

The Historical Archaeology of Virginia From Initial Settlement to the Present: Overview and New Directions



Edited by
Clarence R. Geier

Authors: Eleanor Breen, John Broadwater, Laura Galke,
Clarence Geier, Barbara Heath, Lori Lee, Dennis Pogue

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Introduction



From 1990 to 1996, the Archeological Society of Virginia partnered with the Council of Virginia Archaeologists to publish three volumes that attempted to review and summarize the historical archaeological research of 17th- (Reinhart and Pogue 1993), 18th- (Reinhart 1996), and 19th century (Sprinkle and Reinhart 1999) Virginia. To some degree the chapters included in this text attempt to update the discussions introduced in those volumes but it is the authors' intent to accomplish much more. Some of the chapters are products of an initiative started with the Virginia Department of Historic Resources to provide guidance in determining standards/historical themes/topics against which the historic significance of a cultural resource could be assessed and determined. Certainly, at a time when so much of the physical history of the Commonwealth is being threatened by modern urban renewal, erosion, sea level rise, neglect, or transportation, residential, and industrial development, the determination of standards against which the potential loss of a historic site can be compared is of considerable importance. It is hoped that these chapters help in providing direction for the purpose of assessing the potential significance of Virginia's historic resources.

The organization and topics of the chapters vary from those embracing centuries of time to those focusing on a particular historic episode; e.g. the Civil War. While most deal with terrestrial sites, one chapter addresses the historic importance of underwater resources and their very significant place in the larger scheme of Virginia history from the time of initial settlement to the modern era. In each case the chapters were prepared by professionals who have practical field and research experience working on sites in Virginia belonging to the time period reviewed. There is no common format for the essays and each reflects a style that is consistent with the authors' own scholarly writing. Editorial efforts have been chiefly concerned with establishing a common form or format for purposes of publication. While approached in slightly different ways, each chapter:

- 1) provides a review of relevant scholarly and "grey" literature representative of the historical and archaeological research being conducted for the time period in question. To this end, the concluding section on references cited should be treated as a valuable resource in that it includes a wide range of scholarly research not readily available to researchers, some of which is not on file at the Virginia Department of Historic Resources (VDHR) offices in Richmond.
- 2) provides a historical and theoretical context for current research. The authors consider the evolving field strategies and methodologies of the field, areas of artifact analysis and assemblage re-interpretation, and more importantly, changes in what are believed to be significant topics of study. This latter focus can be seen in common threads of popular or vernacular history and anthropology in which research foci and questions have shifted from earlier interests in studying and understanding great men and places; to topics that include as significant, the life and lifestyle of common persons who defined and animated the larger community, be they enslaved, Irish immigrant, tenant farmer, laborer, or soldier.
- 3) considers the nature and reliability of existing state-wide, regional and sub-regional histories which are used to provide a context of events against, and during which, particular sites were established, occupied or renovated. Such histories are key to illustrating or determining how the historical and archaeological analysis of the material culture at a particular site can provide a significant, and often unique, insight into those events.
- 4) identifies a series of historic issues, topics and themes considered significant to contemporary historians and archaeologists as part of their larger professional disciplines. Some of these themes have a long history of directing historical and archaeological research in Virginia. Others are relatively new and serve to set new directions for investigation and for re-evaluating and analyzing previously excavated site

assemblages. Whether from an anthropological or historical perspective, research continues to broaden our comprehension of what is needed to understand and interpret past and current human communities and the natural and human context/environment in which people enacted their lives.

As the sequence of chapters is presented, certain common issues are raised concerning the state of historical archaeology in the Commonwealth; the future conduct of research or fieldwork on historical sites; and concerns for addressing issues of historic significance. National Park Service criteria identified as determining the nomination status for the Register of Historic Places are as follows (NPS 2015a):

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- A.** that are associated with events that have made a significant contribution to the broad patterns of our history; or
- B.** that are associated with the lives of significant persons in our past; or
- C.** that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D.** that have yielded or may be likely to yield, information important in history or prehistory.

While wide-open in terms of possibilities, the criteria are complicated by the fact that NPS guidelines recognize that a site can be considered significant for its place in providing insight into historical events at the national, regional or local level. This is relevant because, as noted by virtually every author in this text, the idea of establishing a single set of significance criteria against which all archaeological sites in Virginia can be assessed is difficult.

As documented in this volume, the history of the Commonwealth illustrates the physical expansion of the colony from the initial tidewater-Chesapeake settlement at Jamestown, westward into the piedmont and then ridge and valley provinces of the Appalachian

front. Each of these areas required a different human response to ensure survival and well-being. As a result, at virtually any point in time, the expanse of contemporary settlement is revealed in often significantly different population features and strategies of social, political and economic activity. In 1735, for example, English-based towns and farming communities near the falls of the James and to the east were stable and beginning to thrive. At the same time, the first Scots/Irish/and German families who migrated south out of Pennsylvania to occupy the Shenandoah Valley faced the problems of an isolated, frontier community confronted with the need to carve working and profitable farms out of a woodland setting. In the late 19th and into the 20th centuries, the construction of rail lines into the southwestern part of the state brought a prosperity and lifestyle built around mining and the coal industry. Elsewhere, farming communities flourished on tobacco-based agriculture, and in towns like Richmond workers were employed in the profitable industry of cigarette manufacture and tobacco processing. While the historical events shaping the diverse lifestyles in each of these contemporaneous areas of Virginia are different, they cannot be separated from the larger cumulative history of the state. Given this reality, virtually every author, and for different reasons, recognized the need for more expansive historic research and archaeology at the regional and sub-regional (local) levels.

Historical archaeology has matured significantly from the time when it simply meant doing archaeology on historic period sites. The modern discipline is an integration of the methods of archaeology and history to the study of historic events and personages and the cultural processes that shaped them. If issues of archaeological site significance at the regional and sub-regional levels are to be addressed, accurate scholarly histories must extend to the local level to provide the context against which historical sites can be evaluated. Unfortunately, such histories do not exist for many parts of the state. This is particularly problematic given the fact that forms of planned construction, such as transportation networks, pose threats to historic resources statewide. For many areas, the review of existing historic literature, so often recognized as appropriate to evaluating the importance of a historic site at a “Phase I” level, simply may not be sufficient. For many towns, counties, and regions, even minimally adequate local

and regional histories do not exist. In such situations, in order to mitigate historic impacts, Phase I studies should be required to incorporate a more substantial program of historic research, potentially including the use of primary documents.

For those doing research in the Initial Settlement and Colonial Periods in particular, the record of excavating significant historical sites extends into the decades prior to WWII. The cumulative number and diversity of such sites presents an important comparative opportunity to address a range of social, ecological, and economic issues relative to these early stages of Virginia history. Challenges to making these interpretive comparisons lie in the differing strategies of data recovery and artifact analysis between sites excavated at different points in time, and between those excavated by different archaeologists using more modern strategies. Some of the authors call for re-evaluating and reinterpreting artifact assemblages recovered from earlier excavations, using current insights into the range of human behaviors that the analysis of diverse artifacts can provide.

A particularly fruitful avenue to pursue in refining our understanding of the culture of particular periods of time, lies in the collaboration of active researchers to allow meaningful cross-site data comparisons. This effort entails implementing similar research strategies and adopting complementary excavation and analytical methods. Three efforts to attain this compatibility are discussed. These include the Comparative Archaeological Study of Colonial Chesapeake Culture (CASCCC), which

currently includes a database of artifacts excavated from 18 archaeological sites in Maryland and Virginia dating from 1620 to 1740; the Database of Early Chesapeake Architecture (DECA), which provides important evidence to inform two recent synthetic studies of the architecture of the 17th century Chesapeake and the cultural contexts which shape them; and the Digital Archaeological Archive of Comparative Slavery (DAACS), which enables inter-site research on many sites of slavery throughout the Chesapeake, the Carolinas, and the British Caribbean.

The concern for preserving as much of the archaeological record as possible has led to a strong interest in initiating less invasive methods of excavation and data interpretation. The increased role of metal detecting and other strategies of geophysics are noteworthy in that regard, and have been demonstrated to be important tools for discovering sites as well. Similarly a growing awareness of the data that can be extracted from artifacts such as vegetal remains, animal bone, and human skeletal remains have opened new avenues of study into such topics as nutrition, site seasonality and environmental interaction, population structure, and issues of disease and medical care.

In closing, the authors wish to thank the large number of persons who have contributed to this project. Numerous individuals shared their knowledge of projects relevant to the different periods of study, and several provided their time and editorial skills by reading and commenting on early text drafts. These are not little things, and they are gratefully acknowledged.

The Archaeology of Virginia's Long 17th Century, 1550–1720: Previous Research and Future Directions

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Introduction

During the roughly 170-year period extending from circa 1550 to 1720, the lands bounding the portion of the Chesapeake Bay estuary that came to be known as the Commonwealth of Virginia were first explored by Europeans and then swiftly grew to remain the largest and most populous of the Anglo–American colonies. By the beginning of the 18th century, Virginia had achieved stability and general prosperity as a slavery-based, agriculturally dependent socio-economic system, with a highly stratified and racially polarized populace. The factors leading to this outcome were primarily ecological and economic. The Chesapeake region was well suited to staple-crop agriculture, with fertile and tillable land that was serviced by an abundance of navigable streams whereby the processed plants could be transported to trans-Atlantic markets. Tobacco was the money crop, initially commanding high prices and generally providing a healthy return on investments in land and labor. Thus its cultivation formed both the economic and social underpinning for the Virginia and Maryland Colonies (Kulikoff 1986; Middleton 1953; Morgan 1975).

The first few Spanish explorers, and later the flood of English settlers who migrated to the New World, found the region already inhabited as Native Americans had occupied the area for millennia. The strained relations between them and the European interlopers defined the first decades of the era, but by the last quarter of the 17th century the English dominated, and succeeded in displacing, the native peoples. Initially the English

planters brought their fellow countrymen to labor for them in the tobacco fields. Over time, however, that labor source was replaced by enslaved Africans, whose presence became a defining characteristic of Virginia life (Craven 1971; Kulikoff 1986; Morgan 1975; S. Potter 1993).

From a tiny beach head on swampy Jamestown Island beginning in 1607, English settlement expanded; haltingly at first, then with greater pace. By 1634 eight counties had been established—Henrico, Charles City, James City, Warwick, Isle of Wight, Elizabeth City, York, and Northampton—with a total population of approximately 5,000 men, women, and children. Forty years later, as many as 32,000 settlers occupied virtually all of the Virginia Tidewater, loosely organized into 20 counties and extending from the fall line on the west, across the Chesapeake Bay to the lower Eastern Shore. The settlements were widely dispersed, with the overwhelming majority of the inhabitants living on individual plantations that ranged from a few dozen to many hundreds of acres in size. For much of the period, only the colonial capitals of Jamestown (beginning in 1607) and Williamsburg (after 1699), even remotely qualified as urban centers. While periodically invigorated through legislative and economic initiatives, even they remained essentially seasonally occupied hamlets (Kulikoff 1986:95; Morgan 1975:404, 410–413).

As the commitment to tobacco cultivation intensified among all levels of society, and the numbers of Africans coming to the colony increased over the course of the century, the character of Virginia as a slavery-based

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enterprise became entrenched. By the 1640s, the largest of the planters who had the fiscal means and the necessary social and political connections, had effectively cornered the market on the relatively small numbers of bound Africans who were then available (Coombs 2011a; 2011b).

Beginning in the 1670s, the influx of enslaved blacks to the colony increased dramatically and by 1720 they were 30% of the total population (Kolchin 1993:240). By then, Virginia's hierarchal system was

well established, headed by a tightly connected group of affluent planter families and supported by the labor of an ever expanding and increasingly segregated underclass of bound and bonded workers. By adapting to the novel Chesapeake environmental and social conditions, and by responding to the opportunities and requirements involved in attending a plantation system devoted to staple-crop tobacco cultivation, these men and women laid the groundwork for a creolized culture that, while indebted in varying degrees to the models found in their homelands, had already taken on uniquely American

Figure 1.1. Time Line for Period; 1560–1720

1561 – 66: Spanish expeditions from Havana and La Florida explore the Chesapeake Bay in search of trade routes to the west and to scout potential sites for settlement.

1570: Jesuit priests establish the Ajacan mission on the York River in an attempt to Christianize the natives; the venture fails the next year when the priests are killed by the Indians.

1607: The English establish their first permanent settlement in Virginia when 104 colonists disembark at Jamestown Island and erect James Fort.

1607 – 08: John Smith and his crew explore the Chesapeake Bay and its major tributaries by boat; the Englishmen record the locations of the Indian settlements they pass.

1609 – 14: Colonists and the Powhatan Indians engage in a series of armed conflicts as the natives attempt to protect their rights to the land.

1614: English settlers begin to cultivate tobacco, which becomes the primary source of wealth for the colony for the next 200 years.

1617 – 22: Twenty-three “particular plantations,” or subsidiary corporations controlled by stock holders, are created as part of an attempt to encourage immigration and the spread of settlement beyond Jamestown.

1619: The first enslaved Africans are introduced to Virginia; the first representative legislative assembly is formed.

1622: 200,000 pounds of tobacco are shipped out of Virginia; the homes of 1500 settlers spread for 50 miles along the James River; in response to the pressures of continued immigration of Englishmen, the Powhatan Indians attack and kill several hundred settlers in a series of coordinated attacks.

1624: Due to the colony's failure to develop according to plan, the Virginia Company is stripped of its administrative power and the authority reverts to the crown.

1624 – 25: A “muster” is taken of all of the English settlements in Virginia, listing approximately 1200 inhabitants, along with weapons, provisions, and other goods.

1620s – 30s: Due to high prices and a ready trans-Atlantic market, tobacco cultivation for the export trade becomes highly profitable and thus encourages the expansion of the plantation system.

1660: As testimony to the attraction of the prosperity to be had from tobacco, the total population of Virginia reaches approximately 25,000 individuals.

1668: English settlement spreads inland up to the Fall Line along the James, York, Rappahannock, and Potomac Rivers, and on the Eastern Shore as far north as Accomack.

1674: Total population reaches approximately 32,000; the black population numbers between 1,000 and 3,000 persons.

1676: In response to a series of armed encounters between colonists and local natives, a force of disaffected planters, freedmen, and servants, under the leadership of Nathaniel Bacon, overthrows the royal government; the governor's authority is reinstated later that year.

Ca. 1690: The number of native-born adults equals that of immigrants for the first time.

1693: The College of William and Mary is established in Williamsburg; two years later construction begins on the imposing three-story brick college main building, now named after the well-known English architect, Christopher Wren.

1699: The colonial capital is moved from Jamestown to Williamsburg (formerly known as Middle Plantation); the total population reaches approximately 60,000, with the black population (enslaved and free) numbering between 6,000 and 10,000.

1716: Governor Alexander Spotswood leads an expeditionary force of 50 men to explore the interior of Virginia; they cross the Blue Ridge Mountains and traverse portions of the Shenandoah River Valley.

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characteristics (Fischer 1989; Graham et al. 2007; Kulikoff 1986; Morgan 1975). A time-line of events pertinent to the early period of Virginia history covered in this chapter is presented as Figure 1.1.

Early European Settlement (1550–1670)

Cultures in Contact

Europeans probably first visited the region in the year 1561, when two Spanish ships that had set sail from Havana to explore the east coast of North America entered the capes of the Chesapeake Bay. The explorers made contact with the natives at a site near the mouth of the James River, and when they returned home they took with them a young boy who was given the name of Don Luis. The first attempt on the part of Europeans to found a permanent settlement in Virginia occurred nine years later, when the Jesuit Order dispatched seven priests, accompanied by the same Don Luis who had returned from Spain, to the York River to establish a mission known as Ajacan. The goal of the missionaries was to convert the Algonquian-speaking natives to Christianity and bind them as allies to Spain, thus solidifying Spanish control over the region south of the Chesapeake Bay (Gradie 1988).

After only a few months the Ajacan Mission failed catastrophically when the natives killed all seven of the priests. The Spanish and the Indians initially interacted on a friendly basis, with Don Luis serving as an intermediary and translator between the groups. He soon abandoned the Jesuits, however, and relations swiftly deteriorated. Scholars have interpreted these events as the result of a predictable breakdown in communication, with the clerics violating the rules of proper behavior mandated within the exchange-based culture of the native peoples. The Jesuits apparently committed a series of blunders in their dealings with the local groups, starting with a failure to compensate them adequately for supplies that they had provided, and ending by trading goods with members of a rival village (Mallios 2004:134–141).

The first English voyages to the area then known as Virginia took them to the North Carolina coast, where in 1584 they established the ill-fated colony of Roanoke. The failure of Roanoke appears to have been at least partly due to the same type of inter-cultural misunderstandings

that had transpired at Ajacan, leading to the total loss of the first group of settlers (Mallios 2004:141–145). By 1590, the English investors in the Roanoke Colony gave up their efforts at settlement and turned their attentions elsewhere.

During the decade of the 1590s, Spanish, French, and English ships continued to enter the Chesapeake Bay with some regularity. These visits usually consisted of brief stopovers to gather provisions in preparation for their trans-Atlantic return voyage. Despite the failure at Roanoke, the English remained interested in establishing permanent settlements in Virginia. It was not until the conclusion of the Anglo-Spanish War (1585–1604), however, that commercial and political interests combined to foster renewed colonizing efforts (Horning 2001:5–7; Quinn 1977:429–440).

Although archaeologists believe that they have identified the general location of the site of Ajacan, no specific material evidence for the Jesuit occupation has been found. On the other hand, several Contact Period and late prehistoric Native American village sites in Tidewater have been excavated and have yielded extensive collections of artifacts and other important evidence of their societies. At several of the sites – among them Great Neck in Virginia Beach, Jordan's Point on the James River near modern day Hopewell, and Governor's Land at Two Rivers on the east bank of the Chickahominy River north of Williamsburg — archaeologists found patterns of post molds clearly delineating the footprint of native long houses and circular wigwams, along with various associated features (M. Hodges 1993; Potter 1993:24–27). Most recently have been the archaeological excavations at Werowocomoco in Gloucester County, principal residence of Powhatan in 1607 and capital of the chiefdom over which he ruled (Gallivan et al. 2006, 20134; Lutz et al. 2015). The results of these investigations indicate that the resident Indian populations occupied semi-permanent settlements supported by the swidden cultivation of maize, beans, squash, pumpkins, gourds, sunflower, and tobacco, augmented by hunting deer and smaller species of game, fishing, oystering, and foraging (Gleach 1997; S. Potter 1993:32–43).

The Virginia Company Period (1607–24)

When King James I considered his options for planting colonies in the New World, the most attractive

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came in the form of a proposal made by a group of wealthy businessmen to finance two settlements; one in New England and the other in Virginia. Their vision called for the colonies to take advantage of the local resources to supply an array of raw materials and manufactured goods that would ease the dependence of the mother country on foreign suppliers. Of possibly equal importance, the colonies would also provide an outlet for the growing numbers of landless, unemployed workers who were the product of the changing character of the traditional agriculturally-based English economy. The promoters hoped to reap significant profits within a few years, while the crown would stand to benefit from an infusion of revenue from new taxes. The king approved the plan, and in 1606 the London Company was duly chartered. The expedition dispatched to the area of the Kennebec River in Maine later that year was an almost immediate failure. In contrast, the Virginia venture succeeded in establishing a permanent, if fragile, foothold at Jamestown Island beginning in May 1607 (Morgan 1975:44–91; Quinn 1977:440–464).

National Park Service archaeologists conducted extensive excavations at Jamestown Island during the 1930s to the 1950s and succeeded in revealing abundant physical evidence of portions of the settlement. However, they failed to uncover recognizable remains of the fort that had been erected in 1607, leading most scholars to conclude that the site of the earliest settlement had been lost due to erosion from the James River (Cotter 1958). In the 1990s, archaeologists working for the Association for the Preservation of Virginia Antiquities (now Preservation Virginia) renewed efforts to find James Fort. Against considerable odds, they succeeded not only in revealing substantial vestiges of the palisade and bastions, but also the remains of houses, trash-filled pits, wells, human remains, and many other features dating to the first decades of the colony. The fort was found to have been laid out according to contemporary European models for defensive works. Further, the archaeological evidence for making brass implements, glass vessels, and tobacco pipes, suggest that the colonists were more dedicated to carrying out the entrepreneurial wishes of the company's directors than was previously believed. Nevertheless, the settlers were beset by disease, food shortages, and poor relations with the natives, and they struggled mightily just to survive (Kelso 2006; Morgan 1975:71–91).

Reflecting the challenging conditions of early settlement and a natural uncertainty about the future, the Jamestown colonists elected to construct dwellings based loosely on contemporary English models for semi-permanent buildings that were relatively cheap to erect and easy to repair. As the focus of attention of the colonists almost immediately turned from trade and local manufactures to agriculture, the labor intensive nature of tobacco cultivation acted as a strong deterrent to the adoption of more permanent modes of traditional English construction. The impact of these considerations are succinctly summarized in a letter written by one settler to a friend back home in England during the last decades of the century: “[I] should not advise to build either a great or English framed house, for labor is so intolerably dear, & workmen so idle and negligent that the building of a good house, to you there [in Virginia] will seem unsupportable” (Davis 1963). Planters therefore experimented with a wide range of variations, striving to strike a balance between cost, longevity, and relative comfort. Certain basic traits, such as wood as the primary building material and structural supports provided by posts set directly into the ground, remained constant, and by the 1640s, this hybrid building type was so ubiquitous that it was widely referred to as the “Virginia house” (Carson 1974; Carson et al. 1981).

The failure of the Virginia Company to live up to the high expectations of its investors led its leaders to cast about for other paths to success. In addition, even though settlers had begun cultivating tobacco as early as 1614 and it was already offering the promise of significant financial reward, these men hoped for more than simply serving as suppliers for England's growing demand for “sot weed.” A variety of measures were introduced to increase security, encourage immigration, and provide incentives for investors to take a more active interest in the direction of the colony (Morgan 1975). Beginning in 1619, the company authorized grants of 100 acres of land to those individuals who already had migrated to Virginia, while “headrights” of 50 acres were allotted to new immigrants who came on their own and/or paid the cost of transporting others. At the same time, investors were encouraged to form corporations for the purpose of establishing “particular plantations.” These communities were to be settled on lands deeded from the company on the basis of headright, and were envisioned as semi-autonomous enterprises. Finally, they encouraged

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another round of efforts aimed at producing a variety of commodities other than tobacco for export — such as iron, lumber, cordage, and silk (Morgan 1975:92–107).

The ongoing troubled relations between the English and natives reached a crisis in 1622 when the Powhatans, the largest and most powerful of the indigenous tribes, carried out a series of highly ambitious coordinated attacks on settlements throughout the colony. Although unsuccessful in eradicating the interlopers, several of the outlying plantations were particularly hard hit and as many as 700 colonists were killed. The discovery of human skeletal remains at Martin's Hundred has provided graphic testimony to the physical damage inflicted by the Indians. The ironworks at Falling Creek, which had been part of the renewed attempt by the Virginia Company to exploit the region's natural resources for commercial gain, was halted as a result of the attack (Hatch and Gregory 1962; Morgan 1975:100–101; Noël Hume 1991).

Reflecting keen disappointment in the progress of the venture, the English crown took over the management of the colony from the Virginia Company in 1624. The new administrators almost immediately initiated a house-to-house inventory of people, provisions, and munitions. Given the depredations of the natives during the uprising of 1622 when up to a third of Virginia's population may have been killed, the muster recorded and confirmed the depleted condition of the colony. A total of 28 settlements were surveyed, located on both banks of the James River from its mouth to the falls, and reaching across the Chesapeake Bay to the lower Eastern Shore peninsula. Of the 1,216 people who were listed, 932 were males (77%) and 270 were females (22%), with 14 individuals unidentified as to gender. In addition to the extremely high ratio of men to women, the population was young and white: 76% under the age of 30, with only 23 Africans and two natives being recorded. As might be expected, the overwhelming majority (89%) were immigrants who had been born in England or Europe. Only 78 individuals were identified as native-born. The findings of the muster reflected the early emphasis on recruiting young males from England to clear land and cultivate tobacco. Evident as well were the detrimental effects of high mortality rates and a skewed male to female ratio, which combined to preclude natural population growth (Barka 1993; Morgan 1975:395–410).

Archaeologists have excavated at several of the outlying settlements that were established beginning in 1617, including: Jordan's Journey, Piersey's Hundred (also known as Flowerdew Hundred), The Maine (Governor's Land), Kingsmill, Martin's Hundred (Wolstenholme Town), and the Falling Creek Ironworks. Evidence for the types of housing that were erected in these early days indicates that traditional vernacular English building forms were already being adapted for use in the New World. The material culture found at these sites echoes the findings from Jamestown indicating that other adaptations in the form of diet and the trappings of daily life were well underway as well (Barka 1976; Hatch and Gregory 1962; M. Hodges 1993; Kelso 1984: 2006; Mouer et al. 1992; Noël Hume 1991; Outlaw 1990).

The remains of fortifications that had been erected at three of the plantations have been intensively investigated. These were found to range in sophistication from the carefully designed complex at Flowerdew Hundred to simpler, palisaded, company compounds at Martin's Hundred and Jordan's Journey (Hodges 1993:188–199; Pecoraro 2015:228–253). Later builders abandoned many of the defensive fortification features designed to counter European foes as they were deemed to have little value in defending against the natives.

Scholars have pointed to the experiences of the English in establishing plantations in Ireland beginning in the 1580s as having influenced the design of these later fortifications (M. Hodges 1993:185–186). The comparison between Virginia and Ireland is particularly apt when considering the outlying Virginia settlements: isolated, fortified homelots of a type which in Ireland were referred to as *bawns*. Pecoraro (2015) has amply demonstrated the strong connection between the two colonies by tracing the activities of a father and son, Daniel Gookin Sr. and Jr., who both had been investors in the Munster Plantation, Ireland, and who later migrated to south-side Virginia to establish settlements of their own. In 1621, Gookin Sr. seated 57 colonists at the Newport News Plantation, also known as Marie's Mount, several miles downriver from Jamestown Island. Although the details of the fortifications he constructed are not known, they were successful in repelling attacks by the natives during the uprising that occurred the following year. Gookin Sr. returned to Ireland in 1624, but his son seems to have taken his place as a local leader (Pecoraro 2015:10–12, 40).

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Daniel Gookin Jr. migrated to the Nansemond River region by the mid-1630s, where he was instrumental in establishing a dispersed community that appears to have been made up primarily of followers of the Puritan religion. Both Gookin Sr. and Jr. had strong ties to the Puritans, a relationship that seems to have served them well in their many trans-Atlantic ventures. Gookin acted as the district militia commander during a subsequent period of Indian unrest that culminated with the Third Anglo–Powhatan War of 1644–45. One of the settlers under Gookin’s authority was Thomas Wilcox. His fortified house, known as Nansemond Fort, was enclosed by a continuous ditch-set palisade that bears striking resemblance to those used to defend the *bawns* in Ulster, and which the Gookins had personally experienced in Ireland (M. Hodges 1993:199–202; Pecoraro 2015:43–49, 202–233).

“A Good Poor Man’s Country”

During the decades of the 1630s through the 1660s, Virginia was known as “a good poor man’s country,” and has been described by historians as the “Golden Age of the small planter in the colonial Chesapeake.” Adopting tobacco as the economic mainstay for the Virginia Colony set the stage for this period of remarkable growth and relative prosperity. Tobacco was especially attractive to those of humble origins who looked to the Chesapeake as offering an opportunity for a better life (Walsh 2010:3, 122–131).

Beginning almost immediately upon the arrival of the first settlers who disembarked at Jamestown Island, the Virginia Colony was set on a course that would lead to a culture and society that was different in many important respects from the one that the migrants had left behind in the British Isles. Given the inherently challenging nature of the colonizing experience, the goal of replicating a society modeled closely on traditional English norms was problematic at best. Among the particular challenges were the novel environmental conditions and alien plant and animal life of the Chesapeake region, as well as the threat of an established and often hostile native population. But it was the combination of the opportunities and constraints — widely dispersed pattern of settlement, lack of societal controls, and striking demographic imbalances — attending the adoption of a staple crop agricultural system that was the primary

factor in developing the novel character of society in the Chesapeake (Carson et al. 1981; Craven 1971; Horn 1994; Miller 1988).

During the boom decade of the 1620s, the financial return was so high that a single man with one or two helpers could expect to reap a substantial reward. The gradually declining price of tobacco after the 1640s, however, forced planters to find ways to increase the rate of return per acre. Even so, revenue was directly tied to the number of available field hands; and laborers were at a premium. Fortunately, the low costs of subsistence meant that the overall profit margin provided by tobacco was sufficient to sustain the existing population and encouraged a steady stream of migrants (Kulikoff 1986:30–37; Morgan 1975:395–410; Walsh 2013).

The royal governors who succeeded the leaders of the Virginia Company redoubled efforts to bring settlers to the colony and had considerably greater success. Although conflict with the Powhatans continued intermittently for many decades, the colony generally became a more hospitable environment for newcomers and for established, or “ancient planters,” alike. The population grew substantially, registering a 19-fold increase to roughly 25,000 individuals by 1660; the area of effective settlement spreading far beyond the narrow confines of the James River drainage. Several independent factors combined to spur migration to the New World. These included: a severe glut of labor in England and a ready surplus of young men willing to take their chances in the Chesapeake; the international market for tobacco boomed during the decades of the 1620s–1640s and provided a steady, if less dramatic, rate of return thereafter; and cheap, tillable land was readily available (Morgan 1975:180–195).

Clearing land to establish tobacco plantations remained the preoccupation of virtually every colonist. This led to a dispersed settlement throughout Tidewater; first along the James and its many tributaries; then following the river valleys to the north and south; the southern shore of the Potomac; and finally along the coast of the Eastern Shore (Morgan 1975:133–157). A number of domestic sites belonging to this period have been excavated, yielding evidence for a pattern of generally modest dwellings and associated service buildings such as kitchens, quarters, store houses, dairies, and tobacco barns (Linebaugh 1994:16–18). The character of the evidence revealed at the sites predictably reflects the differing economic and social standing of

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the occupants. Remnants of masonry structures and a wide range of domestic items found at Richard Kemp's Rich Neck Plantation seat near Jamestown, for example, testify to the owner's wealth and prominence as the secretary of the colony (Muraca, Levy, and McFadden 2003). The ambition of Kemp's plantation complex and overall lifestyle stands in marked contrast with the single small earthfast dwelling and the remarkably sparse assemblage of household items found at the CG8 site, in James City County (Edwards 2004). The meager evidence from this latter site reflects the more modest means of its anonymous occupants, and is more representative of the lifestyle of the growing class of yeoman planters, many of whom may have begun their careers in Virginia as indentured servants (Carson et al. 1981).

A Time of Troubles

Among the migrants to the Chesapeake during this period were those who sought an atmosphere that was more amenable to practicing their religious beliefs. George Calvert had been a close advisor to James I, who granted Calvert the right to establish the Maryland Colony as a reward for his service. Calvert's adoption of Catholicism at a time when the church was in decline in England and the subject of widespread distrust and open contempt by the Anglican majority, had cemented the end of his public career. George Calvert died in 1632, so it was his son, Cecilius, who succeeded in securing the colony's royal charter later that year. He dispatched two ships and roughly 130 settlers who made landfall in southern Maryland in March 1634 (Menard and Carr 1982:174–176).

The Calverts' Catholic beliefs were a recurring source of friction and unrest as they attempted to retain control of the leadership of the colony. The proprietors did not discriminate against non-Catholics when it came to immigrating to Maryland, however, and many Protestants, including growing numbers of Puritans, settled there during the 1630s–40s. Other followers of the faith, such as Daniel Gookin Sr. and Jr., hoped that Virginia would be a welcoming destination as well. To their dismay, however, the government of Sir William Berkeley maintained a policy of rigid intolerance of Puritanism, causing Gookin Jr. and others to migrate to Maryland in 1643. For Gookin Jr., this move served as

only a brief interlude as he relocated to the Massachusetts Colony the following year (Pecoraro 2015:12–13, 52–53).

Although buffered somewhat by distance from the impact of events in the British Isles, the social and political upheavals that occurred there during the 1640s–50s reverberated in the Chesapeake. The clash between King Charles I and the Parliamentarian Party over the appropriate roles and rights of the English people to determine the affairs of the nation, finally led to the execution of the king in 1649. Ongoing religious differences, between Catholics and Protestants, and between the High Church and Calvinist wings of the Church of England, played a significant role in conflicts both in England and in America. In Maryland, Protestants took advantage of the disruption of crown rule to challenge the authority of the Calverts and their Catholic supporters, and succeeded in taking over the colony's governance between 1645 and 1646. In Virginia, the royal governor was deposed, although he returned to power in 1660 when Charles II ascended the English throne. During the interregnum, the Puritans experienced some relief from government repression and they were allowed to implement a number of ecclesiastical reforms. These included altering the character of many churches in conformity with their more fundamentalist beliefs (Lounsbury 2011:127–130; Walsh 2010:124–131).

With the return of the Calvert proprietors in Maryland in 1646, many Puritans who had opposed the government elected to migrate across the Potomac to settle in the Northern Neck of Virginia. Archaeological excavations at several sites (Hallowes Site on Northern Neck; Popes Fort, St. Mary's City; Fendall Site, Charles County) have revealed that Puritans on both sides of the river maintained a close social and economic network which the unrest may have intensified. In support of this, McMillan (2015) and Hatch (2015) have traced the distribution of selected artifact types with very specific characteristics—locally made tobacco pipes and ceramic earthenware vessels, respectively—that were found to concentrate at sites within the river valley that had strong ties to Puritan settlers.

Morgan Jones was a potter who produced a wide range of utilitarian earthenware at his shop in southern Maryland from 1661–69, under the patronage of the Puritan Robert Slye. Through Slye's connections, Jones became associated with a network of Puritan merchants

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and planters who were instrumental in his success. In the years following the English Civil War, many Puritans migrated to the Northern Neck, and two decades later Jones relocated his pottery there as well. Whether Jones's decision to move to Westmoreland in 1669 was motivated by religious beliefs, by political leanings, or was simply a pragmatic matter of maintaining links with his trusted trading partners, he seems to have been strongly aligned with the Puritan community both in Virginia and in Maryland (Hatch 2015).

McMillan (2015) studied several types of locally made tobacco pipes, whose distribution correlated almost exclusively with properties owned by Puritans on both sides of the Potomac River in the mid to late 1640s. The symbolism of the pipes is unclear. They may have served as a badge of group identity in a social context of strong partisan feelings, or less explicitly, as a result of community cohesion. Pipe making in the Chesapeake at this time was a small-scale enterprise, with the products generally distributed within a limited radius around the pipe maker's work place. It would not be surprising, therefore, to find pipes made by a Puritan artisan associated almost exclusively with members of the closely knit community in which he was a member (Agbe-Davies 2015:138–145). Nevertheless, the examples provided by the distributions of the distinctive pipe and pottery forms suggest the importance of religious affiliation as a factor in community development in both of the Chesapeake colonies (Pecoraro 2015:22–23).

An even clearer manifestation of the unrest of the 1640s has been identified by research carried out at the plantation of John Hallows, another staunch follower of Puritan beliefs who had settled on the south side of the Potomac River in Westmoreland County by 1647. The site of Hallows's home plantation was excavated in 1968–69, and revealed a complex of post holes/molds interpreted as marking the planter's substantial earthfast house along with associated features and outbuildings. Two narrow trenches were revealed, each forming a roughly rectangular shape and intersecting with opposing corners of the house (Buchanan and Heite 1971). Initially interpreted by the investigators as drainage ditches, the features were later correctly identified by Neiman (1980:74–75) as the remnants of bastions that were appended to the dwelling house to provide elevated defensive platforms. As such, the Hallows structure is reminiscent of fortified houses that were popular during

periods of unrest in Ireland, Scotland, and Northwest England from the 14th through the 17th centuries (Hodges 1993:205–208; Pecoraro 2015:114–116). Re-analysis of the associated artifact assemblage revealed that the occupation of the site began much earlier than had been believed. Hallows was a leader in the Puritan uprising of 1645–46, which included armed raids on the part of both Calvert loyalists and Puritan rebels up and down the shores of the Potomac. Hallows moved to Virginia in 1647 and the archaeological evidence indicates that he built the house, along with the bastions, at that time (Hatch, McMillan, and Heath 2013; McMillan, Hatch, and Heath 2014).

The temporary disruptions of the English Civil War notwithstanding, the pace of immigration to Virginia continued unabated. A second boom in the price of tobacco beginning in the mid-1640s served as a strong attraction for these new settlers. As a result, both the numbers of planters and the volume of their crops increased dramatically between 1640 and the late 1660s. Thousands of acres of land were cleared for cultivation and settlement spread inland bordering all of the major rivers and along the upper shores of the Bay (Walsh 2010:331).

Other developments had their beginnings during this period that combined to eventually diminish the features of Virginia society that had made it an attractive destination for English settlers of modest means, however. The changing backgrounds of the immigrants themselves was a factor, as many new settlers came from relatively wealthy and politically connected families. These men were often the younger sons of landed gentry, whose prospects for success in England may have been blighted by the political unrest, and whose opportunities at home were further limited by the competing inheritance demands of older siblings in a socially conservative environment (Quitt 1988). Virginia, on the other hand, offered the promise of wealth, status, and power, all as a result of cashing in on the ready availability of land and the continued strong market for tobacco. Beginning in the 1660s, however, tobacco cultivation itself had taken on greater risk as increased production predictably led to oversupply and reduced prices. In this more challenging social and economic environment, small and middling planters faced shortages in labor and undeveloped land in Tidewater and found it increasingly difficult to compete (Coombs 2011b:250; Walsh 2010:177–184).

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Men of greater means and older, more established settlers who had made the best of the years of prosperity were better positioned to consolidate their advantages in the face of shifting economic conditions. One avenue to pursue was to invest in the more expensive, but ultimately more remunerative, practice of acquiring Africans to cultivate their fields of tobacco. While the number of enslaved Africans brought to Virginia in the 1640s–50s remained relatively small, the wealthiest planters, who also regularly held positions of authority in the colonial government, were able to secure virtually all that were available. Over the years, these ambitious individuals buttressed their wealth and status by forming kin-based and political alliances among their peers that dominated the workings of Virginia society for decades to come (Carson 2013a; Kulikoff 1986:37–43; Morgan 1975:196–211).

Rise of the Plantation System (1670–1720)

During the half-century beginning circa 1670, the Virginia Colony was transformed from a frontier outpost to a fully realized creole society defined by its commitment to tobacco and the resulting dispersed network of plantations that increasingly depended on the labor of unfree workers for their success. The wealthiest planters continued to purchase most of the enslaved blacks that were imported to the colony in large numbers during the last decades of the 17th century. Less prosperous land holders were left to compete in acquiring laborers from the steadily declining pool of bonded white immigrants. This competitive advantage allowed the larger planters to further widen the social and economic gap between them and their less well-to-do and less politically connected neighbors (Carson 2013; Coombs 2011b; Walsh 2010). Archaeologists have identified patterns in the material record—types of houses that were built, foods that were eaten, and the range of household objects used—that they believe provide evidence for these social differences (Carson et al. 2008; Graham et al. 2007; Horn 2011:327–328; Pogue 2001).

Bacon's Rebellion, 1676

Growing tensions between royal officials and their gentlemen planter allies, on the one hand, and the majority of colonists composed primarily of small planters and landless freedmen, on the other, erupted

into open rebellion against the government of Sir William Berkeley in 1676. Portrayed by an earlier generation of historians as a precursor to the American Revolution, the proximate causes of the conflict were much more localized and grew from a long trajectory of intermittently hostile relations between the English and the local Native Americans (Washburn 1954). By 1676, the numbers and the influence of the indigenous peoples were in steep decline, the remaining tribes having been reduced to tributary status at the periphery of colonial society. Following a renewed outbreak of hostilities, the Bacon's Rebellion took shape when a group of men living on the margins of settlement refused to accept Governor Berkeley's plan to embark on what they considered to be a series of unnecessary and expensive defensive measures. They instead, argued for taking more proactive steps to halt once and for all the Indians' capacity to inflict damage on the colony (J. Carson 1976).

Nathaniel Bacon was a recent immigrant to Virginia who possessed the resources and the political connections to establish himself as a man of substance. He sided with the disaffected planters against the governor and accepted an offer to lead a military campaign aimed at punishing the Indians. Berkeley reacted by declaring Bacon and his followers outlaws. This ill-considered act on the governor's part redirected the rebels' attention from killing Indians to venting their grievances on his government. Bacon and his followers succeeded in defeating the royal forces in open combat, burning the capital, looting the homes of citizens loyal to Berkeley, and forcing the governor to flee across the bay to the Eastern Shore. Before the end of the year, however, Bacon was dead of the "bloody flux," and with his passing the rebellion lost what direction it had. Berkeley and his followers soon returned to power with a strengthened resolve to hold in check the resentments of the underclass against the gentry (J. Carson 1976; Morgan 1975:250–270; Sprinkle 1992; Washburn 1954).

The site of the Clifts Plantation, in Westmoreland County on the property that in the 18th century would become the powerful Lee Family's Stratford Hall Plantation, was excavated under the direction of Fraser Neiman for the Lee Memorial Foundation in the 1970s. The Clifts Site excavation and analysis was one of the seminal projects of the "new archaeology" of 17th century Virginia, providing precise and compelling data on the transformations that English culture and architectural

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traditions underwent in the New World. Occupied over a span of seven decades, the development of the Clifts “manner house” epitomizes the trajectory of those changes and offers a glaring contrast between evolving Virginia vernacular architecture and the ambitious brick “polite house,” Stratford Hall, which was built by the Lees some 60 years later. Along with the many important findings relating to the character of the main house and the associated quarter, the homelot was found to have been enclosed by a wooden palisade erected by the anonymous occupants as a defensive measure against the Native Americans during the unrest leading up to Bacon’s Rebellion. In addition to ditch-set palisade walls, bastions were built into two of the opposing fortification corners to provide the defenders with the benefit of enfilading fire in a manner similar to the previously noted Irish *bawns* (M. Hodges 1993:204–205; Neiman 1978; 1980).

From a Society with Slaves to a Slave Society

In the years following Bacon’s Rebellion, a combination of factors accelerated the transformation of Virginia’s society into one that was increasingly stratified along economic, cultural, and racial lines. The continued depressed prices paid for tobacco simultaneously reduced the opportunities available to small planters and recently freed servants, and favored those who had the capital to invest in enslaved blacks. Since slaves were more costly than servants, men with limited resources continued to try to buy indentures as a source of needed labor. In contrast, a man who could afford the higher prices hoped to purchase slaves as they were more profitable in the long run. The transition from white indentured servants to enslaved Africans as the base of the labor pool was not immediate by any means. By the 1690s, however, the declining rate of white immigration had become acute, and virtually all planters had turned to acquiring bound workers if they could. The result was that by circa 1700 the majority of unfree laborers in the Chesapeake were black with the proportion increasing every year. Over the next 20 years, the percentage of slaves in the work force and the population as a whole continued to grow dramatically. The same reasons that had allowed the white population to expand over the last half of the 17th century contributed to this shift. These factors included a natural population increase due to higher rates of birth

and survival, a more normal sex ratio, and the formation of relatively stable family groups (Kulikoff 1986:37–43; Morgan 1975:295–315; Walsh 2013:51–53).

Available archaeological data on the size and configuration of slave housing provides some insight into the changing demographics of Chesapeake plantation slavery. The unprecedented wave of enslaved workers brought to Virginia after 1670 was made up largely of adult males imported directly from Africa. Patterns of post holes marking the footprints of the dwellings that housed these people indicate that they often were communal, barracks-like structures. At a number of these sites, clusters of small pits have been found that had been dug into the ground below the floors of the buildings, suggesting that they served as personal storage spaces for the unrelated occupants. Over the course of the 18th century, as kin-based, mixed sex, residential groups became increasingly common within the enslaved population, the housing was adapted to meet their different needs. Slave cabins generally took on smaller dimensions more conducive to individual families, and the number of subfloor storage pits seems to have decreased accordingly (Fesler 2004a; Heath 2010:162–168; P. Morgan 1998:104–124; Neiman 1997).

Archaeologists studying animal bones and other faunal and floral remains have generated previously unforeseen insights into the foodways of Colonial era Virginians. As with architecture, the archaeological evidence indicates that within the first years of settlement, the subsistence strategies adopted by the colonists had responded to the unique ecology of the New World and showed significant departures from the practices of their homeland. The greatest changes are indicated in the meat diet, which initially depended on pork and wild game. In contrast to their experience in England and Europe, fish, wild mammals, and a variety of birds and other wildlife were available in abundance and could be hunted. The domestic pig was well suited to the environment, thriving in a forested setting and reproducing with gusto, whereas cattle found survival in the relatively harsh, pasture-free frontier landscape difficult. Over time, more familiar patterns of cattle raising gained in popularity as colonists found the greater investment in their care worth the effort and as lands were cleared for pasture grasses needed for their support. As a result, the ratio of beef to pork bones found in archaeological assemblages increased dramatically, as did the overall ratio of domestic to wild

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species. After decades of decline, however, beginning ca. 1680, the percentage of pig bones found archaeologically in site assemblages increased again. This development has been interpreted as related to the rising numbers of enslaved blacks in the colony, and to the strategy of masters to make use of cheaper and more easily acquired cuts of pork as the primary meat ration (Carson et al. 2008; Graham et al. 2007; Miller 1988).

A wide range of other data indicates that the standard of living known by most settlers in 17th-century Virginia was considerably lower than that of their countrymen in England. As measured by the presence or absence of domestic furnishings such as cooking and dining implements, ceramic and glass table wares and storage vessels, items of personal adornment and leisure, and the like; it is clear that the first generation of Virginians had jettisoned many of the accepted trappings of English material life. The conditions that the immigrants experienced during the first decades of settlement were particularly grim. Lorena Walsh (1979) concluded that most settlers attained only a “rude sufficiency” at best. Cary and Barbara Carson (1976) characterized the conditions endured by those toward the bottom of the social pyramid as “remarkably, almost unimaginably primitive.” Needless to say, the character of the daily lives of the growing numbers of enslaved blacks who found themselves laboring under the heavy hand of Virginia’s “sot weed” planters was harsh indeed (Horn 1994; P. Morgan 1998:102–203).

The fluid and culturally diverse nature of Virginia society during the 17th century meant that Englishmen of all ranks, Native Americans, and Africans — enslaved and free — interacted on a level of remarkable intimacy and dependence. This necessary reality is indicated by a variety of interrelated strands of evidence. One way that archaeologists have contributed to this discussion is by plotting the distribution and social dimensions of locally made tobacco pipes and ceramic vessels that likely reflect shared contributions made by Indians, Africans, and Englishmen.

Given its importance to the economy of the colony, it is not surprising that smoking tobacco became a ubiquitous pastime among all levels of Virginia society. White clay tobacco pipes were imported in enormous quantities from England and Holland. Pipes made from local clays, hand formed or molded into English shapes, and decorated in a mix of English and Algonquian

designs, also have been found in large numbers on Virginia sites beginning in the 1640s. These pipes almost certainly were made initially by both natives and colonists, and later by blacks, and they continued in use through the end of the century. The proportion of local pipes fluctuated over the years in a pattern that tracks loosely with the price of tobacco. This led Henry (1979) to propose that when revenues from tobacco declined, cheaper locally made pipes became an attractive option to those of modest means when compared to the imported forms (Mouer 1993; Mouer et al. 1999).

A type of locally made pottery, referred to as colonoware, has also been found at Virginia plantation sites spanning the period from the 1620s through the 18th century. Generally speaking these wares, at least superficially, resemble both Native American pottery from the Contact Period and traditional African vessels. The vessels also exhibit a variety of features that are clearly European in derivation including flat bottoms, lug handles, and a range of forms which qualify them as a unique blending of cultural prototypes. In a path-breaking article published in 1962, Ivor Noël Hume first coined the term Colono–Indian Ware (colonoware) to describe the locally produced, smoothed or burnished earthenware vessels that had been recovered in significant quantities from a cluster of sites located along the lower James and York River valleys. Based on a number of attributes that suggested to him that a mixture of Native pottery techniques and European design influences were at play, Noël Hume attributed the wares to Native American manufacture made as items for trade with colonists. As with the locally made pipes, however, current thinking interprets these ceramics as more likely representing the handiwork of Native American, English, and African makers at different times. It is also believed that they were made to serve a market demand by members of the humbler ranks of society for vessels of relatively low cost (Heath 1996; Mouer 1993; Mouer et al. 1999).

