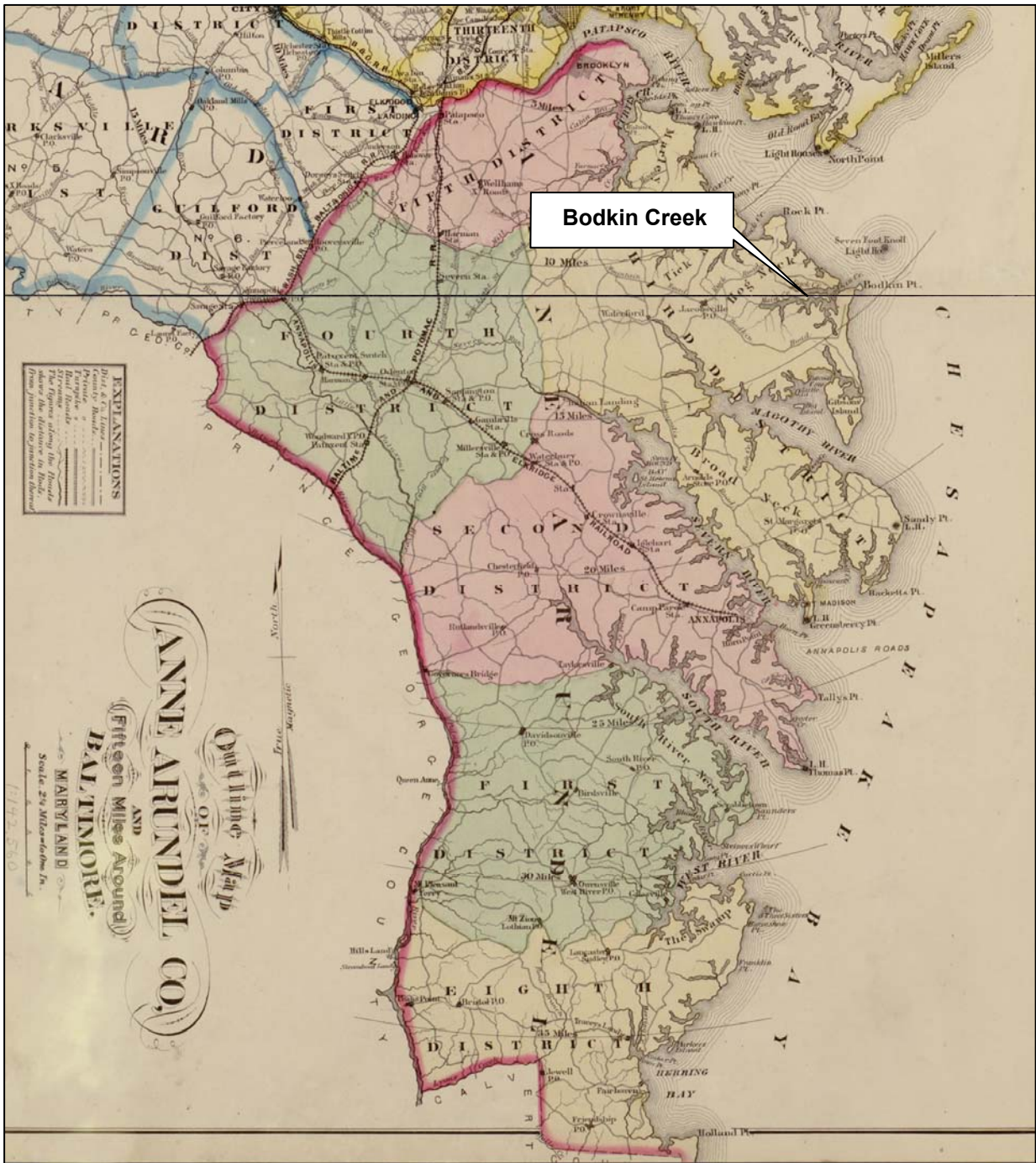


Figure 2-5. Hopkins' Map of Anne Arundel County, 1878.

increased production of fruit and vegetables during the Civil War, demand for produce increased with the development of the canning industry in Baltimore shortly thereafter. Oysters were the initial focus of canning, especially during the fall and winter months. Soon though, canneries began operating year round in order to process fruit and vegetables in spring and summer (Mumford 2000:4). With stepped up demand, farmers increased their planting, which before long led to a labor shortage at harvest times. The shortage was addressed by bringing immigrants and African-Americans from Baltimore to help during the picking season. Many of the immigrants were from eastern Europe¹ (mostly Poland and Bohemia, or Czechoslovakia) (Mumford 2000:4; Cunningham 2001:45). By one account, at the turn of the 20th century 10,000 pickers came to Anne Arundel County for the 6-8 week picking season (Mumford 2000:6). Small brass or aluminum tokens, known as picker checks, were used as a form of payment. Stamped with the initials of the farmer, the checks were used as IOUs redeemable for cash, or as specie, good for purchases in farmers' commissaries or in many local stores. Most Eastern Shore farmers used paper chits to pay their workers. Metal picker checks were a distinctive feature of 20th-century truck farming in Anne Arundel County, and the county saw the greatest concentration of picker checks in the region (Mumford 2000:88).

Beginning in the 19th century, oystering became an important commercial maritime activity in many areas along the Eastern Seaboard. From the beginning of European exploration, settlers had recognized the rich oyster beds of the Chesapeake Bay as an important food source. When Captain John Smith first explored the Chesapeake Bay in the early-17th century, he noted that in some places the abundance of thick oyster beds made it dangerous to navigate his ship. With its extensive estuaries, Maryland represented one of the most prolific oyster producing areas of the world. In the early 1800s, oysters were cheap and mainly eaten by the working class (Warren 2006). Oyster packing houses were common all along the shoreline of Maryland and Virginia.

By the end of the 19th century, overharvesting resulted in a steep decline in oyster populations in the Bay (Maryland Sea Grant 2009). In 1875, harvests dropped from 14 million bushels to 10 million, prompting the Maryland General Assembly to call for an assessment of the state's oyster reserves (Leffler 1987). William K. Brooks, a professor of biology at Johns Hopkins University and a member of the first Maryland Oyster Commission, published a book entitled *The Oyster* in 1891, stating: "It is a well-known fact that our public beds have been brought to the verge of ruin by the men who fish them...All who are familiar with the subject have long been aware that our present system can have only one result -- extermination" (in Leffler 1987).