The Virginia social order that had emerged by mid-17th century was still extremely fragile. Suffering from a high rate of mortality and marked by an unnaturally high proportion of males, circumstances hindered the formation of families, depressed rates of reproduction, and retarded social cohesion. As noted previously, after 1680, declining immigration from England coincided with reduced opportunities for advancement for freedmen

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and small planters. The unintended consequence of these changes was a more balanced sex ratio and, with it, a significantly elevated birth rate. Accordingly, by the 1690s the numbers of native-born white Virginians approached parity with the immigrant population for the first time. Life expectancy generally improved, meaning that families were less likely to be sundered by parental deaths, further contributing to a more stable social order. Thus, the processes of adaptation and innovation had culminated in a society dominated by the complex, reciprocal relations between tobacco planters, large and small, and the laborers (both white and black) upon whom their prosperity depended (Kulikoff 1986:37–43; Morgan 1975:133–157).

Rise of the Virginia Gentry

As a relatively small number of wealthy and politically prominent families came to dominate the politics and economy of the Virginia Colony, they sought ways to demonstrate their elevated status, cement their association with the English gentry, and distinguish themselves from those among white society who they considered to be their inferiors. At the same time, the presence of a growing caste of enslaved blacks encouraged small planters, freedmen, and even indentured servants, to band together in racial solidarity, and thus helped to defuse the resentments among poorer whites that had been a prime feature of the discontent leading up to Bacon's Rebellion. Finally, within the white population, the growing numbers of the enslaved in their midst fostered a fear of rebellion and led to passing laws that established tighter controls over their bound workers. This network of legal constraints resulted in hardening racial boundaries and further segregating the social landscape. White Virginians adopted a variety of strategies aimed at helping them to negotiate the increasing complexities of a slave-based society, and the character of their housing, the foods they ate, the clothes they wore, and the types of household objects they acquired all were enlisted to aid in this process of self-definition (Carson 1994; 2013; Carson et al. 2008; Graham et al. 2007).

A variety of material measures of the adoption of genteel behavior, first by members of the gentry and eventually trickling down to those lower on the social pyramid, include developments in the types of ceramic vessels used, and in the acquisition of a wide range of household amenities. The pattern of ceramics use

changed dramatically over the course of the century. Early assemblages were typically dominated by vessels used in preparing and storing food, reflecting a traditional style of folk cuisine well suited to frontier conditions. By the last decade of the century, however, the proportions of individualized table wares and beverage containers in site assemblages increased dramatically. The introduction of tea wares and other specialized vessels revealed a new focus on fine dining, particularly for the socially conscious. This trend is echoed by the steady appearance of household amenities such as table knives and forks, utensils to allow meats to be prepared in a variety of ways, curtain rings and candlesticks, tables and chairs, and many more (Carson 1994; Pogue 1993; Yentsch 1990; 1991).

Housing is a primary means of self-fashioning in virtually every culture. It is not surprising, therefore, that the Virginia house style continued to be adapted to meet the evolving social needs of the colonists. Servants and/or slaves living on modest-sized plantations may still have resided in the main dwelling with the planter family, but increasingly, over the last decades of the century, the living quarters for both bound and bonded workers shifted to outbuildings. This was particularly true on plantations with large resident slave populations where removing laborers and their clutter from the primary household allowed a much greater degree of privacy (Neiman 1990; 1993). Changes in house pattern also opened the way for a number of design innovations aimed at demonstrating the wealth, status, and power of the owners.

Chief among these architectural innovations was the addition of a central passage, a hallway that ran the width of the house and acted as a buffer between the private chambers and the main entrance to the dwelling. The first residence where evidence of a central passage has been found is Arlington, the precocious three-story, brick country manse of John Custis, which he built in Northampton County in the 1670s. By the 1710s several other members of the colonial elite had adopted the innovation which was especially popular in and around the towns of Williamsburg and Yorktown. The design was soon widely adopted among men of means across the colony (Carson 2013b:112; Wenger 1986; 2013:125–126).

Building in brick and stone was a traditional means of signifying wealth and social prominence in England. In Virginia, at least a few houses sporting masonry

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foundations and walls partially composed of brick were built beginning as early as the 1620s; but few families had either the means, or the inclination, to adopt that strategy before the 1660s. In addition to Arlington, two notable examples of this pattern are the two-story brick dwellings erected by John Page in 1662 near what later became the new capital of Williamsburg, and that of Arthur Allen in 1665 in Surry County, across the James River from Jamestown (the extant house today is known as Bacon's Castle). In both instances their status-conscious owners and builders modeled their homes after up-to-the-minute English precedents. By the 1660s, a number of other brick structures had been erected at Jamestown as part of yet another failed attempt to realign the character of the struggling capital with traditional English notions of what proper town architecture was like (Brown 1998; Carson 2013b; Carson et al. 2008; Graham et al. 2007; Upton 1980).

By the turn of the century, a new type of "polite" house had made its appearance, which was often, at least partially built of more costly brick. Robert Beverley noted the trend in 1705, when he recorded in his history of the colony that, "The private buildings are of late very much improved; several Gentleman of late having built themselves large Brick Houses" (Wright 1947:289). The newly popular architectural features simultaneously increased privacy for the occupants, provided spaces appropriate for entertaining peers in such high-status activities as punch and tea drinking, and accommodated the display of a wide array of fashionable household furnishings. In short, the houses of the gentry were increasingly reshaped in order to support a new set of behaviors modeled on English ideas of gentility embraced as a means of reinforcing the occupants' claims to exalted social position (Carson 1994; Carson et al. 2008; Graham et al. 2007; Wenger 1986).

A particularly ostentatious strain of building constructed by the gentry has been identified based largely on evidence provided by excavations at three sites in Virginia and two others in Maryland. These large and imposing structures span the period from ca. 1660–1727, and were not erected as dwellings, but rather as "banqueting lodges." These structures were venues where their owners could entertain peers in a lavish manner, incomprehensible to the vast majority of their fellow Virginians, but familiar to their brethren across the ocean. The three Virginia lodges were

constructed by some of the most prominent men in the colony—Governor Sir William Berkeley, Lewis Burwell II, and Robert "King" Carter—at their country estates of Green Spring, Fairfield, and Corotoman. These men were among the "fashion leaders" of their time, willing to invest in pretentious structures to go along with the other trappings of genteel behavior that their wealth and position allowed. The structures bore a number of similarities to each other related to their extraordinary function: long and narrow with rooms dedicated to entertaining and accommodating guests, and an elevated gallery from which to observe surrounding ornamental gardens (Carson 2013a; 2013b).

Archaeological and documentary evidence indicates that by the last decades of the century formal gardens were a significant element in the landscape of at least some fashionable entry estates. At Greenspring, Governor Berkeley situated his new lodge, completed in 1674, so that the long gallery was aligned with the existing walled garden. Nicholas Lucchetti excavated the site of a substantial garden at Bacon's Castle, measuring 362 by 192 feet, laid out with eight principal planting beds separated by axial pathways. He also found evidence for several small, three-sided, brick structures facing the garden that he interpreted as enclosures for garden benches. The garden likely was installed by Arthur Allen II, as part of his effort to rehabilitate the property following the damages caused during Bacon's Rebellion in 1676. Other than at Bacon's Castle, the archaeological evidence for 17th century formal gardens is scant, but the presence of gardening implements in probate inventories and the observations made in various first-hand accounts indicate that they existed. By the first quarter of the 18th century, a number of formal gardens had been established in Williamsburg and at elite plantations. One notable example was Westover, the James River estate of William Byrd II (Carson 2013b:108; Lucchetti 1990a; Martin 1991:7–27, 54–78).

The expense and the elaborate nature of these "party houses" reflect the attainments and the pretensions of the tiny faction that made up the wealthiest members of Virginia society; these fancying themselves as fashion trend setters performing on an international stage. These men had taken advantage of the privileges of birth and rank (Berkeley), and the profits from their early commitment to a slave-based economic model (Burwell and Carter) to rise to the uppermost echelon

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of society. They wanted to ensure that their success was duly acknowledged, in Virginia certainly, but in England above all. Their banqueting houses and associated gardens were just the most obvious tangible expression of this desire; these being complemented by a lifestyle of conspicuous consumption of the widening array of fashionable goods that were becoming available (Carson 2013a).

Research Trends

The New Chesapeake Social History

Studying the development of Anglo–American society in Virginia and her sister colony of Maryland, became one of the most dynamic fields of scholarship in the field of early American history, and the research undertaken by Chesapeake historical archaeologists played an important role in this renaissance. The remarkable, and largely unexpected, findings that began to emerge in the early 1970s from excavations at sites such as Flowerdew Hundred, Martin’s Hundred, Kingsmill, Governor’s Land, and Clifts Plantation in Virginia, and St. Mary’s City in Maryland energized the field, testifying to the richness of the archaeological record, and suggesting the potentially dramatic insights to be gained from its careful investigation (Hudgins 1993). At that time the early Chesapeake already had become the focus of renewed attention on the part of documentary historians who were bringing to bear the methods and the perspectives of what was then referred to as the “new social history” (Carr, Morgan, and Russo 1988; Tate 1979). Given the shared focus on the quotidian aspects of daily life, it is not surprising that a synergy between the two disciplines would emerge as a strong feature of Chesapeake research, and one which has continued down to the present (Carson et al. 2008; Carson and Lounsbury 2013; Graham et al. 2007; Hudgins 1993; Lounsbury 2011; Morgan 2011; Walsh 2010; 2013).

The prevailing interpretation of early Virginia society in vogue prior to the discoveries of the 1970s, was the product of historians such as Alexander Brown and Philip Bruce writing in the 1880s and 1890s, and of their successors, including prominent scholars like T.J. Wertenbaker and Wesley Frank Craven who were active in the decades just before and after the Second World War. Given the general perspective of the era, their approach was overwhelmingly political in focus. In this

context, the events of the 17th century were considered to be important largely as a prelude to what was really of interest; the march toward national independence that culminated in the American Revolution. When these scholars elected to consider issues relating to daily life, their perspective once again was framed primarily by looking backward from the accomplishments of later generations; namely, the presumed grandeur and cultural attainment of the planter society that they viewed as the dominant feature of the 18th century. While the challenge of settling the alien Chesapeake landscape was acknowledged by some to have been a major influence in framing the colonists’ experience, the depth and the breadth of the impact of the environment, and the novelty of the social and economic adaptations that came to characterize the region, were downplayed. The society that had its beginnings along the shores of the James River and then spread throughout the Chesapeake was thus viewed simply as a slightly backward version of that found in the British Isles at the time (Carr, Menard, and Russo 1988; M. Hudgins 1993; Tate 1979).

It is no surprise, therefore, that the archaeologists and other scholars of material culture who attempted to make sense of what had been uncovered at Jamestown Island and at the few other domestic sites dating to the 17th century excavated to that time, were heavily influenced by this perspective. The focus on the findings at Jamestown obscured, rather than clarified this picture as the archaeological evidence marking its growth did not fairly represent contemporary developments at the surrounding plantations. Thus, Henry Forman, whose writings appeared over a 30-year period beginning in 1938, viewed the architectural evidence from 17th century Virginia and Maryland as essentially representing traditional, what he called “Medieval,” English forms. The many brick buildings that he and others excavated at Jamestown and at St. Mary’s City led Forman (1938; 1948; 1957) and his contemporaries (Jester 1957:20–25; Morrison 1952:134–165; Waterman and Barrows 1932) to infer that houses supported by brick foundations, comprised either entirely of masonry or supporting box-framed English-style cottages, were the regional norm, dating virtually from the first years of settlement (for an early reassessment that questioned the prevalence of brick buildings in 17th century Virginia, see Pierson 1976:23–24). The presence of these and other amenities, and the confusion caused by misdating a number of

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standing structures—some by as many as 75 to 100 years—reinforced these scholars' erroneous conclusion that builders in the New World had experienced a considerable measure of success in almost immediately replicating familiar, if antiquated, English models (M. Edwards 1982).

Scholars attempting to manipulate other categories of material culture believed to portray the perceived character of "domestic life" in 17th century Virginia, followed the lead of the architectural historians in viewing conditions in the colony as watered down versions of those found in England. As with architecture, the colonizing experience itself was seen as having only a minor impact on living standards (M. Hudgins 1993). This upbeat appraisal is epitomized by Annie L. Jester in her book, *Domestic Life in Virginia in the 17th Century*, one of the series of pamphlets that were published by the Jamestown Anniversary Commission in 1957. Jester concluded that, "it will be seen that these furnishings were as elaborate or as simple as in the comparable home in England," and that "even the planter with a modest household" possessed a table dressed with linen and set with plates and other vessels made of pewter, ceramics, and glassware, surrounded by an array of furnishings like chairs, beds, and chests, and outfitted with a variety of cooking utensils, such as iron pots and pans, skewers, ovens, and the like. In short, she concluded that the settlers had just what any self-respecting cottager back home in Yorkshire or Sussex might expect to own (Jester 1957:52–57).

It is important to note that Jester's findings were based almost exclusively on her highly selective reading of the evidence provided by probate inventories, with the archaeological data from Jamestown cast in a minor supporting role. Jester may have been the first, but she hardly was the last, scholar studying early America to privilege the evidence gleaned from inventories and other documentary sources as more readily available and more easily interpretable than archaeological data to inform their investigations (Stone 1977). It would be many decades before Chesapeake archaeologists could look to a corpus of comparative evidence from excavations as a viable starting point to consider such issues (King et al. 2006; Pogue 1993; 2001; Yentsch 1990; 1991).

In a sense, the work that began in the 1970s was built on the findings from the excavations that had been undertaken at Jamestown in the 1930s and early 1940s,

and again under the direction of John Cotter (1958) in the years leading up to the 350th anniversary celebration. But, the evidence generated by archaeologists and historians that piled up so impressively during the boom decade of the 1970s, was in such stark contrast to much of what had been found at Jamestown, that the earlier interpretations were discarded almost immediately and entirely. Forman's portrayal of the development of Chesapeake architecture and Jester's characterization of 17th century living standards, for example, simply collapsed under the weight of the new research. Suffice to say that where the archaeologists and historians of earlier generations saw a moderately successful, if beleaguered, effort to replicate the social trappings and cultural norms of Elizabethan England in the Chesapeake colonies, the "baby boomers" envisioned a volatile mix of social misfits and men on the make, striving within the constraints imposed by the alien tidewater ecology. Grasping desperately at any and all options that came to hand, discarding traditions that failed to make the grade, and at different times battling with and borrowing from, and to a degree ultimately blending with, African and Native American cultures, the colonists cobbled together a new life in the New World (Carson et al. 1981; Hudgins 1993; Lewis 1975; Tate 1979; Walsh 2013).

Deconstructing the Virginia House

Exploring the character of Chesapeake vernacular architecture has been a particularly popular focus of research; the trajectory of its development being closely linked by architectural historians and archaeologists alike to the interpretive narrative outlined above. Central to this discussion was the discovery of the widespread adoption of the hybridized, vernacular building form which came to be known at the time as the "Virginia house." The appearance of this building strategy began with the earliest years of settlement as colonists selected, and then quickly modified, a traditional, lightly framed style of construction in the face of New World conditions. The labor-intensive nature of tobacco production served as a spur for continued architectural experimentation, leading to the many labor saving features that came to define the Virginia house. The resulting hybrid, boasted a remarkably low construction cost as compared to the traditional box-framed structures that were the norm in England. Over the course of the 17th century the design

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of Virginia housing continued to evolve, addressing both functional and stylistic concerns. Many of the changes were interpreted as reflecting the ascendance of a native-born, gentry elite, and their desire to more clearly delineate their status, both real and desired, during a period of dynamic social development (Carson 1974; 2013a; 2013b; Carson et al. 1981; Carson et al. 2008; Main 1982; Neiman 1978; 1993; Stone 2004).

The basic argument for the significance of the Virginia house as an indicator of social change was first articulated in print by Cary Carson and Garry Stone in 1974. Elaborated by Fraser Neiman in 1978, the name was finally “canonized” by Carson and his four co-authors in their highly influential article, “Impermanent Architecture in the Southern American Colonies,” which appeared in 1981. Although the sample of sites and structures available for study in the late 1970s was tiny—detailed information being available from only about two dozen archaeological sites—the interpretation offered was so amply bolstered by the documentary evidence that it almost immediately gained universal acceptance (Carson 1974; Carson et al. 1981; Hudgins 1993; Neiman 1978; Pogue 2001; Stone 1974). In hindsight, however, this precocious achievement may also have had the unintended consequence of glossing over variability in the data that forestalled other lines of inquiry. For example, although the vast majority of the region’s buildings were determined to have been timber-framed and supported by earthfast posts, the focus on that larger pattern likely stunted systematic study of the fewer, but hardly insignificant, brick structures that were also present (Brown 1998; Levy 2005). Further, with the interpretive focus firmly trained on tracing broad regional patterns of architectural development, much less effort was expended on considering the significance of variations in house types and their spatial and temporal distribution (Carson et al. 2008; Graham et al. 2007; King and Chaney 1999).

Foodways and Living Conditions

As with housing, diet has been a traditional focus of archaeological investigation. The study of food availability and choice generated a complementary body of data on the topic of temporal and social change. By analyzing animal bones and other food remains from datable contexts at most of the sites that had yielded the sample of structural evidence first studied by Carson

and others, Henry Miller (1984; 1988) proposed that the diet of the English inhabitants of the Chesapeake changed dramatically over the course of the 17th century. Furthermore, he argued that these developments followed the general trajectory of initial adaptation and subsequent elaboration prefigured by the architectural and documentary evidence. At first, English subsistence practices were necessarily modified significantly in direct response to novel features of the Chesapeake ecology and the absence of established English food alternatives. Over time, more subtle adjustments were made, including a re-emergence of the importance of traditional English food sources and a corresponding reduction in the proportion of wild species consumed. This was accomplished as the tidewater eco-system was physically changed through deforestation and the increasing agricultural prosperity and improved animal husbandry practices that enabled colonists to recapture elements of English foodways traditions that had been earlier jettisoned under the stress of New World conditions (Graham et al. 2007; Miller 1984:294, 372–382; Miller 1988).

Another important body of evidence brought to bear on these topics was provided by the renewed and much more sophisticated analysis of the information found in probate inventories (Carson and Carson 1976; Carr and Walsh 1988; Horn 1994; Kulikoff 1986). These records are relatively detailed, the sample is refreshingly large, and the estates they inventoried were regularly assessed according to their monetary value. Therefore, it is possible to make comparisons between the contents of estates according to wealth and class at any given period, and to trace patterns of change over time. One of the most significant results of this research was the finding that living standards throughout the Chesapeake, and for virtually all households in all wealth categories for the entire period, were much lower than the norm for their peers in England. Most telling was the conclusion that, for much of the era, even those more affluent members of Chesapeake society seem to have had limited opportunities to demonstrate their status materially; and that they were often content with owning more of the same generally utilitarian possessions found in the homes of their poorer neighbors. These compelling results soon achieved almost universal acceptance, which once again had the unintended consequence of skewing interpretation and obscuring other avenues of research (Pogue 1993).

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Synthesis: 1993

By the 1990s, several scholars had focused on analyzing specific subsets of the material culture universe that was available to Virginia colonists, with the results of much of that research presented in a volume of papers organized and published by the Council of Virginia Archaeologists (Reinhart and Pogue 1993). At one end of the spectrum, Jay Gaynor, a museum curator with the Colonial Williamsburg Foundation, analyzed a single class of artifacts — woodworking tools — which until then had received little attention from scholars of material culture. Gaynor (1993; also Harvey 1997:75–96) demonstrated the value of archaeological data in contributing to understanding the types of tools that were used in the Chesapeake, and offered insights into how settlers employed them. At the same time, he also suggested that the patterns that were revealed had interpretive significance in relation to larger questions of social development. At least in the case of woodworking tools, this study found that the English prototypes had not undergone any perceptible alterations in their physical character, even while the specific uses to which they were put experienced subtle changes.

If the interpretive benefits deriving from Gaynor's detailed treatment of a little-studied class of artifacts came as a pleasant surprise, Bill Pittman's assessment of the contributions of ceramic analysis to provide similarly enlightening insights was the opposite. One of the most ubiquitous, and arguably the most intensively-studied of any type of artifact found on Chesapeake sites, tens of thousands of hours of painstaking sorting, cataloging, and mending of ceramic sherds hardly seemed to have repaid the investment. Pittman (1993) attributed this deflating circumstance largely to a methodological flaw—the lack of a standardized language to describe ceramic wares and forms—which served as a major impediment to comparative analysis.

Pittman did point to one notable contribution that the study of ceramic evidence had made to the study of early Chesapeake society. This was the work of Anne Yentsch (1990; 1991) who analyzed changing patterns in the use of ceramic vessels over the course of the century. Yentsch reanalyzed a number of collections from more than a dozen Chesapeake domestic sites in order to enhance their comparability. Using the typology of vessel forms developed by Beaudry et al. (1983), Yentsch divided each of the assemblages according to five broad

functional categories based on vessel type. She then plotted the percentages of each category to determine if, and to what degree, their popularity changed over time. The result was a strong pattern of directional change. Yentsch observed that food preparation and storage vessels predominated during the first decades of settlement, which she interpreted as reflecting a traditional, or folk, cuisine suited to the circumstances of the New World. By the last quarter of the century, however, the percentage of individualized vessels for consumption in archaeological assemblages had increased dramatically. This change was largely due to the growing popularity of new types of drinking vessels that were made in the potteries of Staffordshire, England. Yentsch combined these data with documentary evidence to argue that this marked a shift from a folk, to a more “courtly,” or fashion-conscious mode of dining.

Dennis Pogue (1993) returned to the issue of living standards that had been raised by Jester more than 30 years before. He first attempted to expand upon the findings made by Yentsch by adding to her sample of ceramic assemblages and by incorporating other categories of material culture in his analysis. Although the sample size in both cases remained quite small—just over 20 total assemblages from Maryland as well as Virginia—the findings were consistent with those previously reported by Yentsch. Furthermore, this result offered support for the interpretation that by the last quarter of the 17th century the Chesapeake was experiencing a revolution in consumer behavior reflecting the adaptive, social and demographic developments outlined above (Carson 1994).

Also of note, these data indicate that certain types of household objects characterized as amenities—table knives and forks, individualized ceramic vessels, and others—seem to have found their way in increasing numbers into Chesapeake households several decades earlier than was suggested based on historians' interpretations of inventory data (Carr and Walsh 1988). This finding, in turn, led to considering the broader question of the reliability of inventories to reflect the full range of objects that were actually used in households. Apparently because of biases and inconsistencies in reporting on the part of inventory takers, the objects so helpfully listed in probate records were found to under-represent various significant classes of household objects. Thus, interpretations based solely on inventory data may

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well understate the number and variety of household goods owned and used by Chesapeake colonists, particularly those on the lowest rungs of the economic ladder. The archaeological data, therefore, represents an invaluable source of evidence which can balance these omissions (Hawley 1989; Lucchetti 1990b; Pogue 1993; 1997).

Another area of research that has yielded an impressive body of evidence on the daily lives of Virginia colonists lies in studying their physical remains. Led by the work of physical anthropologists based at the Smithsonian Institution, first by Lawrence Angel in the 1970s and continuing to the present under the direction of Douglas Ubelaker and Douglas Owsley, important insights have been obtained on issues of burial practices, physical manifestations of daily activities, disease, diet, dental health, and more. Beginning with the earliest analyses of skeletons exhumed from the Maine, Clifts Plantation, Governors Land, and Martin's Hundred Sites, and bolstered by many more subsequent studies at Jamestown and elsewhere, the quantity of skeletal data dating to the early period of the colony is voluminous (Angel 1976; Aufderheide et al. 1981; Aufderheide et al. 1985; Kelso 2006:125–168; King and Ubelaker 1996; Owsley 1990; Phung, King, and Ubelaker 2009). When combined with the data from human remains excavated at St. Mary's City and various Maryland sites, this material allowed for preparing the widely praised exhibition, *Written in Bone*, which was on display at the Smithsonian Museum of Natural History from 2009 to 2014 (Walker 2009). Broadly speaking, the findings reinforce the characterization of living conditions in the early Chesapeake as harsh indeed, and provide graphic evidence of high rates of mortality and morbidity.

Red, White, and Black

If the scholars of the 1950s and 1960s devoted little time and energy to considering the role of Native Americans and Africans, enslaved and free, in the makeup of Colonial Virginia society, by the 1970s historians had begun to address this omission (Craven 1971; E. Morgan 1975; Sobel 1987; Tate 1979). Not surprisingly, the region's archaeologists followed suit, and by the 1990s several scholars had offered assessments as to the contribution of the discipline in studying the dynamics of English, Native American, and later African,

interactions over the course of the century. In his COVA essay, Dan Mouer (1993) adopted an interdisciplinary approach in arguing that Virginia society underwent a process of creolization, incorporating elements from African, Native American, and various European groups to form a new, and distinctly American, folk culture. For investigators focusing primarily on the Native American side of the equation, charting the wide-ranging changes to traditional Indian practices resulting from the contact experience was the dominant approach (M. Hodges 1993; King and Chaney 2004). In her assessment of the state of knowledge relating to Virginia's Native American peoples during the Contact and early Colonial Periods, Mary Ellen Hodges stressed the limited contribution made by archaeology. She concluded that the "archaeological research ... has generated only incomplete patches of data for a small sample of incoherent and temporal contexts," and that, "For most regions of Virginia, ethnohistoric research [still] has produced the best body of cultural and historical information to date that can be summarized in a narrative...of resident native populations following European contact" (M. Hodges 1993:33). Over the last two decades, considerable effort has been devoted to expanding the archaeological database both by investigating additional sites and by reanalyzing and synthesizing the results of earlier excavations. Given the wide interest generated by the 400th anniversary of the settlement of Jamestown in 1607, the majority of these efforts have focused on the Powhatan Chiefdom that played such an important role in the era of initial Native American–English contact (Blanton and King 2004; Gallivan 2003; Gleach 1997; Rountree 1989; 1993; Rountree, Clark, and Mountford 2007; Turner and Opperman 1993).

One particularly significant outcome of this intensified focus on the Powhatan Chiefdom has been to refine Turner's (1986) earlier observation that the archaeological record did not confirm expectations of a highly centralized, politically hierarchical, and socially stratified society to the degree suggested by the ethnohistoric evidence (Gallivan 2003; 2004). Gallivan's study of Native American household and community dynamics in the James River basin did reveal patterns reflecting greater sedentism, increasingly concentrated nucleated settlements, and wider diversity in housing suggesting the growing prominence of social and political elites, as well as other indications of an evolving,

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stratified social hierarchy. The evidence suggesting these developments is relatively subtle, however, and the findings only became apparent as the result of a combination of finely grained, site-specific analyses and inter-site comparisons. This points to the need and value of conducting additional studies of this type in providing an independent set of data to complement and critique interpretations based on ethnohistoric sources (Gallivan 2004).

Other scholars continued to expand the focus to include tribal and chiefdom societies from around the region that lay beyond Powhatan's control (Boyd 2004; Hantman 2001; Klein and Sanford 2004; Lapham 2004; Potter 1993; Rountree and Davidson 1997; Wall 2004). This broadened perspective has offered the opportunity to address region-wide questions of change and diversity relating to trade and exchange both between native communities and with the colonists (Boyd 2004; Klein and Sanford 2004; Lapham 2004). For all of these investigators, the impact on Native American society and culture as a result of the experience of interactions with English settlers remains a defining focus of their work. Tracing changes to traditional systems of exchange and, in particular, the ramifications of the growing importance of trading beaver fur and later deer hides to the English in exchange for a range of goods, has been an especially popular undertaking (Boyd 2004; Klein and Sanford 2004; Lapham 2004; Mallios 2004; Wall 2004).

One measure of the extent of the impact of contact on native culture is provided by documenting the rate of replacement of traditional prestige items by European trade goods. Although such replacement occurred with great rapidity in some areas, the extent and rate of change and, presumably, the impact of contact, has been found to vary significantly over time and space (Boyd 2004; Klein and Sanford 2004; Wall 2004). In general, these studies indicate that "innovations and social transformations did not occur uniformly across the region," with "social, ecological, and historical factors influenc[ing] the pace and type of change within local areas" (Klein and Sanford 2004:55). Thus, these results further support the need for more fine-grained studies of native groups throughout the region in order to produce a balanced, accurate and nuanced interpretation of the impact of cross-cultural exchange (Barber 2008).

King and Chaney (2004) make the case for integrating a Native American point of view into what

heretofore has been the overwhelmingly Anglo-centric focus—more recently expanded to include the study of Africans—that has been the norm for Chesapeake historical archaeology. Prehistoric archaeologists have addressed historic or contact-period sites occupied by Indians, but historical archaeologists have largely ignored those sites while, at the same time, paying little attention to the native artifacts recovered from English contexts. Because of this professional division, according to King and Chaney (2004:194–195), "native people and their cultures are often missing from the colonial landscapes archaeologists reconstruct."

Pointing to the tendency of archaeologists to focus on the impact of contact on native lifeways, King and Chaney (2004:195) also argue that the opportunity to explore the reciprocal influence on English culture and society has been ceded to scholars primarily making use of the ethnohistoric record (also see Chaney 2006). European borrowing of features of Native American material culture, deemed better suited to the conditions found in the New World, are universally acknowledged especially as they relate to techniques of hunting and fishing and to agricultural practices such as tobacco and corn cultivation. But the authors maintain that the day-to-day role played by Native Americans in colonial life has been minimized.

Pots, Pipes, and Pits

Addressing issues of ethnicity and creolization by linking specific archaeological features and artifact types with ethnic groups, as both producers and users, became popular beginning in the 1970s. In his COVA essay, Mouer (1993; Mouer et al. 1999) pointed to the research on colonoware and Chesapeake pipes as providing the most compelling evidence to date for studying the creolization process. He concluded that it was likely that Africans, Native Americans, and Englishmen all had a role, at different times and in varying degrees, in the manufacture and use of these products. Similarly, tobacco pipes formed out of local clays (also referred to as Chesapeake pipes) and made both with and without molds, were initially attributed to English and Indian makers, respectively (Harrington 1951; Henry 1979; Noël Hume 1962).

Almost 20 years after Noël Hume published his study of colonoware, Susan Henry (1980) incorporated

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a number of additional assemblages in her detailed re-investigation. She also formally addressed the question of the identity of the potters by comparing the vessels' characteristics with those associated with West African pottery and Native American wares. She concluded that while the American and African pots shared some general attributes, the evidence indicated a stronger connection with Native American pottery traditions. But in subsequent investigations, other scholars came to a different conclusion, arguing that Africans are likely to have been the "primary" producers of colonoware (Deetz 1988; 1999:42–45; Ferguson 1980; 1992; 1999). At any rate, the strong correlation of the ware type with sites inhabited by Africans and their descendants suggests that, at least in certain circumstances, those vessels served as an important element of their material culture, and therefore have particularly strong interpretive potential in that context (Heath 1996; Mouer et al. 1999; Steen 1999).

The debate over the identity of the makers of Chesapeake pipes has followed a similar trajectory. Further research focusing on Chesapeake pipes led some scholars to conclude that the decorative motifs found on many of the objects were African in derivation supporting the conclusion that blacks were responsible for making pipes exhibiting those markings (Deetz 1993; 1999; Emerson 1988; 1999). More recent investigations appear to support the original interpretation that Native Americans were most likely responsible for producing the hand-formed examples of local pipes, and that the molded versions were the work of white colonists. This finding is based on a combination of documentary and archaeological data (Davidson 2004; Mouer et al. 1999), including plotting the variability in the presence and the numbers of Chesapeake pipes in a sample of artifact assemblages from 18 domestic sites in Maryland and Virginia that date from circa 1620 to 1740 (Cox, Luckenbach and Gadsby 2006). Locally produced pipes were found to be present in substantial numbers (between 9 and 25 percent of the total pipe assemblages) on five of the sites, all of which were occupied in the middle to the third quarter of the 17th century. The steep drop off of in the occurrence of Chesapeake pipes on sites after 1680 was interpreted as a reflection of the growing maturity of trans-Atlantic trade and, in particular, the explosion of imports from the west England port city of Bristol. Bristol was a major pipe making center,

and pipes with identifiable marks of Bristol producers dominate archaeological assemblages beginning in the 1680s. Given the timing and these insights, it is more likely that English colonists and Native Americans had been the makers of local pipes rather than Africans. Some additional support for this lies in the fact that the apparent ability of the pipe makers to compete with English imported pipes ceased at about the time of the first major influx of African slaves to the Chesapeake (Cox, Luckenbach and Gadsby 2006).

Most recently, a number of investigators have concluded that the debate over who made Chesapeake pipes is unlikely to be resolved and that the questions of who used the pipes, and for what purpose, are likely to be of much greater interpretive value. By plotting the distribution of Chesapeake pipes found at a sample of domestic sites, Neiman and King (1999) found that the pipes correlated with dwellings and work areas related to bound and bonded laborers. These findings appear to be consistent with the conclusions made by Henry (1979) and others that the local pipes likely were valued for their relatively low cost in contrast to the imported white ball clay pipes, and thus appealed to those in the lower economic strata of Chesapeake society. Ana Agbe-Davies (2015) argues that the typological approaches to classifying the pipes have actually hindered attempts to understand the social value of the objects. She proposes that capturing the broadest possible range of archaeometric data, and sorting and comparing the results according to modalities, has the greatest potential for success.

Another set of archaeological evidence strongly correlated with African occupation is the presence of one or more relatively small subfloor pits within the footprint of structures hypothesized as quarters for the enslaved. The pattern of a single cellar, typically located just in front of the hearth, has been associated with home sites believed to have been occupied by white settlers, and later, at sites occupied by both free and unfree blacks. These features tend to be substantial in size, and they are widely believed to have served in the traditional capacity of storing perishable foodstuffs. In contrast, multiple subfloor pits of smaller size have been found in numerous structures identified as slave quarters and seem more likely to have served a variety of functions beyond simple food storage. The earliest examples of this feature association date to the late 17th century when

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enslaved Africans were first being introduced to Virginia in large numbers (Fesler 2004).

The precise functions of the sub-floor quarter features remains a subject of debate, but most of the pits apparently held personal items, and some of them may even have been used as ancestor shrines (Samford 1999; 2007). The number of sites where multiple pits have been found so far is small and are largely limited to the James River Valley. The average number of pits recorded per house site seems to have increased during the first half of the 18th century, then declined precipitously after 1760. This trend has been interpreted to correlate with region-wide changes in the composition of households, as quarters for the enslaved increasingly came to shelter family units rather than serving as barracks for large numbers of unrelated individuals (Fesler 2004; Heath 2010; Neiman 1997).

Scholars have begun to adopt a sub-regional approach to studying the material culture of enslaved Africans (Heath 2010). The rationale for this research is based on Walsh's (2001) finding that there were important demographic differences between enslaved populations across the region in that peoples originating from culturally distinct areas of Africa tended to cluster together in different sectors of the colony. This naturally raised the question of whether tribal/cultural differences in slave origins manifested themselves in the archaeological record.

As part of Walsh's (2001) study, he concluded that slaves imported to the upper Chesapeake generally originated from an area in Africa that was culturally distinct from those introduced to other parts of the region. Given this observation, Samford and Chaney (2010) selected assemblages from 12 slave quarter sites in Maryland and northern Virginia to compare to those from 11 sites excavated in lower Tidewater Virginia. They compared patterns associated with three selected attributes: quarter architecture, subfloor pits, and colonoware. Potentially significant differences were observed in that upper Chesapeake quarters were found to be smaller in size, contain fewer subfloor pits on average, and exhibited less colonoware when compared to their counterparts in the lower Chesapeake. It goes without saying that the sample of sites used in this preliminary investigation is quite small. The sample is further qualified by the fact that the sites were occupied at different points across a span of more than 150 years.

The racial character of the quarter occupants for at least one of the sites is also in question (Pogue and White 1994), and the total absence of colonoware found on the upper Chesapeake sites used in the study may be a result of inadequate sampling (Heath 1996). As with other attempts to consider patterns of behavior on a sub-regional scale of analysis, the small numbers of assemblages available for comparative study remains an impediment.

Revitalization

Over the last decade, a number of developments have taken place to help re-energize interest and stimulate renewed research in the archaeology of early Virginia even as the findings of documentary historians have offered an intriguing new interpretive paradigm. Just as preparations for the 350th anniversary celebration of Jamestown's founding in 1957 spurred a diverse program of scholarly inquiry in the years leading up to the event; planning for the 400th anniversary celebration in 2007 led to intensive new excavations at the Jamestown Site and an effort to revisit and reassess the previous work there and at other sites (Carson et al. 2008; Graham et al. 2007; Horning 2001; Kelso 2006; King et al. 2006). The anticipated wide interest in Jamestown's anniversary on the part of the general public was the source of substantial funding used to establish three major new museums, each erected within a two-mile radius of the site, and under the sponsorship of three organizations: the private foundation, Preservation Virginia (formerly the APVA), the National Park Service, and the state-funded Jamestown–Yorktown Foundation. In addition, new interpretive programs were developed that were devoted to telling the story of the founding of Jamestown and the early development of Virginia.

The bright spotlight trained on Jamestown brought other benefits as well, as a number of other early Colonial domestic sites received greater attention than might otherwise have been the case (Mallios 1999; 2000). In addition, public and private funding was secured to support efforts to identify and excavate important Native American sites dating from the Contact Period (Turner 2004). At the same time, collaborative efforts to compile region-wide databases of archaeological materials were carried out both to stimulate additional research and to provide a context for interpreting the Jamestown story (www.apva.org; www.chesapeakearchaeology.org).

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When taken together, these efforts represented major contributions to the corpus of knowledge relating to 17th-century Virginia, building on the synthesis of research that had been prepared for the COVA volume that appeared in 1993 (Reinhart and Pogue 1993).

Jamestown Revisited

After having been relegated to the sidelines during the headiest days of renewed interest in the study of the 17th-century Chesapeake, a series of steps were taken in the early 1990s to restore Jamestown to a place of scholarly prominence prior to the commemoration of the 400th anniversary of its founding in 1607. First was the effort on the part of the National Park Service to systematically reassess the research that had been carried out in the 1930s–1950s. The agency contracted with the Colonial Williamsburg Foundation and the College of William and Mary to work in partnership to reanalyze the artifact collections, review the excavation records, and prepare a detailed tract map of the property boundaries and other important features (Brandon, Chappell, and Graham 1993; Horning 2001). A subsequent phase of investigation consisted of comprehensively surveying the entire island for the first time and conducting limited excavations in selected areas (Blanton 2001).

Shortly after this effort was initiated, the APVA elected to undertake intensive archaeological excavations on the portion of the island that they owned, hiring William Kelso to lead the project that began in 1994, and which is ongoing (Kelso 2006). Kelso and his team almost immediately began to uncover features and artifacts indicating that the site of the fort that marked the first English settlement of the island in 1607, had survived. This was a remarkable development, given the previous, widespread assumption that the fort site had been completely lost as a consequence of centuries of erosion along the James River shoreline. Since then, much of the fort's trench-set palisade and two surviving bastions, numerous structures, wells, trash-filled pits, human burials, and other features have been revealed, and hundreds of thousands of artifacts have been recovered. This work yielded a number of remarkable discoveries about the character of the settlement which not only indicates the richness of the evidence at hand, but should also serve as the basis for many decades of additional analysis (Kelso 2006:229; Hudgins 2005).

Together with the findings of the Jamestown

Reassessment Project led by Cary Carson, the results of the excavations carried out by the APVA allow the trajectory of the development of Jamestown to be much more fully understood. Jamestown appears to have passed through three iterations: two failed experiments followed by a successful urban formula, the latter being re-established at the new capital city of Williamsburg after Jamestown was abandoned in 1699. The first trial took the form and function of a well defended trading post where the English intended to act as middlemen trafficking in the gold, furs, and skins that they assumed were to be had by trading with the native peoples. Once it became clear that the natural wealth of the area lay in other resources, and that the Powhatan Indians were unwilling to engage in the type and scale of transactions that the English anticipated, the efforts of the settlers were redirected to extractive industries such as mining, harvesting naval stores, and growing tobacco as a staple crop (Carson et al. 2008).

As tobacco cultivation came to dominate all other occupations, Jamestown was largely abandoned for much of each year, with planters relocating to live on their widely dispersed outlying holdings. The town's boarding houses, taverns, and warehouses experienced periodic bursts of prosperity when the government was in session and when the tobacco crop was ready to ship. This model of a sparsely settled court town was replicated at Williamsburg, and then spread throughout the region as satellite communities were established to accommodate those functions on a local level (Carson et al. 2008).

The portrayal of the rise and fall of Jamestown is presented in an article authored by Carson and four colleagues—two historians, two architectural historians, and one archaeologist—in the pages of *The Journal of Southern History* (Carson et al. 2008). The story of Jamestown is offered to support their thesis that the development of Chesapeake society is the familiar one of Old World traditions being adapted to the conditions found in the new. The two other sources of evidence brought to bear in support of this thesis are the by-now familiar ones: architecture and foodways. Another treatment of much of this same analytical territory appeared in the pages of the *William and Mary Quarterly* in 2007, this time authored by Willie Graham and four colleagues—in this case including two historians, two architectural historians, and one archaeologist (Graham et al. 2007). While there are some differences in interpretation and focus between the essays, both articles

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essentially support what has come to be the normative interpretation of the development of society in the 17th-century Chesapeake as a distinctive formulation that emerged from the complex interplay of forces and factors, many of which have been alluded to throughout this essay.

Summing the Parts

In the period running up to the 400th anniversary of the founding of Jamestown, scholars of the early-Chesapeake became increasingly interested in offering a more nuanced, inclusive, and representative portrayal of the region's long and complex history. But in order to do so, a more robust and dependable source of data was needed. That the findings of the two wide-ranging essays mentioned above bear a great deal of resemblance is not surprising given that they share an author. An even more important factor, however, is that they depend largely on the same data. In particular, both studies make use of a recently developed source—the Database of Early Chesapeake Architecture—that contains information on more than 450 buildings from Maryland and Virginia spanning the years 1607 to 1720.

A group of scholars led by Julie King initiated a parallel project to develop a database of comparative archaeological evidence. The effort, known as the Comparative Archaeological Study of Colonial Chesapeake Culture (CASCCC), was supported by a collaborative research grant awarded by the National Endowment for the Humanities. The initial phase of work was completed in 2006. The product, to date, consists of a database of artifacts excavated from 18 archaeological sites in Maryland and Virginia dating from 1620 to 1740 (www.chesapeakearchaeology.org). As with the architectural database, this enterprise grew out of the conviction that a corpus of comparative data is crucial to the ongoing and more intensive study of material life in the Chesapeake (King et al. 2006). The compilation has served as the basis for comparing data sets according to selected social, economic, and spatial variables; the preliminary results suggesting that significant variation in material culture existed among households over time and space. A somewhat more surprising outcome was the finding that when the average scores for the presence of amenities between Virginia and Maryland were compared, Virginians in every wealth category ranked higher than their Maryland counterparts (Levy, Coombs,

and Muraca 2007; Pogue 2007). These results have been interpreted to reflect a variety of social and economic differences between the colonies, and supports the value of undertaking more detailed analyses of assemblages on a sub-regional level.

The CASCCC (King et al. 2006) comprises the web-searchable catalogues of artifact assemblages retrieved from 18 domestic sites (7 in Virginia, 11 in Maryland), combined with associated information on the sites and the previous findings of the original investigators and selected new analyses (www.chesapeakearchaeology.org). The database has already been employed to refine our understanding of variability in the types of domestic accoutrements found on the household level. But while the availability of this material represents a major step forward in allowing scholars to carry out comparative research, it remains based on an extremely small and limited sample. There were two main criteria for inclusion in the database: the existence of already completed artifact catalogues, and a systematically obtained artifact sample that could be used to study intra-site distributional patterns. These requirements necessarily limited the number of potential sites that qualified for inclusion. Funding constraints under which the project was carried out further precluded standardizing or substantially supplementing the cataloging protocols. The core of the available data consists of the linked site catalogues which have been generated by more than a dozen different investigators over a 40-year time span. The character and level of detail of the information naturally varies, and this variability places a variety of restrictions on analytical options.

A related focus of the CASCCC (King et al. 2006) was to provide the same level of detailed information for the material culture of the sites' African and Native American occupants as for the English planter households. As the ability to identify artifacts and their patterns of use with members of specific ethnic groups is a well-documented challenge (Agbe-Davies 2015; Fesler and Franklin 1999; Neiman 1999), the spatial evidence is likely to be crucial in sorting out whatever patterns may exist. While it is likely that the majority of the plantation sites occupied after the 1650s housed enslaved Africans as well as whites, it seems probable that, in most instances, any Native American materials found in the historic context reflect trading relationships rather evidence of their actual residence. Two sites (one in Virginia and the other in Maryland) were selected which are believed to have

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been occupied by Native Americans during the second half of the 17th century. The mixture of European and native artifacts found at the two sites was remarkably similar to each other and equally dissimilar from the English plantation sites. Interpretations made indicate that the natives in these instances retained much of their traditional material culture while adopting certain types of foreign objects. These tantalizing results suggest the interpretive gains to be made by expanding the overall sample of assemblages offering at least this level of detail (King et al. 2006, www.chesapeakearchaeology.org).

Future Directions

Separating the “Two Fruitful Sisters”

By the 2000s, the state of scholarly inquiry regarding the Early Chesapeake was acknowledged by historians as having “lost much of its vitality during the past twenty years because of a perception of the field as overcrowded and a major shift of interest to other topics and regions” (Horn 2011:330). A number of recent contributions have served to re-energize the field, however, and these developments have naturally begun to influence the research approaches taken by historical archaeologists. On one hand, this consists of shifting away from a regional focus to embracing the trans-Atlantic connections that provided the context and the driving force behind the settlement of the Chesapeake colonies. On the other, new research suggests that the traditional regional perspective had served to mask more subtle variations in behavior that are likely to be better understood from a sub-regional level of analysis (Bradburn and Coombs 2006; Coombs 2011b; Morgan 2011; Walsh 1999; 2001; 2010; 2011). In essence, the recent shift in perspective represents the latest round in negotiating the inherent tension that exists regarding proper scales of investigation: ranging from global, to trans-Atlantic, to regional, to sub-regional, down to that of individual households. For archaeologists, questions of scale are of particular importance as they are faced most often with the challenge of extrapolating their interpretations from an extremely limited data set—typically that from one specific site—in hopes of elucidating broader patterns of behavior.

The Maryland and Virginia Colonies have been joined in both the popular imagination and in historical scholarship for a long time. The connection was made as early as 1656, when the pamphleteer John Hammond

published a tract aimed at promoting migration to the Chesapeake in which he closely linked the colonies by using the Biblical analogy of Leah and Rachel (Hammond 1656). It was the intimate, yet competitive relationship of the sisters, who both were married to Jacob, and their fruitfulness in bearing him a combined total of nine children that stimulated Hammond’s imagination. In a somewhat similar vein, scholars of the Chesapeake have generally elected to emphasize the similarities between the colonies rather than their significant differences. From at least the 1950s, scholars have been well aware that the Chesapeake region was a composite of sub-regions defined by a range of environmental, economic, and demographic factors. But for the majority, the overall similarities far outweighed the differences and their significance (Middleton 1953). Furthermore, the focus on comparing the Chesapeake with other areas—primarily New England and the Carolina Low country, and later the Caribbean and Ireland—served as the primary impetus for the initial wave of documentary research in the 1960s and 1970s, thus fostering a strong regional perspective (Morgan 2011:300–301).

The recent catalyst for both historians and archaeologists to adopt a sub-regional scale of investigation came from the renewed awareness of “important regional variations depending on local economic specialization and the presence (or absence) of increasing numbers of enslaved Africans working in the fields of large plantations,” and the research opportunities these differences seemed to offer (Horn 2011:327). Of particular significance in this regard, was the appearance of two essays authored by Lorena Walsh (1999; 2001) in which she segmented the Chesapeake into three zones according to their primary economic foci—growing either sweet scented or Oronoco tobacco, or pursuing a regime of mixed farming—and identified associated differences in the patterns of slave holding. These developments already have influenced a number of Chesapeake archaeologists to refocus their attention on the possible benefits that a sub-regional level of inquiry may offer for the analysis and interpretation of patterns in material culture (King et al. 2006; Levy, Coombs, and Muraca 2007; Samford and Chaney 2010).