As the 19th century progressed, New England oyster beds were fished out and northern oystermen began frequenting Maryland waters. By 1830, the Maryland General Assembly passed a law restricting the harvest of Maryland oysters to Maryland residents. Yet, without enforcement the law was ineffective. A statewide licensing system was introduced in 1865, and in 1868 the General Assembly created the State Oyster Police. Hunter Davidson, a graduate of the United States Naval Academy and former Lt. Commander in the Confederate

¹ It has been estimated that by 1880, more immigrants arrived in the United States through Baltimore via the Patapsco River than any other port of entry besides Ellis Island (Cunningham 2001:45).

Navy, was elected the first Commander of the State Oyster Police Force (MD-DNR 2007). In 1874, the oyster police force was restructured and renamed the State Fishery Force, and it is known today as the Maryland Natural Resources Police² (Warren 2006).

Roads and Suburbanization

The many creeks and streams flowing into the Chesapeake Bay on the Western Shore from Curtis Bay in the north to Herring Bay in the south “hindered the development of a reliable road system until the late-18th and 19th centuries, and set the tone for greater reliance upon water for transport, communications, and...commerce” (Gadsby et al. 2000:18-19). Rail lines were established in the western part of the county by mid-century with, for example, the opening of the Annapolis & Elk Ridge Railroad in 1840. In 1887, the Baltimore & Annapolis Short Line connected the political and commercial capitals of the state via Glen Burnie and Severna Park (Harwood 2005). Nevertheless, boats remained the most important means of transporting produce to the Baltimore markets until the development of the modern road system in the 1930s, particularly for small estuaries such as Bodkin Creek that had always had a maritime focus (Gadsby et al. 2000: 27; Fitz 1984).

By the turn of the 20th century, the population of the region increased substantially due mainly to the proximity to urban centers of Washington, D.C., and Baltimore: the populations of Prince George’s and Anne Arundel counties almost doubled between 1900 and 1930 (Wesler et al. 1981:89). A major contributor to this effect was the opening of the Hanover Street Bridge in 1917, connecting south Baltimore and the community of Brooklyn, which was at that time part of northern Anne Arundel County. The first bridge across this part of the Patapsco River was the Light Street Bridge, a privately built toll bridge constructed in 1856 that connected South Baltimore with Acton's Park in Brooklyn. The bridge was also known as Long Bridge or Brooklyn Bridge. In 1878, the State of Maryland purchased the bridge and lifted the tolls. On May 28, 1892, the Baltimore and Curtis Bay Railway (a predecessor of the city’s Mass Transit Administration) inaugurated streetcar service across the bridge—the fare to Brooklyn was a nickel. On April 8, 1913, a streetcar derailed and fell into the river, killing a passenger. Two years later, the bridge trestle burned. A new bridge, the Hanover Street Bridge, was built by the State Roads Commission, opening early in 1917 (Tressler 2009). The bridge brought easy access to the shoreline areas of northern Anne Arundel County for trucks and the growing number of private cars, and roads were soon extended throughout the region.

More automobiles and mechanical streetcars meant fewer horses and thus less manure from urban centers, which was an important source of fertilizer for truck farms around the turn of the century. With the personal automobile, commuting became a possibility and farmland often became more valuable for suburban development than for farming. As more and more farmers participated in the truck farming market after World War I, prices fell. Many farms were thus already in economic distress before the Great Depression. For many, the only

² Isabel Cunningham (2001:76-77) relates the tale of the cutter *Windsor* inspecting dredgers near the Magothy River in 1905, following reports that some of the crews had been pressed into service, or “shanghaied.” As the story goes, the men admitted to having been forced onto the boats, but they were content with the situation because they now had steady work and decent pay.

means of avoiding bankruptcy during this period was to sell their land, and the farming industry has never really recovered (Mumford 2003:7).

Beginning in the late-19th century, recreation developed as an important industry in the eastern part of Anne Arundel County. Residents of Baltimore and Washington, D.C., began to arrive along the shores of the Bay and its tributaries seeking day and weekend refuge from busy and crowded urban life. While railroad and steamboat service provided access to many areas, the growth of the county's road system and increasingly common use of the automobile has added to the convenience of access to the area into the late-20th century and early-21st centuries. Increased industrialization in the county during World War II and the national trend toward suburbanization that followed the war continued the changes in the county begun earlier in the century. Population tripled in the decades between 1940 and 1960 from 68,375 to 206,634, with approximately 70 percent living north of the South River (Ware et al. 2008). By the second half of the 20th century and beyond, the area had become a bedroom community for the nearby urban centers and continues to be a major recreation area.

2.3 Previous Investigations

A record of previous archaeological investigations in Research Unit 7, which contains the Bodkin Creek survey area, necessarily begins with the work of 19th-century artifact collectors such as Joseph McGuire, whose particular focus was large, accessible shell midden sites (Wesler et al. 1981:194). Serious archaeological work was later conducted by Thomas Mayr and to a greater extent by Richard Stearns (1943, 1949). Their work again focused on shell middens, probably because midden sites are typically large and easily recognized, even in the wooded environments that typically border the Chesapeake Bay.

Modern cultural resource research in the region began with a large-scale study of prehistoric settlement patterns in the South River drainage (Steponaitis 1978) and an extensive shoreline survey by Wilke and Thompson (1977). Steponaitis' study proposed a seasonal alternation in the use of coastal areas, as evidenced by large shell midden sites, and interior locales. The model is by now an accepted, if rather general, representation of prehistoric settlement patterning throughout the Middle Atlantic region beginning in at least the latter part of the Late Archaic period, as estuary environments began to stabilize and aquatic resources including fish, shellfish, and marsh vegetation became increasingly reliable. Research throughout the region since the 1980s has included compliance studies such as transect surveys for highway construction. Most of this work though, with the exception of the Wilke and Thompson survey, has not included the Bodkin Creek area.

Nevertheless, in spite of the relatively small area represented by the Bodkin Creek estuary, at least 15 archaeological studies have been conducted in the immediate vicinity of the creek and are documented in MHT files. The investigations include three underwater surveys and 12 terrestrial studies. Two-thirds of the studies in the survey area dealt with research related to Hancock's Resolution, while the remainder included compliance investigations associated with development projects such as housing developments and a golf course. An annotated

bibliography is presented below. Not all of the investigations are mapped in MHT files, but those survey areas that do appear in MHT files are shown in Figure 2-6.