This is not to say that archaeologists are likely to discard interpreting the trajectory of 17th-century Anglo-Chesapeake society as primarily a reflection of the processes of cultural adaptation in the face of alien conditions and peoples. But, as is the nature of

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all scholarly exercise (Kuhn 1962) and for a variety of reasons—new discoveries, the passing of time and of generations, shifting interests and research questions, funding opportunities and constraints—these findings and approaches have come under increasing scrutiny (Agbe–Davies 2015; King et al. 200; Levy, Coombs, and Muraca 2007; Samford and Chaney 2010).

New Tools and Old Data

Pursuing more fine grained investigations covering a range of questions and topics, old and new, necessarily brings with it the need to gather comparative data sets that are sufficiently robust to support those efforts. The recent examples of compiling this type of evidence serve as the greatest reason to be optimistic about generating productive new insights in the future. Yet challenges remain. One fundamental issue is whether, after more than 40 years of industrious digging, cataloging, and number crunching, the raw data exists to measure up to the demands of scholars as they pursue their research. Another is the basic question of whether the collections gathered will be given the quality care and attention required to survive.

The Database of Early Chesapeake Architecture (DECA) has already provided important evidence to inform two recent syntheses of the study of the 17th-century Chesapeake (Carson et al. 2008; Graham et al. 2007), and it has the potential to serve as the platform for pursuing an even wider range of research questions. With information captured for several hundred buildings from throughout the region, the DECA database comprises a refreshingly large and comparable sample for one of the most intensively studied aspects of early Chesapeake material culture. It should be particularly amenable for investigators to trace more closely the temporal and spatial distribution of house forms and other characteristics of early architecture. Initial plans called for the database to be made available to scholars and others as a web based research tool (Graham et al. 2007). More than eight years later this has not yet come to pass, however, and the observations offered in this essay have depended on the limited published evidence.

Two studies carried out as part of the CASCCC project demonstrate both the benefits and challenges associated with using the existing database to undertake sub-regional analyses. Phil Levy, John Coombs, and David Muraca (2006:58–62) focused their attention on

plotting the variability in selected artifact types between households that they identified as belonging to a hierarchy of socio-economic classes: colonial elites, county elites, ordinary planters, and tenants, servants, and slaves. Not surprisingly, by plotting the presence and absence of selected artifact types, they found differences that seem to reflect the standing of the occupants; the elites more likely to live in larger houses with brick features with a greater range of domestic accoutrements and amenities. These findings provide support for a growing body of evidence (Carson 2013a; 2013b; Pogue 1993; 2001) which suggests that the image of Chesapeake colonists as being unable, or unwilling to acquire the trappings of “comfortable living” has been overdrawn. Despite this evidence, the size of the samples upon which these assessments are based remain quite limited. When the assemblages from these sites are grouped for comparison according to socio-economic and spatial variables, the numbers involved are alarmingly small.

Levy, Coombs, and Muraca (2006; 2007) proceeded by sub-dividing 11 site assemblages into four different classes. In a subsequent investigation they expanded their sample to 16 site assemblages sorted into only three classes. This resulted in as few as two and never more than six sites representing broad swaths of Chesapeake society which, together, spanned more than a century in time. Similarly, Pogue's (2006; 2007) studies of region-wide trends in consumer behavior included sites dating to over a 120-year period and was based on artifact assemblages from just 24 sites. As all of these authors have acknowledged, while the outcomes of these exercises are highly suggestive, they must be considered tentative until the size of the sample is increased significantly.

A third comparative database, the Digital Archaeological Archive of Comparative Slavery (DAACS), is being assembled under the direction of Fraser Neiman and Jillian Galle and is being hosted by the Monticello Foundation. Its purpose is to enable inter-site research on slavery throughout the Chesapeake, the Carolinas, and the British Caribbean (www.daacs.org). Unlike the CASCCC, the creators of DAACS have been able to secure funding that is adequate to allow the archaeological collections to be re-catalogued according to a new and uniform set of protocols. Therefore, certain problems with comparability, at least in terms of reporting the artifact data, have been minimized. The database currently contains information from more than 70 sites, although as of this writing

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only a few of those assemblages date to the time period discussed here. As the database is expanded and includes more sites dating to the period before 1720, this should serve as a helpful resource in conducting the types of fine-grained analyses that are likely to form the core of future research.

The growing interest in compiling databases to support comparative research has spurred scholars to re-examine collections associated with previously excavated sites, some many decades ago. Over the last 50 years dozens of archaeological sites dating to the period spanning the 17th and early 18th centuries have been excavated which have been only partially analyzed and/or incompletely reported. Many of these projects were carried out under the umbrella of cultural resource management, sometimes in dire salvage situations, with inadequate funding to conduct comprehensive, post-excavation processing and report writing.

Barbara Heath at the University of Tennessee led a team in reassessing the excavation of two sites located on the Northern Neck of Virginia that were excavated more than 30 years ago. They re-examined the findings and reanalyzed the artifact assemblage, and prepared a final report on the Newman Neck site, a late 17th-, early 18th-century domestic complex on Virginia's Northern Neck that was salvaged in 1989–1990. Even though the field records were somewhat lacking, the overall quality of the excavation was sufficient to allow the investigators to prepare a relatively detailed report (Heath et al. 2009). Heath also directed the reanalysis of the Hallowes Site excavation and artifact assemblage, which resulted in correctly dating the site's initial occupation decades earlier than had been believed. As such, the significance of the defensive bastions that the archaeological evidence indicates had been attached to the house was altered dramatically. Instead of reflecting colonists' concerns over potential attacks from Native Americans during the period of unrest surrounding Bacon's Rebellion in 1676, they reflect similar concerns regarding a very different threat during the years marking the aftermath of Ingle's Rebellion in 1645 (Hatch, McMillan, and Heath 2013; McMillan, Hatch, and Heath 2014). Both of these efforts amply demonstrate the value of re-examining such "abandoned" resources.

Heath's interest in studying these legacy collections from Virginia's Northern Neck is allied with an ambitious project led by Julie King to reanalyze as many as 33

archaeological assemblages representing sites from both sides of the Potomac River that date between ca. 1500–1720. The choice of the Potomac River Valley as the focus of research depended on the availability of a sufficient sample of artifact collections and was aimed at investigating intercultural interactions within a relatively circumscribed area. The research focus is on studying relationships of exchange, violence, and identity for all of the occupants of the area. This meant selecting sites, both single- and, more often, multi-component, belonging to Native Americans, Africans, and Englishmen in order to counterbalance generalized regional narratives that tend to flatten the details of everyday life (King and Heath 2012). While in its infancy, the preliminary results (Hatch 2015; King and Heath 2015; McMillan 2015) promise rich interpretive rewards.

While all of these developments are promising, and prefigure many more decades of substantive research, there is at least one cause for concern. The conviction that the artifacts and associated records generated by archaeological investigations should be preserved in perpetuity is a standard tenet of the discipline (Childs 2004). But cyclical cutbacks in funding and related attempts to redirect the efforts of the state and federal historic preservation programs may well threaten the ability to fulfill that commitment. In the case of both the Hallowes and the Newman Neck sites, along with many of the sites from the Potomac River Valley, the artifacts and records had been protected and preserved by the Virginia Department of Historic Resources at their laboratory and collections facility in Richmond, and thus are available for scholars to study. But the Commonwealth of Virginia does not operate a comprehensive curation program, and according to a recent survey carried out by the Council of Virginia Archaeologists, many similarly valuable collections are held by a range of entities—colleges and universities, historical societies, cultural resource management firms, and private individuals—often under less than ideal conditions. More troubling are the recent efforts on the part of legislators and bureaucrats in Virginia and elsewhere to limit the responsibility of government in preserving both old and recently generated archaeological materials, which calls into question whether collections such as these may continue to be available for archaeologists to analyze in the future (White et al 2011).

Archaeological Research on 18th-Century Virginia: Recent Scholarship, Trends, and Future Directions

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Introduction

Historical archaeology in Virginia developed professionally and intellectually in the last 75 years through the study of the 18th century, cutting its disciplinary teeth at important urban sites in Williamsburg and Yorktown, and at plantations like Shadwell and Mount Vernon (Hosmer 1981; Pogue 2006a; Heath 2012a). In 1993, members of the Council of Virginia Archaeologists came together to produce a synthesis of the archaeology of the 18th century that revisited the discipline's roots, summarized the current state of research, and proposed future directions. Edited by Theodore Reinhart, it was published in 1996 as *The Archaeology of 18th Century Virginia* (Reinhart 1996). Here we provide historical context and material evidence for understanding the important and interrelated themes of migration, slavery and race, gentility, consumerism, and urbanization, and summarize major research in these areas undertaken since the important 1996 publication. We then suggest where future work can productively advance our understanding, interpretation, and preservation of Virginia's past during the period from 1720 to 1780.

Colonial Virginia emerged from the long 17th century, a period characterized by both opportunity and oppression, as a place transformed. From 1607 to 1720, the possibilities of landownership and wealth—at least for those who arrived as free men and women or who could aspire to earn that status—drew immigrants to the colony. At the same time, the likelihood of limited and unstable family relationships, death from disease

or violence, economic uncertainty, and, for Africans, the codification of legal enslavement, tempered those dreams with the reality of conditions on the frontier. For Virginia's native tribes, the first century of colonial encounter proved catastrophic, and many groups migrated out of the region or relocated away from their ancestral lands.

The years from 1720 to 1780, formerly associated with “Virginia's Golden Age” and the “Georgianization” of America—with its attendant and much-debated mindset and the birth of widespread consumer culture—were increasingly characterized by an entrenched, hierarchical social order ruled by powerful families with deep generational roots in the colony. This society was underpinned by largely rural underclasses of white middling planters, tenant farmers, itinerant laborers, enslaved and free Africans, and Virginia Indians (Isaac 1982; Barka 1996; Deetz 1996). Macro-scale change during this period included significant population movement into and through the Shenandoah Valley and west beyond the fall line; the construction of fortifications in defense of the western frontier; large-scale importation of captive Africans and changes in the culture of slavery; the expression of class distinctions among the colonial elite through the exercise of genteel behavior; the widespread adoption of consumerism that affected all Virginians; the beginnings of manufacturing; and the establishment of towns and urban centers. Micro-scale studies can capture these processes on a human scale as socially, ethnically, racially, and religiously diverse people experienced and shaped them through architecture, landscapes,

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consumer goods, foodways, and other tangible forms of cultural expression.

Some groups of people rejected the new order and removed themselves from it. Cissna (1986) and Rountree (2004) argue that swamps and swamp margins, areas that colonists perceived as of marginal value, provided long-term refuges for displaced Chesapeake Indians beginning in the late 17th century. Rountree (2004:10) has urged archaeologists to take up the challenge of finding these sites of relocation. Daniel Sayers and his colleagues subsequently studied the conditions of exile for communities of Indians, maroons (self-liberated Africans), and others who sought refuge in the Great Dismal Swamp; peoples who created social, political and economic alternatives to the dominant colonial order (Sayers et al. 2007; Sayers 2014). Although difficult to locate, and often characterized by ephemeral remains, sites of exile present important evidence of processes of adaptation, community formation and dissolution, and resistance to the dominant culture of colonial Virginia. Much remains to be learned about them.

Settlement and Frontiers

In 1720, European settlement began to push beyond the limits established in the 17th century tidewater. The Blue Ridge Mountains formed a great divide between Virginia's two frontiers. To their west lay the fertile limestone soils of the Shenandoah Valley and the rugged terrain of the Allegheny Mountains. To the east lay the red lands of the piedmont; a vast expanse of rolling wooded countryside and fertile clay soil stretching to the fall lines of Virginia's major rivers. While both regions benefited from relative proximity to the tidewater's established political, economic, and social systems, historians have argued that the driving forces behind their settlement and the nature of the societies that developed within them were distinct (Nobles 1989; Hofstra 2004a; 2012). Initial settlement in the Valley was characterized by the establishment of small farms based on mixed-grain agriculture, scattered market towns, a more egalitarian social order, and greater ethnic and religious diversity among its largely European inhabitants (Geier and Tinkham 2007:74–75; Hofstra 1998; 2012). Socially, economically and politically, the piedmont counties were clearly an outgrowth of life in the tidewater, extending tobacco cultivation, plantation slavery, and English-dominated colonial culture westward.

Land policy formulated by Governor William Gooch encouraged settlement in the Shenandoah Valley as a safeguard against French encroachment, a resolution of land claim disputes, a buffer for the more settled regions of eastern Virginia against hostile Native forces, and as a means of discouraging maronage by escaped slaves. German, Scots–Irish, and English settlers from Maryland and Pennsylvania entered the northern Valley and settled Frederick and Augusta County in the 1730s, creating dispersed, rural communities of farm families who each owned 300 to 400 acres of land on average with some holdings being as large as 1,000 acres (Hofstra 2004:7; Geier and Tinkham 2007:74). At least one of these dispersed, early communities, located along the upper Opequon Creek in Frederick County, has been documented, although none of the specific sites identified has been excavated (Hofstra and Geier 2000). Movement continued south along the Great Wagon Road into the southern Valley and southwest Virginia throughout following decades.

During the 1970s, Tim O. Rockwell (1974) oversaw excavations at “Old Hall,” one of the oldest historic-period domestic sites found to date in the Shenandoah Valley. Over the last two decades, significant additional archival and archaeological research has been undertaken by faculty and students at James Madison University working with the Belle Grove Plantation, Inc. in Frederick County. Subsequent reassessment of Rockwell's work suggests that Old Hall was built in three phases, and may have been occupied initially by an overseer or tenant for a previous landowner before being reconfigured as the principle residence for the Isaac Hite Jr. Family prior to the 1780s (Geier and Tinkham 2007:181–183).

The site of another mid-18th century farm, Harmony Hall, consists of a standing stone house, a road trace, and a mid-18th century grist and sawmill. The remains of three additional buildings near the main house might also date to this period. A scatter of debris may be associated with an earlier log building and well that date to the period of initial settlement by George Bowman and his wife in the 1730s or 1740s (Geier and Harding 2006:89–92; Geier and Tinkham 2007:170–172). Much work remains to be done in locating and recording early domestic and industrial sites in the Shenandoah Valley, and understanding the factors that contributed to its unique regional identity.

The outbreak of hostilities in King George's War, or The War of Austrian Succession (1740–1748) and

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the subsequent French and Indian War (1754–1763), underscored the necessity of Gooch's settlement plan for the Valley, if not its effectiveness. Winchester, laid out in 1744, developed as a garrison town (Hendricks 2006:89; Hofstra 2004:8). From 1754 to 1763, in response to a developing threat from the French and their Indian allies, over 80 frontier forts are known to have been built within the borders of modern Virginia between Fort Loudoun in Frederick County and Fort Chiswell in Wythe County. Like other fortifications built as a defensive barrier along the colonial frontier, some were constructed based on modified plans developed by military engineers in Europe. Others were more expediently built by surrounding existing houses with palisades (Babits 2014a; Jolley 2013:103–104; McBride 2013:123–126), while yet others were simply strongly built, typically stone, houses.

In the 1960s and 1970s, archaeologists investigated Forts Chiswell, Dinwiddie, Lewis, Looney, Loudoun and Vause (Calmes 1971; Hazzard and McCartney 1976; McCord 1973; Sprinkle 1996; Loth 1999:320, 556), with subsequent work undertaken at Fort Loudoun in 2002 and 2003 (Clark 2003; Jolley 2005) and the second Fort Vause in 2005 and 2006 (McBride 2013). Researchers have focused largely on architecture and associated military features that defined these sites as fortifications. More recently, Robert Jolley (2005; 2013:118–121) posed broader questions relating to the material conditions of life at Fort Loudoun; the degree of interaction between soldiers, Indians, and local citizens; and the evidence for military hierarchy. The limited extent of excavations and small sample size of artifacts recovered precluded definitive answers to these questions, but he argued that well-preserved sections of the fort remain intact and that further excavations and comparative work should prove fruitful. Inquiry into the importance of these forts as places of memory that shaped modern identities and existing communities is also needed.

On a cautionary note, archaeological research can also refute historical associations. Recent work at the Nieswander's Fort Site, popularly believed to have been built in Frederick County as a frontier fort, has challenged community memory by demonstrating a lack of features and associated artifacts pre-dating the late-18th century (Geier, Whitehorne and Wood 2014), well after the end of hostilities. Clearly, there is as much to be

learned today from the investigation of frontier forts and their place in the emerging new Virginia frontier as there was when John Sprinkle (1996) urged us to make them a research priority.

By 1721, the Virginia Assembly had authorized the creation of the first of the piedmont counties—Hanover, Spotsylvania and Brunswick—which stretched from the fall line to the feet of the Blue Ridge Mountains. A stream of migrants, initially slow, but quickly gaining force, moved from the tidewater into the northern and central piedmont, encouraged by separate but complementary circumstances. Tidewater-born planters' sons looked westward for new tracts to settle as local land became increasingly difficult to obtain locally. The tobacco trade, stagnant in the earlier part of the century, revived. Growing European markets eagerly sought to satisfy consumer tastes for Oronoco tobacco—which grew well in the clay soils of the piedmont—as well as the sweet-scented variety more suited to tidewater conditions. Land speculation attracted settlers who could obtain land patents through direct purchase rather than the old headright system (Morgan and Nicholls 1989:215–216).

How were new settlements created? Hofstra and Geier (2000) and Crystal Ptacek (2013a; 2013b) offer avenues to explore this question. Both studies trace the patenting of land and growth of communities and neighborhoods from the first generation of settlement in the 1720s and 1730s through the remainder of our period of interest. Hofstra and Geier approach the landscape through a consideration of the intersection of environmental resources and the ability of those resources to provide for economic independence. Basing their study on an extensive archival and archaeological survey of 8,000 to 10,000 acres along the drainage of Opequon Creek and Abrams Creek–Redbud Run in Frederick County, they argue that settlers adopted economies based on soil fertility affected by the underlying geology of the lower Valley. Families that lived on land underlain by limestone deposits developed farms rooted in mixed-grain cultivation and livestock rearing. Those who settled in the adjacent shale lands put their resources into the development of industrial milling.

Ptacek's (2013a; 2013b) study of over 28,000 acres of land between Deep Creek and the Appomattox River examined the historic development of a neighborhood along Buckingham Road in modern Powhatan County. She acknowledged the importance of natural and existing

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cultural resources (the road) in land selection. Her focus, however, was on how pre-existing networks of wealth and power influenced the acquisition, siting, size, and use of parcels of land, and the effects of landownership on community formation, hierarchy, maintenance and change over time. Recent archaeological work by Randy Lichtenberger and Keith Adams at Cabellsville (44NE0174) in modern Nelson County, and by Lichtenberger at New London in modern Campbell County, is also being conducted at the community scale, exploring the early landscapes of these county seats. To date, their work has explored the Cabellsville Courthouse complex, established in 1761, and has begun to define the landscape associated with the commercial site of Mead's Tavern (44CP0244) at New London, which operated from 1763 to 1785. It later served as a private residence, school, parsonage and doctor's office (Lichtenberger 2015, personal communication).

Most archaeological studies of settlement in the piedmont that have been undertaken at the household scale post-date the American Revolution and are discussed elsewhere (Heath and Breen 2009; Heath 2012a; Heath and Galke, this volume). Mount Pleasant and the early phase of Montpelier in Orange County; and Shadwell, the "Negro Quarter", and Sites 7 and 8 in Albemarle County, associated with Peter and Thomas Jefferson's occupation of the land that would become associated with Monticello, are among the few 18th century sites that have undergone extensive excavations (Kelso 1997:66–67; Bon–Harper 2006a; 2006b; Reeves and Fogle 2007; Kern 2010; Reeves and Smith 2015a; 2015b). While some of these sites are important for understanding the rise of consumerism and the 18th-century pursuit of gentility among Virginia's elite, all contribute to our expanding understanding of the material worlds of enslavement during this period.

Older, established tidewater farms and plantations also underwent important changes in the 18th century. While tobacco continued to yield strong returns into the 1750s, a growing market for corn, wheat and other grains induced both large and middling planters to invest resources in grain production by mid-century (Walsh 2010:407–412). The growing emphasis on grain production throughout the region had profound effects on labor organization, access to consumer goods, plantation architecture, and the development of towns, neighborhood mills and mines (Walsh 2010:413–423).

Archaeology of the African Diaspora

Archaeologists have been studying African American life within the context of plantations since the 1960s (Singleton 1995; Heath 2012a). Over the last two decades, however, there has been an important theoretical shift in the questions we ask and how we frame our research. In 1984, Merrick Posnansky called for "an archaeology of the Black Diaspora" that would promote work on slave-trade era sites in West and Central Africa and foreground the connections between African experiences in the Old and New World. An important goal of diaspora archaeology was/is to unite scholars around a common set of research questions relating to the forced migration of Africans from their homelands to colonial settings beginning in the 15th century; and the subsequent cultural transformations that ensued, or continuities that endured (Posnansky 1984). By the mid-1990s, Americanist archaeologists were working within the conceptual framework of diaspora (Silberman 1989:69; Singleton and Bograd 1995; Agorsah 1996; La Roche and Blakey 1997; Weik 1997; Wilkie 1997), with notable early research focused on African American sites outside of the plantation south that had previously received little attention, such as the New York Burial Ground, and sites of maronage (La Roche and Blakey 1997; Weik 1997). Other work remained situated within plantation contexts, but sought to employ an explicitly diasporic perspective (Franklin 1997; Wilkie 1997).

Concurrent with the rise of African diaspora archaeology was the widespread adoption by historians and archaeologists of the Atlantic World as a useful scale for analyzing colonial interactions (Armitage 2002). The convergence of scholarly interest in connections between Atlantic Africa, Europe, and the New World has resulted in extensive research over the last two decades into the social, economic and political networks through which the slave trade operated, and to document the resulting movement of people from Africa to the Americas. Although the Chesapeake region played a small role in the global business of the slave trade, the influence of African cultures in Virginia, and through Virginia into the upland and deep South in the late 18th and 19th centuries, has been profound and enduring. The impact of the slave trade on migration and on the development of regional and sub-regional cultures is an important area of research and debate.

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By the 1730s, forty percent of the enslaved population of the tidewater had been born in the Chesapeake region and by mid-century, sex ratios within populations on larger eastern plantations had reached parity (Berlin 1998:127). With the growth of a majority creole population in the tidewater, plantation communities became self-sustaining, reaching a point where planters began selling laborers or moving them westward (Morgan and Nicholls 1989:222). Successful planters initiated movement into the piedmont by dispatching overseers and gangs of slaves to clear and plant tobacco on newly-available lands. While internal migration accounted for some of the piedmont population, after 1720, most enslaved people in that region were imported directly from West or Central Africa or were transhipped from the Caribbean after a brief recovery period from the trans-Atlantic crossing (Walsh 2001:144).

Historians of Virginia have pieced together shipping data that some practitioners argue are suggestive of regional clustering of Africans drawn from common ports of embarkation (Chambers 1997; Eltis and Richardson 1997; Voyages, The Transatlantic Slave Trade Database 2009; Walsh 2001; Chambers 2005). These data, from documented shipments, indicate that nearly seventy-five percent of Africans sold during the 18th century in the Potomac basin and the Lower James were drawn from populations stretching from Senegambia to the Gold Coast, with Senegambians dominating. An equal percentage of those imported into the York and James River basins came from the Bight of Biafra and West Central Africa (Walsh 2001:145). The majority of Igbos, imported at a near equal gender ratio, went directly to the piedmont, where they were able to find mates who shared similar linguistic, cosmological, socio-political, and technological traditions. In some piedmont counties, newly-arrived Africans formed the majority of the enslaved population in mid-century and by the American Revolution, they still constituted more than twenty percent (Morgan and Nicholls 1989:218). While the shipping data have altered our understanding of the demographics of 18th century slavery, uncertainty remains about the degree to which people shipped from a single port in West Africa shared languages, cultural beliefs and practices and understood themselves to be similar. Of immediate relevance to this paper is how such difference might be evident archaeologically. How far slave traders transported captives overland to be

sold at a particular coastal fort, and how the geographic distribution of captives from different areas of Africa varied over time, remain questions with no clear answers.

The debate over whether cultural commonalities from shared origins in Africa transferred and persisted among enslaved people in North America is far from settled. Scholars have been divided over whether cultural retention (Lovejoy 1997; Gomez 1998) or cultural mixing (Mintz and Price 1976; P. Morgan 1998) should be the dominant model for interpreting slave societies (see Ogundiran and Falola 2007:17–24 for a summary of this debate). However, the two are not mutually exclusive, and recently scholars have worked to combine elements of both using a model of “historical creolization” or “transformation” (Ogundiran and Falola 2007:19). For piedmont Virginia, the long-term interactions of large numbers of Igbo men and women likely resulted in broadly-conceived cultural continuities. Their interactions with Europeans, Indians, and people from other African ethnic groups surely resulted in cultural mixing as well. In sum, the possibility of ethnic clustering, and a clearer understanding of West African materiality (DeCorse 2001; Ogundiran and Falola 2007; Monroe 2014; Ogundiran and Saunders 2014), have given rise to new research questions and new approaches to the archaeology of slavery.

Interpretive strategies that seek to uncritically equate archaeological evidence of past lives with pan-African traditions are clearly outdated. Others that privilege race, or resistance to oppression, may also benefit from a more fine-grained approach to the regional histories and identities of the groups they study. Certainly these data are useful in modeling more context-sensitive approaches to creolization. These caveats do not constitute a plea to return to the search for materially identifiable “Africanisms” recast in ethnic terms. Rather, the challenge is to consider if, and how, Africans drew upon shared cultural understandings of such things as agricultural practices, exchange systems, kin relations, health and well-being, and gender roles, for example, to structure life within 18th-century slave communities. Explicit attention to the question of ethnic clustering and its possible effects on material life and on the development of Afro-Virginian cultures by region should be a priority.

Patricia Samford has pioneered this approach with her work on Igbo women’s roles in Virginia and her

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analysis of the role of Igbo cosmology in the formation of household shrines (Samford 1999; 2007). Eleanor Breen (2013) has also researched regional origins, examining the enslaved community at Mount Vernon alongside her work with archaeological assemblages from the South Grove kitchen midden and the House for Families. She found that patterns of ethnic clustering at Mount Vernon were much harder to determine due to missing documentation about the slave trade in the early Potomac Valley and southern Maryland, and to the specific historical circumstances of that plantation that resulted in the mingling of enslaved people from more than one region of Virginia.

Other important new research approaches to the subject of enslavement consider the interplay between agricultural systems and family formation (Fesler 2004a; Neiman 2008; Heath 2012b). While no consensus has been reached, the relationship between agricultural regimens, plantation management strategies, and the conditions of enslavement is an important topic to address, as it bears on issues of power, agency, and the form of kin-based relationships within enslaved plantation communities.

It is the case that a significant body of data has emerged out of the last fifty years of archaeological inquiry into plantations and African American life in Virginia. Greater attention to environmental sampling undertaken in the last twenty years, such as the analysis of paleobotanical and soil chemical remains (Heath and Bennett 2000; Shick 2005; Smith et al. 2007; Mrozowski et al. 2008; Fesler 2010; Wilkins 2010; Gibbons 2013; Henderson 2013; Sipe 2013; Sipe et al. 2013(1):392–395; McKnight 2003; 2015) are proving useful for understanding the interactions between enslaved people and the landscapes that they occupied. Intra- and inter-site comparisons of statistically-robust datasets from multiple quartering sites, made possible through the Digital Archaeological Archive of Comparative Slavery (DAACS), now allow questions to be addressed which have greater spatial and temporal depth. In spite of the wealth of available site reports, publications, and comparable datasets, however, most current interpretations of 18th-century slavery are still built upon findings from tidewater plantations located along the James and York Rivers. More attention must be devoted to finding, excavating, analyzing, and interpreting the experiences of enslaved people who labored on plantations and farms in the piedmont

and Valley, as a broader approach will likely highlight important regional variation (Heath and Breen 2009). Future work from diverse regions will surely expand and refine our understanding of spatial and temporal variability in architecture, foodways, craft production, access to markets, spiritual practices and other material aspects of enslavement.

Archaeology of Race, Gender and Class

Increasingly, researchers of social relations in the 18th century have considered the intertwined aspects of identity that include, race, gender and class. Moving away from explanations of behavior grounded in ethnicity alone, scholars have examined how people used the material world to define themselves, and others, in ways that included and excluded groups in order to create and maintain the hierarchical power structure of society. Allison Bell has argued that during the late-17th and 18th centuries, disparate groups of people formed social alliances through the creation of the concept of whiteness, a category of identity that sought common ground with some people while highlighting differences that allowed for the exclusion of others. Late-17th century changes in domestic architecture and the use of space in plantation cores, for example, resulted in the widespread adoption of a hall-and-parlor housing plan that served to segregate householders from laborers while emphasizing similarities among European Americans and enmeshing them in ongoing relationships with local artisans and neighbors (Bell 2005a:451–454).

Other scholars have examined the ways in which racialized groups, especially African Americans, used material culture to resist or circumvent social structures designed to oppress them (Mullins 1999c; Orser 2001; 2004; Shackel 2011). Studies of gender have also proved useful in understanding social differences and strategies of control and resistance within 18th century society. Maria Franklin's (2001) examination of foodways; Ywone Edwards Ingram's (2001) investigation of medicine, well-being practices and motherhood; Patricia Samford's (2004) trans-Atlantic comparison of gender roles among the Igbo and enslaved people in Central Virginia; and Garrett Fesler's (2004b) exploration of architecture and yardscapes at the circa 1700 to 1730 Utopia Quarter; have explicitly applied these approaches to the 18th-century. Archaeologists have paid less attention to variable categories of class, a third aspect of identity, in their

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examinations of 18th-century communities. Studies of households occupied by planters and farmers have yielded significant new information, discussed below, in relationship to gentility and consumerism. However, despite numerous calls for more research focused on free people of color, tenant farmers, overseers and the poor, comparatively little new work has focused on these groups. Two important exceptions include recent excavations at Stratford Hall in Westmoreland County and at the Accotink Quarter in Fairfax County.

The work of Boyd Sipe and his colleagues at Accotink Quarter in Fairfax, provides important data about architecture, foodways, and portable material culture at the site of an overseer's dwelling and associated slave quarter during the second and third quarters of the 18th century (Sipe et al. 2013). Recent work by Andrew Wilkins and Douglas Sanford at the Oval Site at Stratford Hall, which dates from circa 1740 to 1800, also contributes significantly to our understanding of the materiality of overseers. The Oval Site contains earthfast structures including two barns, a kitchen, slave quarter, and a house with a brick-lined cellar that probably served as an overseer's home (Wilkins 2010, 2012). Wilkins is using spatial data from this site, along with others occupied during the 18th and early-19th centuries, to trace the development of a bifurcated plantation racial structure that aligned poor and middling overseers with planters. Through close attention to the ways in which plantation space and the micro-landscapes of yards and gardens associated with quarters were structured over time, Wilkins hopes to understand the processes through which racial identities were created (Wilkins 2014).

Gentility and Consumerism

With few exceptions, the houses and domestic landscapes of 17th-century Virginia gentry were colonial in conception, scale and furnishings. By the 1720s, however, new ideas about architecture and landscape imported from urban centers in Britain and the Continent widely influenced the design, materials of construction, and the siting of houses and gardens created by elite planters. Through the adoption of these new ideas, people communicated social and intellectual bonds that tied them to their European contemporaries. Domestic spaces shared designs that emphasized balance, symmetry, individualism, and privacy, while precisely laid-out pleasure and utilitarian gardens conveyed their

owner's taste and knowledge (Martin 1991; Kelso 1984; Leone 1984; Pogue 1996b; Sarudy 1998; White 2015; 2016). The creators of these spaces engaged in elaborate social rituals made possible by the use of specialized furniture for domestic functions ranging from shaving to tea drinking; fashionable clothing that held the body in place; and the use of eating utensils and serving and receiving vessels that transformed the act of eating into the elaborate social ritual of dining. Gentility was achieved through the accomplished performance of these rituals. Accordingly, objects played an increasingly important role in achieving and communicating genteel behavior, and in expressing identities within and between social groups.

Prior to the 1740s, members of the elite had nearly exclusive access to the furniture, clothing, and household goods through which they expressed refinement and defined themselves as gentry. However, over the ensuing decades, an explosion of specialized objects were introduced, and their widespread availability and adoption were such that by the time of the American Revolution, these consumer goods were widely available for purchase in local shops, by itinerant vendors, or through second-hand purchase at estate sales or auctions (Breen 2005). Over the past several decades, scholars of the 18th century have documented material changes and the behaviors surrounding them, and have posited theories about why these changes occurred. Various associated with the "Georgian world view," "the refinement of America," 18th-century capitalist ideology, and social emulation (Leone 1988; Bushman 1992; Shackel 1992; 1993; Carson 1994; Deetz 1996, Pogue 2001; Leone 2010), the impetus for, and mechanics of, changes in the material world of 18th-century Virginians have been widely debated.

James Deetz was among the first to put forward a comprehensive argument linking multiple forms of material culture—gravestones, domestic dwellings, ceramics and other foodways related items, and music—to historical events that transformed colonists from transplanted Englishmen and women in the 17th-century to emerging Americans in the first half of the 18th century. He then traced the origin of these changes to an English culture influenced not by rural folk traditions, but by emergent academic, urban ideas of symmetry, order, and hierarchy. In this view, consumer goods mirror widespread cognitive change, a shift from valuing

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the corporate to the individual (Deetz 1996; Pogue 2001:49–50). Deetz's work brilliantly documented the richness and diversity of the changing material world, but fell short of explaining the underlying mechanisms of change, and the motivations of consumers whose lives were shaped by a different worldview.

Mark Leone, Paul Shackel, and Barbara Little have interpreted consumerism as a part of the ideological toolkit of emerging American capitalism in the mid-18th century. This ideology promoted standardization of design in house facades, dining implements, newspaper print and layout, and individuality in ceramics and hygienic objects, as means of conveying the existence of a natural social order which was best understood by elite consumers who, by extension, were appropriate social leaders (Leone 1988; Little 1992; Shackel 1992; 1993; Pogue 2001:50–51; Leone 2010). Cary Carson (1994; Pogue 2001:51–52) argued that gentility and consumerism grew out of the breakdown of traditional markers of social position which had been grounded in small communities where residents were familiar with the extent of their neighbor's landholdings and labor force, the size of his home, his pedigree, and his political clout. Social and economic forces in the 17th century gave rise to much more mobile and urban societies, where old markers of status were no longer relevant. People began to draw, and recognize, social distinctions based on their neighbors' acquisition of consumer goods and their knowledge of how to appropriately use them. As more goods became available, social competition increased through emulation. In response, the elite created new fashions and practices to define and defend their position within society. Problematically, within the society of colonial Virginia, the status of elites was constantly under threat due to increasing indebtedness to English merchants brought about by the consignment system. Conspicuous consumption on the part of planters signaled to their economic rivals and their English partners that they were successful and credit-worthy (Breen 1985; Rozbicki 1998).

Richard Bushman (1992) argued that the invention of polite society in America was not merely imitative or exclusionary but, rather, grew out of a belief shared among the elite that the ideal world was beautiful, polite, refined and moral. Subsequently, historians of gender have traced the growth of polite society to a changing ideology that affected the governance of the family and the role of men in British society beginning in the

second half of the 17th century. By the 18th century, the social standing of men derived less from their position within the household, and more from their ability to portray themselves, and the households over which they presided, as polite (Norton 1996:11–12; K. Harvey 2005:300–304; 2012; Hatch 2015:36–44).

Over the last twenty years, archaeological studies of gentility and consumer behavior in Virginia have widened to focus on the expression of social distinction in the backcountry, the attempts at gentility by social aspirants, and the consumer motivations of middling and poor planters. Studies of consumerism have also begun to consider the motivations and the strategies of enslaved men and women who participated in the marketplace, although most of this work examines sites that post-date the American Revolution (Heath and Galke, this volume).

Susan Kern's (2010) work at Shadwell, a tobacco plantation established in the 1730s by the Jeffersons on the piedmont frontier, considers the interplay between genteel behavior, consumerism, and community formation. With reference to architecture, the layout of the domestic landscape, consumer goods, agricultural practices, and plantation industries, Kern argues that gentility, and the acts of consumption that supported it, were the fundamental drivers of the transition from frontier to settled community in this 18th century context. The Jeffersons and their peers generated a demand for goods and services, and built for themselves a network of enslaved laborers, hired workers, local suppliers, relatives and friends to fulfill it. The relationships that they established, largely driven by the consumer needs of elite households, gave rise to, and supported, the social and economic institutions of community life.

Laura Galke (2009a) and Andrew Veech (1997) have examined households for whom gentry status was not guaranteed, to tease apart the strategies by which the members maintained or achieved such status. Galke has argued that when Mary Ball Washington found herself in reduced financial circumstances following the death of her husband, she taught her sons and daughter genteel behavior in order to maintain their social position. Materially, these behaviors were manifest through the use and maintenance of wigs indicated by the presence of a large assemblage of curlers and the residue of powders; decorating a fashionable house, evidenced by the presence of ceramic ornaments; mastering intricate needlework, suggested by the presence of a tambour hook; and using

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appropriate serving wares for the refined act of serving tea, demonstrated by a set of marked pewter spoons (Galke 2009b; Galke and Stevenson 2015).

Andrew Veech (1997) looked at the household of Abraham Barnes, a wealthy 18th-century planter who aspired to gentry status. He argued that while Barnes purchased expensive goods, he did not understand the underlying rules of etiquette or dictates of fashion that would have allowed him to use them in a manner that his neighbors understood to be genteel. Veech noted differences in the style of Barnes' house, his dress, and his dining service that he interpreted as evidence of non-genteel preferences. He then laid out guidelines about how to identify markers of status rather than wealth in the archaeological record of 18th-century plantations.

Bell's (2000) dissertation is one of the few to explore consumerism among a broad swath of wealth categories in rural Virginia. Her findings, taken from probate inventories and the archaeological record, suggest that consumer motivations for the majority of Virginia's colonial and 19th-century residents were complex. Theories of emulation cannot explain the fact that most consumers put economic and agricultural needs at the tops of their shopping lists, as opposed to fine consumer goods meant to serve as symbols of conspicuous consumption. By individually cataloguing and analyzing probate inventories dating from 1700 to 1900, Bell was able to establish the fact that domestic amenities made up a much smaller proportion of one's estate than did agricultural goods, especially among wealthier planters. Hence, she argued for conspicuous production as opposed to conspicuous consumption. Conspicuous production, a way to signal success through products tied to agriculture, was a consumer motivation shared by both elite and non-elite rural Virginians. Costly signaling, Bell argues, can be found mainly in categories of material culture like property, livestock, and slaves, in addition to items such as fine ceramics, wigs, and clocks. Investments in expenditures related to an agrarian way of life brought disparate consumers together under a shared motivation—to succeed at farming and animal husbandry and to ensure the economic viability of future generations of family members. Findings from Mount Pleasant in Orange County and at Belle Grove in Frederick support her argument that conspicuous production was a useful social strategy. Bell's work alerts us to the fundamental idea that material culture of all levels, from high style to mundane and prosaic, has the potential to inform us of

cultural principals enacted in tangible remains.

In her study of consumerism in the backcountry of Virginia, Ann Smart Martin (2008) found subtle differences in the use of material culture among the occupants of this region. While not exhibiting a backcountry artifact or object "signature," they certainly revealed a sense of hybridity, of borrowing and discarding new traditions with a specific knowledge of and attachment to an older ways of doing things. This sense has yet to be tested or explored utilizing the archaeological record.

Eleanor Breen's (2013) dissertation questions how access to goods affected individual's ability to consume by problematizing the concept of the consumer revolution. In the 18th century, a bifurcated system of trade existed in which, in general, wealthy planters subscribed to the consignment system, trading tobacco for the credit needed to purchase British goods to outfit a plantation and a home. In contrast, yeoman planters, laborers, and enslaved African Americans bartered, traded, or bought goods from increasingly common Scottish-owned stores. How did these different avenues of access to goods play out in colonial material culture? In order to consider the issue of equality of access to goods, Breen undertook a systematic object analysis that drew from George Washington's orders and invoices for goods within the consignment system, the store inventories of a local Scottish-owned retail outlet, and the archaeological record at Mount Vernon. Her findings suggest why colonial elites, like Washington, persisted in a rapidly aging and frustrating economic model despite the increased availability and convenience of local goods. Her findings also suggest what might have motivated enslaved people to enter the consumer arena. The consignment system provided planters with a gateway to goods simply not available in local stores; offered a broader range of choices; and afforded them a source for goods in the quantity necessary to operate larger-scale and diversified plantations. Breen's work demonstrates the political acts that consumerism embodies even in the most prosaic of material goods.

Archaeological Advances in Understanding Urban Centers in Virginia

In his seminal synthesis of urban colonial Virginia, John Reys (1972:ix) argued that "towns were slow to grow." From Thomas Jefferson in the 19th century to foreign visitors to Virginia in the 18th century, historical

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figures frequently commented upon the colony's lack of thriving metropolitan hubs. In 1760, English clergyman Andrew Burnaby recorded that "by act of assembly there ought to be forty-four towns; but one half of these have not more than five houses; and the other half are little better than inconsiderable villages" (Burnaby quoted in Hendricks 2006:xv). Certainly when compared to cities in England, or colonial centers like Boston and Philadelphia, Virginia's scarcity of towns is noteworthy. However, the archaeology and historiography of towns or urban centers in colonial Virginia continues to develop.

While debates over what criteria define a town still exist, there is a growing consensus among historians and archaeologists that function, as opposed to demographics, is a primary consideration, and that the definition of what constitutes a city, town, or village is culturally dependent. Urban historian Christopher Hendricks (2006:xviii) argued that towns be defined by a majority population that was not involved primarily in agricultural production. A decade prior, archaeologist Patricia Samford (1996:68) similarly defined towns not by size, but by function. These broad definitions allow for an understanding of the variability of what constituted loci of urban activities in the tidewater and beyond. Some of the more recognizable colonial cities like Williamsburg, Alexandria, and Fredericksburg remain a focus of both scholarly and public attention as major tourist attractions. Others, like West Point, Gloucester, and Kinsale, peaked, declined, and faded from view before the Revolutionary War. Some colonial towns had populations above 1000 individuals by the late 18th century. Others, such as Smithfield, Leesburg, and Charlottesville, were inhabited by less than 250 people by 1780 (Kulikoff 1986). Quakers established Waterford, Huguenots settled Germanna, and Scots provided the incentive for towns like Colchester (Hendricks 2006; Sprouse 1975).

Some towns were planned, others developed out of necessity and convenience. In the Shenandoah Valley, the construction of water-powered mill seats predated the construction of towns. These places became centers of commerce and included a variety of services that were ultimately assumed by towns. Early plantations such as Belle Grove, Montpelier and Shadwell included milling and distilling operations and provided those services to the neighboring farming community. In this way, plantations and mill seats became "central places"

(Mitchell 2000; Kern 2010:151–153).

Scholars interested in the consumer revolution as it developed over the course of the 18th century in Virginia might include for study not only places like Alexandria, Colchester, Dumfries, and New London, but also sites like Boyd's Hole or Cabin Point. These places were established by the Scottish firms who set up stores in the upper Potomac region and west of the fall line in Virginia (Cuddy 2008; E. Breen 2013). In a primarily cash-poor economy, these stores served much like banks by offering store credit for tobacco received and then exported to the wider Atlantic World. At some sites like Alexandria, Colchester, Dumfries, and New London, towns grew in conjunction with the commercial enterprise. Others, like Boyd's Hole and Cabin Point, functioned more like trading posts without much more development than a store, warehouse, and wharf.

What have we learned, then, from the archaeological record of these highly varied centers of residence, industry, commerce, religion, or government? A brief, yet systematic analysis of the archaeology of colonial towns suggests that there is still much to record, excavate, compare, interpret, and reanalyze, particularly in light of developments in anthropological theory as applied to urban America. For the purposes of this survey, more traditional town sites are considered. Inns, taverns, churches, courthouses, mill seats, plantations and trading posts are not. Drawing on the previous research of Reps (1972), Kulikoff (1986), and Hendricks (2006), 42 urban centers were identified as having existed in Virginia between 1720 and 1783. This list does not include those cities that failed to materialize from folio to foundation such as Eden or Peytonsbury (Hendricks 2006). The goal of this survey of colonial towns was to determine the extent to which they have been explored archaeologically in order to make an assessment on the state of research on urban Virginia.

Of the 42 towns, fifteen were formed between 1680 and 1706 on the basis of legislation enacted by the Virginia Assembly under the direction of the English government who hoped to encourage settlements around nodes of commercial activity at a time of economic hardship and decline in tobacco prices. Specialized urban centers like Williamsburg, Yorktown, and Norfolk flourished, but most failed to attract a significant resident population. The Virginia Assembly established more towns for the same reason from 1727

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to 1732 (Kulikoff 1986:104–105). By the third quarter of the 18th century, town development began to expand rapidly, in part because of Scottish capital and the merchant credit system. By Kulikoff's estimation, the number of towns more than doubled from 1750 to 1780 (Kulikoff 1986:122–127).

Urban archaeology brings with it daunting challenges in teasing out complex architectural, stratigraphic, and artifact remains in order to interpret chronologies and associations. In addition it must address high costs of record keeping, reporting, and artifact curation. Only minimal, if any, excavations have occurred in the dozen backcountry urban centers identified by Hendricks (2006). Of the 42 total urban centers previously discussed, this survey suggests that about a quarter (n=10) have been explored archaeologically to the extent that they could be used in a comparative analysis. In other words, these sites have been excavated beyond Phase I levels of study. Towns like Dumfries, Fredericksburg, Yorktown, and Petersburg have been explored archaeologically on a smaller, lot-sized scale while others, like Williamsburg, Gloucester, and Hampton, have been dealt with on a larger, town-plan or city scale (Cressey and Stephens 1982; Cressey et al. 1982; Sanford et al. 1992; Higgins et al. 1993; Brown and Samford 1994;1996; Stuck et al. 1996; Edwards et al. 1998; Pickett 1998; Crane et al. 1999; Richards et al. 2001; Harwood 2002; Barka 2004; Lutton et al. 2003; Lutton 2004; Barile et al. 2008; Duncan and Brady 2008; Rupnik et al. 2008; Laird et al. 2014). The Colonial Williamsburg Foundation has carried out archaeological investigations within the historic core of the city for over 70 years, with recent attention to the Charleton Coffeehouse, the Bray School, and a brewhouse on the campus of the College of William and Mary, among many other sites (Samford 1996; Kostro 2004; Kostro and Edwards 2014). The archaeology at Colchester began with extensive documentary study and historical and infra-red aerial photography in the early 1970s (Sprouse 1975). It continued through the 1980s on the part of George Mason University, and is currently underway with excavations undertaken by the Fairfax County Park Authority (Christopher Sperling 2015, pers. comm.). The majority of archaeological work in the City of Alexandria dates to the late 18th and 19th-century development of the town. Much of the earlier 18th-century archaeology derives from the evolution of the town's waterfront and the infilling of Alexandria Bay. Led by merchants and

ship and land owners, these improvements resulted from a concerted effort to facilitate the movement of goods between deep river and land, and to increase real estate holdings for newly created land (Shephard 2006). Other 18th-century deposits of interest relate to the wealthy Alexandria merchant John Carlyle and trustee of the new town. Salvage excavations in the 1970s included the excavation of a well shaft in the contemporary Carlyle House cellar that dated to the third quarter of the 18th century (Fauber 1980). Finally, Marlborough, the town-turned-plantation located in Stafford County, was excavated in the 1950s by the Smithsonian Institution and was facilitated by the then named Mary Washington College. Both the extensive documentation dealing with John Mercer's attempts from 1726 to 1768 to revitalize the burned and ruinous town, and the archaeological research conducted at the site in the past, are due for reanalysis (Watkins 1968).