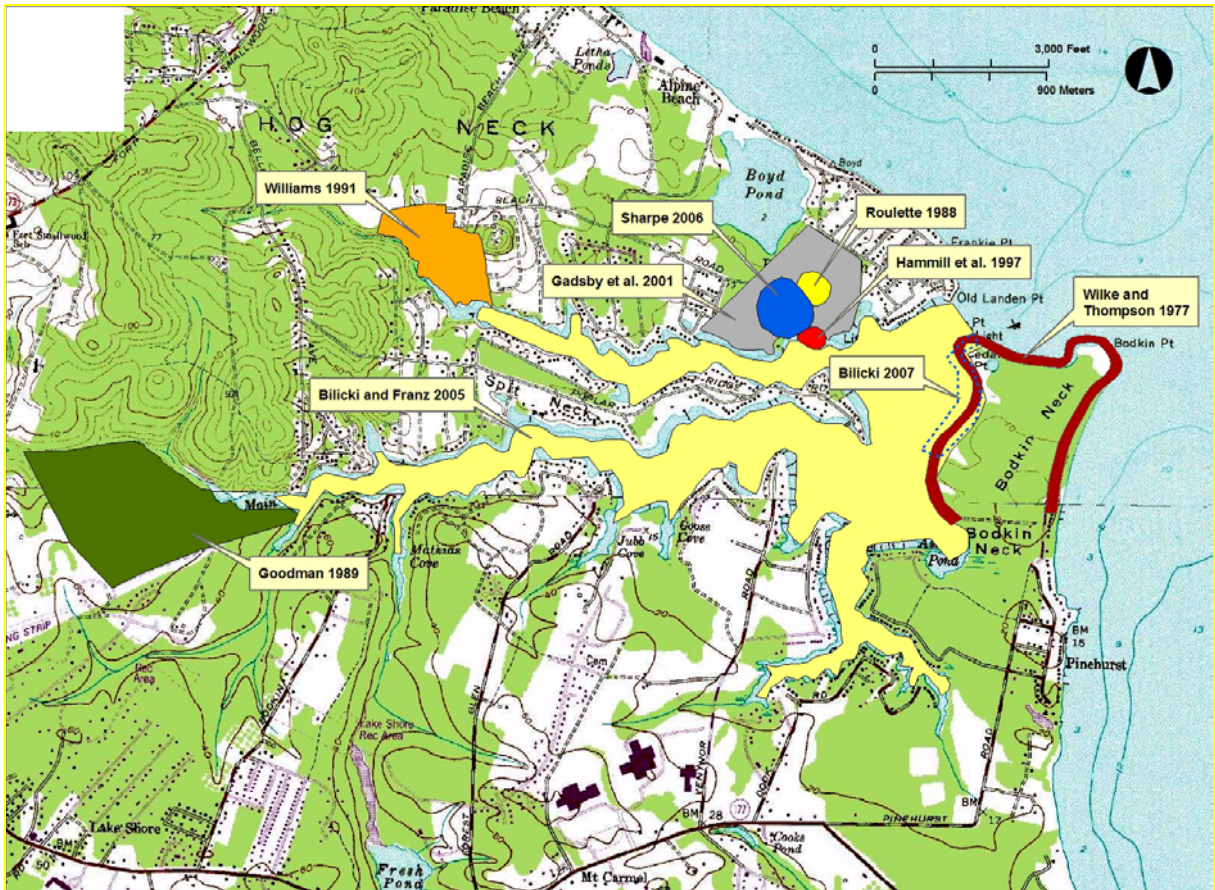


Figure 2-6. Previous Archaeological Investigations in the Study Area Appearing in MHT Files
(USGS Topographic Quad Sheets: Sparrows Point; Gibson Island).

Bilicki, Stephen R., and Lauren Franz
2005 *Phase I Underwater Survey in the Bodkin Creek Waterway of Anne Arundel County, Maryland*. Maryland Maritime Archeology Program, Maryland Historical Trust, Crownsville (AN 472).

Report of a Phase I remote sensing survey followed by site investigations in portions of Bodkin Creek, Back Creek, Main Creek, Wharf Creek, Locust Cove, and the Bodkin Point Shoal Spoil Area. The investigation was performed in 2002. The survey was limited to side-scan sonar and a single day of visual inspection of targets by divers. The objective of the survey was to locate the remains of a 19th-century vessel (the *Lion of Baltimore*) that was reportedly burned in the creek during the War of 1812. No data related to the 19th-century schooner was discovered. One new site was located and recorded, the Old Landen Point Barge Wreck, 18AN1224. The site consisted of a flat-bottom barge that sank prior to 1930, according to informants. The site was not evaluated for National Register eligibility.

Bilicki, Stephen R.

2007 *Phase I Underwater Survey Magnetometer and Site Testing in the Bodkin Creek Waterway of Anne Arundel County, Maryland*. Maryland Maritime Archeology Program, Maryland Historical Trust, Crownsville (AN 532).

Report of a follow-up investigation to a side-scan sonar survey conducted by MMAP in 2002 (Bilicki and Franz 2005). The work consisted of a Phase I magnetometer survey and site investigations along portions of the western shoreline of Bodkin Creek. As in the earlier survey, the objective was to locate the remains of a 19th-century vessel (the *Lion of Baltimore*) that was reportedly burned in the creek during the War of 1812. Shoreline development and improvements, described in the report as bulkheads, piers, revetments and rip-rap, were reported to cover at least 10 percent of the shore within the survey area.

Three areas were selected for testing on the basis of magnetometer and side-scan survey data and a combination of archival research and informant interviews. The areas were investigated by means of diver visual inspection, hand probing with a foot tile probe, and excavation and sampling with a water induction dredge. In two areas, only buried tree trunks were found. In the third area, a new archaeological site was located and documented: Bodkin Neck Wharf, 18AN1354. The site was described as a submerged debris field containing “brick fragments, rocks and one fragment of blue & grey stoneware ceramic.” The site was interpreted as the remains of a late-19th-century wharf. The site was not evaluated for National Register eligibility. No data related to the 19th-century schooner were discovered.

Gadsby, David, Sherri M. Marsh, Paul Mintz, and Jason Moser

2001 *A Plantation in Suburbia: An Integrated Approach to the Archeological and Historical Study of Hancock’s Resolution (18AN169)*. Anne Arundel Lost Towns Project. On file, Maryland Historical Trust, Crownsville (AN 413).