In 1997, a team of historians and archaeologists undertook a comprehensive examination of probate inventories, store, household, and plantation accounts, and zooarchaeological remains from 53 site assemblages to explore the urban provisioning systems in operation in the Chesapeake region from the 17th through the early-19th centuries (Walsh et al. 1997). The prominent cities of Williamsburg and Annapolis form the basis for this study, although data from outlying rural sites were also included to complete their understanding of foodways in place from the farmer's field, to the urban dweller's table. As a result, they were able to make some interesting observations about subtle intra-regional differences in diet between these two cities that could also be explored using other categories of consumer goods from ceramics and glassware to architecture and town plan.

Other developments in the theoretical landscape of colonial urbanism suggest future directions for archaeological research. Stephen Mrozowski's (2006:13) intra-town comparison of Newport, Rhode Island explored the "biophysical realities of class discrimination" embedded in a capitalist system. His approach could find solid application in the study of Virginia town sites like Hampton, Williamsburg, and Gloucester. Comparative analyses between towns in different regions, and between lots in the same town could also provide fruitful research avenues. Shannon Dawdy's (2008) study of New Orleans focused on the comparison between the ideal town plan and the actual spatial layout of lots, structures within

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lots, and streets. There, the best-laid plans were translated into a *métis* city – informed by local conditions, solved through improvisation and creativity, and influenced by the cultural backgrounds of Native Americans, Africans, Canadians, and Europeans who “view[ed] this new urban landscape as a stage for reinvention outside the grid of absolutism” (Dawdy 2008:98).

Despite the fact that English towns may not have been as planned or idealized as those of the French or Spanish (Dawdy 2008:69), Richard Bushman (1992) reminds us of the ideal of the Anglo-American “Grand City,” which sought to maintain the perfect balance between commerce and ceremony (including both church and government). As Stuck and his colleagues (1993) noted, towns like Yorktown and Williamsburg came closer to Grand Cities than places like Gloucestertown or Colchester. Comparing and contrasting the functions and layouts of 18th-century urban centers might provide insights into the English colonial project. More simply, using technologies such as GIS would allow archaeologists to contrast idealized town plans with the in-ground reality of town construction, or as Luke Pecoraro (2014) has recently explored, the plantation/town relationship. Does the archaeological evidence of town structure mirror that found on plat maps? If not, what can be learned about colonial Virginia’s urban frontier? Analyses of this sort can allow for an understanding of towns as nodes of activity where the colonial endeavor connected and conflicted with the metropole.

Finally, our understanding of the cultural role of markets is becoming more anthropologically nuanced. Mark Hauser’s work with locally-produced earthenware in Jamaica might provide an interesting model to interpret those towns identified with a dominant commercial function. Hauser (2008:2) saw street markets in Jamaica’s main cities, operated primarily by enslaved individuals, as “loci of resistance, places in which the self was refashioned, and arenas for the emergence of social networks in which communities developed.” In order to shed light on colonial Jamaican culture, Hauser used the manufacture and movement of local earthenware on the island, as a proxy for the economic and social networks that connected that diverse population.

A similar approach to locally-produced ceramics in Virginia might be instructive. For example, Norman Barka’s excavations of Yorktown’s Poor Potter Kiln Site and the identification of his wares throughout the Chesapeake might serve as a proxy for understanding the

improvisational, craft side of the colonial economy in a way not captured in catalogues dominated by imported English goods (Barka et al. 1985; Barka 2004). The early excavations of Marlborough serve as an example. Watkins (1968) identified numerous milk pans of William Rogers’-type earthenware and speculated that some of the stoneware probably originated at the Rogers’ kiln as well. In fact, the wealth of documentation for this site is evidence that “Mercer’s purchase in 1725 of £12 3s. 6. worth of earthenware from William Rogers probably was made for trading purposes, judging from the sizeable cost” (Watkins 1968:125). Mercer operated as a trader early in his life, sailing through Virginia’s waterways and exchanging goods as he went. Because the movement of goods was accompanied by the movement of people and the exchange of ideas, Rogers’ ceramic products could serve a means through which we can better understand the interconnectedness of the social fabric of 18th-century Virginia.

A similar study of the distribution of colonoware may be a more difficult proposition, given the limited state of our understanding of, and ability to distinguish between, loci of their production. In addition to capturing regional and temporal variability in typological attributes such as visible temper or paste inclusions, surface treatments, and formal variation, we should begin to systematically address petrographic and chemical differences that would allow for a much clearer understanding of networks of production and distribution. In this research we can follow the methodologies pioneered by other scholars for interpreting the exchange networks of similar wares produced historically in the Caribbean (Veech 1997; Sipe 2013; Sipe et al. 2013; Ahlman and Schroedl 2008; Hauser 2008; Meniketti 2011) or other ware types in the Chesapeake (Bloch 2011). The availability of diverse technologies for characterizing the components of clay sources and finished pots is an exciting development that should allow us to pursue new research directions in the scope of trade and exchange among diverse members of Chesapeake society.

Using another commodity, Heath’s (2016) study of the distribution of Indo-Pacific cowrie shells demonstrates that they concentrate within urban and commercial contexts and primarily on 18th-century sites predating the American Revolution. These findings are at odds with the current interpretation that Indo-Pacific cowries represent African American spiritual practices carried out largely within plantation quarters. Instead,

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they suggest the additional use of cowries as informal colonial currency. More broadly, these shells are evidence of global and local networks of 18th-century economic exchange between a wide cross section of people living in the Virginia tidewater.

Material Culture

Since 1996, our understanding of diagnostic attributes, chronologies of manufacture and use, and centers of production for the portable material culture of 18th-century Virginia, has expanded. A number of publications provide a more in-depth treatment of particular classes of objects which had previously received limited attention. For ceramics, these include the immensely important *Ceramics in America* series, begun in 2001, edited by Robert Hunter for the Chipstone Foundation, and published by the University of New England Press. These annual volumes bring together research by archaeologists, ceramic historians, and collectors and cover topics ranging from the contexts of significant ceramic deposits to the histories of potters and potteries; and from the chemical composition of clays to stylistic variation over time. Other important publications about 18th-century ceramics include a reader on Chinese porcelain (Madsen and White 2011) and a well-illustrated historical overview of salt-glazed stoneware, much of it recovered archaeologically (Skerry and Hood 2009). Fred Smith (2008) has addressed ceramics and vessel glass within the context of a growing anthropological focus on the culture of alcohol consumption. Eleanor Breen's (2012) research, in turn, has resulted in new analytical methods for identifying punch bowls and interpreting the variable contexts of their use. Dwight Lanmon's (2011) book on the history of English glass from 1650 to 1775 is a well-illustrated, useful resource for understanding chronology, form and stylistic variation in glass. Mary Beaudry (2007), Carolyn White (2005) and Sara Rivers Cofield (2012) provide useful information and analysis of objects relating to needlework and 18th-century clothing, an important area of research for understanding gentility, consumerism, gendered work, and presentation of self. Rivers Cofield has also produced fresh work on copper alloy leather ornaments (2008).

Useful on-line resources for artifact identification that include a significant regional and temporal focus on the 18th-century Chesapeake include: Diagnostic

Artifacts in Maryland, provided by the staff of the Maryland Archaeological Curation Laboratory (<http://www.jefpat.org/diagnostic/index.htm>); the Digital Archaeological Archive of Comparative Slavery (www.daacs.org), produced by archaeologists at Monticello and a consortium of scholars of Atlantic slavery; and Mount Vernon's Midden Project (<http://mountvernonmidden.org/>), created by archaeologists at Mount Vernon. Culture Embossed (<http://www.cova-inc.org/wineseals/index.php>) and Culture Impressed (<http://www.cova-inc.org/pipes/index.php>), are crowd-sourced databases of wine bottle seals and marked European clay tobacco pipes hosted on the website of the Council for Virginia Archaeologists.

In addition to publications relating to artifacts directly, several on-line resources helpful for the study of Virginia material culture are now available. These include the transcribed estate inventories for York County, digital copies of *The Virginia Gazette*, and a collection of manuscripts made available by Colonial Williamsburg's digital library (<http://research.history.org/DigitalLibrary/>). The American Founding Era collection, published by the University of Virginia Press through their Rotunda imprint (<http://www.upress.virginia.edu/rotunda/>), provides searchable versions of the multi-volume published papers of James Madison, Thomas Jefferson, George Washington and other important political figures. These records include important information about architecture, consumerism, plantation management, and other aspects of daily life relative to the experiences of these men. Digitized advertisements for enslaved runaways are available (<http://www2.vcdh.virginia.edu/gos/>), as well as a rich collection of images relating to the Atlantic slave trade and life for the enslaved in the New World (<http://hitchcock.itc.virginia.edu/Slavery/index.php>). More broadly, the Library of Congress provides digital access to a wide variety of historic images, maps, documents and publications, while The Hathi Trust (www.hathitrust.org) makes 18th-century publications on a wide variety of topics readily available.

Conclusions

New theoretical approaches, a wealth of new archaeological data, and changes in technology for data aggregation and dissemination have resulted in important advances in knowledge about Virginia's 18th

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century. Archaeologists now routinely work at multiple analytical scales, from the fine-grained consideration of chemical, geomorphological, archaeobotanical, or microartifactual evidence to considerations of goods traded and cultural processes that unite regional, national, and global phenomena. While the technological tools are in place to make these analyses routine, we still lack standards of data collection and analysis that allow for robust comparisons between datasets. Further, many sources of data remain unreported, or are published in forms that are impermanent or not readily accessible (Freeman 2015:71). More information is available than ever before via social media, blogs, websites and other impermanent forms of communication, and grey literature continues to dominate more formal channels of information dissemination. These outlets all serve an important role, but still fall short.

The DAACS initiative has pioneered new standards for data publication and dissemination, but a significant gap remains to be filled for sites that don't fit its mandate to explore New World slavery, or for researchers balancing data rigor with constraints of time and resources. While data collection standards remain to be defined, the widespread use of data repositories such as tDAR, which includes online access to grey literature in its database, and the active collection and curation of digital archaeological data by the Virginia Department of Historic Resources, could be important steps. Such initiatives could act to ensure the preservation of the data needed for analyses that transcend site boundaries, and help offset the limited access to physical collections (White and Breen 2012).

Beyond the standardization and preservation of data, there is a critical need to publish peer-reviewed studies. For Virginia archaeologists to enter regional, national and international conversations, to compete for scarce financial resources, and to ensure that our work reaches as broad an audience as possible, we need to commit to rigorous standards of publication that engage with our data theoretically, comparatively, and in a manner that invites response.

In considering future research directions, we offer a few suggestions, knowing that scholars with different interests than ours can, and will, have others that are equally valid. In 2014, a collaboration of archaeologists collected crowd-sourced data to define the "Grant Challenges" of archaeology that resulted in

the publication of recommendations for future research (Kintigh et al. 2014a; 2014b). Under five headings, they list 25 research questions (Kintigh et al. 2014b:880, Box 1), some of which are directly applicable to research on 18th-century Virginia.

1. *Why and how do social inequalities emerge, persist and diminish, and with what consequences? What are the relationships among environment, population dynamics, settlement structure, and human mobility?* (Kintigh et al. 2014b:880, Box 1). While we have learned much about the emergence and maintenance of systems of social inequality on elite Tidewater plantations, and about the forms that inequality took in one region (the southern tidewater), we still know relatively little about life for others occupying the middle ground of the 18th-century social and economic hierarchy: tenant farmers, overseers, and middling planters. Nor do we understand the impact of environment, population dynamics and settlement structure on the material world of slavery in the 18th-century Piedmont, Blue Ridge, Valley of Virginia, or Allegheny Regions. We have looked at relatively few sites occupied by free Africans and their descendants, either within the broader society of late Colonial Virginia, or as self-liberated people choosing to live in exile. Much of the early history of settlement west of the Blue Ridge remains unexplored archaeologically.
2. *What is the role of conflict in the evolution of complex cultural formations?* (Kintigh et al. 2014b:880, Box 1). We have written relatively little about external, international threats that shaped military life in the colony, and nothing about conflict relating to the Revolutionary War or internal threats of slave revolts, as little new research has come to our attention about these topics. Understanding how localized, regional and international conflict shaped phenomena as diverse as settlement patterns, processes of racialization, gender identity, and trade and exchange will help us to better understand the complexity of the colonial world.
3. *How do people form identities, and what are the effects of these processes?* This question, tied to questions about migration, is relevant for the study of both intentional and forced immigrants, and for understanding the cultural processes that transformed individuals

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into members of communities and ultimately, into Virginians and Americans. How are people shaped, and how do they shape, architecture, landscapes, clothing, and many other aspects of the material world to construct individual and group identities? While some important work in this area has been summarized in this article, much more research remains to be done.

These and other questions can be answered not only through the excavation of new sites, but through a re-engagement with legacy collections that fill the storerooms of our universities, historical societies, historic sites and state repository. Re-cataloguing, re-analyzing, and digitizing older collections can allow us to bring fresh research questions, and the advantages of current

knowledge and techniques, to bear on valuable but often neglected archaeological resources (DAACS 2004; Heath et al. 2009; Hatch et al. 2014; McMillan et al. 2015).

The next twenty years promise to be exciting ones.

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Chapter 2

Archaeological Research on Federal and Antebellum Virginia: Recent Scholarship, Trends, and Future Directions

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Introduction

The end of the American Revolution and the outbreak of the Civil War, defining conflicts in American history, mark the beginning and end of the 80-year span that constitute the temporal parameters of this chapter. From 1780 to 1860, Virginians experienced an era of change that gradually transformed their political, social, economic, physical and mental landscapes. Late in the Colonial Period, Virginia was defined by a rural population, with few towns and fewer larger urban centers. One hundred-and-fifty years of a colonial economy dominated by tobacco monoculture had resulted in dispersed settlements, river-based transportation systems, and heavy reliance on British mercantile houses for credit and material goods across the tidewater and piedmont. During the second and third quarters of the 18th century, tobacco gave way to wheat throughout much of Virginia's agricultural economy. In the Shenandoah Valley, where mixed grain cultivation and livestock rearing had formed the basis of the economy since the earliest days of settlement, wheat production intensified to a commercial scale (Siener 1985:410-412; Kulikoff 1986:120, 124; Hofstra and Geier 2000:48,51; Walsh 2010; Evans 2012:93-94). After the American Revolution, planters in the central piedmont shifted their focus to wheat, yet a few areas in the upper Shenandoah Valley and the far southern counties of the Commonwealth continued to be dominated by tobacco culture until the Civil War (Sipe 2009:14; Neiman 2008).

Over time, Virginia's culture became increasingly

divided. Lands east of the Blue Ridge remained under the control of elite, ethnically English planters tied together by a complex network of familial bonds and economically supported by a permanently disenfranchised African- and African-American underclass of enslaved laborers. To the west, the children and grandchildren of ethnically Scots-Irish and German farmers, who were invested in slavery but had a lower rate of slave ownership, created a regional political structure balanced between their northern neighbors in western Maryland and Pennsylvania and the colonial elite of the tidewater (Koons and Hofstra 2000:xxv-xxviii; Hofstra and Geier 2000:48, 54; Heath and Breen, this volume).

While issues of race, class, and economic conservatism precipitated Virginia's participation in the Civil War on the side of the Confederacy, this 80-year period prior to the conflict was also characterized by important elements of social, economic, and political change. Steady population growth and movement away from earlier centers of power, increasing urbanization, the development and growth of industry, improvements in transportation networks, widespread consumerism, and advances in private and public education affected both free and enslaved Virginians, and gradually created a world that was quite different from that of the pre-Revolutionary generation. Their efforts to promote, embrace, negotiate, or reject these changes, in part through the active manipulation of the material world of architecture, landscape, and more portable forms of material culture, left myriad clues for modern archaeologists to recover and interpret.

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The work of historical archaeologists throughout the Commonwealth amply demonstrates the richness and the complexity of the lives of Federal and Antebellum-Era Virginians. Since the publication of *The Archaeology of 19th century Virginia* in 1999 (Sprinkle and Reinhart 1999), compliance-driven excavations in urban and rural settings, long-term research projects at historic sites, and projects initiated at Virginia's colleges and universities have resulted in rich sources of data and interpretive arguments that address late 18th- and 19th- century plantation life, the development, growth, and products of industry, the complexity of antebellum urban landscapes, and consumerism. The following discussion presents a brief overview of important structural changes in Virginia during the Federal (1780-1820) and Antebellum (1820-1860) Periods, a synthesis of archaeological findings, and recommendations for future research directions as policy makers, academics, museum professionals and other interested parties work towards continuing to broaden our understanding of this important period in Virginia's development.

Migration and Settlement Patterns

Following the American Revolution, Virginians migrated externally and internally in significant numbers. While external migration is beyond the scope of this article, it is important to note that in the first half of the 19th century, issues of inheritance, economic stagnation, poor crop yields, declining land values, and new opportunities arising to the south and west led to a significant out-migration. From 1790 to 1820, an estimated 250,000 whites, the majority of whom were small landowners and tenants in Virginia and Maryland, moved to Kentucky, Tennessee, Georgia, Alabama, the Carolina backcountry, and the Northwest (Kulikoff 1986:77). One hundred-seventy-five thousand enslaved men, women and children went with them or were sold out of state. The reproductive success of enslaved Virginians, the legal ending of the transatlantic slave trade in 1808, and the rising demand for enslaved labor in the Upland and Deep South, resulted in Virginia becoming a leader in the internal slave trade in the decades that followed. As many as 45,000 enslaved people were sold to traders during the decade from 1810 to 1820. Georgia, Alabama, Mississippi, Louisiana and Texas became the primary recipients. From 1790 to 1860, close to one million African Americans from Virginia,

Maryland, and the Carolinas moved west, a migration that had important implications for the development of a unifying African American culture in the antebellum South (Kolchin 1993:96; Kulikoff 1986:77).

Within Virginia, migration altered the physical and cultural landscape. The movement of non-slaving holding whites across the Blue Ridge, together with a steady growth in population in the western portion of the state, resulted in profound regional divisions. By 1860, four-fifths of African Americans lived east of the Blue Ridge, while three-fifths of the white population lived west of those mountains (Link 2003:30). Population movement from the Tidewater to the Piedmont, well underway by the mid-18th century, continued south and west as settlers transformed areas of modern southwest Virginia from wilderness to settled countryside, and Southside counties bordering North Carolina became major centers of tobacco production. In the decade following the American Revolution, Montgomery County, which encompassed a huge swath of land in both modern southwest Virginia and West Virginia, was one of the most populous counties in the state. In contrast, Washington and Russell Counties to the south were among the most scarcely populated. By the 1830s, the three counties had been subdivided into nine, and Washington County became the population center of the area, rivaling the Southside and the upper Valley of Virginia in population. This boom was relatively short lived however, and by the 1860s, the population of southwest Virginia was among the lowest in the state (HCB 1790; 1820; 1840; 1860).

In the 18th century, settlers from Pennsylvania and Maryland began navigating the "Great Philadelphia Wagon Road" following its route from Pennsylvania through the Valley of Virginia, into southwestern Virginia and into the northeast corner of what would become Tennessee. Migration continued and increased after the American Revolution, and settlers cultivated farms and plantations, constructed new towns, and established centers of industrial production along the route of the Great Road. In 1790, Frederick County in the Shenandoah Valley had the second highest population in the state (HCB 1790), and remained in the top 15% into the 1860s. By the 1820s, the lower Valley had experienced a significant population increase.

Urbanization was well underway by 1840, and by the 1860s, 10% of all Virginians dwelt in urban communities

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scattered across the state. Alexandria (part of the District of Columbia from 1791 to 1846), Norfolk, Petersburg, and Richmond emerged as the main cities of the Antebellum Period followed by Portsmouth, Lynchburg, Winchester, and Fredericksburg (Majewski 1997:3). Although small in scale compared with the scope of urban development of northern states, Virginia's cities gave rise to improvements in architecture and sanitation systems, fostered the development of commercial, mercantile and industrial centers, and provided diverse opportunities for work and community to the state's population of free blacks.

Unlike states in the Northeast and the Middle Atlantic that legislated for abolition and began processes of emancipation in the final quarter of the 18th century, Virginia maintained the institution of slavery following the American Revolution. Nonetheless, the commonwealth was among the leaders of the young nation in numbers of free black communities. Some people were born free; others were emancipated either due to changes in agricultural practices, Revolutionary War-era fervor among individual planters, or the rise of abolitionist sentiments following the war (Walker et al. 1992:5-8; von Daacke 2004; Heineman et al 2007:178-182; Trotti 1996). Enclaves of free African Americans, such as Israel Hill in Prince Edward County and the Farrow/Bowles/Free State community in Albemarle County, formed in rural areas, while urban communities, such as Canada in Charlottesville and the Bottoms and Hayti in Alexandria, also took root and grew (Cressey 1985:50-62,72-73; Blomberg 1988a; Cressey and Bromberg 1989; Walker et al. 1992; Delaney and Rhodes 2001; Rivanna Archaeological Consulting 2013:5, 28, 32-40; Thompson 2010; 2006:5-17; 2005:13-24; Heinemann et al. 2007:17).

By the mid-19th century, African Americans, both free and enslaved, formed the majority of the population in the cities of Charlottesville, Danville, Lynchburg and Petersburg and were almost half of Richmond's residents (Tripp 1997; Heinemann et al 2007:178-179). Members of urban middling- and upper-class white households hired enslaved women from surrounding plantations to serve as domestics, while urban factories and municipal works employed enslaved men (Sanford 2012:143; Lee 2016a:14-15). These workers were hired away from their home plantations on annual leases, and after 1830, were increasingly accommodated in rented rooms in lodging

and boardinghouses (Sanford 2012:144).

Using census data and insurance records, Douglas Sanford (2012:145-146) has studied the makeup of urban households for the enslaved, finding that the majority were headed by women in the cities of Fredericksburg, Harrisonburg, Petersburg, Richmond and Smithfield. Over time, as the demand for hired labor increased, many enslaved people were housed in brick structures designed for mixed use, such as stables, carriage houses, and kitchens (Sanford 2012:149-150). Based upon his analysis of the documentary record, Sanford constructed a series of testable predictions for archaeological assemblages associated with urban slavery. He predicted significant variation in housing types and in available square footage, as well as increasing evidence of consumerism and production for the market (Sanford 2012:150-151). Lee has looked at the ways in which urban hiring, and other forms of hiring out, affected consumer practices, health, and well-being among hired-out people and the communities they left behind on their home plantations (Lee 2016a).

Cities also housed auction houses and holding areas central to the internal slave trade. Two sites in Alexandria and one in Richmond's Shockoe Bottom District provide important information about this nefarious business. The Franklin and Armfield Slave Pen at 1315 Duke Street and the Bruin Jail at 1707 Duke Street preserved evidence of Alexandria's role in the internal slave trade. The former, excavated in 1984, was associated with a number of slave traders including partners Isaac Franklin and his nephew John Armfield (1828-1846); George Kephart of Kephart & Company (1846-1858); and partners Charles Price and John Cook (1858-1861) (Artemel et al. 1987:26, 35-38). The site contained evidence of the jail itself within the basement of an extant structure, a walled and partially-roofed exercise yard, a well, and a chamber for enslaved men awaiting sale. A trash-pit was associated with the non-enslaved occupants of the site (Artemel et al. 1987: 119-121). The Bruin Slave Jail was owned by slave trader Joseph Bruin from 1844 to 1861 (Kraus et al. 2010:39-52). From 2007 to 2008, archaeologists excavated remains of a barracks where enslaved people were held, a brick cistern, a kitchen, and an associated midden dating to the jail's period of use (Kraus et al. 2010:82-97). Lumpkin's Jail was developed in the 1830s to house people awaiting sale. Robert Lumpkin acquired the property by 1844 and expanded it to include a

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hotel and kitchen for auction customers. An on-site jail held enslaved people for two weeks to as long as two months (Laird 2010:7-22). In 2008, archaeologists conducted 18 weeks of fieldwork at the site, exposing the foundations of the jail building, the Lumpkin's kitchen, two outbuildings, retaining walls, the cobbled central courtyard, and other landscape features associated with the jail complex (Laird 2010:53-130). Under threat of loss to development, the site has become an important focal point for the discussion of Richmond's central role in the internal slave trade, the town being second only to New Orleans as an antebellum slave market. Debate about the future of the site highlights the importance of remembering and preserving elements of the city's painful past.

During this period, slave owners sympathetic to emancipation, and non-slaveholding abolitionists, developed schemes to transport free African Americans from Virginia to Ohio and to Liberia, Africa (Trotti 1996; Heinemann et al. 2007:179). Virginia's proximity to free states to the north, and wilderness areas to the south and west, also encouraged the enslaved to seek freedom through self-liberation. By the 1830s, slave uprisings had strained social relations between white and black Virginians and generated more conservative approaches toward emancipation for many slave owners (Heinemann et al. 2007:178-182). Physical evidence of these ideological struggles is ephemeral, but archaeologists have investigated places of exile in the Great Dismal Swamp (Sayers 2014), and studied the Rebecca Vaughan House in Southampton County which was associated with the slave insurrection of 1831. The latter site is part of a larger effort to preserve the landscape of that uprising and tie it to the Nat Turner Trail Program (Southerlin 2012).

Plantations, Community and Material Culture

The last two decades have seen significant work on Federal- and Antebellum Era plantations throughout Virginia. Heath (2012a) has summarized many of the sites that have been excavated and has discussed methodological approaches and theoretical perspectives used in their assessment. Here we offer a brief review of a rich area of research. Multi-year archaeological projects, undertaken by in-house research staff at historic house museums, have yielded significant data, particularly relating to Federal Period plantation development

and change. Compliance-related projects have also contributed to the growing dataset. Driven largely by restoration questions, archaeologists have investigated the design, implementation, and longevity of the ornamental grounds and gardens, and their associated artifacts that surrounded the mansions at Monticello, Montpelier, Mount Vernon, and Poplar Forest. This work has expanded our methodological toolkit for finding and documenting ephemeral landscape features and has brought new interpretive perspectives relating to power, identity, memory, and commemoration to bear in the study of such sites (Metz 2000; Trussell 2004; 2012; Gary 2008; Heath 2008; 2013; Trickett 2010b; 2011; Gary 2012; White 2016).

Beyond the ornamental grounds, the plantation survey carried out at Monticello, underway since the 1990s, has revealed changing patterns of land use within Thomas Jefferson's Albemarle County plantation which are attributed to the agricultural transition from tobacco to grain production. Findings include shifts in settlement patterns for enslaved laborers and overseers, and evidence of erosion brought about by the shift from hoe to plow-based cultivation (Monticello 2003). Surveys have located slave quarters and plantation outbuildings at both Montpelier and Poplar Forest. Research tied to the study of these Federal Period sites has considered plantation settlement patterns and the broader environmental settings within which plantations operated (Heath 1994; 1999a; Trussell 1999; Higgins et al. 2000; Heath et al. 2004; 2005; Marshall 2009; 2010; Trickett 2010a; Dierauf 2013; Proebsting 2012).

In addition to plantation-scale landscape research, a significant body of work on 19th-century quartering sites, both below and aboveground, has accrued in the last two decades. Fraser Neiman has overseen an extensive re-analysis of the structures on Mulberry Row at Monticello which includes a number of cabins dating to the first quarter of the 19th century. Other, similar sites have been excavated off the mountaintop. This research has resulted in a fine-grained understanding of architectural changes in housing and industry, as well as variation in material culture associated with the inhabitants of Mulberry Row from the final decades of the 18th century to the first quarter of the 19th century. Context and artifact databases, site summaries, chronological analyses, images and bibliographic references for all of these sites are available through

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the online archive known as the Digital Archaeological Archive of Comparative Slavery (DAACS) developed in consultation with other archaeologists researching the African diaspora. Data relating to slave housing at the Mount Pleasant kitchen, Poplar Forest, Rich Neck, Stratford Hall and Utopia also contribute to the archive.

Douglas Sanford and Dennis Pogue have also undertaken a multi-year project to collect documentary, architectural and archaeological data on slave housing with the goal of understanding temporal and spatial variation in size, layout, and quality (Sanford and Pogue 2009:1). By 2009, they had collected information on over 900 structures and documented 30 extant quarters. Through the use of dendrochronology, they were able to successfully date eight structures, all of which post-date the American Revolution (Sanford and Pogue 2009:4-6). Significantly, they have found a wide variety of housing sizes and qualities that exhibit variations that did not correlate with time or proximity to the planter's house.

Overall, archaeologists investigating plantation slavery from the late 18th century to the Civil War have addressed a wide variety of questions relating to the impact of changing agricultural strategies and the growth of kinship networks, and their effect on housing and consumer practices, health, well-being, and spirituality among the enslaved (Heath 2004; 2012b; Edwards-Ingram 2005; Fennell 2007; 2014; Neiman 2008; Sipe 2009; Galle 2010; Lee 2013; Lee 2012a; 2016; Davidson 2014; Reeves 2014a). Researchers have considered the use of space outside of dwellings as evidence of economic activities and place-making (Heath and Bennett 2000; Heath 2010). They have also looked at the role of memory in creating and maintaining "slave spaces" (Heath and Lee 2010). Paleobotanical and faunal studies have placed slave quarters within the broader plantation economies of agricultural production, provisioning of food, foraging, hunting, fishing, gardening and poultry raising (Andrews 1993; 1999; McKnight 2000; 2005; Raymer 2003; Klippel et al. 2011; Lamzik 2012; 2013; Bowes and Trigg 2012; Henderson 2013; Lee 2015a). One important direction to the recent study of Antebellum slavery is the understanding that enslaved people were enmeshed in social and economic networks that crossed plantation lines, and that these networks ultimately shaped their transition to free communities following emancipation. Jillian Galle (2006; 2010) has argued that enslaved men and women used buttons,

ceramics and other fashionable, non-provisioned goods to send "costly signals" both within their own communities and as a way of introducing themselves as potential allies to strangers in the broader world. Lori Lee (2012b) drew on evidence of handmade stone tobacco pipes, found on piedmont Virginia sites, to suggest the possibility of social networks that extended among free and enslaved people living in Bedford and Albemarle Counties. She found that stone pipe makers and users were linked by family ties and Thomas Jefferson's slaveholdings. Jason Boroughs (2013) has studied the relationship between abroad marriage and landscape in the neighborhood of Williamsburg. He argues that geographically dispersed places tied by bonds of kinship helped in place-making during the Antebellum and Post-bellum Periods. These studies indicate the usefulness and importance of moving beyond plantation boundaries in understanding the experiences of the enslaved.

Industrialization

The processing of grain, plaster and timber at mills; the extraction and processing of raw materials such as timber and iron ore at mines, forges and bloomeries; and the limited production of consumer goods, including pottery, furniture, and textiles had their roots in Virginia's Colonial Period. However, colonial industrial production was constrained by the limits of settlement and technology as well as government policies designed to promote British home industry. Although Virginia's population remained largely rural and economically focused on agricultural production, a wide variety of industries flourished in the years following the American Revolution. These developments resulted in regional changes in transportation infrastructure, the natural environment, settlement patterns, and labor relations. Archaeologists studying the rise of antebellum industry understand it as an extension of, rather than a replacement to, social relations of production that developed in plantation contexts (Ford 1998; Russ et al. 2000). In rural areas, 18th-century infrastructure such as grist mills and local byways gave way to post-Revolutionary merchant mills, canals, and improved roads that allowed for the efficient processing and transportation of flour in quantity. Merchant mills were capitalized by large-scale producers who added milling to their other economic pursuits. Gradually, these mill seats became commercial centers that provided access to commercial stores, fiber

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processing and textile production, threshing, plaster-grinding, sawmilling, blacksmithing, barrel making and distilling (Ford 1998:100-113, 145; White and Leeson 1999; Pogue 2011; Hofstra and Geier 2000). Benjamin Ford traced this transition in Albemarle County, focusing on the history of Thomas Jefferson's milling operation at Shadwell as it changed from an 18th-century grist mill to a factory specializing in textile production beginning in the late 1830s. He identified eight other antebellum textile factories in central Virginia in operation from 1820 and 1860 (Ford 1998:194-195). Ford concluded that the presence of industrial capitalism in the Virginia piedmont was not a radical shift in ideology, but rather an extension of the productive strategies of large agriculturists that was dependent on their demand for wheat processing services and to some extent on their supply of labor (Ford 1998:454-455).

Archaeological studies of extractive industries in Virginia have focused largely on the technology of clay, iron, limestone, coal and gold mining, the environment of rural landscapes, the effects of extractive industries on socio-spatial organization, and the experiences of laborers (Heite 1973; Hernigle 1991; Sanford 1993; Egghart and Harbury 1998; Barber and Wittkofski 1999; Ford 2000; Russ et al. 2000; Klein et al. 2004; Stroh and McDaniel 2005; Bell 2005b; Ellis 2010). Much of this work has been conducted at the level of survey, with emphasis on recording extant architectural remains and features associated with extraction, processing, storage, and transportation. Significant attention has been focused on the Longdale Mining Complex in Alleghany County, where nearly 80 sites were recorded between 1991 and 2003 (Russ et al. 2000; Bell 2005b:262). Longdale began as a cold blast furnace in 1827 surrounded by nearly 9,000 acres of timber, iron ore, and limestone, before converting to hot blast in 1854 (Russ et al. 2000:136; Stroh and McDaniel 2005:253). Initially, pig iron produced at the furnace was sent via flatboats and wagons to Lynchburg and down the James River to Richmond. The need for a more efficient transportation system contributed to the development of the James River and Kanawha Canal, with the western terminus completed in Buchanan in 1851 (Newlon and Pawlett 1985:7). More localized transportation needs were met by the construction of narrow gauge rail lines and roads linking the furnace operations internally, to nearby towns, and to the canal (Stroh and McDaniel 2005). The

Longdale complex and other mining companies boomed after the Civil War with the conversion to coke-smelting and the completion of efficient rail transportation.

Mines took a tremendous toll on the environments in which they operated, leaving scars on the landscape that include pits, slag piles, abandoned mine shafts, eroded slopes, widespread deforestation, and waters polluted by human, animal, and industrial waste. Remnants of buildings, road traces, abandoned rail lines, and canals associated with the processing, storage, and transportation of ores persist in the modern landscape. Archaeologists have used the abundance of patent medicine bottles at Longdale to consider how life in proximity to industrial sites, characterized by Russ and McDaniel (Russ et al. 2005:139-143) as "grim and harsh," affected the physical and mental health of workers. Further studies of how, and if, industrial managers sited and built worker housing with health concerns in mind, and of strategies that workers used for managing their own health, could provide useful comparative data for scholars studying 19th-century ideologies and health-care practices relating to the enslaved and the urban poor.

Extractive industries gave rise to residential neighborhoods and company towns that housed wage and enslaved laborers, paid or leased by company managers. Workers were isolated from local non-mining communities; living in industrial landscapes with their own internal hierarchy and spatial order based on occupation, skill levels, and ideologies of race and class. Elsewhere, historical archaeologists have analyzed a range of evidence from container glass to privies to the broader landscapes of company towns or company-controlled spaces to understand how managers defined and enforced hierarchies and how workers struggled against them (Mrozowski et al. 1996; Shackel 2000; Beaudry and Mrozowski 2001; Saitta 2007). Alison Bell's (2005) discussion of housing and consumer activity within three communities associated with Longdale suggests that imposed status distinctions were reinforced by differing sizes and materials used in company housing. In contrast, the house furnishings that laborers acquired while in residence, may have acted to counter imposed hierarchies and solidify group membership. Her work indicates the promise of in-depth comparative studies of antebellum industrial housing and artifacts not only for understanding internal divisions, alliances and tensions, but for understanding the extent to which

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industrialization, set within a Southern context, resulted in materially different lives for workers when compared to those of their northern or western counterparts. Attention to gender roles and choices within the highly masculine world of the mines could also prove fruitful.

Perhaps the most heavily studied arena of late 18th- and 19th-century manufacture is the potting industry. Few commercial potters operated in pre-Revolutionary Virginia, and of these, only a handful are known by name. While potters are known to have practiced their craft in workshops at Gloucester Point, Isle of Wight County, Jamestown, and James City County, much of the pottery production in pre-Revolutionary Virginia was limited to the apparently localized manufacture of low-fired, coarse earthenware—known as colonoware—that is found archaeologically on sites across the region from the late 17th into the 19th centuries (Noël Hume 1962; Kelso and Chappell 1974; Henry 1980; Parker and Hernigle 1990; Galke 1992; 2000b; 2009; Heath 1996; Russ 1999; Barka 2004; Bamann et al. 2005; Sipe et al. 2010).

Pottery production requires the availability of good clay sources and related natural and labor resources, proximity to transportation networks, and a population large enough to support a market for the wares. In addition to these “givens,” shifting social, political, and economic factors make some times and places more favorable than others for the industry. British control of the production of manufactured goods ended with the Colonial Era, and, in response, manufactories sprang up throughout the former colonies in the decades following Independence. Population increases, as well as growth in the business sector, provided craftsmen with urban markets. In the Valley of Virginia, demographic and economic growth resulted in demand for local goods along the length of the Great Road. Potters, like others in search of economic opportunity, migrated to these expanding urban centers and promising rural communities (Magid 1995:45-46; Russ 1995:176; Hunter and Goodman 2005:37).

In Alexandria, potter Henry Piercy found a burgeoning population anxious to purchase local—and thus cheaper—earthenware and stoneware. Moreover, the town provided a busy port that facilitated business outside of the city, favorable tax laws, and a community of skilled artisans capable of building a factory and supplying labor. Piercy began practicing his trade in 1792, the first of a long line of potters, including John

Swann and Benedict C. Milburn, who worked in the city into the 1870s (Magid 1995:50-51; 2004; 2012; 2013). Benjamin DuVal likely recognized many of the same advantages when he settled in Richmond and advertised for a potter in 1791 (Rauschenberg 1978:50). Further west, Benjamin Darst was among the first generation of potters that set in motion a tradition of small-scale pottery production that lasted in the Shenandoah Valley into the early 20th century.

In Alexandria, potters began to add stoneware to their repertoire in 1798, but more than a decade would pass before they went into large-scale production (Magid 1995:53-55). Beginning in the urban markets of Alexandria and Richmond—where the DuVal pottery was producing stoneware as early as 1811—preference for stoneware soon characterized consumer choice to the west as well (Rauschenberg 1978:57-66; Hunter and Goodman 2005). The manufacture of salt-glazed wares superseded earthenware production in the Valley of Virginia by the 1820s (Russ 1995:169). Numerous potters trained in the Germanic stoneware tradition settled in the Shenandoah Valley by the early 19th century, where they set up shop and trained apprentices. Strasburg, in Shenandoah County, in particular became a center of Valley production. The skills of these craftsmen were crucial to the development of stoneware production in that region. At the same time, the pottery industry of the British midlands produced refined earthenware in forms that out-competed local earthenware in quality and, except during times of embargo or high tariffs, in price (Russ 1999:223; Jolley 2004:103-104).

Nevertheless, pockets of earthenware production persisted in Virginia until after the Civil War. In Alexandria, Tildon Easton was making both earthenware and stoneware from 1841 to 1843. In Frederick County, ten pottery sites tested archaeologically all produced only earthenware, from as early as the late 18th century to the end of our period of interest (Park 2001; Jolley 2004:100). In other counties of the Valley, the Firebaugh (ca.1825-1867) and Rockbridge Baths (ca. 1830-1882) potteries in Rockbridge County, and the Noftzinger (ca 1850), Obenchain (ca. 1850-1877), and Spigle (ca. 1850-1880) potteries in Botetourt County have been identified as earthenware producers (Russ and McDaniel 1986:86; Russ 1990:462; Russ and McDaniel 1991:159, 162; Russ 1995:168; Russ 1999:232-233; Jolley 2004: 96; Magid 2004:249). In southwest

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Virginia, potters began producing earthenware by 1780, while stoneware manufacturing did not start until about 1850 (Espenshade 2004:262). The reasons given for the persistence of earthenware production vary from cultural conservatism to the widespread local availability of earthenware clays (Jolley 2004:100).

Significant archaeological investigation of the potters of Federal and Antebellum Virginia, combining archival research, field work, and laboratory analysis has been undertaken since the late 1970s, and much of the previous historical overview is a result of these efforts. In the archives, archaeologists have sought the identities, origins, business and personal relationships, and financial histories of potters. In the field, investigators have recorded kiln sites and collected artifact samples. In the laboratory, work has focused on describing the thousands of recovered wasters, pieces of kiln furniture, and other remains associated with potters' shops and factories, as well as identifying extant examples from specific potters in private collections and museum for comparison. What have these efforts yielded?

Beyond a volume of important documentary information relating to individual craftsmen, archival research is beginning to sketch out the broader economic and social contexts in which late 18th- and 19th-century potters worked. In the boom and bust years of the early Republic, entrepreneurs found themselves operating in an extremely fluid and competitive marketplace. Rural potters employed a variety of strategies to maximize their potential for success, including mobility, diversification, and reliance on kin networks (Russ 1995:169-171; Mullins 1996:157-159; Zipp and Zipp 2004:253-256; Mueller-Heubach 2013). In his survey of pottery manufactures of Frederick County, Jolley concludes that "Most...potters trained and employed members of their own family" (Jolley 2004:98). In fact, throughout Virginia, early industrial workers, both urban and rural, relied on kin to ensure some level of success (Rauschenberg 1978: 60-61; Russ 1995:168-169; 2004:157-158; Mullins 1996:169-160; Espenshade 2004:262-264).

Archaeological field work in Alexandria, Charles City County, Fredericksburg, Leesburg, Petersburg, Richmond, the Lower Valley, and Washington County has yielded a remarkable amount of information about the wares of individual potters and more limited findings on the technologies they employed to produce them (Pogue 1980; 1981; Russ and McDaniel 1986;

1991; Magid 1995; 2004; 2012; 2013; Russ 1995; Espenshade 2002; 2004; Hunter and Goodman 2005; Mullins 2006; Monroe 2008). While most Federal Era and Antebellum pottery sites in Virginia have been extensively disturbed or completely destroyed, two well-preserved kilns have been excavated. At the Firebaugh Pottery in Rockbridge County, excavations revealed the remains of an oval updraft kiln that included two opposing fireboxes, thirteen brick arches, and a brick platform. The arches connected the outside walls of the kiln with the platform and defined the kiln flues. The kiln was constructed with two main chambers. The firing chamber lay beneath the arches and allowed the upward transmission of heat, smoke and ash; the pot chamber above the arches contained stacked vessels undergoing the firing process (Russ and McDaniel 1991:162). The Rockbridge Baths kiln was circular, with two opposing fireboxes and both central and interior flues surrounding two D-shaped pedestals (Russ and McDaniel 1986:73; Russ 1995:176). Northeast of the kiln, the remains of a potter's shed and a small clay processing and storage area were also excavated, providing a rare glimpse into the spatial layout of a rural 19th-century pottery (Russ and McDaniel 1986:86).

Even on badly disturbed sites, quantities of kiln wasters, kiln furniture, and architectural remains of kilns and associated buildings have been recovered. In most cases, archaeologically-recovered pottery constitutes the majority of evidence for variability in types, forms, decorative techniques, and maker's marks produced by individual potteries. Even when a variety of extant examples remain in collections, they tend to under-represent utilitarian forms and over-represent marked or atypically decorated vessels. Much is now known about which potteries transitioned from earthenware to stoneware during the Antebellum Period and the timing of those transitions can be examined in some detail. Further, attributes of glaze, morphologies of rims, shoulders, handles, bases, and overall vessel forms, and maker's marks have been defined for a number of potteries in the hopes of enabling attributions (Pogue 1980; 1981; Magid 1995; 2004; Russ 1995; 2004; Hunter and Goodman 2005:44-58; Russ and Schermerhorn 2005). This process remains less complex for complete vessels, but even then the movement of potters between shops, the simplicity or lack of decoration, and common range of forms often make attributions uncertain.

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Most pottery that predated the Civil War was created for domestic use; however, potters also produced industrial wares in Virginia. Barbara Magid's work on the pottery related to Alexandria's early 19th-century sugar refining process has turned up a handful of earthenware sugar jars stamped with the name of J. Miller (Magid 2005:225, 227). Wasters of stoneware vessels produced for industrial use were discovered at the Trees Point Pottery in Charles City County, in operation from 1850 to 1860. Industrial wares recovered at the site include acid storage vessels, acid receivers, used for condensing hydrochloric acid, and "worm condensers" used with other vessels and crucibles. Chemical capture and storage vessels such as these had a variety of industrial applications in the Antebellum Period including textile manufacture. Marks on wares suggest the possibility that this pottery was produced for sale to retail merchants in nearby Petersburg, as well as to buyers as far away as New York (Pogue 1981:123, 125,129).

While earthenware and stoneware production has received much attention from archaeologists and material culture specialists, more remains to be done. In 1999, Kurt Russ challenged archaeologists to go beyond grouping utilitarian wares into "stoneware" or "earthenware" categories and, at minimum, describe them more fully (Russ 1999:221). With the wealth of comparative data now in hand from pottery sites across the commonwealth, an on-line database could be created that includes descriptions of forms, pastes, glazes, marks, and other diagnostic attributes, associated images, and brief histories of potteries. A resource such as this would be an important tool for moving pottery identification forward. In addition, attribute analyses based on visual criteria could be complemented by chemical and mineralogical analyses of pastes and glazes that could further help to refine identification, and allow researchers to move closer to answering questions relating to marketing and distribution networks over time and space. Further archival research using potters' accounts, ledgers and related resources could also help answer questions of consumer preference, availability, and distribution (Jolley 2004:103; Russ 1999:222). The study of Virginia pottery could also benefit from a more regional approach such as one recently applied by Mueller-Heubach (2013) for the James River potters to better understand networks within which potters operated, and the landscapes that they created and that shaped their craft.

Transportation

Migration, urbanization, and industrialization were significantly affected by advances in transportation that intensified during the Antebellum Period. Networks of local and regional roads, developed in the 17th and 18th centuries, were improved and augmented through the addition of toll bridges and turnpikes. New canals and rail lines led to the creation of new towns and tied existing commercial and industrial hubs to each other and to the broader countryside (Marrs 2009:55). Virginians invested millions of dollars in transportation improvements of every variety during the Antebellum Era (Moore 1996:147; Heineman et al 2007:202-204). Much of the labor required for the creation and maintenance of these infrastructure improvements was provided by enslaved laborers hired out from plantations. Enslaved men also worked as carpenters, mechanics and porters for the railroad companies (Daniel 1985:110; Marrs 2009:53-83).

Public and Private Roads

Many of the roads that existed in colonial Virginia had evolved from longstanding American Indian footpaths (Newlon and Pawlett 1985:18; VDOT 2006:6; Hofstra and Geier 2000). For much of its earliest history, the many waterways that dissected the Tidewater served the transportation needs of the colony well (Rainbolt 1969:344; Reps 1965; 1972; Isaac 1982; Harpole and Brown 2002:58; VDOT 2006). As settlement proceeded inland and population grew, roads became crucial to support commerce and travel. The growing popularity of grain agriculture, especially in the expanding Valley of Virginia, required transportation routes that connected farms, towns, and mills for processing (Hofstra and Mitchell 1993:634-637; Hofstra and Geier 2000; Kimball 2000:16-17; Mitchell 2000:36). The earliest roads were not surfaced, and quickly became impassable in poor weather. Road maintenance was the responsibility of private citizens who were required to maintain a portion of the road convenient to them, using their own tools and supplying their own labor, often enslaved, for about six days each year (Pawlett and Boyd 1993:1; Daley 1999:13; Lukezic 2002:97,101; Pawlett 2003:3-4; VDOT 2006:5-7; Ptacek 2013a:122-131).

Improved roads in Federal and Antebellum Virginia came with the introduction of turnpikes, a term that

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refers to roads with enhanced artificial surfaces and which collected tolls (Hunter 1963:192-194; Newlon and Pawlett 1985:6; Daley 1999:11; VDOT 2006:9, 13). The need for these roads became evident as settlement extended into the piedmont, above the fall line of rivers and, especially after 1730, westward beyond the Blue Ridge Mountains (Daley 1999: 13; Pawlett 2003:5-7). The Fairfax and Loudon Turnpike Road Company and other private companies evolved during the 1790s (VDOT 2006:9). They reached their zenith during the Antebellum Period with the of the Little River Turnpike Company, the Staunton and James River Turnpike Company, and the Valley Turnpike Company (Newlon and Pawlett 1985:6; Pawlett 2003:15-16; Young 2003; VDOT 2006:9-10).