This report contains a summary and update of work conducted at the Hancock’s Resolution site as of 2001. The investigation was conducted for the Friends of Hancock’s Resolution (FOHR) as part of a non-capital grant awarded to FOHR by the Maryland Historical Trust. The report includes a documentary study of the history of the plantation within the context of agricultural development in the county, and summarizes the many archival and archaeological investigations conducted at the site, synthesizing the results in light of the current findings. In an extensive study of tax assessments and agricultural census records for the Third Election District of the County, which lies between Curtis Creek (to the north) and the Severn River (to the south), the shift from early tobacco farming to cereals (grains) and eventually truck farming in Anne Arundel County is documented. The research also included a GIS-based analysis that compared Hancock’s Resolution with other farms of the period in the Third District, with the conclusion that “Hancock’s is a good example of the ‘average’ farm in Anne Arundel County’s Third Election District” (Gadsby et al. 2001:73).

Field work included a shoreline survey that identified a large, notched timber recently washed on-shore in a storm. The timber was presumed to have been part of the cribbed wharf documented by MAHS in 1997 (Hammell et al. 1997). The shoreline survey continued along Back Creek approximately 500 feet west of the wharf and discovered oyster shell and brick eroding from the bank. Two archaeological sites are known in that area, 18AN265 and 18AN1005, but the analysts were uncertain as whether the artifacts were associated with either site (Gadsby et al. 2001:112). The boundaries of the prehistoric component of Site 18AN1005 were redefined on the basis of shovel testing west of the Hancock's Resolution house. Additional 18th and 19th-century artifacts were recovered northwest of the house and west of the family cemetery plot, although it was unclear whether the artifacts were associated with Hancock's Resolution or 18AN1005.

A new multi-component site was recorded during the survey, 18AN1177, located east of the Hancock's Resolution house on Old House Cove. The site consisted of a scatter of prehistoric artifacts and artifacts from the 17th, 18th, and 19th centuries suggesting the presence of at least one structure. The prehistoric component of the site was considered not significant. Additional work was recommended to test the 17th-century component in order to collect a large artifact sample for a fuller understanding of the chronology and function of the site, as well as to better assess the relationship between the 18th and 19th-century components with Hancock's Resolution. Similarly, additional investigation at Site 18AN1005 was recommended to determine the relationship between the early component of that site and Hancock's Resolution. The report also recommended acquisition of part of all of the Charles Crue property, which abuts Hancock's Resolution to the south. And finally, the report stated that further archival or documentary research would not produce substantial new information about the site, recommending that in the future, only archaeological investigations be conducted at the site.

Goodman, Eugene R.

1989 *Phase I, II, and III Investigations at Green Spring, Anne Arundel County, Maryland*. Engineering Science, Inc., for Michael T. Rose Company. On file, Maryland Historical Trust, Crownsville (AN 94).

Report of a large compliance study conducted in advance of a land development project on the south shore of Main Creek. Phase I survey and limited Phase II evaluations were conducted within a tract of approximately 128 acres. Seventeen sites were documented in the report, of which nine were formally recorded with MHT and assigned trinomials. Six of the recorded sites were prehistoric, one was historical, and two had prehistoric and historical components. According to the report, two of the sites, 18AN655 and 18AN656, were recommended potentially eligible to the National Register of Historic Places; six sites, 18AN657-18AN662, were recommended not eligible; and one site, 18AN654, was unevaluated. Contradictory data on site forms in MHT files indicate that none of the sites has been evaluated. The report also details limited mitigation that was performed on one site, 18AN654, to allow immediate access to a portion of the property.

Hammill, Tom, Ray Hayes, Jaime Henderson, Brenda Howard, David Kerr, and Tom Berkey
1997 *Investigation of Pier Remains Believed Associated with Hancock's Resolution*.
Prepared for Friends of Hancock's Resolution Advisory Committee, Anne Arundel
County, by the Maritime Archaeological and Historical Society, Washington, D.C.
On file, Maryland Historical Trust, Crownsville (AN 506).

Report of a near shore survey to investigate wharf remains on Back Creek associated with Hancock's Resolution. Interviews with landowners indicated that the wharf had been used for shipping produce in the early 20th century. As the result of a wading survey, wooden cribbing filled with stone and earth was documented along with a number of wood pilings. The wharf remains measured 40 feet wide and 70 feet long, reaching into water up to 10 feet in depth. The remains were interpreted as a wharf and narrow pier used to ship produce from the Hancock farm to markets in Baltimore. No artifacts were recovered and no archaeological data were discovered related to the construction or use of the pier.

Lee, John G., and Charles A. Phillips
2002 *Hancock's Resolution, A Preliminary Survey: Conservation Assessment Historical Evaluation*. Conducted for the Friends of Hancock's Resolution. On file, Maryland Historical Trust, Crownsville (AN 450).

As indicated by the title, this report details a conservation assessment of the structures at Hancock's Resolution. Overall the house was considered to be in stable condition. Dendrochronological analysis of floor joists provided a *terminus post quem* of 1783 for the structure. The report presents a list of conservation issues ranked by immediacy. It further recommends ideas for site interpretation and development.

Luckenbach, Al
1991 *Canal at Bodkin Point (Pinehurst)*. Letter report, Anne Arundel County, Annapolis.

A short report describing a survey of the Pinehurst Canal site, 18AN949. A brief physical description of the canal remains are presented, along with a short study of historical maps which implied that the feature was constructed in the late-18th century. The final paragraph of the report suggests that the assessment was prompted by the proposed development of nearby property: "...the canal is a unique and important cultural resource which should be preserved, [however] the preservation of the canal should [not] preclude development of the parcel in question."

McKnight, Justine Woodward

1999 *Hancock's Resolution: Historic Landscape Analysis, Vol. I*. Submitted to the Friends of Hancock's Resolution. On file, Maryland Historical Trust, Crownsville (FRR Anne 7).

Report of a documentary study of Hancock's Resolution, which included review of photographs, informant interviews, and a study of the environmental context of the property. The modern landscape was analyzed as a baseline for assessing the historical site. The analysis considered topography, relief, drainage, soils and sedimentology, and biological data (residual vegetation species); and examined the successional development of plant communities and the implications for the historical context of the property and its inhabitants. The report provides "recommendations for appropriate conservation, reconstruction, management and interpretation of the property" (McKnight 1999:1).

Moser, Jason D.

2002 *Executive summary. Archaeological fieldwork conducted at Hancock's Resolution on June 12, 13, and 18, 2002*. Anne Arundel County Office of Planning & Zoning, Annapolis. On file, Maryland Historical Trust, Crownsville (AN 457).

A short compliance report described as a mitigation study, although the work was more accurately an evaluation study in advance of the installation of a cistern and well, and included monitoring of the excavation of a utility trench. The areas to be developed were "considered archaeologically sensitive," and the report recommended that an archaeologist be involved in future development plans for the property.

Roulette, Billy Ray

1986 *Archaeological Excavation of Hancock's Resolution Site 18AN169, Anne Arundel County, Maryland*. Archaeology in Annapolis. On file, Maryland Historical Trust, Crownsville (AN 81).

This study was conducted by Archaeology in Annapolis and consisted of the excavation of 31 test units, most of which were reported as 5-x-5 feet in size. Based on analysis of historical maps, the orientation of the house was determined to have changed since initial construction. That is, until ca. 1850 the front or entrance faced east, towards the water. Later the entrance was on the west side. The report initially interprets this change as a response to the construction of an inland road that first appears on the Martenet map of 1860. Refuse disposal patterns did not support the interpretation, however, since evidence of trash disposal that would not be expected at the front entrance to the house was recorded on the west side "from the early part of the nineteenth century to the time the house ceased to be occupied" (Roulette 1986:107). The report also proposes a *terminus post quem* for construction—1790—based on ceramics from a builder's trench. Many postholes were documented in the archaeological investigation, although the patterning could not be fully interpreted.

Sharpe, Shawn

2006 *Phase III Archaeological Excavations at 18AN1005 Hancock's Resolution Park, Anne Arundel County, Maryland*. Lost Towns Archaeology Project. On file, Maryland Historical Trust, Crownsville (AN 524).

Report of Phase III (data recovery) investigations in a portion of Site 18AN1005 under potential development impact related to a proposed visitors' center at Hancock's Resolution Historical Park. Using artifact distribution data from a shovel test grid excavated in 2000 (Gadsby et al. 2001), six 5-by-5 foot test units were excavated. Artifacts recovered from the units included late-18th and 19th-century glass and ceramics that were interpreted as associated with a dwelling lying south of the project area. In addition, prehistoric artifacts including Early Woodland (Accokeek) ceramics were recovered and interpreted as a distinct component, unrelated to a distribution of Middle Woodland (Mockley) ceramics identified in the Phase I shovel test data.

Stearns, Richard E.

1943 Some Indian Village Sites of Tidewater Maryland. *The Natural History Society of Maryland Proceeding No. 9*. Baltimore, Maryland.

Among a number of sites reported by Stearns in this early report were two in the Bodkin Creek drainage, one on the north shore of the creek and one on the south shore. Little specific information about the sites is provided in the report. The north shore site "contains some thin shell deposits...a few stemmed arrowpoints of quartz and rhyolite and some sherds bearing the impressions of cords and fabrics, and tempered with crushed quartz or shell." The south shore site "contains a shell deposit which extends for two hundred feet...we recovered about one hundred sherds that had been washed out of the shell bank by storms. These were cord and fabric marked, tempered with crushed quartz, beach sand, or shell, and bore no decorations" (Stearns 1943:18). The sites were later assigned trinomials: the north shore site, referred to as the Bodkin Creek site, was assigned 18AN265; and the south shore site, referred to as the Bodkin Point site, was assigned 18AN266. Gadsby et al. (2001:75) reported that the collection from the site is in the Smithsonian collections and consists of "14 projectile points (mostly rhyolite), three gorget fragments, a grooved ax fragment...and 20 pottery sherds (Smithsonian Collection 1952). Unfortunately the records do not distinguish between artifacts from 18AN265 and 18AN266."

Walker, Mark

1998 *Archaeological Investigations at Hancock's Resolution and Bayside Beach, Anne Arundel County, Maryland*. Submitted to Friends of Hancock's Resolution by The Lost Towns of Anne Arundel, Annapolis. On file, Maryland Historical Trust, Crownsville.

This report includes the results of the shovel testing of properties in Bayside Beach to locate evidence of the residence that may have been used by the Hancock family prior to construction of the stone farmhouse at Hancock's Resolution. Tests on the Doss and Hellwig properties recovered artifacts from the late-17th-through-20th centuries in sediments referred to as "relatively intact, in the sense of being undisturbed by modern construction" (Walker 1998:54). Early artifacts included sgraffito, delft, creamware, and pearlware. The archaeological site defined by the artifact distribution was recorded as 18AN1072 and was situated on a high bluff overlooking the mouth of the Patapsco River. Field work also included a preliminary map of a family cemetery based on the locations of stone markers and probing. A geophysical survey using ground penetrating radar proved impractical due to vegetation, and a magnetometer survey provided inconclusive results "likely due to surface trash buried within the brush and leaves" (Walker 1998:27).

Ward, Jeanne A.

2000 *Phase I Survey of the Proposed Greensprings Development, Anne Arundel County, Maryland*. Prepared by Applied Archaeology & History Associates. On file, Maryland Historical Trust, Crownsville.

Judging from references to the report in several site forms, this was a compliance study in advance of development that eventually resulted in construction of the Compass Pointe Golf Course. The survey recorded at least three archaeological sites: 18AN1183, 18AN1184, and 18AN1185. Further details concerning the report were unavailable, since a copy of the report could not be located in the MHT holdings. The boundaries of the survey were not shown in the MHT GIS.

Wilke, Steve, and Gail Thompson

1977 *Prehistoric Archaeological Resources in the Maryland Coastal Zone: A Management Overview*. Prepared for the Energy and Coastal Zone Administration, Maryland Department of Natural Resources, Annapolis. On file, Maryland Historical Trust, Crownsville (AN 7).

This study assessed the then current status of prehistoric resources in Coastal Zone of the Maryland Chesapeake Bay. The investigators assembled information on the type and number of previously recorded prehistoric resources in the region, identified potential sources of disturbance or destruction to prehistoric resources, developed programs on resource conservation, and formulated a predictive model for the distribution of prehistoric archaeological resources in coastal areas. The portion of the survey in the Bodkin Creek region began in the vicinity of Ashlar Pond, continued up Bodkin Neck, around Cedar Point, and ended near Bodkin Point. Four shell midden sites were documented: they included two sites originally identified by Stearns in 1943 (18AN244 and 18AN266); and two new sites, 18AN426 and 18AN427.

Williams, Martha R.

1991 *Phase I Intensive Archaeological Investigation of the Degrange Project Area, Anne Arundel County, Maryland*. Prepared by R. Christopher Goodwin & Associates. On file, Maryland Historical Trust, Crownsville (AN 189).