Turnpikes were both costly and time-consuming to create. Private funding had traditionally financed road construction in the tidewater region, but municipal acts were needed to build roads in the less-populated western counties (Newlon and Pawlett 1985:6, 14). While efforts in support of national government oversight and funding were sought, these efforts were abandoned in the early 19th century (Newlon and Pawlett 1985:14). The construction of major roads became the responsibility of private turnpike companies, who were funded through a combination of tolls and local investors (Newlon and Pawlett 1985:6; Majewski 2000:8; VDOT 2006:5-10). The “Little River Turnpike,” leading west from Alexandria, was one of the earliest turnpike companies in the United States, incorporated in 1802 and operating into the mid-1890s (Newlon and Pawlett 1985:6). A wide range of engineering skills characterized the labor of private companies, and the resulting roads reflected this variation (Hunter 1963:177-179, 199). Because turnpike construction was more sophisticated, the labor tithe did not apply (Newlon and Pawlett 1985:35-36). Experienced contractual labor was needed for maintenance and was funded through tolls (Lukezic 2002:101; Newlon and Pawlett 1985:35-36).

Aware that the state was lagging behind others in total miles of existing public roads, the Virginia Legislature took action after the War of 1812. In 1816, a Board of Public Works was created to administer and distribute funding for road construction with a Commonwealth-wide perspective (Hunter 1963:178; Newlon and Pawlett 1985:7, 14; Daley 1999:13-14; Lukezic 2002:98; Pawlett 2003:21). It was resoundingly successful; possessing only

8 turnpikes prior to its creation, the Board of Public Works administered the construction of 47 turnpikes by the beginning of the Civil War (Newlon and Pawlett 1985:7). Roads such as the Northwestern Turnpike, which roughly follows the orientation of modern Route 50 and stretched from Winchester to the Ohio River, linked Virginia to the west (VDOT 2006:11).

Turnpike improvements in roadbed construction included the development of macadamized surfaces, the use of Telford’s surfacing system, and the creation of roads constructed of wood planking. Invented by Scotsman John Loudon Macadam (or MacAdam), macadamized roads were an important early 19th-century innovation, built slightly above grade, with a shallow camber, and consisting of a single seven-to-ten-inch layer of small broken stones (Evans 1981:5-6; Pawlett 2003:23; Ford and Thompson 2013: 20-21; VDOT 2006:13; USDTFHA 2015). The stones would compact over time to form a solid surface that would shed water to drains located on either side of the road. Telford roads consisted of a foundation of larger stones of uniform size, laid to create a shallow camber, overlain by two layers of smaller stones that filled the gaps and created a uniform surface (Pawlett 2003:24; Ford and Thompson 2013:12-13). Drainage ditches followed the route of the road on either side. The Telford surface was the most expensive, requiring intensive hand labor (Hunter 1963:200).

Introduced in the United States in 1822, the technique of producing a macadamized surface was first used in Virginia in 1824 on the Fauquier and Alexandria Turnpike (Hunter 1963:192-196). A portion of this road, the second macadamized road in the country behind the Boonsboro Turnpike in Maryland, was excavated in Buckland in Prince William County (Rivanna Archaeological Services 2013:30, 140-155). Small (0.75-3 in. diameter), angular stones made up the 1824 surface that covered an earlier roadbed dating from about 1812 to 1818 (Ford and Thompson 2013:152). The Lynchburg and Salem Turnpike Company attempted its own interpretation of the macadamized road in 1826 (Hunter 1963:196-196; VDOT 2006:14). It incorporated a seven-to-ten-inch thick top layer of crushed quartz and flint, materials which MacAdam himself opposed (Hunter 1963:195-196). The expense of the road construction financially doomed the fledgling turnpike company. William Radford, president of the Lynchburg and Salem Turnpike Company, appealed to

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the transportation board to allow the turnpike to remain unpaved west of Bedford (Hunter 1963:196). It seems that few road engineers in Virginia understood the principles of MacAdam's technique (Hunter 1963:196).

Plank roads offered an inexpensive alternative to macadamized surfaces, and were popular in the decades leading up to the American Civil War (Hunter 1963:196; Newlon and Pawlett 1985; Lukezic 2002:100-101). These roads featured boards that were placed parallel to traffic flow, atop a prepared surface of earth and were also referred to as "corduroy roads" (VDOT 2006:14). During the mid 19th century, they attracted investment and proved popular, but offered a short-term solution to transportation needs (Newlon and Pawlett 1985:7). Plank roads proved especially widespread in the piedmont, south of the James River, where turnpikes were lacking. Amelia County was the first to petition the General Assembly for a plank road charter in 1833. The road was conceived to proceed 25 miles to Petersburg, but was never constructed (Hunter 1963:196).

Turnpike revenue suffered along routes of new macadamized roads as developing railroads provided more dependable travel conditions and faster travel (Pawlett 2003:33-34; Young 2003:2-3, 12). The ultimate demise of the turnpike company, however, coincided with the Civil War. The movement of troops, wagons, cannon, and other heavy equipment and materials over the turnpike surfaces proved devastating. In addition, the turnpike companies were unable to maintain roads given the intentional destruction of bridges and road surfaces by both armies as a strategy to impede the enemy.

While little archaeological study has been undertaken of public roads in Virginia, roads constructed within plantations and farms have received limited attention. These roads could stretch for miles. Their construction and maintenance continued to be the responsibility of landowners, who often employed enslaved men in this task during the winter months. Like their counterparts in the larger world, these internal roads structured economic activities, social relations, and aesthetic experiences within private landscapes.

No systematic survey of the archaeological excavation of plantation roads within Virginia has been conducted. Extensive research at Monticello and Poplar Forest estates has uncovered materials related to road construction during Jefferson's ownership; evidence of ornamental plantings and structures that lined roads; and the routes

of the roads themselves (Kelso 1990:12-14; Kelso et al. 1991:16, 47; Heath 2013; Wheeler and Kelley 2015). Documentary evidence indicates that by the 1840s, later owners of Poplar Forest routinely paved internal roads. Enslaved men worked nearly year-round to keep these roads passable, putting aside this labor only during the summer months when grain harvesting took priority. In addition to paving and ditching activities, they hauled tons of stone for construction, repairs, and drainage along plantation roads (Lee 2016:84, 118). Portions of roadbeds constructed of medium-sized quartz cobbles have been uncovered in several locations at Poplar Forest, but as yet none have been definitively dated to the Antebellum Period.

Paul Marriott (1998:1-4) argues that roads are one of our most endangered cultural resources in part because many of them follow courses that have been in use for hundreds of years and which lay beneath modern, heavily-used transportation routes. Because of their continued and contemporary use, roadways are easily altered or destroyed with little regard for their historic integrity (Marriott 1998:25-33). The National Task Force for Historic Roads (NTFHR) delineates three main varieties of historic roads, based upon the primary rationale for their creation: engineered, aesthetic, and cultural (Marriott 1998:11-17).

Engineered roads were designed to move people and goods efficiently and safely; aesthetic roadways enhanced a traveler's experience, taking advantage of vistas, natural resources, and access to public parks; and cultural roads evolved organically in response to tradition or for necessity (Marriott 1998:11, 13, 16). While archaeology can contribute to the interpretation of each of these varieties, it is perhaps the cultural roads where the field can provide the greatest appreciation and evaluation of significance, especially along routes that provided sporadic or clandestine use, those routinely traversed by disfranchised groups or distinct communities (Harpole and Brown 2002:64).

Craig Lukezic has argued that roads merit more archaeological attention, either as "elongated archaeological sites" or as "the cumulative material culture of an entire region." In Nevada, studies of artifact-discard patterns have proven useful for understanding the chronology of road use and construction. Combining documents, oral histories, and archaeological data, roads can also be used as the anchors for local and regional studies of economic

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and social networks (Lukezic 2002:102-103). Particularly compelling for Virginia is the promise of studies that query roads, both formal and informal, (and river routes, see below) for their potential as efficient pathways of interaction for enslaved men and women, through which they established, maintained, and extended economic and kin networks.

Canals

After the American Revolution, there was enormous interest in improving transportation systems in the Commonwealth, especially in developing better access to growing markets beyond the Blue Ridge Mountains in both the Shenandoah and the Ohio Valleys (Newlon and Pawlett 1985:6, 14, 22; Lukezic 2002:97; Pawlett 2003:13-15). Improving waterway routes through the construction of canals, and charting new transportation lines through the spread of rail lines, became the primary means through which Virginians expanded east-west networks of trade and transportation.

Given poor road conditions and the difficulties of overland travel, colonial Virginians privileged water travel. In coastal areas, shipping was an efficient and relatively low-cost means of moving bulk commodities, like tobacco, from planter to port. Beyond the fall line, the movement of goods was largely limited to seasonal passage of canoes and bateaux, and as settlement pushed inland, the limitations of transportation were acutely recognized (Pawlett 2003:13-15). By the late-Colonial Period, influential citizens such as Washington and Jefferson supported the development of canals (Newlon and Pawlett 1985:6, 15; Pawlett 2003:13-14; Trout 1995).

Early river improvement projects included removing obstructing trees and stones and creating sluices through falls and shoals. In the 1810s, the General Assembly began authorizing individuals to take over maintenance of waterways and to charge tolls for the sections of river they controlled. Improvements expanded to include the construction of wing dams—low, dry-laid piles of river stone extending from shorelines that forced water into sluices and improved their navigability—and locks that provided bateaux with clear passage around mill dams that competed for water and impeded traffic along riverbanks (Trout 1995:20). Later canal systems varied by topographical challenges, but could include structures such as aqueducts, culverts, bridges, sections of artificial

waterways moved away from natural watercourses, and accompanying towpaths. By the late Antebellum Period, thousands of miles of Virginia's rivers were "improved" by navigational works stretching from the Chesapeake to the Allegheny Mountains (Trout 1973:141). The stories of a few companies and canals are considered here.

A variety of canal companies came into existence in the late 18th century with the goal of improving navigation. Incorporated in 1784, the Dismal Swamp Canal and the Potowmack Canal Companies followed very different trajectories (Peterson 1930:302; Newlon and Pawlett 1985:6; Dent 1986:50; Pawlett 2003). With work commencing in 1787, the Dismal Swamp Canal was the first project to reach completion, opening to traffic in 1794. It linked the Chesapeake Bay and the Albemarle Sound, and is still in use today. It is, however, a level water canal, requiring no locks to raise or lower elevations to facilitate shipping. In their quest for lucrative western markets, the Potowmack Canal Company and The James River Canal Company—incorporated in 1785 and a major competitor—faced the challenge of routes that spanned rugged terrain and dramatic topographic features (Dent 1986:52; Heinemann et al. 2007:165; McFaden et al. 1992:92; Majewski 1997:14, 16). The Patowmack Company successfully completed a segment of canal bypassing the Great Falls of the Potomac, but beset by financial difficulties, turned over its assets to The Chesapeake and Ohio Company in 1828. The James River Canal Company suffered a similar fate, folding in 1820 (Heinemann et al. 2007:165). Fifteen years later, the Commonwealth chartered the James River and Kanawha Canal Company with the goal of linking eastern Virginia to the Ohio River. Sectionalism delayed its completion until 1851 (Majewski 1997: 15-16; 2000:10, 127-136).

Archaeological research has been conducted on Virginia's canal systems and their associated resources (Browning 1981; Dent 1986; Barr 1989; McFaden et al. 1992; 1994). Perhaps the most anthropological in scope, investigations of the Great Falls by-pass canal (part of the Patowmack Canal system) were undertaken in the late 1970s and early 1980s under the oversight of the National Park Service, Southside Historical Sites, and the Department of Anthropology at the University of Maryland, College Park. This canal complex is the first attempt at extensive construction undertaken in the United States. Excavations at the complex recovered preserved evidence of early technology, entrepreneurial

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innovation, and commercial development. Work included study of the wing dam, guard gates, the canal prism, the holding reservoir, and a series of locks. Associated industrial sites—a sawmill, iron forge, and gristmill—as well as the remains of the village of Matildaville, that grew up along the holding reservoir in the 1790s, were also explored (Dent 1986:50, 53-60). The canal revealed evidence of technological experimentation and innovation that set it apart from its European antecedents. Dent attributes these changes to the need for early 19th-century entrepreneurs to adopt non-traditional solutions to unique challenges in terrain and to alter technology to meet deadlines in a highly competitive environment. Lessons learned from the successes and failures of this canal informed future infrastructure development across America (Dent 1986:60-61).

The Patowmack Canal Project represents the archaeological remains of some of the earliest technology of long-distance canal construction and operation in Virginia. Research undertaken by the College of William and Mary in Buena Vista involving the North River Navigation Company (NRNC), represents some of the most recent. Associated with the broader development of the James River and Kanawha Canal, the transportation network established by the NRNC included the canal, locks, and a series of aqueducts that allowed the system to bypass local creeks (McFaden et al. 1992:25, 99-102). Begun in 1851, the canal system was completed in 1860. Three aqueducts and two locks, made of locally quarried limestone, were recorded within the project area. Archaeological testing was undertaken at Lock #4 to determine its level of preservation which was found to be poor (McFaden et al. 1992:146-150). The canal system brought prosperity to the area by connecting farmers and natural resources to eastern markets and providing economic stimulus to the local economy. It also laid the groundwork, quite literally, for future transportation innovations. In the 1880s, the old towpath and aqueduct abutments were incorporated into the design of the railroad that replaced it (McFaden et al. 1992:155-156).

A third project undertaken in the late 1990s, documented aspects of the material culture of canals in antebellum Virginia. A cooperative effort between Gray & Pape, the Virginia Canals & Navigation Society, the Virginia Department of Historic Resources, and the Archeological Society of Virginia resulted in the

discovery and excavation of two canal boats abandoned in a portion of the James River and Kanawha Canal in the late 19th century. While one boat was poorly preserved, the bottom, partial sides, and rudder of the second were intact. Artifacts were found in association with the latter, providing some clues about its contents and equipment (Trout and Jaeger 1998).

In 1973, William Trout published a list of research questions relating to the antebellum canal system (Trout 1973). His questions focused on understanding the history of specific canals, the technologies of their construction, and current levels of preservation. Further research on the development of canal technology will improve our understanding of the factors—material, economic, and political—that influenced infrastructure development during this period. Broader questions are also appropriate. While ultimately short-lived, canals represent an important episode in the development of long distance transportation networks in Virginia. Their construction required political will, capitalization, sophisticated engineering, and large labor forces, many of which comprised free black and enslaved workers. Like road systems, canals gave rise to towns and villages that benefited from proximity to goods transported on them, personal travel opportunities, and small industries that grew up alongside them. Widening our scope beyond the canals themselves to consider the social and economic networks that they enabled can enhance our understanding of the development of antebellum communities.

Railroads

In 1829, the arrival of Britain's "Stourbridge Lion" steam engine in Pennsylvania ushered in a revolutionary mode of transportation (Newlon and Pawlett 1985:15). Its trial run proved too much for the Pennsylvania rails upon which it was situated as they lacked the strength to properly support the cumbersome engine which weighed over seven tons. However, the technology impressed chief engineer Claude Crozet, who advocated for railroad construction over a canal system for the Commonwealth (Newlon and Pawlett 1985:15-16; Pawlett 2003:31; VDOT 2006:14). The variety of potential power sources for the innovative railroad system—horses, mules, steam engines, and even wind—divided railroad proponents and delayed the implementation of their construction in the Old Dominion (Newlon and Pawlett 1985:16).

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At first, speculators were skeptical that railroads would ever supplant travel by road or canal (Turner 1948:239), but the success of railroads left some turnpike companies struggling (VDOT 2006:14).

Railroads affected local and regional economies in diverse ways. They improved land value, especially for those properties near stations. In some cases communities grew up around them or at those points where they crossed economically significant roadways or turnpikes (Daley 1999:1-2, 67-68, 81; Marris 2009:325, 328, 340-341). Some community members found the railroad an inconvenience, expressing concern over sparks from the smokestacks, noise, livestock deaths, and construction alterations that adversely impacted the surrounding landscape and community (Daley 1999:68-70; Marris 2009:336-340). Others, whose communities were bypassed by this new mode of transportation, commonly faced dire economic consequences (Marris 2009:326-328, 330). Railroads provided opportunities for shipping merchandise, for transporting people, and for enterprising locals who catered to travelers' and rail workers' needs (Daley 1999:81, 94).

Freight, especially coal, was the bread-and-butter of most early Virginia railroads. Compared to canals, railroads offered more advantageous rates for shipping agricultural products and iron, and allowed farmers to provide high-paying customers with produce at greater distances (C. Turner 1948:247; Marris 2009:331). In contrast, lines such as the Richmond, Fredericksburg, and Potomac line, and the Virginia and Tennessee line, derived more revenue from carrying passengers than freight (C. Turner 1948:243). First and second class levels of travel provided different levels of comfort and convenience for passengers (Marris 2009:272-273). Laborers, both free and enslaved, were shipped *en masse* as merchandise and were relegated to freight cars (Marris 2009: 273-274, 356). Enslaved personal servants typically rode in first- or second-class rail cars beside their masters, if present; or in a separate, third class, servant, or baggage car to avoid other, free passengers from feeling offended by their presence (Marris 2009:274-277). Free African Americans could ride in the baggage car or be accommodated in a car set aside for them and that was shared by smokers (Marris 2009:276). Reflecting their status as second-class people and property in American culture, enslaved people were charged lower fares (half price) for travel (Marris 2009:279-281, 306). Travelers

on foot benefited from the rail road, as they quickly discovered that rail lines offered reliable, albeit perilous, routes to their destinations (Marris 2009:10, 308, 342-346).

Enslaved labor was preferred for the challenging conditions that railroad construction workers endured, including difficult and dangerous physical labor in all kinds of weather (Marris 2009:41-160, 207-208, 246-247). Other temporary jobs existed, such as clearing debris, soil, large stones, rockslides or snow from the tracks (Marris 2009:152-153, 223, 246). In addition to their higher wages, free laborers had the ability to strike, rights which frustrated engineers constructing or maintaining the lines (Marris 2009:141, 155-160). Accordingly, enslaved men, hired through contracts made with their masters, made up the majority of the railroad labor force, serving both as construction workers and as servicemen (Marris 2009:160-161). In 1855, William Cotrell, a free black railroad worker on the Virginia and Tennessee line, used his experience and skills to stop a train engine after the frightened engineer jumped from the engine (Marris 2009:247-248).

Sometimes railroad workers were boarded in existing structures, such as the 1849 members of the Richmond and Danville Railroad staff, saving construction costs (Marris 2009:144). Housing conditions could be miserable. One primary source indicated that workers camped on the roadside each night, and railroads noted a reduction in the health, productivity, and well-being of their labor force under such conditions (Marris 2009:142-145). Injuries and sicknesses that befell enslaved laborers can be inferred from the medical costs deducted from the contracts paid their masters (Marris 2009:150-152). Unfortunately, very little information exists on the life in early road, turnpike or railroad construction camps.

The Old Dominion remained committed to the idea of local, private funding for railroad construction. As was the case with turnpikes and canals, private railroad companies emerged, but the Commonwealth also provided some financial support for rail line endeavors (C. Turner 1948:239; Majewski 2000:10). However, the persistence of so many private railroad companies, the novelty of the technology, and the lack of government oversight resulted in a frustrating variety of railroad gauges with significant consequences that prevented the joining of various routes and connecting the regions of Virginia (Majewski 2000:134). Despite technological

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and bureaucratic hurdles, limited resources, and strong political support for the continuation of canal construction, by 1860, Virginia was surpassed only by Georgia amongst southern states in terms of miles of railroad tracks constructed (C. Turner 1948:247). Miles of track did not equal efficiency, however. At the eve of the Civil War, the Virginia countryside was littered with unprofitable and unfinished railroads and canals (Majewski 2000:10). In his study comparing the railroads of Virginia and Pennsylvania, John Majewski (2000) demonstrated that Pennsylvania's railroads, funded through municipal government and urban capitalists, avoided the sectionalism which plagued the rural Commonwealth's transportation efforts.

Education

Throughout the first half century following the founding of the United States, support for public education floundered as various stakeholders debated curricula, the role of religious instruction, the relationship between primary and secondary schools, and the nature of state and federal responsibility for the instruction of its young citizens (Howe 2002:23). If the fledgling United States was an experiment in democracy, then its early schools represented its laboratory in which developed curricula reflected the young nation's goals for an educated electorate and a source for future elected officials.

Archaeological sites that once served as educational facilities are an important resource for interpreting Antebellum society. Early educational institutions, such as single-sex academies and seminaries, trained elite and middle-class young men and women. Although there were some exceptions, antebellum institutions typically forbade the education of African Americans (Woodson 1915:308; Allen 1996; Jabour 1999; Skowronek 2010:274-276; Baumgartner 2011:8-9). Women activists played a prominent role in addressing this deficiency in American education (Baumgartner 2011). While this (oftentimes violent) struggle to educate all Americans gradually advanced, middle class free blacks employed informal and discreet means to educate their children and themselves (Baumgartner 2011:10-11, 25-26, 64-66, 90-108, 121, 151-153).

Many young Americans learned to read at home, where the family Bible served as a textbook (Kaestle 1983:4; Howe 2002:18). A more formalized educational

setting was furnished by Sunday schools, which provided many Virginians with their sole opportunity for reading instruction. Sunday school originated in Britain in the 1780s, and as the practice spread in the United States, it was responsible for providing Bible-based literacy for hundreds of thousands of young Americans by the second quarter of the 19th century (Howe 2002:13). However, even among Christians, there were widely-differing views on basic educational precepts (Herbst 2002:319-328, 334-335), and the creation of public schools that emphasized reading, mathematics, and writing independently of Biblical references eventually proved palatable to a diverse citizenship (Herbst 2002:333).

Schools typically served as the center of a community and proved a popular location for community gatherings during non-school hours (Tyack 1974:15; Beisaw 2009:58; Rotman 2009:71-74, 80-85). It was not until after the Civil War that national standards for curricula and a publically funded system were implemented, making public schooling available to all Americans, albeit in segregated facilities (Hood 1971:171; McDaniel et al. 1994:32-34; Gulliford 1996; Moore 1996:143-148; Nybakken 1997:164; Howe 2002:6; Rotman 2009:71). Antebellum schools reflected community values at a local level and demonstrated a wide variety of approaches to instruction and educational curricula (Beisaw 2009:55-58; Rotman 2009:69-70).

Primary school buildings were often constructed from inexpensive materials on land that otherwise had low value for agricultural, transportation, or commercial purposes (Kaestle 1983:13-14; Beisaw 2009:55-56; Rotman 2009:13-14). During the Antebellum Period, few resources were available to equip schools and, in the absence of standards, teachers struggled with pupils of varying ages and backgrounds, some of whom began their education as toddlers (Rotman 2009:70-71).

During the opening decades of the Early Republic, education was deemed vital to the success of the nascent American democracy. Creating a unified culture from the multi-ethnic population that characterized the United States was an important goal, and a challenge that few institutions outside of schooling could address (Kaestle 1983:4-7; Breen 1988:73; Herbst 1996:12; Tyack 2001:332-336). A well-educated electorate seemed imperative for the fledgling democracy, not only so that its male citizens might make informed decisions when choosing elected officials, but because those same citizens

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might one day hold office themselves (Kaestle 1983:6; Howe 2002:4, 13, 23). The education of women was seen as crucial for their future roles as household managers and mothers of future citizens, and because some women became teachers themselves (Seaman 1996:2-4).

Early political leaders tried to shape educational policy based on their own values and experiences. Unlike most Americans of his social class, George Washington had not received a formal education in England as a young man; a reality about which he at times felt self-conscious. To ensure that future generations of Americans had better opportunities for a quality education, George Washington advocated a national university, and personally donated stock from the Potomac River Company with this goal in mind (Asch 2015:80; Howe 2002:2; Madsen 1962:355). However, Congress failed to create George Washington's national university before his donated stock became worthless in 1823, after the company went bankrupt (Howe 2002:2; Madsen 1962:355). Thomas Jefferson advocated a state-supported school system that provided a mere three years of primary education (Kaestle 1983:6-9; Howe 2002:4). Republican ideals prevented Jefferson from making such education compulsory, but, to encourage reluctant scholars (in 1817), he recommended that youngsters "...who remained illiterate after the age of 15..." should lose their citizenship (Howe 2002:4). The Virginia Legislature rejected Jefferson's proposals for public education, and he shifted his attention to higher education (Howe 2002:5). In the interim, denominational academies filled the abyss wrought from dithering legislatures (Howe 2002:23).

In the first half of the 19th century, while the debate over the role of state and Federal government in education continued, academies and colleges became a veritable battleground, as faculty, students, and administrators negotiated their respective responsibilities for curriculum, discipline, student surveillance, housing, and food (Galke 2006; 2010; Galke and Means 2008). Secondary institutions increased in number throughout the late Colonial Era and into the Early Republic (Hessinger 1999:237). Yet the nature of the student body made the establishment of an earnest academic setting elusive. The few primary schools in existence lacked any curriculum standards or age criteria (Rotman 2009:69). As a result, the degree of scholarship amongst the entering freshmen tended to be highly variable. Incoming pupils at higher educational institutions varied in educational

background, social experience, and age, with some freshmen as young as 10 years of age or occasionally younger (Herbst 1996:12-13). An intense struggle among these fledgling institutions for tuition-bearing students ensued and admissions standards were compromised to accommodate immature pupils who were unprepared for the structure, responsibilities, and instruction that they encountered in college (Bailyn 1960:2, 38; Allmendinger 1971:383).

The old European model of the cloistered academic community steadily succumbed to the realities of an antebellum student body who insisted upon unfettered access to nearby towns and their diversions (Allmendinger 1971:381-385; Herbst 1996:8; Geiger and Bubolz 2000:88-89; Galke 2006; Galke and Means 2008). It was this breakdown of cloistered academic seclusion that researcher David Allmendinger (1971:385-387) credits with contributing to "...a crisis of disorder..." during the early 19th century. This "crisis" led to the formation of a formal committee in Virginia with representatives from various educational institutions. The committee solicited the Virginia legislature to grant college administrators with the power to subpoena witnesses in the pursuit of formal inquiries (Crenshaw 1973:98).

As the mid 19th century arrived, denominational academies became increasingly irrelevant. Formal college degrees became preferred. After 1840, publicly funded high schools became firmly established, as the demographics and needs of the student body were transformed (Bailyn 1960:40; Bourdieu 1988:128-129; Nybakken 1997:183; Howe 2002:16, 24). Although there were a number of exceptions, the vast majority of black Americans would have to wait for Reconstruction to attain a modicum of American democratic ideals of education.

Excavation of educational institutions, both primary schools as well as secondary, demonstrate that low artifact counts characterize the assemblages of these sites, especially if the structure(s) under investigation were log or frame. This ephemeral evidence can be of some concern as the discovery of sites related to educational activities must, therefore, rely heavily upon historical research and a more sensitive interpretation of any survey data gathered than is true for most domestic sites. When compared to other domestic sites, artifact assemblages dominated by architectural materials characterize these educational structures. The proportions of ceramic and

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utilitarian glass artifacts are quite low. Schools were often placed on land that was not considered economically viable, a fact that reduces the potential for these sites to be discovered using traditional archaeological predictive models (Rotman 2009:70). As a result, many cultural resource management surveys routinely miss identifying these sites (Baumgartner 2009:12). Further, when located, traditional evaluation methods based upon the density of material, or the presence of high quantities of domestic material, may fail to recognize the material culture signature of schools (McDaniel et al. 1994; Gibb and Beisaw 2000; 2009:49-50). The powerful interpretive potential of educational institutions, or any site for that matter, does not derive solely from high artifact counts but is realized from a sophisticated understanding of the social and political context in which the institution was created and served (Baugher 2009:11-13; Beisaw 2009:55-58, 64-66; Galke 2010; Lewis 2010:33-35; Skowronek 2010:282).

In addition to primary schools, 15 existing Virginia colleges and universities were founded prior to the Civil War (Schulman 2003, note 5). Excavations have been undertaken at the 18th century Bray School, located on the modern grounds of The College of William and Mary, and in the historic Wren Yard. There, archaeologists have uncovered the remains of dependencies including an 18th-century brew house and a 19th-century kitchen, as well as fence lines, garden-related features, and middens associated with college life (Higgins and Underwood 2001; Kostro and Edwards 2014).

A lengthy program of archaeological investigations on the antebellum campus of Washington and Lee University (44RB489) has included intensive excavations at the site of the Colonial-era, log cabin academy built in 1780 as well as some test excavations on its 19th-century campus (McDaniel et al. 1994; Galke 2006; 2010; Galke and Means 2008). After fire destroyed the main academy building in 1803, the institution reluctantly relocated to a location within the town limits, a move for which the townspeople had lobbied (Galke 2010:168-169). Unlike the previous, stone 18th-century academy building, the architects placed the student quarters on the first floor of the educational structure, ensuring that faculty might better observe student behavior (Galke 2006:23-24; 2010:171). Rules published by the college in 1839 permitted faculty to enter student rooms at will, day or night (Galke 2006:24; 2010:171).

Excavations conducted on a portion of the 19th-century Washington Academy Campus focused upon a structure known as "Union Hall." Union Hall was used for both instruction and for student quarters (Galke 2006:22; 2010:171; Galke and Means 2008). Distinct differences in the nature of artifacts recovered from the 18th-century campus and the 19th-century "in-town" campus reflected a dramatic change in campus culture. The 18th-century academy campus contained marbles, smoking pipes, and evidence of games that used dominoes and dice. In stark contrast, archaeologists recovered absolutely no evidence at the 19th-century campus for any of these former activities. Either increased scrutiny prevented students from engaging in them, or the proximity of town provided an alternative for their engagement (Galke 2006:26; 2010:177-179). Material evidence for discipline is suggested by the discovery of a bone-handled pointer or ferrule (Galke 2006:26; 2010:179). This object was used by a professor to emphasize specific aspects of various lessons. In addition, it was likely used to dispense corporal punishment.

Union Hall was replaced in 1835 by a single-story brick dormitory for students. It was a structure specifically designed to facilitate scrutiny and control of the students upon a landscape that further enhanced such surveillance (Ruffner 1904:28-29; Loth 1967:41; Galke 2006:22-25; 2010:174-176). No windows were allowed on the front, town-facing façade. The interior of the brick dormitory possessed neither connecting doorways nor hallways. Within six years faculty housing was built immediately adjacent to the dormitory to provide another convenient means of 24-hour surveillance of the student body.

Proximity of the town to the 19th-century campus may have encouraged college officials to more strictly enforce rules than their counterparts had been able to do at the 18th-century campus. Excavations on the campus of Washington and Lee University demonstrated the institution's evolving approach to the responsibilities of school faculty toward controlling student behavior and concern regarding the influence of nearby town distractions (Galke 2006; 2010). These were issues being faced by academic institutions throughout Virginia and the United States (Ruffner 1893:5-6; Wagoner 1986:172; Hessinger 1999; Geiger 2000:10-13; Jackson 2000; Pace and Bjornsen 2000; Howe 2002:5-6; Pace 2004:82-97; Galke 2006:24; 2010:165-167). Undertaken at an institution with a long history in a single location,

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archaeological investigations at Washington and Lee's late 18th-century campus (McDaniel et al. 1994) supplemented by test excavations on the succeeding 19th-century campus (Galke and Means 2008), have shown the evolving roles of school administrators and pupils, as the academy progressed from a struggling sectarian academy to a secular institution.

The pressure to construct new facilities, the continued growth of academic institutions and infrastructure, and the re-use and repurposing of educational buildings and their associated landscape make our academic environments especially vulnerable cultural resources. The landscape of campuses and schools are often altered to construct facilities to improve athletics, create parking, increase administrative space, build new or expanded academic facilities, and other support structures. Such improvements are often made without regard to, or interest in, existing underground cultural resources, historical architecture, or the historic landscape, even when such improvements fall under Section 106 purview. When cultural resources are inadvertently encountered, sometimes by something as mundane as landscaping activities or as intrusive as new construction undertakings, many institutions find themselves unprepared, possessing neither preservation plans nor means to assess the impact of improvement projects upon existing cultural resources (O'Gorman 2010; Wilkie et al. 2010:225-229). Many of these institutions are not protected by preservation law, leaving historic structures, roads, landscapes, and other cultural resources unprotected and vulnerable.

While popular histories abound at many institutions and form an important part of their identities (Potter 1984:23-29; Jones 2010; Lewis 2010), accurate information about the historic landscape(s) they occupy is often lacking, despite professed pride in institutional narratives (O'Gorman 2010). Well-researched histories and archaeological investigations revealing the evolution of academic life (Skowronek and Hylkema 2010:204-205; South 2010), school-to-surrounding community relations (Grandison 1999; Galke 2006; 2010), changes in curriculum (McDaniel et al. 1994; Nassaney et al. 2010), and landscape and architecture (McDaniel et al. 1994; Galke and Means 2008; Galke 2010; Sadler 2010) have demonstrated the significance of academic sites to their communities and their role in the development of our democracy (Skowronek 2010; Skowronek and Lewis 2010).

In fact, few excavations have been done of antebellum educational facilities across the Commonwealth (McDaniel et al. 1994; Galke and Means 2008; Beisaw 2009; Davis et al. 2010; Galke 2010; Schurr 2010; Skowronek and Hylkema 2010; South 2010; Stubbs et al. 2010). Given the variety of approaches to education, curriculum, vocational training, and discipline that schools employed throughout the history of the United States, these sites offer much to further the study of our democracy. As institutions that reflect and instill society's ideals, schools possess great potential to analyze how our core values have changed through time as well as the myriad approaches that communities implemented to instill, or to restrict, those values across dimensions of age, gender, religion, social status, and ethnicity. Additional research at these centers of learning will enhance our understanding of these factors in the development of our nation and as increasing sectional divisiveness led to Civil War. Unfortunately, as noted previously, the ephemeral material culture signature characteristic of many of the structures that comprised these institutions makes them vulnerable to poor archaeological recognition and undervaluation.

Conclusions

From 1780 to 1860, important transformations emerged gradually from processes set in motion before the American Revolution. These interdependent transformations include a shift in the population of white Virginians from east to west; a surplus of labor that resulted in practices of hiring out and sale of enslaved people in the internal market; crop diversification and production intensification; the development of manufacturing and extractive industries; the growth of urban centers; dramatic improvements in transportation infrastructure; and the expansion and reformation of public and private education. Our knowledge of these changes in some cases is highly localized, and it is difficult to assess how individual sites represent or reflect broader processes in play across the State. In other cases, our understanding derives from macro-scale historical trends that remain poorly understood at the local or sub-regional levels. Nevertheless, the volume of research generated over the last twenty years has reshaped and broadened our understanding of this period, and should allow for more synthetic studies to emerge from the data in the future.

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Practical recommendations for the study of 18th-century Virginia regarding data standardization, accessibility, and publication, offered by Heath and Breen in this volume, are equally relevant for research addressing the Federal and Antebellum Periods. Comparative research can only succeed when data are known to exist, are accessible, and when the limitations from which the comparisons are drawn are understood and acknowledged. DAACS is an excellent model for how to standardize, summarize, and distribute multiple, complementary datasets, but we should experiment with other models as well to fit the diverse types of sites that characterize this period and the questions that we ask of them. In conclusion, it is useful to return to the questions posed by Kintigh and colleagues in “Grand Challenges” of archaeology that resulted in the publication of recommendations for future research (Kintigh et al. 2014a; 2014b). Here, we have selected a few, acknowledging that archaeologists working in the diverse regions that define Virginia may find more value in additional, or other, questions as well. Under five headings, the authors of “Grand Challenges” list 25 research questions (Kintigh et al. 2014b:880, Box 1), many of which are directly applicable here.

Questions relating to communities and complexity include: *Why and how do social inequalities emerge, persist and diminish, and with what consequences? How can systematic investigations of historic urban landscapes shed new light on the social and demographic processes that drive urbanism and its consequences?* (Kintigh et al. 2014b:880, Box 1).

We are already engaged with interrogating aspects of racial, and to some extent, gendered inequality relating to the social relations between planters and slaves, and with the study of how planters maintained and expanded their success. As is the case for the earlier 18th century however, our understanding of the economically disadvantaged, of marginalized ethnic groups, and of gender inequality within the broader society, is less well developed. The ongoing research in Alexandria serves as a model for the value of long-term, systematic study of urban landscapes. More limited work in other cities in Virginia is contributing to our understanding of neighborhood development and change over time particularly as derived from processes of integration and segregation, and economic growth and abandonment. Studies of urban environmental changes and their effects on local communities could add significantly to our understanding of social and economic inequality as well.

Questions relating to resilience, persistence, transformation and collapse include: *How does ideology structure economic, political, and ritual systems?* (Kintigh et al. 2014b:880, Box 1).

Ford, in his work on Shadwell Mills, and Russ and his colleagues at Longdale Furnace, argue that antebellum industry in Virginia did not emerge in opposition to agrarian ideals, but as an extension of them. Slave-based and other forms of labor-intensive agriculture gave rise to the conditions necessary to support merchant mills and later textile factories, while racialized ideologies underpinned the hierarchy of labor in situations ranging from industrial forges, to railroad construction, road building, to urban domestic service. Nineteenth-century ideology privileging white men also framed access to education, and the social structures dictated where and to what extent even they were educable.

Questions relating to cognition, behavior and identity include: *How do spatial and material reconfigurations of landscapes and experiential fields affect societal development?*

We have referenced studies of how people shaped plantation landscapes to impose or express identities; the ways in which designed and neighborhood landscapes were experienced by others; and how landscapes created in the 19th century affected subsequent generations. Certainly more work on plantation and other agricultural landscapes would prove useful, as would more explicit explorations of the materiality of urban and industrial landscapes, and the landscapes of mobility (rail lines, canals, and roads).

Questions relating to Human—Environment interactions include: *What factors drive health and well-being? How do humans respond to abrupt environmental change?*

Given the number of competing ideologies of health, and the numerous commercially- and naturally-available materials in which to regulate it, the Antebellum Period is a rich time to explore discourses around attitudes on the nature, causes and cures of illness and perceptions of “health”. Urban sites and industrial sites associated with a range of pollutants also provide important opportunities to consider individual and group responses to unfamiliar environmental challenges of which many were not even aware. We look forward to exploring these and other questions in the coming years.

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“The Night They Drove Old Dixie Down*”, a Reprise: Historical Archaeology and the Civil War Era in Virginia; Scholarship, Themes and Method

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Introduction

Elsewhere, the five years of the American Civil War has been identified as marking “an end of tradition and a time of new beginnings” (Geier 1999; Geier and Galke, this volume). While this certainly applies to the social, political and economic impacts of the outcome of the war on the nation as a whole, this is particularly true in Virginia. As a defeated and conquered society, the Commonwealth not only underwent political and social re-design, but was obligated to recover from dramatic material devastation and the loss of close to half of its territory through secession as the State of West Virginia was born. Perhaps the most dramatic measure for the place of the Civil War in the history of Virginia, or the place of Virginia in the history of the Civil War, lies in a summary of battles by state, prepared by the American Battlefield Protection Program (ABPP) (Figure 4.1). In this presentation, 26 states are identified as having military battles during the period from 1861-1865. These vary from one in Colorado, the District of Columbia, Idaho, and Indiana, to 123 in Virginia (not including West Virginia). Georgia (27), Louisiana (23), Missouri (27), North Carolina (20), Tennessee (38) are the next closest in numbers of battles. These statistics do not include actions such as the “burning” of the Shenandoah Valley (Heatwole 1998), or Sherman’s march across Georgia. While the role of the other states in the war took many forms and is not to be diminished, the fact that 123 out of 381 battles identified by the ABPP, or

32% of all actions fought, took place within Virginia points to the dramatic physical impact on, and sacrifice of, the citizenry of the state.

Again focusing solely on Civil War battles (Figure 4.2), the ABPP has identified 26 major military campaigns, all or most of which were conducted by Union or Confederate forces on lands of the Commonwealth.

Civil War Battles by State			
Alabama	7	Mississippi	16
Arkansas	17	Missouri	27
Colorado	1	New Mexico	2
District of Columbia	1	North Carolina	20
Florida	6	North Dakota	5
Georgia	27	Ohio	2
Idaho	1	Oklahoma	7
Indiana	1	Pennsylvania	2
Kansas	4	South Carolina	11
Kentucky	11	Tennessee	38
Louisiana	23	Texas	5
Maryland	7	Virginia	123
Minnesota	2	West Virginia	15

Figure 4.1. Civil War Battles by State (abstracted from American Battlefield Protection Program; nps.gov/history/hps/abpp//battles/bystate.htm; 2009a)

*With Thanks to the Band

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Civil War Battles in Virginia

Main Eastern Theater

- 1861**
Blockade of the Chesapeake Bay (May–June 1861)
Sewell's Point; Aquia Creek, Big Bethel
- Manassas Campaign (July 1861)**
Blackburn's Ford, Manassas I
- McClellan's Operations in Northern Virginia (October–December 1861)**
Ball's Bluff, Dranesville
- 1862**
Blockade of the Potomac River (October 1861–January 1862)
Cockpit Point
- Jackson's Valley Campaign (March–June 1862)**
Kernstown I, McDowell, Front Royal, Winchester I, Cross Keys, Port Republic
- Peninsula Campaign (March – July 1862)**
Hampton Roads, Yorktown, Williamsburg, Eltham's Landing, Drewry's Bluff, Hanover Courthouse, Seven Pines, Oak Grove, Beaver Dam Creek, Gaines' Mill, Garnetts & Goldings Farm, Savages Station, White Oak Swamp, Glendale, Malvern Hill.
- Northern Virginia Campaign (August 1862)**
Cedar Mountain, Rappahannock Station I, Manassas Station Operations, Thoroughfare Gap, Manassas II, Chantilly.
- Fredericksburg Campaign (November – December 1862)**
Fredericksburg
- 1863**
Longstreet's Tidewater Operations (March – April 1863)
Norfleet House/Suffolk
Hill's Point/Suffolk
- Cavalry Operations along the Rappahannock River (March 1863)**
Kelly's Ford
- Chancellorsville Campaign (April – May 1863)**
Chancellorsville, Fredericksburg II, Salem Church
- Gettysburg Campaign (June – July 1863)**
Brandy Station, Winchester II, Aldie, Middleburg, Upperville, Manassas Gap.
- Bristoe Campaign (October – November 1863)**
Auburn, Bristoe Station, Buckland Mills, Rappahannock Station II.
- Mine Run Campaign (November–December 1863)**
Mine Run
- 1864**
Demonstration on the Rapidan River (February 1864)
Morton's Ford
- Kilpatrick–Dahlgren Raid (March 1864)**
Mantapike Hill [Walterton]
- Crook–Averell Raid on the Virginia and Tennessee Railroad (May 1864)**
Cloyd's Mountain, Cove Mountain
- Bermuda Hundred Campaign (May 1864)**
Port Walthall Junction, Swift Creek, Chester Station, Proctor's Creek, Ware Bottom Church.
- Grant's Overland Campaign (May–June 1864)**
Wilderness, Spotsylvania Court House, Yellow Tavern, Wilson's Wharf, Haw's Shop, North Anna, Totopotomy Creek/Bethesda Church, Old Church, Cold Harbor, Trevilian Station, Saint Mary's Church.
- Lynchburg Campaign (May – June 1864)**
New Market, Piedmont, Lynchburg.
- Early's Raid and Operations Against the B&O Railroad (June – August 1864)**
Cool Spring, Rutherfords Farm, Kernstown II
- Richmond–Petersburg Campaign (June – December 1864)**
Petersburg I, Petersburg II, Jerusalem Plank Road, Staunton River Bridge, Sappony Church, Ream's Station I, Deep Bottom I, Crater, Deep Bottom II, Globe Tavern, Ream's Station II, Chaffins Farm and New Market Heights, Pebble's Farm, Darbytown and New Market Roads, Darbytown Road, Fair Oaks and Darbytown Road, Boydton Plank Road.
- Sheridan's Valley Campaign (August – October 1864)**
Guard Hill, Berryville, Opequon or Third Winchester, Fisher's Hill, Tom's Brook, Cedar Creek.
- 1865**
Richmond–Petersburg Campaign Continued (January – March 1865)
Hatcher's Run, Fort Stedman
- Sheridan's Expedition to Petersburg (March 1865)**
Waynesboro
- Appomattox Campaign (March – April 1865)**
Lewis's Farm, White Oak Road, Dinwiddie Court House, Five Forks, Petersburg III, Sutherland's Station, Namozine Church, Amelia Springs, Sayler's Creek, Rice's Station, Cumberland Church, High Bridge, Appomattox Station, Appomattox Court House.

Figure 4.2. Civil War Battles in Virginia by Campaign and Year (abstracted from American Battlefield Protection Program; nps.gov/history/hps/abpp/battles/bycampgn.htm; 2009b)

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Many of these battles had significant local and long term impacts and were tactically significant within the course of the War in the state. Battles such as 1st - (1861) and 2nd Manassas (1862), Jackson's Valley Campaign of 1862, the Peninsula Campaign of 1862, Fredericksburg (1862), the Chancellorsville Campaign (1863), Grant's Overland Campaign of 1864 (Wilderness, Spotsylvania Courthouse, etc.), the Richmond-Petersburg Campaign (1864); Sheridan's Valley Campaign (1864), and the Appomattox Campaign (1865), among others, had significant national implications for the continuation of, and then resolution of the war.

The above statistics are significant but are misleading in their historic significance in that they reflect only the dramatic impact of conflict. What is missing are references to the associated impacts of the massive encampments of armies, Union and Confederate, as they competed with local citizens for limited food supplies; the disruption of the domestic agricultural economy, industry and established lines of supply; and the degradation of human life when under enemy control and on fields of conflict.

The Status of Scholarly Research

While diverse types of Virginia's Civil War Period sites have undergone some level of historical-archaeological analysis (Townsend 1999; Geier 1990; Wittkofski 1992;1989; Margolin 1994), reports of findings lie primarily within the gray literature produced as a result of Section 106 environmental impact studies, and/or as overview and assessment projects (Section 110) conducted for agencies, such as the National Park Service or U. S. Forest Service, who are charged with managing and protecting significant historic resources on their properties. A cursory review of studies published in a small, but growing, number of texts; on file as reports at the VDHR archives in Richmond; or, as commonly, in the archives of diverse private and Federal agencies, identified 157 references to field work involving Civil War sites (Figure 4.3). This is in no way presented as a complete review of existing literature, much of which remains widely scattered. As a data set, however, they are useful in presenting a picture of the nature of the research that defines and represents the current state of historical archaeology of the Civil War in Virginia.

The sample documentation is interesting in that of 95 Virginia Counties, all of which were directly or indirectly impacted by events of the Civil War, only 22 (23%) were

identified as having any level of archaeological assessment of sites attributed to that period. Only 11 towns/cities identify such projects, though there are certainly more in the grey literature for towns like Fairfax, Alexandria, Fredericksburg, Petersburg, Norfolk, Richmond, and the others noted. Certain of the projects were conducted for management, preservation and interpretation purposes (Section 110) carried out by entities such as the National Park Service on its National Historical and Military Parks, the U. S. Forest Service, and private agencies such as James Madison's Montpelier. The greater number, however, are Section 106 related and involve sites and lands either threatened, or subsequently destroyed by planned development/construction. Some research has been coordinated through preservation groups such as the Shenandoah Valley Battlefield Foundation (SVBF), the Cedar Creek Battlefield Foundation (CCBF), and Belle Grove Plantation, Inc.

Of the project sample, 66 (42.5%) are limited to Phase I investigations, several involving large areas of space, which are confined in research goals to preliminary studies of site identification and historic assessment. Seven (4.5%) are overview and assessment projects designed to evaluate and document archaeological sites and landscapes on historic properties such as battlefield lands managed by the Fredericksburg-Spotsylvania National Military Park, or private groups such as Belle Grove, Inc. which manages and interprets a significant part of the Cedar Creek Battlefield in the lower Shenandoah River Valley. Seventy one of the reviewed projects involve the Phase II significance evaluation of identified military sites or contributing domestic sites lying on military sites. Of these, only 16 sites have been taken to the level of full scale mitigation, all of those lying in areas of threat of loss.

Scholarly, and academic research into the historical archaeology of the Civil War in Virginia is not well developed. Thus it is difficult to establish a context in which site significance can be assessed. Similarly, scholarly research by trained historical archaeologists into the wide range of artifact types and architectural structures (Jensen 2000; Jolley 2007; Geier, Reeves and Orr 2006; Geier, Whitehorne and Samulski 2015) found on diverse Civil War sites is only in infancy; the scholarship of the amateur community being the primary source of such significant insight. This is beginning to change. The visibility of military sites archaeology, and particularly

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Figure 4.3. Civil War Excavations by County and Township

County/Town	A	B	C	D	E	F	G	H	I	J	K	Comments/Notes
Augusta County	2	1	1	-	-	1	1	-	-	1	-	Fort Edward Johnson/Camp Shenandoah, 1861-1862
Alexandria	5+	3	1	1	-	4	-	-	-	-	1	U.S. Military Railroad Station
Arlington County	2	1	1	-	-	-	1	-	-	1	-	Fort C F Smith, Defense of Washington
Caroline County			2									Garrett Farm, John Wilkes Booth
Chesterfield County	6	1	3	2	-	2	2	1	-	2	-	Battle of Drewry's Bluff, Southern Defenses of Richmond, Hatcher-Cheatham Plantation
Charles City County	2+		1			1				1		Series of investigations at Fort Pocahontas carried out by Center for Archaeological Research at the College of William and Mary. Battle against African American troops May 24, 1864.
Clarke County	1	1	-	-	-	1	-	1	1	1	-	National Register Nomination, Battle of Cool Spring 1864
Culpepper County	1	-	1	-	-	1	-	-	-	-	-	
City Point	2	1	1	-	-	1	-	-	-	-	1	Grant's Cabin
Frederick County	27	14	7	3	3	12	2	6	2	3	2	O&A Cedar Creek-Belle Grove Plantation NHP; Site Plan Belle Grove Plantation, Battles of 1 st and 2 nd Kernstown; 1 st , 2 nd and 3 ^d Winchester, Cedar Creek; Camp Russell
Fauquier County	4	4	-	-	-	4	-	1	1	-	-	1 st and 2 nd Auburn
Fairfax County	1+	1	-	-	-	1	-	-	-	-	-	Number unknown
Fairfax City	+											
Gloucester County	1	1	-	-	-	1	-	-	-	-	-	
Hampton	3	1	2	-1	-	1	2	-	-	-	-	Fort Monroe
Highland County	1	1	-	-	-	1	-	-	-	-	-	Battle of McDowell, Jackson's Valley Campaign of 1862
Henrico County	2	1	1	-	-	2	-	-	-	-	1	Malvern Hill (Richmond Battlefield Park)
Isle of Wight County	1	-	-	-	-	-	1	-	-	-	-	
James City County	2	1	-	1	-	1	1	-	-	-	-	Confederate fortifications at Jamestown Island

Key: **A.** Number of Reports/Projects. **B.** Phase I Studies. **C.** Phase II Investigations. **D.** Phase III Investigations. **E.** Overview and Assessment Project. **Project Types:** **F.** General I CRM. **G.** Studies of Fortifications. **H.** Battlefield Related. **I.** Cultural Landscape Features. **J.** Encampments. **K.** Other.

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Figure 4.3. *continued.*

County/Town	A	B	C	D	E	F	G	H	I	J	K	Comments/Notes
Jamestown Island	1	-	-	1	-	1	1	-	-	-	-	Confederate earthwork built upon Jamestown Fort.
Leesburg	2	1	1	-	-	1	-	-	-	2	-	13 th Louisiana Encampment, Battle of Balls Bluff 1862
Manassas	1+	-	1	-	-	-	1	-	-	-	-	
Manassas Battlefield Park	3	1	1	1	-	1	-	1	-	-	1	1st and 2 nd Manassas, Portici
Norfolk	+											
Newport News	2	1	1	-	-	1	1	-	-	-	-	Magruder's defense line fortifications
Orange County	3	1	2	-	-	2	-	-	-	3	-	1863-1864 Confederate encampment south of Rapidan on lands of Montpelier
Prince William County	13+	7	6	-	-	11	-	1	-	1	-	Manassas N.R. Nomination; Portici
Petersburg	5+	1	4	-	-	1	-	1	-	-	3	Petersburg Battlefield, defenses and cultural landscape
N. Potomac Valley	1	-	1	-	-	-	-	1	-	1	-	Evansport Cantonment, Confederate blockade of Potomac, 1861
Rockingham County	2	2	-	-	-	-	-	2	-	-	-	Cross Keys Battlefield 1862; Battle of Harrisonburg 1862; Jackson's Valley Campaign 1862
Richmond	1+		1									Tredagar Iron Works
Richmond Military Battlefield	11	4	6	-	1	5	-	2	1	-	2	Richmond defenses and battlefield Tredagar I. W.
Reston	1	-	-	-	1	-	-	-	-	-	-	
Spotsylvania County	27	8	16	1	2	3	2	6	3	2	13	O&As for Fredericksburg, Chancellorsville, Wilderness and Spotsylvania Court House Battlefields; cultural landscape features, Willis Hill, Sunken Road reconstruction, Catharine's Furnace
Stafford County	14	5	6	3	-	8	-	-	-	6	-	Union encampments 1862-1863 battles of Fredericksburg and Chancellorsville, Chatham O&A
Williamsburg	1+	1	-	-	-	1	-	-	-	-	-	
Winchester	5+	1	4	-	-	2	-	-	-	-	3	Sheridan Field Hospital 1864/1865
York County	1	1	-	-	-	-	-	-	-	-	1	
Yorktown	2	-	1	1	-	-	-	-	-	-	1	
Totals	160	66	72	16	7	71	15	23	8	24	29	

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that of the American Civil War, is becoming more and more evident in meetings of the Society for Historical Archaeology and at regional meetings of groups such as the Middle Atlantic Archaeological Conference, Fields of Conflict, and the Archeological Society of Virginia. As this research area gains in scholarly recognition, a number of academic texts have been published which include analyses and interpretations of military sites within the Commonwealth (Geier and Winter 1994; Geier and Potter 2000; Geier, Orr and Reeves 2006; Geier, Babits, Scott and Orr 2011; Geier, Scott and Babits 2014; Scott, Babits and Haecker 2007).

To many professionals active in the Commonwealth, however, the events of the mid 19th century remain a period that they have to deal with rather than actually prefer to study. The irony to this situation is that the demand to consider and study these military sites is increasing within the citizenry of the state. This can be illustrated by a number of examples:

1) Historians in military parks such as those managing the battlefields of Fredericksburg, Chancellorsville, Wilderness, and Spotsylvania Court House, identify a growing demand for popular interpretations of battles and their human impacts. This interest spurred archaeological studies that resulted in restoration of the stone wall along the sunken road that played such a pivotal role in the Battles of First and Second Fredericksburg (Geier, Sherwood and Lotts 2004; Geier, Sherwood and Sancomb 2002). It is also reflected in growing efforts, particularly with groups such as the Civil War Preservation Trust (CWPT), to work with local public and private groups to acquire and preserve historically significant battlefield landscapes. An example of this would be the recent (2014) CWPT acquisition of lands associated with the National Register listed Battle of Cool Spring in Clarke County, Virginia (Geier, Whitehorne and McClary 1995; Whitehorne and Geier 2000), which will be managed and maintained in collaboration with Shenandoah University.

2) Drawing on rising popular interest, communities across the Commonwealth are, as possible, developing Civil War themes as a means of attracting tourists and tourist dollars (heritage tourism). In many cases, this has drawn attention to otherwise poorly known sites. Certainly the popularity of Civil War Trails Program and the publishing of State maps documenting Civil War sites and tours shows some evidence of this phenomenon.

Additional evidence exists in the support for, and success of, agencies such as the Shenandoah Valley Battlefield Foundation that has tied together a series of battlefield sites within the Shenandoah Valley for the purpose of historic preservation and public interpretation. In addition, the newest of the nation's historical parks has recently been established in the lower Shenandoah Valley: the Cedar Creek and Belle Grove National Historical Park. While established to recognize the important settlement history of this region, the defined boundaries of the park are tied to the 1864 Battle of Cedar Creek, which finally established Union control of the Shenandoah Valley. Hopefully, the recent Civil War Sesquicentennial celebrations across the Commonwealth have served to stimulate popular interest in the War as it relates to local and State history and the need to protect these military resources. The long term effects of this series of events remain to be determined, however.

3 / 4) Civil War focused research studies have been supported by individuals who saw the war-related history as a tool to be used in encouraging, channeling, or restricting community and economic development (Geier, Whitehorne, Wood, Troll and Tinkham 2008). In fact, however, the recent spurt in Civil War sites archaeology is primarily attributed, not to the pursuit of scholarly inquiry, but the fact that Civil War sites of all types are increasingly threatened by virtually unprecedented community development. Residential, industrial, and transportation construction and expansion threaten numerous and diverse military sites, many of which were once considered safe.

It is the case that, much of this research has been conducted by private and some academic archaeology groups whose scope of field archaeology and associated historic research is often very clearly, and narrowly defined/restricted by project parameters. Certainly, Federal legislation, most visible in Section 106 guidelines and reinforced by State directives, works to ensure some level of investigation on some sites. It is not a coincidence (Figure 3) that a significant body of the research that has been conducted on Civil War sites takes place near towns (Richmond, Petersburg, Fredericksburg, Leesburg, Winchester) or in counties (Frederick, Stafford, Spotsylvania, Prince William) undergoing rapid residential and industrial growth and/or requiring a realignment or improvement of road connectors (Rte. 288 project southwest of Richmond, Rte. 37 Bypass of

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Winchester). Unfortunately, much significant Civil War military activity took place in these same areas.

5). Much of the support for Civil War research and study is driven by a population of citizens at the local and state level that see the Civil War as their history; one that they can relate to in the letters, diaries, and militaria left by their great grandparents and other family members who fought and sometimes died in that war. Certainly, in the Shenandoah Valley the ravages of General David Hunter, and General Philip Sheridan's "Burning of the Valley" are things that are seen as part of the personal history of long term Valley residents (Heatwole 1998).

The Regional and Temporal Character of the Civil War

The purpose of this paper is to make suggestions concerning measures that can be used to assess the historic significance of Civil War military sites and that can be implemented by the Commonwealth in establishing policies and protocols that protect the rich historic heritage of such sites. As topics or themes which are believed to define measures of historic significance are considered, one overriding observation needs be made. No other single sequence of events has so dramatically, directly and/or indirectly shaped the trajectory of Virginia history at the individual, local, regional, and national levels when compared to those leading up to or following the Civil War. Whether studying communities whose only role was to send their young men to war; the secession of West Virginia; the devastation wrought on the infrastructure of the state; or the devastation and human loss in battles; the impacts in very human terms, both in the short and long run, were profound.

While many of the Civil War military events that occurred in Virginia have been interpreted as having a legitimate historic significance at the state and national level, much of the real story of the nature and impact of the war for Virginians must start with a working knowledge of the local and regional impact. The war was experienced differently in different parts of the state (Figure 4.1). The date, nature and duration of military conflict; the nature and duration of military occupation by an enemy force; the nature and duration of an encamped military be it friend or foe; all serve to shape the local experience. In Highland County, the Battle of McDowell, fought in spring of 1862, is identified as the onset of Jackson's Valley Campaign. While eulogized in this way, little military activity, and none of real significance, took place

in this county following that engagement. In contrast, Fredericksburg was directly or indirectly involved in three major battles between December of 1861 and May of 1864 and following them, remained in Union hands for the remainder of the war. While literally hundreds of primary and secondary texts documenting local Civil War histories, the character and flow of particular battles, regimental histories, and the unique experiences of common soldiers to generals are being published, there is no corresponding historical archaeology in many areas that serves to validate, enliven, clarify, or define this record.

Temporally, the nature and conduct of the war, and its impact on the Virginia community over time, is of great import in assessing the historic significance of a Civil War military site (Figure 4.2). 1860-1861 marks a time when Virginia endured the shock of the secession of its western counties (WestVirginia); the mobilization of its militias in response to the needs of a new central government, the Confederate States of America; and its initial military responses to "invasion". The day after Virginia approved the Ordinance of Secession, Alexandria was occupied and the Alexandria and Orange Rail line was transformed into a modern and major Union railhead, supply and transit point. Atlantic Coast and shipping ports were blockaded.

1862 to July of 1863 marked a time of enthusiasm and optimism as battles fought primarily in the Shenandoah Valley, northern Virginia, and on the Peninsular lands north of the James River, were marked by victory after Confederate victory. The Union invasion of Virginia was fought to a bloody stalemate. In May of 1863 Stonewall Jackson was mortally wounded by his own men in the decisive Confederate victory of Chancellorsville. Despite this loss and on a wave of confidence, Robert E. Lee challenged the Union by invading Maryland and Pennsylvania. This dramatic event, culminating in the decisive Confederate defeat at Gettysburg in July, marked a turning point from which the Confederate armies of Virginia never fully recovered.

1864, while including early Confederate victories in the Shenandoah Valley (Early's March on Washington, Battle of Second Winchester) and to the south of Richmond (Drewry's Bluff), marked a time when the will of Virginia and the Confederacy was bludgeoned by the overwhelming power of Ulysses S. Grant and the Army of the Potomac. Following Jubal Early's embarrassing

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Confederate raid on Washington and the re-conquest of the Shenandoah Valley in late June and early July of 1864, General Philip Sheridan was made commander of the Union Army of the Shenandoah. By October of 1864, following a series of decisive victories and the infamous “burning” of the Valley (Heatwole 1998), the rich farmland was in Federal Control. Starting in May of 1864, Grant began his Overland Campaign at Wilderness and slowly but consistently hammered Lee’s army as it was forced to withdraw into a fortified Richmond-Petersburg area. By the end of the year the capital of the Confederacy was virtually surrounded, cut off from substantive supplies; and much of Virginia to the north, west, and east was in Union control. In April of 1865, at Appomattox Courthouse, the Confederacy surrendered. Richmond burned, and many of the agricultural fields enclosing towns like Fredericksburg, were virtual cemeteries for the fallen and/or retained the scars of massive encampments of armies, friend and foe.

While the above somewhat dramatized summary marks a progression of temporal change within the flow of the five years of war, local differences within this context are dramatic. In some counties such as Bath and Highland, where a Union presence was nearly nonexistent through the greater part of the war, the major stress of was seen in the increasing absence of men at home and working the fields, and who were participating in political events many did not fully understand (Marion Epperly letters). In contrast, the citizens of Richmond moved from the euphoria and confidence of early victories of 1862 and 1863 to a community overwhelmed by refugees from the countryside and with the status of virtual prisoners who suffered severely from the presence of an encompassing enemy army. Parts of Northern Virginia, Fairfax County for instance, were almost a demilitarized zone (in the Vietnam sense). Depending upon the time, areas were occupied/controlled by one side or the other, and neither occupying force necessarily trusted the people who lived there (personal communication, Elizabeth Crowell). Given these facts, it is argued that, if there is a real interest in setting standards against which the historic significance of Civil War sites is to be assessed, it is essential the “regional centers” of the VDHR, assume a pro-active, leadership role in assessing and determining the historic significance of such sites within their local and regional historical context.

Significant Themes and Research Topics

Scholarship at the national level, as evidenced by the growing number of military focused papers and sessions presented at the Society for Historical Archaeology meetings, and at regional sessions such as that of the Middle Atlantic Archaeological Conference, reveals a growing interest in, or involvement with, Civil War and military sites archeology. Much as recent studies in anthropology and history have undergone a change in focus away from great men and great events, the field of military sites archaeology has begun to evolve from a focus on generals and battles to include a widening series of themes and topics. Such themes include: an understanding of the structure and social organization of the competing armies; a greater interest in the life of the common soldier; and the impact of military actions on domestic populations including women, children and slaves (contraband). These themes include, but are not restricted to: the traditional interpretation of battles and battlefields; military encampment, support and the life of the common soldier in the field; transportation and supply; Civil War medicine, forensics and the care of the dead; cultural landscapes and collateral damage; ceremonial commemoration; industry and industrial development; and life in prisons. While these topics are emerging in the larger body of military scholarship (Geier, Babits, Scott and Orr 2011), they are just beginning to be recognized as standards in the determination of historic importance/significance of military sites within the Commonwealth. In, fact, only the first of this set, battlefields, have been recognized at the Federal level for efforts at preservation and interpretation (American Battlefield Protection Program) and reflect the principle focus of preservation groups such as the Civil War Preservation Trust (CWPT).

Problems posed by many sites that address these topics lie in issues of scope, size and complexity. For example, estimates of the size of the lands involved in the Battle of Cedar Creek fought in the lower Shenandoah Valley approach 125 square miles, the attacked Union camp stretching for roughly 6 miles. While not computed, the size of the area involved in the Battle of Chancellorsville in 1863 would have been far greater, stretching from the Union camps in Stafford County east of Fredericksburg to just east of Wilderness Tavern or a distance of over 11 miles. Simply put, many of the military sites across

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the Commonwealth cover large areas of physical space and the ability of historical archaeologists to control and understand them can be difficult if not impossible; particularly when research access is limited by project directives to only small parts of the larger whole.

This situation is made more complex by the fact that terrain, cultural, and military features included within the site boundaries are not, and cannot be assumed to be simple repetitions of the same things. Understanding bits and pieces does not necessarily promote needed understanding of the historical significance and importance of the larger whole. Further, assuming the boundaries of the events can be defined, such information only begins the process of revealing the complex nature and diversity of the human actions that created the site. As an example, the Union military encampment at Cedar Creek clearly illustrates the problem. Since the early 1990's historical archeologists from James Madison University have been conducting various levels of field investigation and primary historic research on lands within this vast resource (Geier and Whitehorne 1994; Geier 1995; Geier and Harding 2006; Geier and Tinkham 2006; Geier, Whitehorne, Tinkham, Wood and Lewis 2009; Geier, Whitehorne, Wood 2014). Integrating available historic documentation and field archaeology, the Union camp attacked by the much smaller Confederate army of General Jubal Early has been described as follows (Geier and Whitehorne 1994:42-45; includes references from Mahr 1992, Pond 1883 and Wert 1987):

Including flanking cavalry deployments, the main Union encampment extended for five to six miles, the main areas of encampment taking advantage of high ground north of Cedar Creek. The camps and works of the army sprawled across a series of ridges between the creek and the vicinity of Middletown, Virginia. Wooded or open uplands, the placement of steep-banked ravines, and the dramatic meanders of Cedar Creek all contributed to shaping the deployment. Within the Federal encampment...over 31,600 troops including 2 divisions of Crook's VIII Corps, 2 divisions of Emory's XIX Corps, and 3 divisions of Wright's (Rickett's) VI Corps were in place. ...the mansion at Belle Grove was the nerve center of the military community, serving as the headquarters of the commander; Maj. Gen. Philip H. Sheridan.

The right (north) flank of the Union deployment was held by the cavalry divisions of Brig. Gen. Wesley

Merritt and Brig. Gen. George A. Custer. Custer's 3d Division was encamped south of Old Forge Road in fields east of the west branch of Buffalo Marsh Run. Merritt's 1st Division was about a mile north of Red Hill, south of an unnamed road in the fields east of Middle Marsh Run....To the south, and on the weathered high ground above Cedar Creek and between the mouths of Middle Marsh Brook and Meadow Brook, lay the encampment of the Union VI Corps. The 3d Division was deployed along the stream and west towards Cedar Creek. The 1st Division occupied Red Hill farthest west, while the 2nd Division was in camp north and east of Red Hill. Significantly, the deeply entrenched U-shaped valley of Meadow Brook separated these forces from those of the XIX Corps to the southwest. The train for the VI Corps was deployed along the edge of the uplands above Meadow Brook and along Hite's Road....

South of the mouth of Meadow Brook and across the high upland fields east of Cedar Creek and north of the passage of the Valley Pike, lay the encampment of the XIX Corps. The Corps was entrenched on high bluffs that attained heights as great as 150 feet above Cedar Creek. The south flank of the defensive earthwork overlooked the Valley Pike and its bridge crossing of Cedar Creek, the north flank ended on a high weathered knob overlooking Hottle's Ford at the mouth of Meadow Brook. The south flank was occupied by the Corps, 2nd Division commanded by Brig. Gen. Cuvier Grover. His division was supported by a large portion of the Corps artillery, commanded by Maj. Albert Bradbury, which had been placed to control the Pike crossing of Cedar Creek. The Corps 1st Division, commanded by Brig. Gen. James W. McMillan occupied the northern flank. Again, a substantial artillery support was in place to cover the Hottle's Ford crossing and the mouth of Meadow Brook. Col. Stephen Thomas' 2nd Brigade, 1st Division, was in reserve to the rear on the east, or right, flank. A battery of XIX Corps' artillery was placed to control the crossing of a small ford midway between Hottle's Ford and the Valley Pike Bridge.

The Union VIII Corps stood in place south of the Valley Pike. Its position controlled a series of upland ridges and prominences that extended from that point east of Cedar Creek to the Union south, or left, flank which lay on high ground 1300 yards from the Cedar Creek confluence with the North Fork of the Shenandoah River. Col. Joseph Thoburn's 1st Division

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was posted considerably forward on an entrenched hillock above Bowman's Mill Ford. Capt. Henry A. Dupont's Artillery was aligned with Thoburn. Batteries of 6 guns each were in place 400 yards apart on the two flanks of the entrenchment above Bowman's Mill Run; Battery B of the 5th U.S. and D of the 1st Pennsylvania being on the west and east sides respectively. Battery L, 1st Ohio Artillery, with 4 guns, was in place to the northwest of Thoburn's position, on a high knob overlooking the Cedar Creek crossing of the Valley Pike. A deeply entrenched northeast trending ravine separated the 1st Ohio's artillery position from that of Battery B. Col. Alpheus Moore's 1st Division of Col. William H. Powell's Cavalry Brigade was in position at Buckton Ford on the Shenandoah. The other brigades of Powell's cavalry were stationed near Front Royal in an effort to defend against a possible attack by way of the Luray Valley (Pond 1883/1989: 216).

The 2nd Division of the VIII Corps, commanded by Col. Rutherford B. Hayes, with Col. J. Howard Kitching's Provisional Division attached, was encamped 1300 yards to the northeast of the 1st Division, on a high weathered ridge that paralleled the passage of the Valley Pike. Hayes' Division was to the southwest, 400 yards south of the Pike and almost due south of the XIX Corps. Kitching's Division was stationed several hundred yards to the east. The road from Belle Grove to Bowman's Ford and Front Royal (Belle Grove Lane/Longmeadow Road) crossed east of Kitching's position. On October 18, entrenchments were being prepared on the south and west sides of the position held by the 2nd Division. These remained unfinished on the morning of the 19th. Significantly, the ridge upon which the 2nd Division was encamped and the land to the east, represents some of the highest land in the encampment area (700 to 730 ft. ASL), the high ground commanded by Emory and the XIX Corp to the north attaining heights no greater than 690 feet.

The train of ambulances, supply and ammunition wagons that provided VIII Corps support was parked in the ravine to the south of Hayes' and Kitching's encampments. In addition, combined trains of XIX and VIII Corps created a situation in which "the park of wagons extended from Middletown, along the plain by Belle Grove, to the camps of the XIX Corps" (Wert 1987:188). Between Hayes' position and the Valley Pike to the north, the terrain fell away into a deeply

entrenched ravine (60 feet), whereas to the north of Kitching, the ravine was less defined...

A tent encampment, including that of Sheridan himself, was in place on the front lawns, south of the house (Belle Grove). General Torbert's Cavalry Corps Headquarters was situated in a small orchard to the east of Belle Grove. In the fields between Torbert's headquarters and the Valley Pike was a makeshift, corralled prison containing 300 Confederate prisoners. A large herd of cattle and livestock lay in a sheltered ravine east of Meadow Brook and north of the headquarters camp (Geier and Whitehorne 1994: 42-45).

This detailed, and yet significantly incomplete, description shows not a simple encampment but a veritable tent city designed to defend, house, and provide medical, nutritional and other support needs for close to 35,000 troops, not including those tied to the supporting wagon trains. As an archaeologist would move across the site, the material culture and structural features that serve to define the differing cavalry and infantry regiments, the lines of defenses and deployed artillery, the headquarters facilities, the supporting wagon trains and livestock would be expected to, and do, vary. Without an understanding of the nature and complexity of the whole camp, the ability to determine the nature and historical significance of one or a small part would be very difficult to assess.

Battlefields and Battlefield Analysis

Civil War Battlefields and many encampments (as noted above) are the military site types that most often fall interpretive prey to their size. The location of Virginia on a primary corridor into the seceded south, and the existence of the Union and Confederate capitals within 100 miles of each other, turned Virginia into a focus of war from the beginning days in 1861 to its end in 1865 (Figures 4.1, 4.2). Over three dozen major battlefields lie within the boundaries of Virginia, not including naval actions (Margolin 1994; Broadwater 2012; Broadwater, this text). Certain of the battlefields have been included in federal, state, regional and county owned military parks, others in government sponsored National Historical Parks, and elements of others lie in the dispersed holdings of private preservation groups such as the Shenandoah Valley Battlefield Foundation and the Civil War Preservation Trust. None of the

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battlefields is totally protected and ownership by private individuals and groups provide ongoing threats of resource loss to development. In fact, it is the case that virtually all of the battlefields of national significance (Manassas, Fredericksburg, Wilderness, Chancellorsville, Richmond-Petersburg, Cedar Creek, etc.) and others of more local import (John Milner Associates et al 2004) have been, and/or are under immediate threat due to dramatic residential and industrial development. It can also be argued that despite often extensive historic analysis and interpretation, large areas of many battlefields remain undefined, undocumented, and poorly interpreted (Jolley 2007; Geier and Harding 2006; Geier and Tinkham 2006; Geier, Whitehorne, and Wood 2014).

The use of historical archaeology as a tool in identifying and interpreting the flow of conflict continues [Manassas Battlefield Park (Reeves 2001); Cedar Creek Battlefield (Geier, Whitehorne and Wood 2014); 1st and 2nd Auburn (Geier, Whitehorne, Wood, Troll and Tinkham 2008); 1st and 2nd Saltville (Whisonant, Boyd and Herman 2007); Battle of Harrisonburg (Geier, Lotts, Krick and Whitehorne 2007); 3d Winchester (Jolley 2007; Rutherford's Farm, Jolley 2010). The National Park Service through its park system and the associated American Battlefield Protection Program (ABPP) have expanded the research and interpretation of these parks. From a principally historical accounting as presented in battle histories and interpretations, new research includes the documentation and understanding of the contemporary cultural landscapes and natural terrain circumstances as key elements to understanding the staging and deployment of troops, the flow of battle, and the human impact of the action (Andrus 1992). Under the acronym **KOCOA** (Babits 2014) the ABPP system of battlefield analysis "has been developed by military experts to analyze and defining features, focusing primarily on terrain but also with consideration for historic structures that were significant to the battles. **Key** terrain, **O**bstacles, **C**over and **C**oncealment, **O**bservation points and **A**venues of approach and retreat are the five categories into which a defining feature can be placed. One of these five criteria must be met in order for a feature to be classified as a 'defining feature'; the relative importance of that defining feature depends then upon its significance to the ultimate success or failure of the regiments in battle" (Dautartas, Boyd, Herman and Whisonant, 2005).

The existence of roadways, industrial features such as mills and quarrying sites, plantations and farmsteads, and the open fields and fence lines that are a product of their agricultural enterprise; the presence of villages, towns, and even cities, can all serve as key features in shaping the battlefield. The naturally sculpted landscape and patterns of vegetal cover are commonly exploited as tools in providing opportunities to aggressors and natural defenses to defenders. Ironically, in this scenario, some of the most important terrain features to identify relative to interpreting a battle can be places that prevented troop movements and channeled them into a narrow set of alternatives, i.e., they can be identified by an absence of evidence of military activity. Despite their real importance, military historians often do not identify significant cultural and natural features on battlefields in describing battle accounts and often see them as secondary in import to actual troop deployments. It is also the case that such features are often not documented or discussed in the context of primary military records such as those found in the Official Records of the Union and Confederate Armies (O.R.). Instead, they remain to be identified, evaluated and interpreted by historical archaeologists (Jolley 2007; Geier and Wood 2014; Geier, Sherwood and Sancomb 2001).

Military Encampment

While battlefields have some level of research and preservation advocacy through funding made available through the ABPP and other preservation groups, few military encampments of any sort have such advocates. It can be argued (Geier, Orr and Reeves 2006) that the failure to recognize the extremely great historic significance of military encampments contributes to some of the greatest failures in preservation by localities, the state and national government.

The word "encampment" tends to evoke the image of some kind of temporary event of transient importance. Recognizing that virtually every soldier went into some kind of encampment on a daily basis tends to create the false illusion of commonality. For people concerned with commemorating the sacrifice of persons in war, the fact that approximately six times the number of men died in camp as died on the field of battle (Robertson 1984:14) is of profound significance. It should demand an understanding of the circumstances that generated such a waste of human life. The "honorable" loss of life

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on the battlefield is somehow diminished by the fact that one's loved ones died from smallpox, dysentery, malaria, measles or pneumonia while in camp.

Perhaps the greatest disservice to the study and preservation of encampments and the interpretation of camp life lies in a profound scholarly ignorance of the behaviors that they represent and attempts to generate a sense of sameness to their nature (Whitehorne 2006). Any reasonable person would agree that the designation of an every day camp or picket site as potentially significant is untenable. On the other hand, the encampment of an army must be treated as the equivalent of a mobile city, town or village, varying with the size and composition of the force under study (see the description of the 1864 Union encampment at Cedar Creek above). When armies engage in hostile actions or are holding static positions such as when in winter camp, the place of encampment in providing housing, food, supply and medical support for the engaged troops can be highly significant to morale of troops and the outcome of the military action.

The study of military encampments represents a scholarly nexus of political science, anthropology and history (Geier, Orr and Reeves 2007). When armies went into relatively permanent summer or winter camps, they became distinct governed communities in which issues of morale, training and preparation, sanitation, housing, supply and feeding, medical care, law enforcement, and troop entertainment, were all considered and become primary structural issues reflected in the plan and patterning of the facility (Balicki 2014). These issues remained viable and became of even greater importance when the army was in motion. Within this context and others, the "chain of command" needs to be understood in its legal, political and support roles. The 130,000 man army of General Burnside that enclosed the area north and east of Fredericksburg in 1862 and the opposing 90,000 man army of Robert E. Lee, were, in fact, some of the largest cities in Virginia at that time. In turn, the commanding generals and subordinates in the chain of command became the equivalent of big city mayors and their support staff. In this logic the ability of commanding officer to guarantee the support and maintenance needs of his army was pivotal to the ability of that army to initiate a military campaign and confront an enemy.

Guidelines for encampment published in 1861 (Whitehorne 2006; United States War Department 1861) show structural plans that reveal patterns intended

to provide residence for troops but also reveal internal political and supply structuring for a company. These guidelines also identify different standards for troops of different types such as artillery and cavalry, each of which can be components of a larger army. Armies such as the previously described, 35,000 man Army of The Shenandoah deployed over a 6 mile front prior to the Battle at Cedar Creek (Geier, Whitehorne and Wood 2014; Geier and Whitehorne 1994) exhibit social and political features of a widely dispersed city made up of troops from various parts of the country who often reveal in their encampment plans, evidence of access to differing types of personal and military material culture.

Encampment in rural vs. urban settings (Fesler, Laird and Lutton 2006), as well as issues for non-human occupants of camps, need to be considered when interpreting military encampments. Camp structure and placement not only addresses human needs, but when considering the massive trains that provide military support and the nature of artillery and cavalry units, it is often the need to support horses, mules and other livestock required to make the units mobile that takes precedence (Whitehorne 2014; Geier, Whitehorne and Wood 2014). One area of encampment is not the same as its neighbors; tent or other more permanent structures within a camp are not all the same (Nelson 2006; Jensen 2000); and the cultural-political and military implications of the encampment units must be understood in terms of the significance of the larger camp and not in terms of its multiple, individual parts.

A review of much of the literature dealing with encampments, particularly at the Phase I level of study, shows that with some glaring exceptions, a determination of significance or eligibility for significance is often overlooked in terms of what appears to be a perception of sameness and abundance rather than an informed understanding of the place of the encampment elements to be impacted within the larger whole. Researchers often conclude that sites are redundant rather than significant because of the false conclusion that all areas of encampment are the same. Unfortunately, in many cases, research requirements or limitations prevent a larger understanding of the encampments and minimizes the level of primary research that can be done to interpret their historic significance. Further, at least in some cases, the person(s) writing these preliminary reports do not have the proper background, interest or time to interpret what

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they have found within the context of the larger whole.

The issues of political affiliation and time also impact the subject of encampment in a significant manner and raise serious anthropological questions dealing with the lives of soldiers as the demands of war extended to five years. The nature, composition and standardization of military equipment of the Confederate and Union armies varies significantly and can be expected to be revealed in patterning at the regimental and company levels. The Union dependence on a developing standardization supported by an increasingly prosperous line of supply managed by the Quartermaster Corps varies significantly with the Confederate companies and regiments which were often dependent on diverse state agencies for support and which often had to depend on scavenging provender from the lands they occupied. Certainly as the war wore on, the imbalance in material culture and support as illustrated by the competing armies increased and became a key factor contributing to Union success. The reference to “camp starvation” attributed to the Confederate encampments at Fisher’s Hill prior to the Battle of Cedar Creek in 1864 (Geier, Tinkham, Lewis and Whitehorne 2006:47) provides an example of the military significance of the imbalance in supply. The body of available evidence suggests that the otherwise victorious Confederate army bogged down and came to rest because of a break-down of discipline as certain of the Confederate forces began to loot the abandoned Union camps for food and supplies (Bohannon 2006). This cessation of activity allowed a counter-attack that resulted in the destruction of the Army of the Valley.

Despite the low priority of camp preservation, often mandated Section 106 studies or Section 110 management studies have none-the-less resulted in a number of important investigations. Examples include the delineations of diverse encampments at the Confederate complex at Evansport (Balicki 2006); the picket camp of the 13th Mississippi outside of Leesburg, Virginia following the Battle of Balls Bluff (Geier, Grondin, Harding and Sherwood 2006); the documentation of Lee’s vast winter camp south of the Rapidan River in 1863/1864 (Reeves and Geier 2006 and ongoing work of Montpelier Archaeology); the mitigation of one sector of Camp Misery, part of the vast Union camp in Stafford County in the winter of 1862/1863 (Geier, Coleman, Samulski and VanZandt 2003); and the delineation of sections of the VI Corps and 1st U. S. Cavalry Division

camps at Cedar Creek (Geier and Wood 2014; Geier, Whitehorne and Wood 2014).

On Being a Prisoner of War

Another issue key to the life of the soldier involved capture on the battlefield. Only one project identified in the set of papers reviewed focused on a site in which the care of wounded prisoners was a primary interpretive issue; the Fairview Cabin Site on the Chancellorsville Battlefield. At this site, wounded Union soldiers were left virtually untended for days in severe weather conditions as the battle continued. It was not cruelty but a lack of medical supplies available to the advancing Confederate force that created the situation (Geier and Sancomb 2000).

The care of captured wounded is certainly an issue of concern, but the living as well were seriously affected by capture. Early in the war the process of exchanging prisoners served to shorten and improve the plight of the captured. City Point (now Hopewell) in 1862 into 1863 served as one of the places where prisoner exchanges took place. By 1864, Union forces took control of the area and converted it into a key medical center and one of the largest inland ports in the world. With the arrival of General Grant, on April 17, 1864, the exchange system was stopped. Cessation of exchange condemned both Union and Confederate soldiers to some of the most hellacious of circumstances that contributed to death, disease and permanent disability. In Virginia, Belle Isle near the falls on the James housed thousands of Union soldiers in an open tent city. In Richmond, Libby Prison was established to house captured Union officers. Both were notorious for circumstances that worsened as the ability of the Confederacy to support its own armies much less captured prisoners was increasingly strained. The historical archaeology of sites dealing with this topic in Virginia is minimal despite its anthropological and historical significance. Belle Isle now serves as park for the City of Richmond. Libby Prison has been removed. Today, the site is bisected by the Richmond Flood Wall. Only a plaque and an interpretive marker commemorate the prison.

After Alexandria was occupied, the Franklin and Armfield Office (slave pen) was converted into a Civil War Prison for Union deserters. There are detailed photos at the National Archives that show the retooling of the slave holding facility into a Civil War jail. Some

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archaeology has taken place at the site (alexandriava.gov/uploadedFiles/historic/info/archaeology/ARSiteReport/AlexandriaSlavePenAX75.pdf).

Earthworks and Defenses

A feature common to both battlefields and encampments includes the preparation of defenses adequate to secure the position in case of threat. Such architectural features can include hasty earthworks such as rifle pits and trenches or artillery lunettes created rapidly to secure against immediate threat such as those found on battlefields such as Fredericksburg (Geier, Sherwood and Sancomb 2002), Spotsylvania Courthouse (Geier, Brien and Fuller 2005), Fisher's Hill (Geier, Tinkham and Whitehorne 2006), Drewry's Bluff (J. Cromwell 1988) or the earthwork defenses associated with military camps such as those at Cedar Creek (Geier and Morrison 2003), and Fort Johnson on the heights of Shenandoah Mountain (Geier 2003; Geier, Nash and Dewan 1999). Even more complex and massive construction is included in the line of earthworks of the Magruder Peninsular Defenses constructed in 1862 (Geier, Mullen and McCartney 1981), or the extensive and elaborate complexes designed to enclose Richmond and Petersburg or to generate a defensive ring about Washington DC (Balicki 2000; Bedell and Potter 2014). Confederate artillery batteries on the heights above Fredericksburg (Geier, Sherwood and Sancomb 2001; 2002) played a key role in determining the Confederate success in that battle. Fort Monroe in Hampton, Virginia, has also been a focus of study (Gardner and Mullen 2001; Gardner, Mullen, Hurst and Walker 2003), and the efforts to document the earthworks and military complexes at Saltville, Virginia, is ongoing (Whisonant, Boyd and Herman 2007; Dautartas, Boyd, Herman and Whisonant 2005).

Significantly, and as noted in the ABPP KOCOA system described above (Babits 2011; 2014), a consideration of the natural terrain and its role in determining the placement of artillery batteries and the plan of a defensive system is key to interpreting defensive positions and the design and construction of fortifications. In this logic, the land tangential to, but outside of, the human defensive construct can be as historically significant and worthy of preservation or interpretation as the manmade features themselves. Fortunately, in the Commonwealth the presence of a large number of historically significant battlefields has resulted in several

sets, or parts of sets of earthworks of various types being protected. The National Park Service through its National Battlefield Park system has protected significant remains at Fredericksburg, Spotsylvania Courthouse, Richmond, and Petersburg, the latter two being tied to the Union siege of those important cities. Elsewhere, the George Washington and Thomas Jefferson National Forest has preserved the entire fortification at Fort Johnson and its associated Camp Shenandoah, and the Shenandoah Valley Battlefield Foundation (SVBF) has protected the Star Fort at Winchester and rifle trenches at Fisher's Hill and Cedar Creek. The developers of the Oakland Dairy Industrial Park at New Port News, agreed to protect the two forts of the Magruder Line on their property (Geier, Nash and Dewan 1999).

Medical Support and Care

Whether in camp or on the field of battle, the issue of medical care is an issue of great military concern and sites reflecting it should be given a high priority of importance (Scott 2011). To say that the troops had a somewhat low regard of hospitals and the care of doctors is an understatement. In a study of life at a camp of the 13th Mississippi established during the Winter of 1861-1862 outside of Leesburg, Virginia (Geier, Grondin, Harding and Sherwood 2006), Private Newton Nash called the hospitals slaughter pens: "Those hospitals are just like slaughter pens. Half or nearly so that go there either die or fit for nothing if they get well. If I should go to one I would despair of ever leaving it alive. I never will go to one if I can help it" (McLean 2002: 242).

The development (or lack) of hospital and surgical sanitation, facilities, and the care and treatment of wounded within the Union and Confederate Armies over the course of the war, played a key role in enhancing the survival rate of soldiers on the battlefield and in camp. Sites ranging from the major medical hospitals and recovery centers in Alexandria, to those established as part of mobile military camps, to surgical hospitals manned and operationalized in the field, reveal patterns of care, many of which, particularly early in the war, contributed to the numbers of dead identified above.

At the same time, programs of medical care, particularly in the North and as a result of groups such as the U. S. Sanitary Commission, did evolve over the course of the war (Geier, Orr and Reeves 2006, Appendix 1.1:17-27). This maturity of service is illustrated by a series of archaeological sites. At the Fairview cabin on the

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Chancellorsville Battlefield in 1863, large numbers of wounded Union soldiers were left by their Confederate captors with little care, many dying from exposure (Geier and Sancomb 1999). At the Hatcher Cheatham Site (Geier 1994a), the Union Army established during the 1864 Battle of Drewry's Bluff, what was, in effect, a MASH camp from which wounded of both sides were stabilized and then sent by ambulance to hospitals at City Point (Geier 1994a). Yet another example is the comprehensive networking of medical facilities that tied the almost experimental Sheridan's Tent Hospital established in Winchester, Virginia, following the Battle of 3d Winchester, to a supply and hospital system at Washington DC, Harpers Ferry, and Baltimore with the citizens of Winchester (Geier 1994b; Whitehorne, Geier and Hofstra 2000).

In 2013, Charles Goode and Joseph Balicki (2013) reported on field work conducted at the Virginia Theological Seminary in Alexandria. In 1861 the campus and buildings of the seminary were commandeered for a hospital and campgrounds for Union troops. Tents, barracks, and other structures associated with the hospital were erected on the seminary grounds. The hospital remained open until the end of the war.

In an issue of surprisingly great importance, interest in the veterinary care of horses and mules is only beginning to be an issue to military historians and historical archaeologists (Whitehorne 2014). The horsepower of today that drives America, at the time of the Civil War had four feet, a tail, and was often a mule. The huge trains that carried everything from a soldiers personal gear to the food, ammunition and uniforms for his support; cavalry; mobile artillery; and ambulances, etc., all moved by energy provided by teams of horses or mules. To turn cavalry into infantry you shot the horse; to capture military trains you shot the horses/mules pulling the wagons; to capture enemy artillery you shot the horses of the team hitched to the caisson. Accordingly, horses/mules were not only critical to the mobility of any military unit but became primary targets for the enemy. Their value was such that injured horses were often killed rather than let them fall into the hands of the enemy. At Gettysburg alone between 3000 and 5000 horses were killed. Approximately 3.5 million horses and mules were lost to action in the course of the war, these 4-foot soldiers dying at a rate almost 6 times that of Union or Confederate soldiers (Niepert 2010:1). Solutions for the Union lay in the development of remount stations such

as the Giesboro Remount Station and depot outside of Washington DC, but even with that the supply was not limitless. For the Confederacy acquisition of needed livestock was an even more severe and ongoing problem (Whitehorne 2014).

For archaeologists dealing with cavalry encampments such as that of the 1st U. S. Cavalry Division, Army of the Shenandoah, at Cedar Creek, an understanding of the food and water needs of livestock and the material culture associated with horses and farriers was key to interpreting site plan. At that site, approximately 1700 men and a similar number of horses were encamped together, the site plan and placement being determined principally by the needs of the horse herd (Geier, Whitehorne and Wood 2014).

Cultural Landscapes

Previously the importance of understanding the cultural environment over which armies fought to interpreting the events and often the outcomes of these engagements was noted (See Geier and Tinkham 2011; Andrus 1992/1999). This highlights the fact that battles rarely occurred in a vacuum but were typically fought on settled lands that were shaped by the domestic, economic, and industrial state of the communities at the time of the action. Most of the most significant Civil War battles (Gettysburg, Antietam, Manassas, Cedar Creek, etc.) were not fought on prepared military landscapes, instead, the combination of natural and cultural landscapes that existed at the time of the engagement created the battlefield. Only eight of the studies considered in this report clearly addressed cultural landscapes as an interpretive result, though several of the studies in the "other" category include projects directed at locating and evaluating cultural features/structures that had stood on a military landscape (Figure 3) (Galke 1992; Cooper 2000; Bevan, Orr and Blades 1984; Blades and Cotter 1978; Geier and Brien 2005; Parker and Hernigle 1990; Geier and Veness 2003).

To a major degree, the idea of cultural landscapes as a significant topic is driven by changing attitudes concerning the interpretation of national military and historical parks, and by the standards put forward by the ABPP and National Park Service in defining key features of a battlefield (Geier and Tinkham 2011; Andrus 1992/1999). As further evidence of the importance of this issue, in 2014, the National Capital Region NPS sponsored a symposium on contemporary battlefield

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conservation and management strategies titled: *Farmsteads, Fence Lines, Fields and Forests: Documenting Battlefield Landscapes Through Cultural Landscape Documentation*. Examples of such cultural landscape studies are referenced in the overview and assessment project completed for the Cedar Creek and Belle Grove Plantation National Historical Park (Geier and Harding 2006; Geier and Sancomb 2006); and include studies on lands acquired by the Shenandoah Valley Battlefield Foundation at Fisher's Hill (Geier, Whitehorne, Tinkham and Wood 2010; Geier, Whitehorne and Tinkham 2006) and on lands threatened by quarry development at Cedar Creek Battlefield (Geier Whitehorne and Wood 2014). In these studies, given the critical importance of military trains to meet diverse needs of supply, ambulance transit, and general support for artillery, infantry, and cavalry when on the move or in camp, the location and documentation of period roads of all levels can be a major concern.

The nature of the cultural features to be documented, logically, varies with the military site or landscape under question, but in this context, the existence of architectural features associated with farms, towns and industrial complex becomes of real interest. In addition, support features such as stone walls, bridges, fence lines, roads, agricultural fields, etc. can have great significance when interpreting flows of battle or the placement of encampments. As examples: Phase I field study on the Chancellorsville Battlefield recorded significant new detail of the mid 19th century Catharine's Furnace and iron mine complex (Geier, Morrison and Tinkham 2003; Geier and Sancomb 2003); and research done to document the stone wall bounding the "sunken road" at the foot of Marye's Heights west of Fredericksburg, which played a primary role in the destruction of Union troops advancing against the heights in the 1862 Battle of Fredericksburg. It's role was so significant that an extensive program of historical archaeology was undertaken for the purpose of allowing the stone wall and associated road to be restored for public interpretation (Geier, Sherwood and Sancomb 2001; Geier, Sherwood and Lotts 2004).

Collateral Damage

A consideration of cultural landscape anticipates the issue of collateral damage (Geier and Tinkham 2011) as it suggests some level of impact by encamped troops or those on campaign on a civilian community. Troops encamped for long periods of time often salvaged/

dismantled structures, fences, support buildings (usually abandoned) in the vicinity of their camp for use as fuel or as material used in the construction of the huts they occupied (Reeves and Geier 2006). As armies engaged in battle moved apart, it was not uncommon for farm and agricultural buildings on the field to be destroyed, the fields covered with the litter of war and serving as the initial burial of dead from both sides (Stotemyer 1992). In the case of Fredericksburg (Geier and Tinkham 2011), and later Richmond and Petersburg, the conduct of battle in an urban setting (siege in the latter cases) resulted in extensive devastation to homes and shops and community infrastructure. Field studies on battlefields such as Manassas (Portici Plantation; Parker and Hernigle 1990), Chancellorsville (Fairview cabin, Bullock house; Geier and Sancomb 2000), Spotsylvania Courthouse (Spindle House; Geier and Brien 2005), Fredericksburg (little white structure on Willis Hill; Geier, Tinkham and Evans 2003), and Petersburg (the Taylor House; Bevan, Orr and Blades 1984), among others, reveal efforts to locate and evaluate structures on battlefields which were either destroyed during the conflict, or were removed subsequently, but which played a key role in some aspect of the action.

The combined effects of battles such as Chancellorsville and Wilderness, fought about a year apart but across much of the same land, crippled the agricultural economy of the northern Spotsylvania County/Fredericksburg area for decades after the war. Military encampments, both Union and Confederate ravaged the domestic landscape in efforts to secure construction materials and obtain food, functioning much as large parasites consuming the lifeblood of local communities. Letters from Confederate soldiers occupying, and, in theory, defending their homeland, report very strained relations with local civilians as the military sought to feed and supply itself (Snyder letters; Epperly letters).

Towns such as Alexandria, were converted into major railheads and military support facilities. The sleepy backwater community of City Point became a major, modern Union supply depot. In December of 1862, the population of Fredericksburg was obligated to abandon the city prior to the onset of the 1st Battle of Fredericksburg only to become refugees on the land, the town being seriously damaged (Geier and Tinkham 2011). Winchester, in the Shenandoah Valley, was

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occupied and reoccupied as many as 72 times; and major towns such as Richmond and Petersburg became fortified encampments, their populations swollen by refugees and soldiers, the towns enclosed by vast Union armies. The impact on many communities was profound and dramatically shaped the subsequent histories. Clearly sites documenting the collateral impact of war should be treated with particular respect.