Report of a cultural resource management compliance project conducted in advance of development along Bayside Beach Drive north of Back Creek. Two locations are documented within the survey area containing what were described as “surface sheet midden deposits” along with five isolated prehistoric artifacts. Located on either side of a farm road, the largest midden area was presumed to be the remains of Site 18AN844, the William Calvert farm complex. None of the artifacts recovered from shovel testing during the project were from intact archaeological deposits, and the site was recommended not eligible for nomination to the National Register of Historic Places. Six buildings comprising the early-20th-century Calvert farmstead (and associated archaeological site 18AN843) were reported in the project area. The buildings included the main residence, a barn, and four buildings described as vernacular dependencies: a wagon shed, a blacksmiths shop, a cornhouse, and a temporary farm worker’s house. The dependencies were considered “deteriorated,” but an architectural survey of the complex was recommended (Williams 1991:28).

Wright, Henry T.

1972 *Exploratory Excavations at Hancock’s Resolution, 1971: A Field Report*. On file, Maryland Historical Trust, Crownsville (AN2).

Report of an early archaeological investigation at Hancock’s Resolution. A series of trenches was excavated along the south, east, and west walls of the house, as well as in the cellar. An additional set of trenches investigated an area north of the farmhouse and a dependency.

Wright, Russell

1980 *Hancock’s Resolution: A Historical Structure Report of the Hancock Family Farm*. Submitted to Historic Annapolis, Inc. On file Anne Arundel County Office of Planning and Zoning, Annapolis.

As part of a historic structures report, Wright conducted archaeological excavations in and around the main house at Hancock’s Resolution, as well as outlying structures and features. He identified the possible remains of the original log kitchen, a stone chimney base, and a cellar hole, finding corner posts and wooden cribbing in the latter and assessing the cellar to have been five feet square.

3.0 RESEARCH DESIGN

The current study is designed as a comprehensive analysis of the maritime history of Bodkin Creek, combining information from archival, terrestrial, and underwater investigations into an integrated examination of the area's past.

Traditionally, terrestrial and underwater archaeological research have been treated separately. The well-known historical archaeologist, James Deetz, noted that "much of historical archaeology is the digging of the archaeology sites, but these sites are not the sole sources of information" (Deetz 1977:6). Indeed, historical archaeology often combines archival or documentary evidence to supplement archaeological data. The same process of integration can be extended to maritime studies through the incorporation of terrestrial and underwater archaeological data in to a single complementary study. The very notion of maritime history implies an evident combination of land and sea, since "maritime" is generally defined as that which deals with the sea or, more particularly, things at or near the sea. While histories typically assume a broad, inclusive maritime perspective, archaeological studies, and in particular regional or area surveys, tend to remain distinctly either terrestrial or underwater in focus.

This study is an opportunity to combine the results of terrestrial and underwater archaeological and historical research from a specific geographic region into a fully synthesized maritime study. The idea is not new. Westerdahl (1992) coined a term for the concept of an integrated study in the mid-1970s, while surveying the coast of Sweden. He referred to "the maritime cultural landscape" which he defined as "the unity of remnants of maritime culture on land as well as underwater...[that] signifies *human utilization (economy) of maritime space by boat: settlement, fishing, hunting, shipping and its attendant subcultures*, such as pilotage, lighthouse and seamark maintenance" (Westerdahl 1992:5, emphasis original).

Relatively few such integrated studies have been conducted, notwithstanding the title of the 2010 Society for Historical Archaeology Conference, *Coastal Connections: Integrating Terrestrial and Underwater Archaeology*. No examples are known for Maryland or the Middle Atlantic region. Perhaps some of the best recent studies from Australia, many of them being theses published in the Flinders University Maritime Archaeology Monograph Series (Ash 2007; Bullers 2007; Firth 2006; Nash 2006). Recent research from East Carolina University has also resulted in integrated maritime studies (Friedman 2008). Nevertheless, these investigations are typically narrow in focus, either in time or place: they are largely site-oriented, studies of individual locales that do use both terrestrial and underwater data but with a limited focus.

The Bodkin Creek estuary has an obvious maritime focus. Rural and agricultural for most of the historical period, roads and rail lines came late to the area: water has been for generations the primary means of transportation and communication. The current study attempts to integrate terrestrial and underwater data, from both existing research and research conducted specifically for the project, into a comprehensive analysis of the maritime history of the estuary system.

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4.0 METHODS

The Bodkin Creek investigation was conducted on three separate but complementary levels. General background archival research provided a common context for the more detailed research to follow. Primary archival research was conducted in a number of venues including libraries and other repositories. Internet searches and informant interviews provided additional information. Lastly, field research was conducted on land and in the waters of Bodkin Creek and its approaches to assess previously recorded archaeological sites and to search for additional, unrecorded sites.

4.1 Archival Research

Initial archival research was carried out at the Maryland Historical Trust (MHT) library in Crownsville. Using MHT's GIS system, records of previously recorded sites in the Bodkin Creek area were examined. The records that were consulted included the *Maryland Inventory of Historic Properties, Archeological Site Survey: Basic Data Report* form and the relevant *Prehistoric Data*, *Historic Data*, and *Shipwreck Data* forms for each site. In addition, survey reports describing archaeological and historical research projects conducted in the area were examined and the detailed results of these projects were assembled. Current and historical maps in the MHT collection were consulted for general geographical and site-specific location data. Secondary works in the MHT collection and elsewhere dealing with the region, including natural histories, local and regional histories, and histories of the War of 1812 and of American privateering, were also consulted for general background information.

As background to the investigation of maritime activity in the creek, a study of the various types of watercraft traveling the Chesapeake Bay and plying its waters was conducted. A number of books and articles describing the maritime activity of the Bay were consulted including: *Chesapeake Bay Log Canoes and Bugeyes* (Brewington 1963); *Chesapeake Bay Schooners* (Snediker and Jensen 1997); *Tidewater by Steamboat: A Saga of the Chesapeake* (Holly 2000); *The Baltimore Clipper* (Chapelle 1978); *Shipwrecks on the Chesapeake: Maritime Disasters on the Chesapeake Bay and its Tributaries, 1608-1978* (Shomette 1988); and *Terror on the Chesapeake* (George 2001).

An online search also disclosed numerous articles describing the maritime activity of the Chesapeake Bay including: "Unique Craft of the Chesapeake" (McComas 2010); "Wooden Model Kits of the Chesapeake Bay" (Wye River Models 2001); "Tidewater Triumph: The Development and Worldwide Success of the Chesapeake Bay Pilot Schooner" (Footner 2005); "Pungy Schooner Lady Maryland Frequent Visiting Vessel to Mystic Seaport" (Mystic Seaport 2010); "The Baltimore Clipper" (Klima 1998); and "Chesapeake Bay Workboats" (Mariners' Museum 2002).