One very dramatic human impact issue in the Civil War involves the lives of the newly freed slaves, otherwise known as “contraband”. While applauding the freeing of slaves and the role of the “underground” railroad, the fact is that little has been done by historical archaeologists to study the diverse cultural situations of this emerging and growing refugee population that entered towns such as Alexandria. Some of the first research in this area was conducted by Dr. Pamela Cressey (1985). The large numbers of refugees entering the town created a population crisis; many of the escaping slaves arriving hungry and in ill health. Many were housed in barracks but disease was rampant. In 1864, after hundreds had perished, the Superintendent of Contrabands ordered that a property on the southern edge of town be established as a cemetery. The last burial in what came to be known as the Contrabands and Freedmen’s Cemetery took place in January 1869. The cemetery fell into disrepair, and while still identified on maps until 1939, by then there was little remaining above-ground evidence of the burials, the mass of the site being ultimately covered by modern construction including a gas station. More than 30 years later, preparation for rebuilding the Woodrow Wilson Bridge focused new attention on the site. Archaeologists used ground-penetrating radar to confirm the presence of graves, and the Friends of Freedmen’s Cemetery was formed to advocate for preservation of the site as a memorial park. The layout of the cemetery, revealed by the archaeological work, is now reflected in the design of the memorial park (Alexandria Archaeology Museum 2015).

In 2013, Cynthia and Charles Goode of John Milner Associates, Inc., reported on field work at Fort Carroll in Washington D. C. (Goode and Goode 2013). While the final report is not available, it was suggested that domestic site remains found in the study area may show evidence of the lives of “contraband” and wage laborers who served as part of the work force constructing the defenses of Washington.

Industry and Transportation

Efforts to maintain and disrupt lines of supply varied with the circumstances of the event and locale in question, but were key to both defensive and offensive posturing of the respective armies and navies and to the domestic communities that encompassed them. Early in 1861, the Alexandria and Orange Railhead in Alexandria was converted into the primary point of supply for the Union Army that joined Washington DC with Union Armies in northern Virginia and the Midwest (Cromwell and Hills 1988). In other instances, efforts to disrupt rail lines to cut off lines of supply (1864 Lynchburg Campaign; Wilson-Kautz Raid of 1864; Averell’s 1863 raid on the Virginia and Tennessee Railroad in Salem; Catlett’s Station; Brandy Station, etc.) and , or prevent their use by enemy forces (Fredericksburg) was a major military objective.

Perhaps one of the more spectacular of these events took place on May 24, 1861 in what is known as the Great Confederate Train Raid. In this, Colonel Thomas Jackson (later “Stonewall”) executed a raid to cut the B&O Railroad lines east of Martinsburg and west of Point of Rocks, thereby trapping a large quantity of rolling stock in between, especially in the rail yard at Martinsburg. From Martinsburg, the Winchester & Ohio Railroad ran as a spur off the mainline south towards Winchester, Virginia, allowing Jackson to move his captured rail assets quickly to Winchester. With the assistance of Captain Thomas Robinson Sharp and wagoners in the Winchester area, Jackson’s forces moved a total of 56 locomotives with tenders and over 300 railroad cars off the B&O Railroad and into Virginia State Militia hands. The wagoners rigged special carriages and dollies to transport this equipment, especially the disassembled locomotives, south from Winchester along the Valley Turnpike over 20 miles to Strasburg, Virginia. In an incredible and historical feat of engineering, the Virginia militia soldiers pulled the locomotive boilers with 40-horse teams, rigged artillery-style, through downtown Winchester south on the Valley Pike to the railhead at Strasburg where they were re-mounted onto the tracks of the Manassas Gap Railroad and taken west, out of the Valley, and south towards Staunton. These captured steam locomotives were subsequently sent into service on Confederate rail lines throughout the South (Linane 2011).

Many cultural resource studies document the presence of active water powered grain and lumber

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mills within the boundaries of military actions or encampments. Some of these have been archaeologically documented as part of military landscape studies [Ellerson's Mill, Richmond Battlefield (Druss, Erickson and Otteson 1997); Howison's Mill behind Willis Hill at Fredericksburg (Geier and Sancomb 2003 Part I); Fisher's Mill at Fisher's Hill (Geier, Tinkham, Lewis and Whitehorne 2006); the Bowman, Daniel Stickley and Hottle Milling complexes on Cedar Creek within lands of the Cedar Creek Battlefield (Geier and Harding 2006; Geier, Whitehorne and Wood 2014); the complex of Wood Family mills on Redbud Run, Battlefield of Third Winchester (Geier and Hofstra 1992b; Hofstra, Geier and Boyer 1997; Hofstra and Geier 1991; 2000)]. The visibility of mills in military landscapes not only reflects their existence on primary water sources, but their common placement as a point of convergence/divergence in established road networks (Hofstra and Geier 1991; 2000; Geier and Hofstra 1992). Clearly, the productivity of working mills was of major importance and could be used to the advantage of any army present in its area. Such mills were often targets of destruction, however, the purpose being to deny their use and product to an enemy. The dramatic "burning" of the Valley in 1864 (Heatwole 1998) by Sheridan's withdrawing Union Army of the Shenandoah, which targeted mills and barns, was done to deny a stressed Confederate Army the prosperity of the Shenandoah Valley.

Just as the blocking and reopening of roads, the burning and rebuilding of bridges (including railroad), etc., were ongoing parts of the military experience in contested lands; the blocking, barricading, destruction, repair and reopening of inland and coastal ports to facilitate or prevent troop movement and supply (1862 Union James River Squadron) were substantive military concerns (Figure 4.2; Balicki 2006, the blockade of the Potomac near Evansport). This introduces the issue of underwater archaeology as it relates to the military resources of the Commonwealth, an issue about which we are admittedly poorly informed. In 1994, Samuel Margolin considered the "endangered legacy" of Virginia's Civil War Naval Heritage. While somewhat dated at present, Margolin's work stands as the only such assessment and probably retains much of its validity (see Broadwater, this volume). Margolin described the James River as a central focus of strategic maneuvering by both the Union and Confederacy. He states "Northern

General George B. McClellan considered control of the river, as gateway to Richmond, critical to the success of his Peninsula Campaign in 1862. Southern strategists knew that the failure to block the enemy's navy on the James at any point in the war would mean the loss of the Confederate capital and, most likely defeat of the Southern cause. The James was the scene not only of the legendary "Battle of the Ironclads", the most famous naval confrontation of its era, but also of numerous other, less widely known actions of comparable drama and consequence" (Margolin 1994:76). To that end, John Broadwater has recently prepared the thesis on the U.S.S. Monitor (Broadwater 2012) its history and archaeological discovery and recovery.

While discussing a set of underwater military sites, Margolin is particularly attentive to a study of a naval action at Drewry's Bluff, a fortified precipice on the James River about seven miles below Richmond and which served as part of its southern defense system. Beneath their gun battery on the bluff (Fort Darling), the Confederates placed a series of obstructions in the river to prevent the Union's James River Fleet from advancing on the Confederate capital. The obstructions consisted of wooden pilings or cages loaded with stone, supplemented by sunken wooden vessels, including the steamers *Beaufort*, *Northampton*, and *Jamestown*. Margolin documents research into locating the archaeological remains of this blockade that also included the remains of the famous Southern ironclads *Fredericksburg* and *Virginia II*, which were destroyed by the Confederates during the evacuation of Richmond (Margolin 1994). In presenting this discussion, Margolin provides evidence for the wealth of Civil War Era underwater resources within the coastal and riverine resources of the Commonwealth, discusses the ongoing threat to them from natural and man-made causes, and highlights the need for their effective identification, assessment, preservation, and recovery.

Resource acquisition, other than the obvious needs of provender for support of the armies and domestic communities, was a major focus of concern for the south and a point of concern for the Union. Examples of this include the reopening of Catharine's Furnace in Spotsylvania County and over which a part of the Battlefield of Chancellorsville was fought. This mine, that had been virtually shut down prior to the war, was reopened and contributed a source of iron to the

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cause (Geier and Sancomb 2003), “pig” iron being shipped by way of Fredericksburg to the Tredegar Iron Works in Richmond; that important manufacturing site undergoing only preliminary archaeological examination (Raber, Malone and Godon 1992).

In 1864 Union forces twice attacked Confederate defenses at Saltville, Virginia. By the advent of the Civil War, Saltville was one of the three largest salt-making centers in the United States and during the war, it became one of the prime mineral producing centers in the south. Given its strategic significance, Confederate defenses were established to protect the industrial complex. Two-thirds of all of the salt consumed by the South during the war was produced at Saltville, and given this strategic importance, in 1864 the complex became the principal military target in southwestern Virginia. Research on this complex has been conducted and is ongoing by researchers from Radford University (Whisonant, Boyd and Herman 2007; Dautartas, Boyd, Herman and Whisonant 2005).

Commemoration: On Death and Dying

One topic of historic and anthropological study is concerned with the manner in which individuals and populations choose to remember or memorialize military events or personages (Shackel 2003; Stewart 2011). Certainly this interest can be illustrated by the current, almost statewide effort to identify and commemorate local military actions and events. A visit to battlefields such as Manassas, Chancellorsville, and Cedar Creek include commemorations made to particular individuals such as Stonewall Jackson, and to the sacrifice made by particular regiments as commemorated by the states and communities that they served.

The process to which this paper is dedicated serves to establish criteria which can be used to ensure that archaeological sites which contain, often singular, evidence of historic events significant to locales, regions within the state, the state, and the nation, are recognized, preserved, and/or evaluated when under threat of loss. The assignment of National Register status or eligibility is a badge of honor that serves to commemorate places where individuals or groups engaged in activities that were pivotal, or significant to the progress of human events in the Commonwealth and nation. Such recognition can ideally result in their preservation and protection; and when threatened by construction, can result in their

archaeological mitigation. Certainly, Virginia is filled with numerous Civil War Era sites, many having legitimate local or national status and which were key to the events defining the onset and outcome of the war (Figure 4.3).

One very human and anthropological issue of relevance to the Civil War is the manner in which the “honored” dead were treated (Stotlemeyer 1992). Many of Virginia’s battlefields and adjoining agricultural fields still retain the remains of pits which mark where the dead were buried and exhumed (or not); sometimes in shallow mass or communal graves, or as solitary shallow pits dug at the place where soldiers fell in battle. As battles were fought, the dead and wounded of both sides were commonly left on the field to the mercy of the victor or the local residents. It was not uncommon for the dead and even some wounded to be stripped of clothing and personal items by members of the local community or by soldiers seeking replacement gear (or regrettably, trophies). Further, the quality of burial received could vary with the circumstances of the troops given burial duty.

By 1867, a growing concern about the conditions of these wartime interments and the desire to provide a proper burial for every Union soldier who died during the war, caused the Office of the U.S. Quartermaster General to establish national cemeteries in central locations such as Fredericksburg, where they assembled remains from around the region for burial. The 1867 “Act to Establish and Protect National Cemeteries” required the Secretary of War to enclose every national cemetery with a stone or iron fence, to mark every gravesite with a headstone, appoint a superintendent to each cemetery, and construct a lodge for the superintendent to occupy (Merrifield 2015). Significantly, however, Confederate soldiers could not be buried in these cemeteries nor were they afforded any benefits from the United States Government for many decades after the end of the Civil War. When the reburial corps in the late 1860s found the remains of Confederate soldiers lying near those of Union soldiers, they left the Confederate remains in place. Private organizations, especially women’s organizations established in former Confederate states after the war, assumed responsibility for Confederate reburials. One of the more prominent groups was the Hollywood Memorial Association, which raised funds to move the bodies of Confederate soldiers from the battlefields of Gettysburg and Drewry’s Bluff to Hollywood Cemetery in Richmond, Virginia (Merriweather 2015). To its

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discredit, Virginia never provided state funding for the recovery of its fallen.

Following the war, the initial Union gravesites were revisited for the purpose of bringing the dead together in temporary military cemeteries. In such places bodies were often stacked like cordwood in grave shafts until they were ultimately removed to more permanent Federal, National Cemeteries such as those in Fredericksburg (Geier, Brien and Fuller 2005). In one of the greater ironies of the time, these persons not only lost their lives but also their identity. For example, approximately 85 percent of the over 15,000 Union soldiers at Fredericksburg are not identified.

The differential commitment to the burial of Civil War dead; differing strategies and opportunities for the burial of the dead; often incomplete Confederate records concerning the place of interment; and policies of burial recovery that did not require the complete recovery of a body and its associated burial goods; all join to make the recovery of the dead from battlefields, camp and hospital cemeteries, uncertain. In truth, many of these sites still have the high potential of retaining complete or partial human remains and the burial goods interred with the dead. As an example of this Elizabeth Crowell (personal communication) recounts that in Fairfax County, the graves of 6 Union soldiers were found at the proposed location of a McDonalds on Rte. 28. They were excavated by Mike Johnson and the remains were analyzed by Doug Owsley. They were subject to intensive research and ultimately reinterred in Massachusetts. In sum, areas of military action where burials had taken place, need yet to be carefully studied to determine whether significant human burial features still remain.

Miscellaneous

Five days following Lee's surrender at Appomattox, President Abraham Lincoln was assassinated. While having profound political implications, this act began a 12 day long search for the killer, John Wilkes Booth, who was cornered and killed in the barn of the Garrett Farm in Caroline County, Virginia. In 1979, an archaeological survey was conducted on lands within Fort A. P. Hill that resulted in the location of a series of historic sites (Ayers and Beaudry 1979), one of which proved to be the site of the Garrett Farm (44CE0085; Baicy and Clem 2014). Phase II testing of the farm and associated tobacco barn locale (Baicy and Clem 2014; Lutton and Harris 2015)

showed this historically significant site to have been seriously disturbed by past road construction, structure demolition, and metal detecting.

Methodology and Concerns

A growing body of archaeological data from studies within Virginia and elsewhere around the world has generated new insights into appropriate field methods for the identification and assessment of military sites and associated features; some of these methods generating ongoing controversy (Geier, Scott, Babits and Orr 2011). The **KOCCOA** system, discussed earlier and implemented (Babits 2014) by the ABPP, is particularly significant in this regard. While natural and cultural landscape studies are not new to archaeology, KOCCOA, nonetheless draws attention to the critical understanding and interpretation of the land and cultural features on it to shaping the dynamics of military battles. In the context of traditional CRM types of research, however, this can be problematic, in that while established Section 106 guidelines focus on identifying and assessing particular sites of human activity, they do not necessarily require an evaluation of the broader landscape on which the events represented by the association of artifacts and features took place. While specific military sites might be identified, often narrow CRM guidelines can prevent the natural terrain that shaped and determined their existence and significance from being considered and, therefore, lost as a historic feature. This is certainly the case when considering situations such as road construction across battlefields or other military sites where physical research is limited to those remains lying only within the construction right-of-way.

Just as KOCCOA guidelines serve to direct projects supported by ABPP grants and are coming to be recognized as appropriate to battlefield analysis in general, a similar system of analysis should apply to the study of military encampments. While generalized period military guidelines exist (United States War Department 1861) which direct the pattern of military encampments of diverse sorts (infantry, cavalry, artillery, etc.), the fact is that field studies of identified encampments show their plan to be strongly influenced by factors of terrain, water availability, cultural features such as existing roads, the availability of pasture for livestock, and the existence of cleared land that can be occupied (Reeves and Geier 2006; Balicki 2000; Geier, Reeves and

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Orr 2006). As the importance of studying the nature of military encampments and the lifeways of soldiers when encamped evolves as a topic of concern, the need to document, understand and interpret the terrain that supports and cultural landscapes that shape and support those communities should be a priority consideration to both scholarly research and CRM concerns.

An additional problem introduced to the study of military sites by initial or Phase I level CRM, Section 106, and potentially Section 110, research lies not only in the fact that some projects strictly limit the area of research to the specific area of impact (Area of Potential Effect, APE), but they often require only a review of already existing literature relative to it. In some instances, this may be appropriate, but for many military sites these constraints are problematic and are not even minimally appropriate to assess parts of the larger whole. Many written military histories exist that provide substantive overviews of military battles. A great number of these histories lack specific spatial and tactical information and are often written by individuals, some of whom have never walked the land, and who are not conversant with the needs of the historical archaeologist. I cite, for example, the previously introduced and discussed description of the massive Union Civil War camp attacked as part of the Battle of Cedar Creek. Further, while many events of the Civil War are extensively mapped, documented, and even photographed, finding those data available to interpret specific actions on particular landscapes in the secondary literature is often illusive and/or nonexistent. In some cases where such maps exist, they can provide contradictory or erroneous information, the features and accuracy varying with the intent of the map and the perspective and knowledge of the illustrator/cartographer.

It is the case that much of the research mandated in established CRM guidelines, while technically correct and consistent with existing legislated directives, can often result in misleading or incorrect conclusions. For example, in a project directed at documenting a military action in the community of Auburn, Virginia, (Geier, Whitehorne, Wood, Troll and Tinkham 2008), a small section of the project locale had undergone "Phase I" testing in an area of planned road-widening. The study, built around a traditional STP format of testing, found a light and widespread scatter of military artifacts that were interpreted as being historically insignificant. The initial Phase I field work was restricted to the immediate

area of planned construction impact and historic research was limited to existing written history. When joined in a broader spatial study that included systematic metal detecting, the same location was found to be part of a military encampment and battle complex that was significant to interpreting the battle sequence at Auburn in October of 1863.

It is becoming increasingly apparent that traditional guidelines for site identification that rely on regular interval shovel test pitting as a primary field method, is extremely ineffective and unreliable in locating and evaluating battlefield and certain other types of military sites. Researchers with the National Park Service have been well aware of the limitations of shovel test pitting (Geier and Potter 2000: 287-360). Within Virginia, Joe Balicki has been a leader in discussing and recommending new strategies of site identification and assessment using metal detectors (Balicki 2006, 2011; Corle and Balicki 2006; Leach, Holland and Balicki 2014). The value of using metal detectors to find and assess sites has been proven across Virginia. Examples include: Balicki's work at the Evansport Cantonment (Balicki 2006); Reeves significant research in the interpretation of battle events at Manassas Battlefield (Reeves 2001) and at James Madison's Montpelier (Reeves 2014); the excellent work of John Milner Associates at a bivouac of the 14th Connecticut Infantry Regiment (Balicki, Traum, Holland and Corle 2007); and the recent documentation of conflict and encampment associated with the Battle of Cedar Creek (Geier, Whitehorne and Wood 2014), and the evaluation of military features associated with a section of the Battle of Fisher's Hill (Geier, Tinkham, Lewis and Whitehorne 2006). All provide evidence of quality studies that *could not have been* accomplished without the use of the metal detector and trained professionals that know how to use them. Robert Jolley (1996; 2007) has been particularly successful in illustrating the use of the metal detector and has prepared an excellent statement on their use in his analysis of the Confederate left flank at the Third Battle of Winchester fought in September of 1864 (Jolley 2007). Building on that research, additional metal detector reconnaissance identified a firing line held by the Union 1st Brigade, XIX Corps, above Redbud Run and as part of that same action (Geier and Wood 2014; Geier, Whitehorne and Wood 2014).

Significantly, it is not simply the use of metal detectors that is the issue. Instead, Corle and Balicki (2006), Balicki (2006), Jolley (2007), Reeves (2014b)

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and JMU researchers (Wood 2010; Geier, Whitehorne and Wood 2014) all support the value of working with trained metal detectorists, many of whom are active collectors of militaria. Such individuals can bring with them a working knowledge of archaeological sites in an area; high quality to cutting edge technology; an extensive body of experience in working detectors in diverse and varied soils; and an informed knowledge of the material culture that is being recovered. While we strongly support the training of professional archaeologists in metal detecting, the fact is that, at present, many historical archaeologists are not adequately trained in the use of the metal detector. Even if they were, on sites of large size and complexity common to many military sites, the need to work in teams exceeding the number of available trained professionals is routine. There is no question that a working collaboration with members of the local metal detectorist community has been shown to make a significant difference in the success of identifying and documenting military sites in a manner that would be virtually impossible within the context of existing historical archaeology. It is also the case that many of these individuals have a strong sense of the historical value and importance of military sites, many taking pride in the records they keep as a result of their effort.

The value of working with trained local metal detectorists has generated some controversy. This debate is serving to divide, if not polarize, historical archeologists active in the Commonwealth and has also been a source of friction between the collecting and professional communities. On one hand certain professionals are concerned with what they see as the looting of historic sites by some metal detectorists; and, on the other, some members of the metal detecting community see archaeologists as arrogant, uncompromising snobs. While advocates in the professional community, noted above, have called for a growing collaboration with the collecting community, experiences of other archaeologists (Bies 2006) are negative and document having lost significant remains to the intentional looting of ongoing professional excavations.

There can be no question that the deliberate metal detecting of sites for purely material and financial gain with no thought for the resource being damaged cannot and should not be condoned. On the other hand, if we are truly interested in managing, protecting and preserving the military resources of the Civil and other wars, the

polarization in the relations between the professional and collecting communities is unfortunate and needs to be mitigated.

Summary

A series of themes have been proposed that are believed to be valid measures against which the historic significance of Civil War period and military sites can be assessed (ABPP; Geier, Reeves and Orr 2006; Geier, Scott, Babits and Orr 2011). The problem is that while these have political, anthropological, and historical legitimacy, with the exception of battlefield studies, few have precedents that have been recognized in academic scholarship or CRM research. In many ways, despite the increasing number of Civil War sites threatened by ongoing development across the Commonwealth, the historical-archaeological study of these sites is just beginning.

As noted, Civil War archaeology and the historic assessment of the associated sites requires a new analytical perspective on what we as a community identify as historically important. At the same, time, as discussed previously, the identification and evaluation of many site types requires the use of new methodologies, technologies, and dedication to the scholarly interpretation of a tremendously varied material culture. Despite differences in perspective, much of the immediate solution to the tremendous loss of military sites, lies in developing a working collaboration between the collecting and professional communities. In the absence of such collaboration, the learning curve required and the relatively small number of historical archaeologists active in the Commonwealth, creates an overwhelming obstacle when the loss, and threat of loss for the military heritage of the state is considered.

Regional diversity is also a key issue for the question of determining significance. While convenient and possibly desirable, a one size fits all approach to the Civil War should not, and cannot be applied in assessing the historic significance of a resource. The issue of significance can only be assessed in terms of local and regional contexts, which for many parts of the state remain to be defined.

One last point needs to be made and that relates to scholarly involvement and interest that some may have in the Civil War. In a conversation with a professional, who I will not name, I was told that this person would never

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knowingly become involved in working on a Confederate site. In an ardently anti-slavery statement, all who fought for the Confederacy were branded as unworthy of scholarly research or recognition. After decades of studying the Civil War I certainly do not romanticize any aspect of the war. However, as a Yankee, I cannot help but feel that the hundreds of thousands of Virginians who fought in the war for Virginia, many not at their own choice, deserve a voice. Many of these men died horrendous deaths; many were disabled and abandoned by their government and families; and many went through multiple years of deprivation in which their lives and that of their families was in turmoil. While they may have served on the “wrong side” politically and ideologically, they not only served the Confederacy, but Virginia. I am reminded that

one of the darker and more shameful periods of recent history involves the poor treatment and abuse of US soldiers as they returned from the unpopular Vietnam War. In theory, we learned from that...

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Chapter 4

An End to Traditions, a Time of New Beginnings: Reconstruction through World War I (1865-1918)

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Introduction and Overview of Virginia History in the Late 19th Century

On April 11, 1865, President Lincoln presented his first speech since the end of the Civil War in which he warned Americans that “reconstruction” would be difficult. Just three days later, the president was dead, and a war-weary country began the arduous journey of rebuilding and re-uniting. Given the loss of life and level of destruction, Americans had little interest in international affairs. However, as the 20th century began, events would force international responsibilities upon a reluctant citizenry. Further, the rise of mechanized industry and transit would change economic, social, and political needs, and provide new opportunities and possibilities for the Commonwealth and the Nation. This essay spans the years 1865 to 1918 or from the end of the American Civil War through the First World War. While varying in impact across the diverse regions of the state, this was nonetheless, a period of tremendous demographic, social, political, and economic change for the Commonwealth and the Nation.

For Virginians, the time following the American Civil War through the end of WWI was characterized by remarkable, almost continuous economic, social, political, environmental, and demographic change as the Commonwealth sought to recover from the trauma and devastation of war. The devastation wrought to some portions of the state, such as the Shenandoah Valley which was “burned” in October of 1864 (Heatwole 1998); and

the physical destruction to cities such as Fredericksburg, Richmond (Sanford 1975), and Petersburg, resulted in a slow recovery. While some communities never recovered their pre-war economic status, over the decades of the latter 19th century, many successfully rebounded during the Post-bellum Era as investors from the North took advantage of the economic opportunities that the state offered (Moore 1996:142-143). Long-standing political frustrations in the western portion of the state resulted in the formation of the state of West Virginia in 1863; the Commonwealth losing about a third of its landmass, resources and its associated citizenry (Daily 2000:18; Kesavan and Paulsen 2002).

The economic- and cultural-infrastructure that was the lifeblood of the Commonwealth was devastated during the Civil War and needed to be rebuilt quickly. Roads such as the macadamized Valley Turnpike had been virtually destroyed by military traffic during the five years of intense conflict and desperately needed repair. Bridges across rivers and streams that were deliberately destroyed as defensive or offensive actions, required restoration and upgrades. Rail lines were damaged or destroyed, and stones were used as rails as a temporary repair in the months immediately following the war (Daily 2000:17-18). Harbor and shipping facilities that served the trade centers of the Chesapeake and inland ports such as Fredericksburg and Richmond, were steadily rebuilt. Perhaps most dramatically, the demise of the James River-Kanawha Canal System was hastened as the rapid expansion and modernization of a complex rail

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network marked the emergence of new regional nodes of prosperity (Gibson 2000:284-289). Significantly, however, simple rebuilding of the State infrastructure was not enough because new social, political, economic and demographic realities required new solutions.

The fact that socially and politically challenging aspects of Virginia's transformation came as a result of a failed secessionist war effort and were imposed from (often punitive) external sources, had a profound and long-term effect on shaping the developing social and economic relationships and institutions within the new Virginia (Geier 1999). These consequences continued to be manifested throughout the 20th century. While warfare had directly reduced the Commonwealth's population, demographic problems were compounded as popular westward migration to new lands and opportunities enticed families to leave, many having lost virtually everything to the war (Geier and Tinkham 2007; Koons 2000; Moore 1996:140-141; Paonessa 1996). The environmental impact of the war and needed extractive industries such as iron mining, to Virginia's waterways, forests, air, and soils was devastating. Deforested landscapes hastened topsoil runoff, exacerbating a long history of irresponsible agricultural practices (Trimble 1985:162-165, 170-171, 180). Soil-choked waterways changed marine environments and impacted the livelihoods of Virginians dependent upon them.

Race relations and the economic realignment challenged the citizens of the Commonwealth throughout the Reconstruction Era. Labor relations between freedmen and white landowners were slow to change, and exploitative relationships persisted despite the efforts of the Freedmen's Bureau (Farmer-Kaiser 2010; Mugleston and Hopkins 1978). Established in 1865, the Bureau of Refugees, Freedmen, and Abandoned Lands, or "Freedmen's Bureau," was created to assist formerly enslaved Americans segue into American society as full citizens having access to better education, legal resources, nourishment, and fair labor practices (Carson et al. 2007; Mugleston and Hopkins 1978). Millions of freed blacks, now full citizens, took advantage of new prospects to improve their economic situation, to take advantage of new educational opportunities, to legally marry, and to become politically active (Dailey 2000: 17; Edwards 1997; Gutman 1976; Koons 2000:240-252; Lowe 1995; 1972; Siebert and Parsons 2000:267-286; McCartney 1992:123-128; Reeves 2007; 2003a; 2003b;

Ryder 1991). African-American churches formed the backbone of newly constituted African-American towns or neighborhoods and a desire for black-administered institutions inspired political, economic, and educational activism as well as societal backlash and segregation (Foner 1988:106-108; Forsythe 1997:425-436; Lowe 1995:181; Mugleston and Hopkins 1978:47; Moore 1996:141). Interracial efforts had some success in the years before Jim Crow (Dailey 2000). A coalition of black and white Virginians formed the "Readjuster Political Party," winning a majority in the Virginia General Assembly in 1879. Virginia's poor economy and high state debt led to the closing of many public schools. Tax reforms and educational improvements were made that benefitted black Virginians and the destitute. Greater political activism on the part of African-Americans followed, with representation in elected offices, employment in the police force and post office, and greater participation in community markets. Deadly, race-based violence in Danville in November, 1883 collapsed the Readjuster Movement (Calhoun 1966; Dailey 1997; Melzer 1963; Pearson; 1913; Tate 1968). The rise and fall of political movements such as this one demonstrate that social change is not one of linear progress, but rather a process of advancement and deterioration can characterize their history. In the economic depression that followed the Civil War, the agricultural community that had shaped the base of the pre-war economy was significantly changed. Many large plantations that had grown labor-intensive crops were forced to break up, the subdivisions being sold off as smaller, family-owned farms that raised livestock and/or a variety of less labor intensive vegetable and fruit crops. As some owners confronted the demand of rebuilding destroyed farms and re-establishing abandoned fields, many sold their lands, abandoning years of family investment, and left the Commonwealth to become part of a significant post-war westward movement (Koons 2000). In areas where large, labor-intensive farms were retained, tenant farming took hold and characterized many of the rural portions of Virginia. Share cropping, in which farmers labored upon the landlord's property in exchange for a portion of the crop and sometimes housing, was one response to the region's lack of capital following the Civil War. Such crop tenancy fostered poor soil stewardship, since there was little incentive for transient, poor, and undereducated tenant farmers to invest in long-term soil enrichment and

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preservation (Trimble 1985:173-174). An unskilled and uneducated labor force exacerbated Virginia's stagnant economy (Connolly 2004; Wright 1986).

At the onset of the War, it was a common tendency for mature men who often shared a common town or community to enlist in the same military regiments. As these troops participated in lethal military actions over the five years of war, communities across the Commonwealth were devastated, as significant numbers of their adult male citizenry were lost to the trauma of battle. The resilience and productivity of women serving to replace, or stand in for their male counterparts during the War is a powerful story in its own right. The absence of mature males in local populations when the conflict ceased impacted efforts to "normalize" affairs in gender relations.

The energy driving Virginia's changing agricultural system and evolving industrial interests in the latter half of the 19th century underwent significant and revolutionary change. The post-war transition from water power to steam, virtually eradicated the economic import of the dispersed milling networks of the early 19th century that had been established along the water flows of the Commonwealth. In a similar manner, the maintenance of facilities of the James River-Kanawha Canal, which tied the international ports at Norfolk with the agricultural prosperity of the Ohio Valley, were abandoned in favor of more cost-efficient rail power. In response, new, centralized centers of commerce, industry and population concentration were established around factories fueled by steam produced from coal-fired furnaces. As new towns and economic centers emerged, established road systems were redesigned, and the "golden era" of steam established a network of rail lines that tied local economic centers across the Commonwealth to each other and to major trade centers and ports: each node supporting and enhancing the other to greater scales of industry, economics, and demographic thresholds.

Conversely, the significant American iron industry in which Virginia had participated transitioned from wood to coal, and finally to coke to fuel its furnaces. Cheaper sources of fuel, higher quality ore, and inexpensive mining technologies eventually moved the center for iron extraction to northern states, such as Pennsylvania and Michigan at the turn of the century. As a result, iron-mining communities in the state withered and were abandoned at the turn of the 20th century.

A major transformation in education occurred in the southern landscape after the Civil War. A system which had in the past been characterized by a few, isolated academies with a decidedly ecclesiastical orientation was supplanted by a publically-funded school system modeled on the New England tradition (Heath, Galke and Lee this volume; Hood 1971:171; Howe 2002:6; McDaniel et al. 1994:32-34; Moore 1996:143-148; Nybakken 1997:164). In 1869, at the onset of Reconstruction, a state-administered public education system following a Jeffersonian model was established under the authority of the "Underwood Constitution." Questions of funding, participation, teaching credentials, and curriculum evolved over the latter decades of the century. The period from 1900 through 1918 was particularly significant as a program of comprehensive high school accreditation began in 1912 with expanded curriculum for education and training being introduced by 1917 that focused on trade, business, home economics, and industry, as well as agriculture (Gunter 2003; Foner 2005:162). The study of public and private education, its nature, availability, and place in defining an educated and prosperous society is an issue that shaped the history of all communities across the Commonwealth.

Large areas of Virginia, especially throughout the Valley and Southern Piedmont, suffered from a more limited access to public education, to improved transportation, and to medical facilities. Economic and social factors contributed to the unequal distribution of these resources across the landscape, persisting throughout the period under study. Public schools educated Virginians of every economic and social background, and helped integrate African-American and recent immigrant communities into a new Virginia social and cultural order. These schools also functioned to indoctrinate national values and popular historical narratives to a diverse population of Americans and a burgeoning immigrant population.

The agriculturally-driven society and economy of pre-Civil War Virginia diversified significantly in the late 1800s. During the latter decades of the 19th century and the onset of the 20th century, particularly stimulated by investment from northern investors and entrepreneurs, certain areas of the Commonwealth (the Chesapeake, the Ridge and Valley) underwent an unprecedented economic boom. The demand for coal, iron and other minerals, timber, and tan bark in the burgeoning and rebuilding

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American economy contributed to the emergence of seasonal “boom town” economies along the mountain walls of the Blue Ridge and Appalachians. Company towns, joined by an ever-expanding network of rail lines to a fickle national and world economy, grew up and thrived only to be relocated or die out as local resources were depleted or failed to compete. The seasonal nature of these labor-intensive communities was accommodated by a transient, predominantly male population. Some of these work teams were maintained by seasonal immigrant labor, these populations were segregated apart from the larger, indigenous community (Clarkson 1964). Ethnic minorities and recent immigrants were encouraged to conform and to adopt to new and changing American values and traditions. Public education and the home became the front line for these efforts.

Given the expanding industrial base, the relationship between labor, management, and industrialists underwent significant changes. The system of apprenticeship training, one in which a master craftsman provided board for his student employees within his home, became outmoded in most industries and, in many instances, became replaced by more formal, often institutionalized modes of training and professional preparation (trade schools). In conjunction, the relationship between management and labor became increasingly more formalized, contractual and wage based. As the industrial era evolved in the latter 19th century, issues of working hours, conditions, housing, safety, and the rights of the laborer, revolutionized and to some extent polarized, the relationships between the worker and an increasingly more remote, corporate boss or employer. Laborers began to identify themselves as a community with common interests and challenges. Attempts at unionization met with varying degrees of success and sometimes violent responses from those in authority (Little and Shackel 2014:111-124).

Changes in the power/energy sources (man/horse to water/steam to gasoline, electricity/machines) that drove regional economies and shaped the prosperity of towns and regions across the Commonwealth, became key factors in the rise and fall of local prosperity. Catalyzed by improved transportation and infrastructure and the emergence of larger and more prosperous middle and upper class populations, tourism and travel grew in economic importance in the closing decades of the 19th century and pre-WWI America. Tourists and seasonal visitation increased, spurred the growth of large resorts,

baths in the mountains and western parts of the state, and coastal beach destinations. Many of these were characterized by architecturally grand hotel and leisure structures, and the often extensive service communities needed to support them. Many of these complexes were short-lived, while others were renovated to accommodate changing interests and remain popular to this day.

It is certainly the case that the circumstances of warfare continued to influence Virginia. The late 19th century Indian Wars, Spanish American War, and ultimately World War I (WWI) had profound social and economic impacts on certain regions of Virginia. Immediately following the end of the Civil War, the process of recovering the huge numbers of Union and Confederate dead, particularly from the vast battlefields of central and northern Virginia (Fredericksburg, Chancellorsville, etc.), became a significant concern. Temporary interment sites were established, and ultimately a network of final military cemeteries was established (Geier, Brien and Fuller 2005; Pfanz 2003:109-112).

Given its proximity to the nation’s capital and housing one of the major, world-class harbor and port facilities at the mouth of the Chesapeake, Virginia benefited from, and made significant contributions to, the nation’s expanded role in world affairs and international marketing. The Chesapeake Bay and certain inland ports took on a new status as merchant and military ports grew in number and increased in size. The towns of Norfolk, Newport News, and other military installations were significantly expanded and modernized. As the United States entered WWI and airpower emerged, military and domestic air fields were established. As the Nation pursued increased international influence and military and domestic ascendancy, these ports grew (and continue to grow) in economic and military stature, scale, and importance.

In support of the WWI war effort, training facilities such as those at Marine Corps Base Quantico in Prince William County, and Fort Lee in Prince George County, and the communities that supported them grew in size and complexity as the demand for manpower to fight in Europe took on an unprecedented level, eclipsing those of the Civil War. Further, given the continuing demand for horsepower in the military of that era, the Front Royal Remount Quartermaster Depot, situated about two miles southeast of Front Royal in the Shenandoah Valley, was acquired by an Act of Congress, March 13, 1911, and was officially organized August 30, 1911 (Reynolds 1930).

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“How you goin’ to keep them down on the farm after they’ve seen Paree”*

In the previous chapter in this volume the complexity and violence of the Civil War was presented as a singular event in the history of Virginia and the nation. While clearly a pathological event in American history, the trauma of that time resolved national-level social, economic, and political questions that had threatened to, and ultimately did, tear the nation apart. As noted in this discussion, the violent resolutions to these questions has clearly shaped the subsequent trajectory of state and national history to this day. In a similar way, the war years of WWI can be set out as a revolutionary event in that they mark the first time that the manpower, resources, and energy of the United States was mobilized to become actively and directly involved in the violent resolution of international challenges and competition between the established Colonial powers of Europe. While the subsequent World War brings to question the extent to which the international tensions were resolved, there is no question that the impact on developments in the United States and Virginia following the end of the war were profound and revolutionary.

As noted previously, changes in available energy sources redefined American industry and lifeways following the Civil War. Experimentation with electrical energy and the magic of the gas-powered combustion engine marked the decades before the declaration of war in the early 20th century. The demands of the war, however, took the emerging energy technologies and intensified experimentation and applications to a point that, following the war, efficient gasoline powered engines were not only driving weapons of war (tanks, aircraft, submarines), but a new truck-and car-based transport system rapidly replaced the horse and mule as major modes of transit. Powerful, engine-driven tractors and farm equipment revolutionized agricultural productivity, and a fledgling domestic air lines was established.

In the latter 19th century the United States had steadily increased its influence overseas. In addition to acquiring a number of Pacific Islands, the United States purchased Alaska (in 1867) and annexed Hawaii (in 1894); the Spanish-American War (1898) providing federal control of such exotic places as the Phillipines, Guam, Puerto Rico and Cuba. By the end of WWI,

the United States was an established world power. Virginia’s proximity to Washington, D.C. allowed the Commonwealth to benefit from the capital’s need for military bases, administrative personnel, and the business opportunities required to support the nation’s expanding international political and economic roles. The port of Norfolk underwent dramatic upgrading as the base of an expanding Navy and as the U.S. began to feed, arm and supply much of the world at war along with an unprecedented overseas military presence.

On September 11, 1918, several sailors in Norfolk reported ill with influenza. Over the next year, 139,000 cases of flu would be reported in the Commonwealth, 15,678 of whom would die. This particular strain was devastating to young Americans: 4,700 who perished were between the ages of 20 to 30 (www.flu.gov/pandemic/history/1918/your_state/southeast/virginia). Recent estimates indicate that 30 to 50 million people died from the 1918-1919 flu pandemic, including 675,000 Americans (US Department of Human Services 2015).

Given the previous discussion, the purpose of this chapter is twofold: 1) to establish a set of criteria that can be used to assess the historic significance of archeological sites and landscapes dating to the period of 1865-1918; and 2), to identify a series of research questions or themes that require additional investigation and research by historical archaeologists and historians. An accurate, informed delineation of these issues, however, must be based on an awareness of the historic trajectories and existing cultural resources of the diverse regions of the Commonwealth. This fact denotes the first, and potentially most difficult of the obstacles to attaining these goals. There is no “one size fits all” set of issues that encompasses all of Virginia’s regions or communities. Using standard regional delineations such as: Coastal Plain, Piedmont, Ridge and Valley, etc. can be a start, however, in themselves these delineations are so physically extensive and internally diverse as to have little use in documenting the significant events that define local histories.

As the regions, towns, and communities of the Commonwealth have not participated equally in the historic events and developments of late 19th century Virginia; local, county or regional histories provide necessary preliminary contexts, against which the historic significance of archaeological and historical

*1919 Song, Lyrics by Joe Young and Sam Lewis.

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data can, and should be assessed. Unfortunately, many of the counties and towns across the Commonwealth do not have comprehensive, scholarly histories. For much of especially rural Virginia, local histories remain underdeveloped, poorly understood, or are dominated by popular narratives which require more rigorous scholarly scrutiny. The absence of so much historic context poses a major limitation to the goal of this study and the efforts to set local and even regional criteria against which the loss of the history housed in a particular archaeological or architectural site can be reliably measured.

A reasonable understanding of local history is essential to assessing significance and determining an appropriate level of investigation for any given site.

Within the field of historical archaeology, cultural resource management (CRM) research has been the primary source of information regarding the lives and struggles of Virginians in the period discussed here. The unfortunate truth is, that despite the importance of this period as a segue to defining and understanding modern Virginia, and with a few exceptions, without the protection provided by Section 106, Section 110 and other preservation focused investigations, the material record of this period would be largely overlooked, compromised, or destroyed. While recent studies involving the place of freed-blacks in Virginia following the Civil War have taken place (Galke 2009; Lowe 1995; T. Madden 1992; Reeves 2007; 2003a; 1998; Ryder 1991; Parsons 2001a; Peterson, Downing, Brown, and Bowen 1995; Potter 2001; Seibert and Parsons 2000), the last decades of the 19th century in general have drawn very little interest or attention from the scholarly community (Horning 2000; 2004). As a result, Post-Bellum cultural resources have few advocates.

Many of the documented and investigated archaeological sites and cultural landscapes known and interpreted for the late 19th century are a product of Section 106 legislated threat mitigation on federal lands or from projects that use federal monies. In other cases, using Section 110 guidelines which argue for the need to identify, monitor, and protect cultural resources on federal lands, the work of the National Forest Service and National Park Service is noteworthy. These studies are obligated to consider, or establish initial historical chronologies against which identified historic sites can be assessed for significance determinations. Even in Section 106 and 110 studies, however, the sites and history

following the Civil War are often given only necessary and cursory consideration.

Emerging Research Themes

A number of comprehensive regional surveys have documented historic archaeological sites and landscapes of the late 19th century as addenda to established regional or local histories. Examples of this include overview and assessment projects conducted at National Parks such as those prepared for Fredericksburg and Spotsylvania National Military Park in Spotsylvania County (Geier and Sancomb 2004; Geier, Sherwood, and Sancomb 2002; Geier and Lotts 2004; Geier, Brien and Fuller 2005); Cedar Creek and Belle Grove National Historical Park in Frederick County (Geier and Tinkham 2006; Geier and Harding 2006); and Manassas National Battlefield Park in Prince William County (Galke 1992a; Parsons 2001a; 2001b; Parsons and Ravenhorst 2002; Potter 2001). In addition, Section 106 studies include those conducted for the Bath County Pumped Storage Project along Back and Little Back Creeks in Bath and Highland Counties (Geier, Raredon, Wood, and Brenner 1978) or the VEPCO Gathright Dam-Lake Moomaw Project on the Jackson River in Bath County (Geier, Campbell, Jefferson, McGuire, and Fisher 1982); both projects contributing to understanding the emerging differences between hollow and bottomland lifestyles in remote, mountainous western Virginia. Other examples include the work of Audrey Horning in documenting settlement of three hollows in Shenandoah National Park (Horning 2004; 2000), studies in the area of Big Meadows in Shenandoah National Park carried out by Carole Nash, and field work at the Dahlgren Naval Surface Warfare Center, in King George County (Klein, Paonessa et al. 1998). More narrowly defined projects include the study of water-powered mill sites in Clarke County (Geier and Hofstra 1997; Geier, Hofstra, and Boyer 1997; Geier and Kilmon 1997), and the vast iron-mining community of Longdale, located within National Forest property in Alleghany County (Russ, McDaniel, and Wood 2000). Certain counties across the Commonwealth have sponsored cultural resource inventories including the study of the human settlement of the Opequon Creek Drainage in Frederick County (Geier and Hofstra 1992b; Hofstra and Geier 1991), and the rich resources along the Broad Run, Bull Run, and Quantico Creek drainages in Prince William County

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(Cromwell and McIver 1985). More recently, extensive studies conducted on behalf of Carmeuse Lime and Stone (Geier, Whitehorne and Wood 2014) in Frederick County, have documented the continuum of historic occupation and settlement along sections of Cedar Creek and its tributary streams of Meadow Branch and Middle Marsh Run. In addition, the Natural Resources and Environmental Affairs Branch (NREAB) at Marine Corps Base Quantico conducted a series of impact studies on sites on lands they control in Prince William and Stafford Counties (Balicki et al 2005).

Certainly, numerous road projects, again mandated by Section 106 guidelines, have added to the number of latter 19th century sites identified. A review of available literature, however, indicates that with some significant exceptions, few of the identified sites are assessed beyond the Phase I level of study. A small number undergo Phase II levels of significance evaluation, with only a very small number being subjected to full data recovery. In many cases, the existence of sites and site patterning have been used to suggest patterns of persistence or change in local settlement behavior, but such interpretations are often tied to provincial historic traditions rather than fact-derived site evaluation. While much work remains to be done at the local and regional levels, the research that has been done, by coincidence or intent, has tended to bring attention to certain topics/or themes, most conforming to historic issues discussed earlier.

Rebuilding Towns and Cities

Certainly a major theme in the historical archaeology of post-war Virginia relates to physical rebuilding of the towns and human populations ravaged by war. Examples include towns like Alexandria, south of Washington DC, captured at the onset of the war and turned into a principal Union supply and support center (Alexandria Archaeology 1988; Shepard 1985; Cromwell and Hills 1989; Cromwell 1989); Winchester in the lower Shenandoah Valley which folk histories identify as changing hands over 70 times during the Civil War; Lexington (Coffey 2002); Fredericksburg, an inland port on the Rappahannock River whose population was forced to become refugee and which was ransacked during battles in 1862 and 1863 (Geier and Tinkham 2011); and the destruction wrought on Richmond and Petersburg as the communities were fortified and came under protracted siege. The devastation to Richmond, as

the capital of the Commonwealth and as a major inland trade center, is of particular note (Sanford 1975).

Recent work by Dutton and Associates (2013) has focused on a 15.7 acre parcel of land in the Shockoe Valley of Richmond that is being targeted for revitalization. This extensive study considered issues having to do with: the economic impacts of an evolving post-war tobacco economy; the impact of the formation through merger of the Chesapeake and Ohio Railway on changing transportation routes; the rise and decline of local manufacturing efforts; and changes in the social make-up of the community. While specifically focusing on a defined study area many of the changes noted had implications for the larger community and central Virginia.

Changing Post-War Agricultural Patterns

As the war ended, the ravaged agricultural landscape of the Commonwealth needed to be rebuilt and redesigned. Most all of the major battles were fought across large agricultural fields that served as the prosperity of local communities (Geier and Tinkham 2011). Many of these became virtual cemeteries that were not cleared until after the war (Pfan 2003; Geier, Brien and Fuller 2005). Numerous plantation houses, farm houses, and barns and other support structures were destroyed either deliberately or as collateral damage. Some were rebuilt but others remained casualties of war. Examples include the middling plantation of the Cheatham Family south of Richmond (Geier 1994a; Geier et al 1989) and the loss of the home of the Spindle Family on the battlefield of Spotsylvania Courthouse in Spotsylvania County (Geier and Brien 2004).

Post-war agriculture, in many parts of the state, however, still required intensive human input and for many members of the former planter class, negotiating with free labor, many of whom had been recently enslaved, proved frustrating and costly (Burdick 1985:22-23). As a result, many large farms and plantations were partitioned into smaller family farms as the absence of a cheap labor pool prevented the larger, labor-intensive farms from sustaining their prosperity. This transition from cash crop plantations to one of small landowners raising less labor-intensive crops represents a significant change for the Old Dominion, and one well documented by Phase III excavations at the middling piedmont farm of the Watson /Wills/Dedaker Site in Amherst County (Pullins and Downing 1996).