Further information was obtained through interviews with Kim Nielsen, Director of the U.S. Navy Museum; Donald Shomette, noted maritime author and historian; Patrick Marioné, British author; Al Lukenbach, Anne Arundel County Archaeologist; and Abe Roth, Bodkin Creek area resident and scuba diver with extensive personal knowledge of shipwrecks in Bodkin Creek. An oral history interview was conducted in April 2009 at Hancock's Resolution Historical Park with two prominent local residents and avocational historians,

James Morrison (President of the Friends of Hancock's Resolution), and Henry Schmidt (President of the Hancock's Resolution Foundation); also in attendance was Kim Nielsen, of the Navy Museum.

Histories of Anne Arundel County provided data relating to the evolution of the Bodkin Creek area from its earliest origins as a rural farm community to its modern-day role as residential suburb and bedroom community to the city of Baltimore. Among the sources consulted were *A History of Anne Arundel County: Adapted for the Schools in Anne Arundel County*, by Elihu S. Riley (1905) and *A History of Brooklyn-Curtis Bay Maryland*, by the Brooklyn-Curtis Bay Historical Committee (Tressler 2009). Searches were also conducted of the Anne Arundel County Master Plan Part IV *Community History* (Anne Arundel County 2008b) and the Pasadena/Marley Neck Small Area Plan (2008c).

Maritime records of reported shipwrecks in the Bodkin Creek area were examined to assist in the identification of vessel remains discovered during the field research stage of the project. Various sources of shipwreck data were consulted including the following:

1. *Virginia and Maryland Shipwreck Accounts 1623 to 1950 Including Chesapeake Bay Over 1200 Named Wrecks* (Charles 2004)
2. *Shipwrecks on the Chesapeake: Maritime Disasters on Chesapeake Bay and Its Tributaries, 1608-1978* (Shomette 1982)
3. *Automated Wreck and Obstruction Information System (AWOIS), Region 6 Chesapeake Bay*, (NOAA n.d.)
4. *Encyclopedia of American Shipwrecks* (Berman 1972)
5. *Chesapeake Bay Log Canoes and Bugeyes* (Brewington 1963)
6. *List of Merchant Vessels of the United States (MVUS)*, published annually since 1868 (after 1925, entitled *Merchant Vessels of the United States [MVUS]*). The List of Merchant Vessels began publication in 1867 and continued annually to date under various Government agencies as follows:

1867-1883	Bureau of Statistics, Department of the Treasury
1884-1902	Bureau of Navigation, Department of the Treasury
1903-1931	Bureau of Navigation, Department of the Commerce (and Labor)
1932-1942	Bureau of Marine Inspection and Navigation, Department of the Commerce
1942-present	Customs Service, Department of the Treasury

The list is presently maintained by U.S. Coast Guard, U.S. Department of Homeland Security. Information in the list initially consisted of the ship's name, tonnage, year built and homeport. Fuller detail was included beginning in the mid-1880's. By 1893, the printing style distinguished metal-hulled vessels in italics. By 1898, the practice changed to showing the names of iron vessels in italics and steel vessels in small capitals. From some date prior to 1893, unrigged vessels (essentially barges, canal boats and scows) were listed separately. With the 1906 issue, vessels lost, abandoned or sold foreign during the previous year were also listed separately.

Archival research and oral history interviews revealed little information regarding military activity in or near Bodkin Creek. Nevertheless, one naval engagement did occur during the War of 1812 that has garnered a great deal of interest among local historians. At least one report describes the events of August 24, 1814, when marines from the *HMS Menelaus*, a British warship on patrol in the Chesapeake Bay, burned a schooner in Bodkin Creek claimed to have been the famous privateer *Lion of Baltimore*. This is the only record of an American ship sunk in Bodkin Creek during a military action and therefore a substantial amount of research in the current investigation was focused on this event. The objective was to expand on the historical record and complement the previous study of this event conducted by the Maryland Historic Trust as reported in *Phase I Underwater Survey in the Bodkin Creek Waterway of Anne Arundel County, Maryland* (Bilicki and Franz 2005) and *Phase I Underwater Survey Magnetometer and Site Testing in the Bodkin Creek Waterway of Anne Arundel County, Maryland* (Bilicki 2007).

Both primary and secondary sources were consulted. Initially, a number of books on the War of 1812 were examined, including:

1. *History of the American Privateers, and Letters-Of-Marque During Our War with England in the Years 1812, '13, and '14* (Coggeshall 1851)
2. *The Navy of the United States from the Commencement 1775 to 1853* (Emmons 1854)
3. *Men of Marque* (Cranwell and Crane 1940)
4. *A History of American Privateers* (Maclay 1899)
5. *The Republic's Private Navy: The American Privateering Business as Practiced by Baltimore during the War of 1812* (Garritee 1977)
6. *The Naval War of 1812-A Documentary History*, Vol III (Crawford 2003)
7. *The Dispatches of Field Marshal the Duke of Wellington* (Gurwood 1838)
8. *Privateering During the War of 1812* (Young n.d.)
9. *History of Baltimore City and County from the Earliest Period to the Present Day* (Scharf 1881)
10. *Shipwrecks on the Chesapeake* (Shomette 1982)
11. *Virginia and Maryland Shipwreck Accounts 1623 to 1950 Including Chesapeake Bay* (Charles 2004)
12. *Sea Power in Its Relation to the War of 1812*, Volume 2 (Mahan 1905)
13. *Splintering the Wooden Wall: The British Blockade of the United States, 1812* (Dudley 2003)

A search of primary sources at the National Archives and Records Administration (NARA) revealed the following sources:

1. Record Group (RG) 45 Naval Records Collection of the Office of Naval Records and Library Entry (E) 574-Indexes to Correspondence Concerning Applications for Letters of Marque VOL.1 (Stack Area 11W4, Row 18, Compartment 6, Row 5).
2. Record Group (RG) 41 Bureau of Marine Inspection and Navigation Entry (E)

- 6019 thru 6029-Records of the Bureau of Marine Inspection and Navigation
Customhouse Copies of Vessel Documentation, Baltimore, Maryland.
3. Record Group (RG) 76, Records of Boundary and Claims Commissions and Arbitrations, Preliminary Inventory (PI) 177, ENTRY (E) 180- British Spoliations Ca 1794-1824,NAII: 250(Stack Area):58(Row)/22(Compartment)/07(Shelf) Boxes 1-10.

Newspapers reporting on the activities of War of 1812 privateers were also examined:

1. *Niles Weekly Register/Niles National Register*
September 1813-March 1814
March-September 1814
September 1814-March 1815
2. *Federal Gazette and Baltimore Daily*
3. *American and Commercial Daily Advertiser*
4. *Baltimore Patriot and Evening Advertiser*
5. *Daily National Intelligencer*
6. *Weekly Intelligencer*
7. *The War*
8. *Boston Patriot*

Despite the foregoing efforts, very little data documenting the reported incident was found. Thus, it became necessary to examine the original records and logs of the *HMS Menelaus*, which resided in the British National Archives at Kew, England. A search of this archive included examinations of:

1. Master's Log, *Menelaus* 1813 July 14-1815 Aug 28 ADM 52/4538
2. Captain's Log, *Menelaus* 1812 Jan 1-1814 June 30 ADM 51/2542
3. Night Order Book, *Menelaus* 1814
4. R. Morriss, Guide to British Naval Papers of North America (1994)
5. Ship's Muster *Menelaus* 1814 Jan –Dec ADM 37/5361

The Captain's Log for the time period August 1814 (Vol. 7) was unavailable and officially classified by the National Archives as misfiled. Moreover, it was determined that the Night Order Book was not archived in this facility, but reportedly resides at the British Columbia Archives located in Victoria, British Columbia. These archives were searched, online and in person. A search was conducted for the papers of Captain Henry Crease, Box 18, File 14, reported to contain the Night Order Book of Captain Peter Parker kept on Board HMS *Menelaus* (1814). Neither the Night Order Book nor the missing Captain's Log was found in this facility.

A final attempt was made to locate these records by means of a second visit to the National Archives at Kew. This search was also conducted online and in person. Several record sets were examined including the Captain's Logs, Master's Logs and Admiral's Journals. The search was again unsuccessful.

A personal journal maintained by Royal Marine Lieutenant Benjamin George Beynon, assigned to HMS *Menelaus*, reportedly recorded the burning of a schooner in Bodkin Creek and identified the name of the vessel as *Lion of Baltimore*. A copy of the journal, titled *B.G. Beynon Journal, 1813-1814*, was found at the Western Reserve Historical Society in Cleveland, Ohio. Requests for a copy of the document have remained unanswered. A copy was previously obtained from Kim Nielsen, Director of the U.S. Navy Museum.

4.2 Archaeological Field Research

Terrestrial: Site Surveys. Archaeological field research was conducted in stages throughout the course of the project. Reconnaissance surveys were made of previously recorded terrestrial sites during the winter of 2009. The original sample of sites, as specified in the grant proposal, included sites occurring within 100 meters of the current shoreline, on the assumption that such an area would contain sites that were most relevant to a maritime study. Research at the MHT site files indicated that few sites had been recorded within this sampling area, a finding that rendered the terrestrial survey less useful than intended. Therefore, the sample was expanded to include sites on terraces above the creeks, some of them located beyond the estuary portion of the Bodkin Creek drainage basin. The final sample consisted of 26 sites.

All previously recorded sites were inspected. The site review involved visual assessments consisting of pedestrian reconnaissance where access to properties was available; windshield surveys, where access was limited; or in the case of several shoreline sites, visual reconnaissance by boat and examination of modern satellite imagery. Descriptions of current conditions were prepared based on observations made during the site inspections. No systematic rediscovery of recorded features or re-survey of site boundaries was performed, and no subsurface or other intrusive investigations were undertaken.

Underwater: Remote Sensing. A remote sensing survey was conducted in the fall of 2008 by marine archaeologists from Geomar, LLC. The survey used a Klein 595 Digital side-scan sonar and a Marine Magnetics Explorer magnetometer, both with sensors deployed from a 25-foot Parker Marine work boat. Positioning data was collected with a Raymarine C80 GPS system. All of the information was managed using customized versions of Hy-Pack and Echovision 20-20 software. Survey data were collected using the Universal Transverse Mercator Projection (UTM), based on the World Geodetic System 1984 datum (WGS84). The data were converted to Maryland State Plane Coordinates based on the 1983 North American Datum (NAD83) to correlate with the GIS maintained by MHT. The cabin of the work boat contained a computer with dual monitors that provided synchronized, real-time displays of acoustic and magnetic data returns (Figure 4-1). A second set of monitors located near the helm gave the boat captain access to the same information and was used to help steer the survey vessel.

The survey occurred over the course of 12 consecutive days, with Geomar's staff assisted by MAHS volunteers who helped deploy sensors, monitored data returns, and logged data. The remote sensing survey covered approximately 2.5 square nautical miles, including parts of Bodkin Creek and the bayside approaches to the creek. Portions of Bodkin Creek itself had



Figure 4-1. MAHS Monitoring Data Gathering in the Cabin of the Geomar Workboat.

previously been subjected to side-scan sonar surveys (Bilicki and Franz 2005; Bilicki 2007). During the current project, specific sections inside the creek mouth were surveyed with the magnetometer using a combination of 50-foot and 15-foot lane spacings. A wide swath in the Bay constituting the approaches to Bodkin Creek was also surveyed with sonar and magnetometer on a 50-foot interval.

Underwater: Diver Inspections. Over several weekends from the fall of 2008 through the fall of 2009, in-water assessment of remote sensing targets was conducted by divers from MAHS, Geomar, and MHT (Figure 4-2). All on-site investigations were non-intrusive. No excavation was undertaken, and no artifacts were recovered from the sites. Targets from the remote sensing survey were reacquired using GPS and side-scan sonar. Relocated targets were scanned on several passes from various angles to provide multiple views. The targets were marked with buoys attached to cinderblock anchors. Due to the low visibility conditions that are typical of the Chesapeake Bay, divers experienced difficulty locating the targets visually in the water. Instead, they followed buoy lines down to the anchor points and conducted circle searches around



Figure 4-2. Divers Preparing to Inspect Sonar Target.

the markers to locate the targeted features. In December 2008, a small remotely operated vehicle (ROV) with a high definition video camera was deployed on several of the targets providing high quality images of several features (Figure 4-3).

MAHS maintains stringent dive safety procedures, and all diving activities were conducted in accordance with these procedures. Dive plans are developed as part of overall project planning. The plans are specific to each outing to take into account anticipated variations in conditions including location, type of site, water, and weather. Each dive plan is reviewed and approved by the MAHS Board of Directors and the MAHS Dive Safety Officer.



Figure 4-3. Geomar's ROV Prepared for Deployment.

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