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Many of the previously-identified surveys conducted to meet Section 106 or 110 legislative needs have resulted in studies that document the changing nature of local, late 19th century agricultural communities. Such regional studies have taken place for the Gathright Reservoir (Geier et al 1982) and Bath County Pumped Storage (Geier et al 1978) Project areas on headwater streams of the James in Bath and Highland Counties, Virginia; along Cedar Creek (Geier and Harding 2006; Geier and Tinkham 2006; 2007; Geier, Whitehorne and Wood 2014) and Opequon Creeks (Hofstra and Geier 1991; 2000; Geier and Hofstra 1992) and certain their tributary streams in the lower Shenandoah River Valley. Field projects in the area of Cedar Creek carried out for, and in the vicinity of, the new Cedar Creek and Belle Grove National Historical Park (Geier and Tinkham 2006; Geier and Harding 2006; Geier and Tinkham 2007), documented the post-war break up of a large slave-based plantation complex, the introduction of tenancy, and also illustrated how certain of the local, large family farms were sold off or were broken up as properties were divided among heirs. More intensive studies recently completed in that same general area have discussed the dissolution of neighboring farms owned by Abraham Stickley (44FK33) and John D. Tabler (44FK767) on Middle Marsh Run (Geier, Whitehorne and Wood 2014)

Washington and Lee University has led several archaeological investigations on farmsteads dating to the late 19th and early 20th century which have provided data against which popular traditions of isolation, crude living conditions, and self-reliance with the Valley of Virginia were tested (Gregory 2002; 1984; McDaniel and Adams 1984; McDaniel, Russ, and Potter 1994; Potter 1984; Russ, McDaniel, and Wood 2000). These investigations not only documented farm life in remote areas of the Valley, they also considered the extent to which location shaped access to material goods and items of fashion. This scholarship suggested that fashionable materials, such as the reed organ of the Hughes Site, reached the homes of Valley with little delay (Gregory 1984:235). A popular form of entertainment during the last decade of the 19th century, the Hughes Site reed organ was made in Massachusetts around 1910 (Gregory 1984:235). Michael Gregory and others suggest that the presence of nationally-popular material culture at remote valley homes, such as the Hughes Site indicates that these

communities were not as isolated as popular histories indicate (Gregory 1984:236-237; 2002; Horning 2004; 2000; McDaniel and Adams 1984; Potter 1984:28-30). The lesson to be gained here is not simply that of comparing and contrasting various data sets (i.e., historical, archaeological, oral history, popular histories) to understand regional events, but in considering the nature of popular histories in the creation of local community heritage (Potter 1984; Shackel 2008:10).

In some areas tenancy and share cropping emerged as solutions to the labor problem, but this also generated a new class and culture of free laborers, many of whom subsisted in poverty (Foner 2005:202-203; Moore 1996:141; Peterson et al 1995). The pressures of a large group of newly-freed laborers, the influx of millions of labor-seeking immigrants as the 20th century dawned (Wolfe 1979), and a generally under-educated white population in the south led to intense competition for employment and fomented racism and ethnic violence.

Unfortunately, the identity of the tenant farmers, both white and black, is typically lost to the historic record as the properties they occupied and/or farmed were legally owned by others. With few tenant farms subjected to intensive archaeological investigations, and given the lack of primary and secondary documents relating to this demographic, scholars can provide little information about tenant lifeways within a particular region, much less compare that lifestyle between regions (Jones et al 1991:121). Accordingly, archaeology is in a unique position to investigate the lives and experiences of these Americans.

The Emerging Free-Black Community

One issue that has emerged as a key topic of study relates to the shifting demography and emerging socio-economic position held by freed slaves and black Americans in post-Civil War Virginia (Blomberg 1988; Burdick 1985; Carson et al. 2007; Farmer-Kaiser 2010; Galke 2009; 2000; Koons 2000; Lowe 1995; Madden 1992; Mogleston and Hopkins 1978; Mullins 2001; 1999a; 1999b; 1999c; Potter 2001; Seibert and Parsons 2000; Shackel 2003:165-171). While economic, social, political, and educational prospects and opportunities expanded somewhat, racism continued to profoundly shape and limit the nature of these opportunities. Emancipated workers provided increased competition for skilled, semi-skilled, and unskilled employees. In a

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depressed labor market, this fomented well-established social tensions, often between ethnic communities.

In a rural context, Phase II and III excavations of the Gilmore cabin on the grounds of James Madison's Montpelier documented the late 19th century material culture and family history of one of Madison's freed slaves (Reeves 2003a). The experiences and lifestyle of the Gilmore cabin inhabitants contrasts dramatically with those of Sarah Madden and her children, who served as indentured servants to the Madison Family (Madden 1992:11-23; Reeves 2007; 2003a; 2003b). The Madden Family was considered "mulattos" and their members were free by virtue of the free legal status of their female ancestors. Living in central Virginia provided limited opportunities in a society that carefully, and often jealously, scrutinized the family's success (Lowe 1995:181; Madden 1992:132-139). The Civil War devastated the family's thriving tavern business (Madden 1992:112-123). When new transportation routes bypassed their increasingly marginalized community, the Maddens were no longer able to make a living as tavern keepers. They turned to farming to support themselves and also served their community as teachers in the expanding educational opportunities for freedmen following the war (Madden 1992:126-127, 130-132). Their proximity to Northern Virginia and Washington D.C. provided financial opportunities and more resilient real estate values as the Commonwealth recovered in the decades following the Civil War.

Many black families that remained in rural environs became sharecroppers, or tenant farmers, in which they rented a plot of land, splitting the profits from the crops that they grew with the landowner. While this relationship provided families with some degree of freedom, low profits left many families in poverty (Foner 2005:164-165). Ruthless segregation characterized the landscape, in education, religion, and throughout public life (Foner 2005:162-163; Mugleston and Hopkins 1978). Excavations at the Wyms Family Farm provides an example of the home of a black family tenant farm in south-central Virginia during the early 20th century (Peterson et al 1995:79-83). The site illustrates one of the great challenges for archaeologists working on farmsteads of this period given the widespread availability of mass-produced consumer goods. To that end, archaeologists must develop more sophisticated methods for interpreting status, consumer issues, race,

and gender in the archaeological record of this era of mass produced material culture (Mullins 2001; Peterson et al. 1995:83).

Still other studies have begun to consider the life and social place of small black communities in rural Virginia (Galke 2009; 2000; Martin et al 1997; Parsons 2001; Seibert Martin and Parsons 2000; Mugleston and Hopkins 1978; Ryder 1991; Shackel 2003:165-171; Walker and Pappas 1990). Negotiating the political and social landscapes of the defeated south was challenging for the black community. Housing, manners, landscape organization, and portable artifacts, were often employed to pacify a fractious community through non-threatening expressions of material culture (Dailey 1997; Martin et al. 1997:160; Ryder 1991; Shackel 2003:165-167). With few resources or opportunities to acquire land of their own, however, many blacks migrated out of the communities in which they had experienced slavery in favor of more urban environments (Foner 2005:82). In that context, the emergence of African American neighborhoods within large urban centers such as Alexandria, and Richmond's Jackson Ward have come to be a focus of interest (Blomberg 1988a; Cressy 1985; 1988; Walker et al. 1992).

Life for freed "contrabands" during and following the Civil War remains an important issue to be studied. During the Civil War, thousands of emancipated African Americans made their way to Alexandria because of the safety provided by Union occupation. While finding a "safe haven", their large numbers resulted in a refugee crisis. While some found employment, others of the "freedmen" were destitute, hungry and in ill health. The lives of these people and the post-war communities that emerged has been a particular focus of work by the Alexandria Archaeological Museum directed by Dr. Pamela Cressey (Alexandria Archaeology Museum 2015a, 2015c).

Black community leaders enjoyed more opportunities and greater success if they were of light-colored skin or of mixed ancestry (Lowe 1995:194-197). Within the African-American community, greater political power tended to be conferred to those men who possessed lighter skin tone, more wealth, or who were free born prior to the Civil War. This trend held especially true in the urban areas of Virginia and for higher political and social offices (Lowe 1995:205). Among those who had been enslaved, these people began their free lives with virtually

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no wealth, a challenge that would impact these families for generations (Wright 1982:177). As southerners strove to commemorate the “Lost Cause,” black American history was trivialized or silenced (Shackel 2003:21-28). Stories of faithful servants, who preferred enslavement over freedom were created (Shackel 2003:157-158). This heritage has tremendous social and political consequences for all Virginians.

Cemetery and Ritual

The documentation and recording of cemeteries across the commonwealth is an established part of VDHR archiving. This process is particularly important as numerous small family cemeteries, particularly in rural Virginia, are lost to agriculture and the reforestation of abandoned farms and fields. In addition, Fredericksburg Spotsylvania NMP has sought to document temporary military cemeteries established as the Battlefields of Fredericksburg, Wilderness, and Spotsylvania Courthouse underwent the recovery of dead immediately following the Civil War, and in preparation for the establishment of the military cemeteries at Fredericksburg (Geier and Lotts 2004). Family cemeteries attributed to the J. D. Tabler Family and that of Abraham Nieswander on Middle Marsh Run in Frederick County, have been archaeologically assessed as part of a program of quarry expansion in that area (ECS 2008). Brandon Buck has recently reported on a long neglected family cemetery in the area of Radford, Virginia (Buck 2014).

The effort to document African American cemeteries is of particular note as these are typically tied to the emergence of free-black communities, and also tend to be vulnerable to past indiscretions with respect to urban renewal and development. In this area, the early work of Pamela Cressy in Alexandria (1985), and the continuing efforts of the City of Alexandria to recover and recognize the Freedman’s Cemetery Site is of particular note. The Alexandria Contrabands and Freedmen Cemetery served as the burial place for about 1,700 African Americans who fled to Alexandria to escape bondage during the Civil War; the last recorded burial taking place in 1869. The cemetery fell into disrepair, and a brickyard and railroad encroached on its edges. The cemetery appeared on maps until 1939, but by then there would have been little remaining above-ground evidence of the burials. In 1955, a gas station was built on the property, followed

by an office building. Impact studies associated with an interest in rebuilding the Woodrow Wilson Bridge along the cemetery’s southern edge renewed attention on its existence and history. Archaeologists used ground penetrating radar to confirm the presence of graves on the site, and the Friends of Freedmen’s Cemetery was formed to advocate for preservation of the site as a memorial. The layout of the cemetery, revealed by the archaeological work, will be reflected in design of the memorial park (Alexandria Archaeology Museum 2015a).

In 2011, at the 71st Annual Meeting of the Archaeological Society of Virginia, a session focusing on African-American Sites and Cemeteries was held. While several papers were presented, many dealing with slave cemeteries, the work of Lynn Rainville, Research Professor in the Humanities, Sweet Briar College, was a highlight. Her work has sought to identify African-American cemeteries across Virginia and to work with local communities and descendant groups to work to preserve them (Rainville 2011).

Energy Changes and Cultural Impacts; Steam

There is no question that across Virginia in the first half of the 19th century and earlier, water power was a key player in the development of agricultural and other industries. Technological requirements of this energy source identified particular points along the rivers and streams of the Commonwealth where necessary water-flow allowed water-powered gristmills, lumber mills, distilleries, woolen mills, etc. to be established. These seats typically became central places (Hofstra and Geier 2000; Geier et al 1997), that often included taverns, hotels, stores and other service areas that met the needs of farmers and others who came to the site to have product processed or sold. As these centers became critical to the success and prosperity of emerging agricultural communities, networks of roads were constructed that joined local farms to the mill seats, and the mill seats to primary towns and ports from which product could enter a local or even national marketplace (Geier and Lotts 2003; Hofstra and Geier 2000; Geier and Hofstra 1992; Geier and Kilmon 1997). The emergence of steam energy driven turbines in the decades following the Civil War changed this pattern. New mechanized, steam driven mills were now freed from the idiosyncrasies of drainage systems and could now be constructed at sites

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that took advantage of established transit points such as railheads, which provided direct access to regional and even international markets.

As steam driven mills, more ideally placed for market access, provided growing competition, the profitability of established, dispersed water power mills diminished. As further market competition with western farming reduced the profitability of grain, many of these milling seats were closed down and abandoned. Additionally, as these centers of commerce were diminished, roads joining them to farms and to established market centers were abandoned resulting in significant changes in existing road networks; new systems coming into place that better responded to the new realities. In 2006-2007, Clarke County in the lower Shenandoah Valley sponsored an archaeological survey of all water powered mills in the county (Geier, Hofstra, and Boyer 2007). This survey very nicely illustrated the changes noted above.

Similar studies have documented changes in a complex milling network on Redbud Run, a tributary of Opequon Creek, east of Winchester, Virginia (Geier and Hofstra 1992). Archaeological studies have also documented the persistence of the Hite-Hottel Milling Complex at the mouth of Meadow Brook (Geier and Lotts 2004; Geier and Tinkham 2006) at a site that was invigorated by the construction of a B&O Railroad line after the Civil War.

Isolated studies of water powered mill longevity (Browning 1986; Sancomb and Geier 2003) have taken place. The extensive field work of Dr. William Trout and the members of the Virginia Canals and Navigation Society have produced a number of river atlases (Shenandoah 2013; Appomattox; Chickahominy 2014; Great Dismal Swamp, and others) that document the location of historic features and reveal efforts to utilize and control primary water systems of the Commonwealth for purposes of navigation, market access and water power (Available from the Virginia Canal and Navigations Society).

The Coming of the Railroad

Well before the start of the Civil War, steam power was transforming transportation as railroads began to compete with canal systems and road networks to tie the diverse regions of Virginia together and to major political centers and ports of commerce within the state and beyond. Following the Civil War, the newly re-unified

nation invested in rails and railroad stock as it sought to fulfill its destiny to reach from the Atlantic to California, Oregon, and Washington on the Pacific. While much of this early challenge was seen in the drive to establish transcontinental lines, numerous local and connector lines emerged that redefined opportunities for market access and personal transportation. With the rails came new prosperity. Numerous towns emerged and/or thrived at points where major rail and road networks intersected, or where rail lines tied local production centers to major inland ports or coastal harbors. Principal towns and cities, such as Clifton Forge in the west, Fredericksburg, Lynchburg, Richmond, and Norfolk, became major centers of rail activity and flourished as industry and commerce enclosed the railheads.

After a long, and largely unsuccessful, history of attempting to construct and maintain rail lines throughout Virginia, in 1871 the General Assembly sold much of the Commonwealth's rail interests to investors (Gilliam 1999:193; Moore 1996:142). Tensions between shippers, passengers, and railroad companies continued as the responsibility for the regulation of the industry was marked by jurisdictional conflicts between federal and state administrators (Gilliam 1999:189). By the early 20th century, almost 4,000 miles of rail crossed the state, managed by forty different companies (Gilliam 1999:289). The proximity of rail lines had profound economic impacts upon the communities which they served or bypassed (Burdick 1985:30; Gilliam 1999; Madden 1992:94; Pullins and Downing 1996:158-159)

As the resource productivity of the Commonwealth came to be harvested in the latter decades of the 19th century, rapidly constructed n- and n-s gauge lines were extended from key towns into resource rich areas that were being harvested or mined. Iron mining towns such as Lignite in Botetourt County, and coal/timber/tanbark resource "boom" towns such as Stokesville at the mouth of the North River in Augusta County (Elswick 1998; Geier and DeLobe 1998) tied places of procurement in remote areas, to centers of processing, to shipping points that allowed product to be quickly accessed into national and international markets. These same "roads" provided a new, rapid, relatively cheap, and comfortable means of travel at a local and national level, contributing to the mobility of the American public and to the rise of tourism and seasonal visitation at resorts across Virginia.

The rise of the railroads as the new, preferred form

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of transport, not only opened many previously poor areas to a new-found wealth in the processing of natural resources, but it also replaced earlier forms of economic transportation. Numerous small towns thrived along this network of rails, only to fail in the latter 20th century as alternative transportation means came into being and bypassed them (Geier and Tinkham 2006; Geier and Stipe 1998).

By the time of the American Civil War, the James River and Kanawha Canal Company had developed and maintained a network of locks, canals, and connecting highways that served to join the inland port of Richmond with the vast resources of the Ohio River Valley by way of the Kanawha River Valley. The town of Buchanan, north of Roanoke, became the last node in the actual canal system. By the fourth quarter of the 19th century, competition from, and ultimately purchase by, local railroads caused this expansive economic corridor to be closed down (NPS.gov 2015; Town of Buchanan 2015). In 1969 a set of archaeological and architectural features were nominated by Dr. Bill Trout and Tucker Hill as the James River Kanawha Canal Historic District (Virginia Historic Landmarks Commission 1969). This nomination was recognized by the National Register of Historic Places in 1971 and subsequently became the focus of the James River and Kanawha Canal Historic District currently maintained by the National Park Service (NPS 2015). This linear, 10-mile long district consists of the earthen excavations that comprise the greater part of the canal system as well as the stone locks, bridges, culverts, basins, tow paths and other related objects along the James River south of Richmond. In 2002, the Virginia Canals and Navigation Society published *A Guide to the Works of the James River and Kanawha Company* by William Trout, which presents a driving tour of remaining architectural features.

In 1868, the Virginia Central Railroad Company merged with the Covington and Ohio Railroad Company to form the Chesapeake and Ohio Railroad Company providing an alternative to river transport from Richmond to the Atlantic for the first time. In 1880, the James River and Kanawha Canal Company sold out to the Richmond and Alleghany Railroad providing a singular line between Richmond and Covington, Virginia (Dutton and Associates 2013:4-20). Excavations conducted along the James River in Lynchburg in 1986 (Geier 1986) identified remains of one of the canal locks

that had been buried ca. 1870 as the rail complex along the James was modernized and expanded.

Dutton and Associates in their evaluation of a 15.7-acre section of Richmond in the area of the Shockoe Valley, provide a detailed analysis of the evolution of the industrial, commercial, and residential history of the area. Key to this history of change is the role of the railroad. As early as 1848, the Virginia Central Railroad passed through the Shockoe Valley and terminated at Broad Street in the northwest sector of the study area. When the C&O replaced the Virginia Central, the operation expanded and maps of the area dating to 1889 include a complex of rail lines and sidings, two freight depots, a passenger depot, a freight shed and a beer depot. The rail complex continued to grow and expand and in 1901 the Main Street Railroad Station served travelers on both the C&O Railroad and the Seaboard Air Line Railroad (Dutton and Associates 2013:5-57 to 5-62).

The Alexandria and Orange Railroad, nationalized during the Civil War by the Union Army in Alexandria, Virginia, underwent dramatic redesign in the years after the war. The vast military rail depot known the United States Military Railroad Station at Alexandria, Virginia, was demolished as the facility was privatized and new rail lines were established on a newly-constructed elevated landform (Cromwell 1989; Cromwell and Hills 1989). Occupied throughout much of the Civil War, Alexandria was able to industrialize quickly. Archaeological investigations at such sites as the Virginia Glass Company (Pfanstiehl et al 1999) and the Portner Brewery provide insights to this post-war expansion (Parsons Engineering Science 2002).

Certainly, throughout western Virginia, new rail lines that extended their tentacles from nodes such as Stephens Depot, Strasburg, Staunton, Elkton, Roanoke, Clifton Forge and elsewhere, brought new opportunities, prosperity, life, commerce and even tourism to a variety of communities. Some towns flourished, and new industrial/service communities such as Meadow Mills in Frederick County came into being (Geier and Tinkham 2006). These rail lines became a vital key to the emergence of a vast resource procurement network that was established across western Virginia and which was built on the extraction of iron, timber, tan bark and coal - resources that were crucial to the rebuilding of the Commonwealth and the nation itself.

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Capitalism and the Extraction of Natural Resources

In response to the economic depression that followed the Civil War, entrepreneurs from the North established companies devoted to extracting the diverse resource wealth of the Commonwealth, examples being the Longdale Iron Mining Company in Alleghany County and the Stonega Company in Wise County, both established at the turn of the century (Russ, McDaniel, and Wood 2000; Wolfe 1979). In many cases this outside wealth was sought by local entrepreneurs for their own gain (Elswick 1998) but also as a tool to stimulate the local job market and economy. Interestingly, following the Civil War, Jed Hotchkiss in an effort to re-invigorate the economy of western Virginia edited and published *The Virginias, a Mining, Industrial & Scientific Journal, Devoted to The Development of Virginia and West Virginia. Volumes 1-6* between 1880 and 1865.

These emerging resource-driven industries provided members of the local community with transient, seasonal employment opportunities as well as consumers for locally-produced crops, services, and crafts (Gregory 2002:63-72). Immigrant laborers filled the employment gap created when native, local populations were too small to provide the needed labor, or when they took advantage of other opportunities for making a living (Gregory 2002:74; Wolfe 1979). Diverse backgrounds in race, religion and ethnicity amongst the workers typically led to segregated neighborhoods, places of worship, and cemeteries (Wolfe 1979) within established support communities.

Company towns soon dotted the landscape of the Valley of Virginia and the eastern slopes of the Blue Ridge. Many of the workers, both immigrant and native Virginians, were single, and lived in company dormitories or boarding houses. The shortage of labor and improvements in transportation, including train travel, provided improved opportunities for workers and resulted in a transient labor force (Galke and Bell 2005; Wolfe 1979). The improvements made in interstate travel marginalized communities that previously enjoyed ready foot and equestrian traffic over the numerous trails that traversed rugged territory and that shaved miles off public transportation routes (McDaniel and Adams 1984:17; Gregory 1984:236-237).

New ways of organizing labor arose and company towns such as Stokesville in Augusta County, Lignite in

Botetourt County, and Longdale in Alleghany County were established across the Appalachian landscape and vied with one another to attract workers. At the same time, rail lines, which were drawn to these sites of resource abundance; nurtured this prosperity, carried consumer goods to customers, and spurred the growth of commerce and industrial centers such as Covington and Clifton Forge in Bath County, and Bridgewater, Harrisonburg, and Elkton in Rockingham County (Geier and Stipe 1998). Company towns provided worker housing, company stores, bars and other sorts of entertainment, created to satisfy the needs of these remote communities and their transient, predominantly male, populations. These conveniences attracted workers to a successful industry, but the loss of a job could be devastating resulting in the loss of housing and credit at the company store. The location of a worker's employment and his home was now spatially separated. This division intensified people's predilection to imbue the home with values that contrasted its surroundings and ideals to those that characterized the demands of the work environment (Wall 1994:151-155, 158).

The resource demands of a growing nation drew attention to the rich and diverse geological and natural resources of western Virginia in the late 19th and early 20th centuries. Company towns such as Fenwick (Barber 1999), Lignite (NFS), Longdale (Russ, McDaniel, and Wood 2000), and Stokesville, were established specifically for the purpose of extracting iron and coal, or harvesting timber products. Longdale, Lignite and Fenwick are all currently situated on lands managed by George Washington and Jefferson National Forest, Stokesville lying just outside of forest boundaries. Archaeological surveys have allowed sections of these towns to be mapped and interpreted, and surveys along the Big and Little Rivers west of the North River Gorge in Augusta County have tied the railhead and industrial complex at Stokesville to a vast assemblage of interior coal mines, lumber and tan bark camps and mills (Elswick 1998; Geier 1998; Geier and DeLobe 1998; Geier and Nash 1998; Geier and Sipe 1998). In contrast, Phase I and II studies at Catharine's Furnace in Stafford County, noted the demise of an iron complex that had been a source of iron for the Confederacy (Geier and Sancomb 2004).

The continuing growth of industrialism in the United States, especially in the Northeast, required coal to fuel its steam- and gas-driven manufacturing. By the

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1870s, the Virginia's coal resources that lay primarily in the counties of southwest corner of the state, were shipped via rail north, down the Shenandoah Valley and also east, via the Chesapeake and Ohio Railroad, to Newport News, and via the Norfolk and Western lines to Hampton Roads, where schooners carried the cargo to points north (Blanton and Margolin 1994:42; A. Brown 1946:58). Lignite, in Botetourt County, is a former coal mining town which included a company store, churches, and a main street theater. It was abandoned in 1890 after ore demands dropped in the area, as larger and higher quality sources of raw material were discovered in Michigan and Pennsylvania. The site is recognized and efforts have been made to document its remains by George Washington and Jefferson National Forest.

Industrialists in towns such as Lignite, specifically transported workers from areas of Europe on a seasonal basis to serve the massive iron complexes the town serviced. Some studies including the work at Lignite and Longdale, have considered the differential material culture and lifestyle of transient white, black, and immigrant workers within these industrial complexes (Madden and Barber n.d; Hardison, Madden, and Martin 2005). Indeed the community settlement is a study in social, ethnic and economic stratification (Madden and Barber n. d.; Hardison, Madden, and Martin 2005; Russ, McDaniel, and Wood 2000:138-143). Future archaeological investigations that address households within these diverse and segregated communities provide the contexts in which consumerism, demographics, gender, and social and economic decisions can be understood.

Along the Chesapeake Bay, ship building and other activities spurred the growth of professional, highly-competitive fishing, clamming, and oyster industries (Blanton and Margolin 1994:40-43). Legislation permitted deeper harvesting of resources from the Bay, and encouraged the construction of larger, innovative vessels to accommodate both the equipment and greater harvests. Oyster harvesting peaked during the 1880s, when thousands of watermen used tongs or, less often, dredge boats which used weighted nets to drag the bay bottom (Blanton and Margolin 1994:40). Competition between "tongers" and "dredgers" was fierce and often violent (Blanton and Margolin 1994:42; Brewington 1956:172-173; Burgess 1963:137-138; *Harpers Weekly* 1894:92). The life of the watermen was competitive, challenging, dangerous, and living conditions were poor

(Blanton and Margolin 1994:40). The 1890s brought smaller oyster harvests and the creation of the "skipjack," a smaller and more maneuverable oystering vessel. It was inexpensive to manufacture and could navigate the shallow waters of bay waters easily.

Despite the importance of the aforementioned industries, surprisingly little historical archaeology has been published describing and interpreting the actual industrial facilities, technology, and material culture associated with the massive mining, lumbering and milling enterprises and the complex railroad facilities that served them. This is an area of significant and necessary research in that, if the coming of the rail lines stimulated local economies throughout the latter 19th century, the first decades of the 20th century would have documented a major expansion and change in these operations as gas- and steam-powered machinery diminished horse and human labor as primary sources in the extraction and processing of mineral and lumber resources. Deforestation due to mining, town and road construction, the heating lead to severe erosion. Clogged streams promoted flooding, brush fires degraded air quality, prevented new tree growth, and inhibited new plant growth. The environmental impact of these boom towns and extractive industries remain visible in the landscape today.

Preparation for War

As the second decade of the 20th century commenced, American industrial support for, and participation in, the Spanish American War and World War I transformed the economies of key parts of Virginia. Mobile marine, army and cavalry training camps were established in sections of the Shenandoah Valley and western Piedmont of Virginia. Large cavalry remount stations existed at Front Royal, Virginia. Extensive armory and arsenal complexes were established in the vicinity of Roanoke and southwestern Virginia. Large, permanent, training cantonments were established at facilities such as Fort Lee and Quantico which served to support and train the recruits that would feed a military network unprecedented in size and armament to that point in American history. As the country moved to support European allies and to prepare for war, industrial ship building in support of the navy and the merchant marine flourished; and the Naval Yard at Norfolk underwent dramatic transformation and modernization. Many of these facilities are now under

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threat of destruction as their value and historic importance remain unrecognized, unappreciated, and unpublished.

Recently, in response to these threats and to planned development, John Milner Associates has been involved with mapping, documenting and assessing WWI training features at Marine Corps Base, Quantico, in Prince William and Stafford County, Virginia (Balicki et al. 2002; 2005). These included a 40-acre network of trenches prepared to train WWI soldiers in trench warfare tactics (44PW1558); a farmstead dating from the early 19th through early 20th centuries (44ST632) which showed evidence of deposits that could address issues of Piedmont farm development; and 44PW1559, a dump site related to early Marine Corps base occupation during WWI.

Conclusion or “The Theme(s) Not Taken” (with apologies to Robert Frost)

Given the profound importance of late 19th century history to the current state of affairs in the Commonwealth, the previous discussion of historical archaeology is depressing. While the goal of this text is to identify significant historic themes developed in the scholarship of the field, what is more evident is the list of historically significant topics that have not undergone meaningful scholarly discussion by the discipline. In fact, of the themes identified, most of the insights are a product of coincidental research serving as spin-offs of other research objectives. In the absence of Section 106 and 110 opportunities, little of what has been presented would exist in the available literature. None of the emerging topics has been studied at what could be considered as comprehensive or state-wide basis. The single exception to this may lie in the area documenting the circumstances of (1) freed blacks as they sought to enter what was a racially-segregated society.

Seven additional themes have been given some level of scholarly interest: (2) *Rebuilding Towns and Cities*; (3) *Changing Post-War Agricultural Patterns*; (4) *Cemetery and Ritual*; (5) *Energy Changes and Cultural Impacts; Steam*; (6) *The Coming of the Railroad*; (7) *Capitalism and the Extraction of Natural Resources*; and (8) *Preparation for War*. None, however, have been developed in a systematic, comprehensive, or regional manner, nor have they been published to any significant extent.

As noted at the onset of this chapter, the nature and significance of historical events dating from 1865 to

1918 and the archaeological sites that reveal them, vary dramatically across the regions of the Commonwealth. All Virginians struggled economically in the years following the Civil War, and all were compelled to adjust to a dramatically different social and political reality: one in which enslaved labor was outlawed. Some areas of the Commonwealth never fully recovered their antebellum prosperity after the devastation of the Civil War; other communities underwent periods of boom and bust within this time period; but all portions of the Commonwealth experienced a trajectory of ongoing change and development. As standards of historic significance are sought against which sites dating to this period are assessed, the responsibility must fall upon the network of VDHR regional centers to mobilize the historic resources and interests in their areas to identify and refine those events that define the cultural continuum for the latter 19th and initial decades of the 20th century in their respective regions.

This period under study immediately precedes the United States emergence as a world power and marks the onset of the period of mechanization and oil-driven energy that continues to revolutionize the world and impact international relations to this day. The key to understanding the nation's economic and political ascent in the 20th century exists within in the people, communities, and relationships that arose and developed during this time. Because the majority of these people led lives which were typically under documented, historical archaeological investigations of the places where they lived, worked, made purchases, learned, worshiped, recreated, and traveled provide the best way to understand what motivated them to empower the nation's development and rise in international stature. Their material culture is permeated with meaning and provides a powerful resource toward understanding how the people of Virginia contributed to the nation's rise to international influence by the mid 20th century.

In many ways, historical archaeologists of this period are fortunate since much of the historical and archaeological record still exist, though most in a primary and unprocessed form. With the quantum growth of the American population, industry, bureaucracy, and ascendancy as a world power, it is not only the kinds of evidence available but the sheer quantity and scale of material available that may prove to be overwhelming. Biases and omissions in that historical record, however,

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will continue to urge caution, and thorough scholarship. Increasingly, historical archaeologists are turning to “small finds,” such as items of adornment, clothing fasteners, beads, buckles, thimbles, small tools, sewing implements, musical instruments, and decorative hardware for analysis. Such artifacts form a small proportion of any given assemblage, and analysts have often avoided using them since their unique character precluded statistical analyses. Using contemporary, historical accounts of the significance of these objects, their meaning and use can be put into appropriate context and significance in terms of gender, wealth, class, and status (Cochran and Beaudry 2006; Edwards 1997; Mullins 2001; 1999a; 1999b; 1999c). Investment in such analysis is not expensive, given the rich cultural and behavioral data derived from such studies of artifacts from earlier eras (Beaudry 2006; Heath 1999b; White 2009, 2005). The potential for small finds analysis during the Post Bellum Era is unrealized, yet its potential is tantalizing (Mullins 2001, 1999a, 1999b, 1999c).

Likewise, the material record itself occurs in greater quantities and in some ways greater homogeneity than ever before. Given the preponderance of mass-produced consumer goods that characterizes this era, how do we effectively discern the subtle material culture differences between tenant farmers, share croppers, and small farmsteads, or between administrators, skilled workman, and laborers within a company town? How are ethnic, gender, and spiritual dimensions of life reflected, communicated, and affirmed in the landscape, housing, and portable material culture that surround these Virginia residents? Furthermore, distinguishing racial and ethnic differences in such a consumer-driven mass-produced-goods economy is another challenge faced by scholars of this era. Given that ethnicity and gender profoundly shaped the opportunities and experiences of Americans on a daily basis at this time, what is the potential for the material record to reflect these challenges? Or, do material culture differences relate more to social class, job skill, or economic status? What pressures or prospects does the local community exert upon household purchases and display of wealth and success? Laura Edwards argues that studying people on the margin helps to define the attitudes of popular culture (Edwards 1997). Work by Robin Ryder at the Gilliam Site (44PG317) and Mia Parsons and Erica Martin Seibert at the Robinson House Site (44PW288) suggest that black Americans could be

cautious in the public display of their wealth, and often tended to visually understate their success to ameliorate potential conflict with competing interest groups (Martin et al. 1997:160; Parsons 2001; Ryder 1991; Shackel 2003:166-167). Material culture studies of American middle class social aspirations across the dimensions of ethnicity, gender, status, and gender demonstrate that complicated issues characterized consumer motivation, and can be best understood by a thorough understanding of local histories (Galke 2009; Edwards 1997; Mullins 2001). A thorough knowledge of the local history at any given site, and a more nuanced multi-tiered levels of analysis, one that includes not only the artifacts, but the architecture, landscape, and surrounding community as a whole is necessary in order to reveal subtle patterns and accurately interpret consumer motivations. Such analyses will continue to identify more sensitive artifact attributes with greater interpretive potential.

Michael Gregory (2002:74-75) has argued that during the closing decades of the 19th century in western Virginia, opportunities for seasonal work at mining concerns, foundries, mills, farms, and spa resorts allowed a respectable standard of living for those who preferred tenancy. How does the nature of the relationship between administrator and tenant(s) impact tenant consumer choice, building maintenance, re-use of materials, spatial organization of the site, employment opportunities, and the nature of the activities that take place? How do variables such as ethnicity, religion, age, occupation, and education influence these administrative relationships, spatial patterning, and consumer decisions? Conscious excavation and sensitive analysis can reveal important facets of consumer decisions between property owners and tenants at a single site (Pullins and Downing 1996:156, 166-167).

While the changing role of freed black members of Virginia society is of note, other issues of societal change have been virtually ignored or only minimally considered. The changing role of women in the home (B. Carson 1990; Lebsack 1984; Spencer-Wood 1999; 1987; Wall 1994), in industry, and politically as the suffrage movement gained momentum, are not significant issues in the literature of historical archaeology, yet mark significant changes to the traditions of the pre-war era. Issues of child labor and labor rights in an economy that drew their service in factories and mining, changing work relations defined by contract bonds, and the growing role

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of labor unions and labor rights are similarly ignored. The rise of public schools and changes in the nature, importance, and support for public education; growing ethnicity and immigration in structuring work relations in diverse industries and in the changing demographics of towns and cities remains to be studied to any significant degree. The demise and rise of diverse mining (gold, iron, coal, zinc, etc) and extractive industries and the impact on associated support communities is not well understood. The culture, economics, and politics of tenancy and sharecropping as solutions to labor intensive agriculture while noted, has not been materially studied. While the importance of the evolving network of railroads and roads to local and statewide transit, marketing, and economic development has been noted, the historical archaeological literature is minimal except in areas where existing resources are threatened.

Roads are one of the most challenging resources to preserve due in part to their scale and frequent modification for continued use (Marriott 1998:3). Historically, roads were designed for various purposes. Given that, The National Task Force for Historic Roads has identified four major types of historic roads: those privileging an aesthetic experience for travelers (aesthetic routes); those created for practical needs or commercial enterprises (engineered routes); those that developed out of necessity (cultural routes), sometimes evolving from American Indian trails; and “multi-category roads” which possess the attributes of two or more of these major types (Marriott 1998:11-17). In interpreting roadways, it is important to recognize that roadways include not only the travel surface, but contributing resources such as the associated shoulders, gutters, bridges, signs, and lighting (Marriott 1998:28).

The consequences of a lack of government oversight was shown in the previously noted archaeological study of the lumber-coal-and tanbark town of Stokesville, Virginia (Geier 1998; Geier and Nash 1998; Geier and DeLobe 1998; Geier and Stipe 1998; Elswick 1998). These studies document how miles of the valleys of the Little and Big Rivers west of the North River Gap were extracted with virtually no legal oversight. The construction of the town of Stokesville and the vast rail and industrial complex is virtually undocumented in existing County or other legal records. A limited oral history and a series of newspaper articles from Bridgewater and Harrisonburg documented some events at the time, otherwise virtually no historic record exists for these industrial communities.

In such instances, historical-archaeological investigations provide one way to identify cultural resources associated with these forgotten communities; to recover data that reveal the ecological impact of the industries involved; and understand what the daily lives of these Americans were like (Potter 1984; Shackel 2008; 2003).

The federal government gradually began to take on expanded responsibility for American citizens during this time. It progressively extended its obligation to Americans, ensuring food safety, public education, national defense, protecting natural resources, and mitigating labor issues. Industrialization impacted many of the nation’s natural resources, and bills in Congress were introduced in an effort to protect these threatened resources. During the last decade of the 19th century, the forerunner of the National Forest System was established and tasked with protecting the nation’s forests. Initially focused upon the eastern United States, the Weeks Act was passed in 1911 and permitted the federal government to purchase deforested mountain land to protect and improve watersheds compromised through deforestation. In 1917, the George Washington National Forest was among the first federally-protected national parks in Virginia’s Valley. The history of these parks, their creation and their physical and structural evolution has yet to be fully documented. They contain rich resources that can address many of the cultural trends in the Commonwealth and in the nation, and they are subject to Section 106 and Section 110 review.

Increasing economic prosperity in the latter 19th century encouraged vacation and health resort development in many areas of Virginia and in particular along the flanks of the Appalachian range in the Shenandoah Valley and along the Atlantic Coast. Resorts in places such as Rawley Springs in Rockingham County, Warm Springs and the Homestead Resort at Hot Springs in Bath County, and Orkney Springs in Shenandoah County flourished, many served by the same rail systems that opened the valley walls to resource extraction. Similar luxury interests would stimulate the vacation destinations in places such as Virginia Beach as well. Unfortunately, only minimal archaeological work has taken place on sites of this category. Research into the development of the Chesapeake & Western Railroad has only coincidentally discussed camp and party areas accessed by the rail line at Stokesville, Mossy Springs, and the more formal resort of Stribling Springs in Augusta County, Virginia.

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This period marks an era of experimentation and invention that radically changed labor and management relations, transportation, agricultural and industrial productivity, and the nation's capacity for war in the dawning 20th century. The expanding use of fossil fuels, electricity, and the evolution of the combustion engine rapidly evolved in diverse ways that laid the foundation for the cultural social, economic, and political revolutions that defined the United States' rise to dominance in the 20th century. The archaeology of sites revealing the introduction and development of these fuel sources and their associated technologies is only minimally developed, despite their significance.

The last chapter in this volume prepared by John Broadwater, is the one of the first efforts to document and assess the status of underwater resources and research of the Commonwealth. The number of maritime cultural resources with components dating from the entire historical period recorded in the Commonwealth is paltry and reflects the dearth of resources that Virginia devotes to identifying, recording, investigating, and mitigating these sites (Blanton and Margolin 1994). Maritime cultural resources exist in freshwater or saltwater settings, and include sites that document people and their past interactions with rivers, lakes, bays, and estuaries along economic, recreational, and social dimensions (Flatman and Staniforth 2006:168). Such sites can occur in terrestrial settings, such as sites associated with shipbuilding (Flatman and Staniforth 2006), docks, fish and shellfish processing sites, or intentionally scuttled wrecks (Voigt et al 1997:12). No studies have been made into the nature of life in fishing villages and communities that supported a growing fishing industry. How did class, race, and spirituality influence access to waterways, beaches, and their concomitant resources?

While the vast majority of these sites are found in the waterways of the northern Coastal Plain, maritime sites are distributed throughout the Commonwealth (Blanton and Margolin 1994:78). According to a 1994 study by the William and Mary Center for Archaeological Research, the majority of these sites whose function could be determined (27%) are the remains of vessels, followed by marine support structures (17%) such as docks, wharves, piers, canals, sluices, and wing dams (Blanton and Margolin 1994:70, 74). Water crossings, including bridges and fords, and inundated terrestrial sites form the remainder of the historic period underwater resources

documented by Dennis Blanton and Samuel Margolin (1994:75). Section 106 compliance work, in conjunction with dredging activities, bridge construction, and other bottom-disturbing activities, is responsible for most of the underwater sites recorded (Blanton and Margolin 1994:57)

Blanton and Margolin's survey of Virginia's underwater sites recommends that emphasis should be given to underwater vessels over submerged terrestrial sites, due to the uniqueness of these watercraft, their "Pompeii effect" character, and their superior preservation, particularly of organic remains (1994:95-96). One known, but undocumented, shipwreck site dating from this time period is the steel ship *USSTexas*, manufactured by Norfolk Navy Yard and veteran of the Spanish-American War. Site 44NH278, located on the Eastern Shore, is a site that may preserve the remains of early 20th century epidemic victims. None of the watercraft unique to the culture of the Chesapeake Bay region of this time period, such as skipjacks or bugeyes, have been yet located or documented (Blanton and Margolin 1994:97).

The post-Civil War era is a time of marked cultural transition, rebuilding, revitalization and renewal. Virginia participated in, and benefited from, the efforts of the newly re-united nations effort to fulfill its "destiny" to connect the two coasts. The need for the nation to rebuild, and at the same time expand, provided opportunities for the vast natural resources of the state to serve as a vehicle for local economic prosperity. As one of the most devastated states following the Civil War; to one of the most prosperous due to its natural and cultural resources as well as to its proximity to the Nation's Capital; the Commonwealth has the potential to support a wealth of scholarship related to economic, social, and environmental underpinnings of American exceptionalism. Such a dramatic transformation, from the depths of defeat to the prosperity of a great industrialized nation is preserved in the communities, soils, waterways, and archives of Virginia. The presence of significant inland and coastal seaports brought new opportunities as the United States contributed first to a world market place and then provided the resources and manpower needed to become a major world power. As a segue to our modern society, the importance of the efforts to integrate society, evolve the role and place of women, develop new energy sources, and create a new

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technology that moved horse power from the pasture to the garage, cannot be overstated.

As noted, above, however, historical archaeologists are coming late to recognize the importance of the period between the end of the Civil War and the end of the Great War. With some limited exceptions, except for the demands of Section 106 and 110 legislation, very little effort has been made to identify, evaluate, interpret, protect and preserve the vast, diverse, and historically significant array of cultural resources housed within the Commonwealth. Limited investments in staff and interpretive space, and a paradigm that views history as static, has exacerbated the nation's ability to preserve its history and to develop dynamic, relevant heritage programs (Glaser 2014:130; Little and Shackel 2014:40-52, 127-146; Shackel 2003: 168, 173-182, 193-194; Whisnant 2011:5-7). As a result, parts of the Commonwealth, such as the southern Piedmont

-Danville -South Boston- Martinsville-, places where Section 106 and 110 studies are not as frequent, and which have undergone significant economic stagnation in the 20th century, have been understated in the dynamic history of the state (personal communication, Elizabeth Moore).

Forming partnerships made up of community members, colleges and universities, museums, and government agencies can address resource shortfalls and contribute to a more robust interpretations and more inclusive heritage (Glaser 2014:130; Little and Shackel 2014; Whisnant 2011). The separation of natural from cultural resources in preservation efforts is contrived: nature is part of, and reflects, our history. The separation of nature from culture has privileged the preservation of natural resources over heritage (Glaser 2014:132, 135; Little and Shackel 2014:31-33; Whisnant 2011:6). It's too bad.

Chapter 5

The 20th Century: a Coming Archaeological Challenge (1900–1964)

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*“Revolution: a radical and pervasive change in society and the social structure, especially one made suddenly and often accompanied by violence.”**

Introduction

As this chapter is being prepared, our nation is looking forward to the 100th anniversary of the entrance of the United States into the trauma that was World War I, the “War to end all wars”. The 20th century is at an end, and as I look at the most recent copy (Fall 2015) of *Preservation; the Magazine of the National Trust for Historic Preservation*, much of the architecture and archaeology seen as historic and worthy of preservation mirrors events occurring in my life time or just before. In fact, in preparing for this paper I was introduced to a publication of the Virginia Department of Historic Resources that was released in 2014 titled: *The New Dominion Architectural Guide* (VDHR 2014). This document focuses on Virginia’s recent history and architecture from 1946 to 1991. [The] “goals are to develop frameworks for evaluating historic resources associated with this period, to facilitate architectural survey, and to assist property owners, local governments, historical societies, and individuals and organizations with an interest in preserving the architectural landscape of a pivotal period in the Commonwealth” (VDHR 2014: 4,5). In effect, while Historical Archaeology in the state is still discovering the middle and late 19th century (see Chapters 4, 5 this text), the VDHR has already declared the architecture of the second half of the 20th century as

*google.com/#q=revolution+definition; Accessed 11-10-15

being potentially significant and worthy of preservation.

Despite the leadership of the National Trust (2015) and VDHR, the historical archaeology of 20th-century Virginia is only minimally developed and then often as an afterthought. This is despite the fact that perhaps the single greatest spur to the modern field, and particularly cultural resource management (CRM), is the need to document and mitigate the impact of late 20th-and 21st-century industrial, transit and residential development ala Section 106 of the National Historic Preservation Act of 1966 (NHPA) as modified in 1980 by the addition of Section 110 legislation. The irony (?) of this lies in the fact that as our relatively young nation has come to discover its history, it was the dramatic expansion of construction across much of the nation after WWII and the threat it posed to the physical history of the nation, that nurtured the support for the aforementioned legislation. In the introduction to this volume, the criteria used to identify and register historically significant archaeological sites and architectural structures to the National Register of Historic Places are presented. Twentieth century cultural resources are NOT excluded from that nomination process.

It is the case that virtually every project discussed in this volume started with having to deal with the current state of affairs at the site or project area in question, be it a plowed field or the paved lot of a 1950s service

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station. Yet, except to commonly address these features as impediments to the really important historical remains that lie below, little effort is dedicated to consider the significance of the more recent historic, social and cultural events that they represent. It is the case that virtually every program of overview and assessment; whether it be for a program of interstate highway or bridge construction (Geier et al 1986), the preparation of a valley area for hydroelectric development (Geier 1981), an instance of urban renewal (Cromwell 1989; Duncan and Associates 2013), or simply documenting and understanding resources on vast landscapes to be managed (Geier, Whitehorne and Wood 2014), will dutifully document or inventory existing structures, recent archeological sites, etc. In some cases, there will even be an effort to provide an interpretation of more recent histories (Geier and Tinkham 2006). Unfortunately, those discussions, with some clear exceptions, are often only minimally developed, and as often, serve to identify how modern development has negatively impacted or altered the “more important” remains of an earlier time.

For a profession that is being almost grudgingly pulled into the study of the mid and late 19th century (see Chapters 5, 6, this text), the challenge of present and future historical archaeologists to deal with the need to identify, preserve and interpret the “significant” archaeological features of the 20th century, will be difficult for many of the same reasons noted in the earlier chapters of this text. At the onset of the chapter, a working definition of *revolution* was presented. It is argued that, despite the founding importance of our earlier American history, there has never, in all of history, been a period of time such as that of the United States in the 20th century in which a society or culture has undergone such a rapid, radical and comprehensive level of revolutionary change in virtually all aspects of its identity. And that change is still going on. Consider that at onset of the century our “horsepower” was kept in a pasture or barn and by the end we had hundreds of them in a four wheeled metal container parked in our garage. In the latter decades of the century people were walking on the moon, flying faster than the speed of sound and as we enter the 21st century there is serious discussion of going to Mars. Women even received the right to vote [19th amendment to the Constitution became law in 1920], though the Virginia General Assembly did not ratify it until 1952. Virginia, particularly because of its

proximity to the nation’s capital, and given a world-class military and mercantile port in the Chesapeake Bay, has been a key player in most of the events leading to these developments. In the following discussion a selection of 20th century themes denoting significant economic and social changes are considered. Where relevant, notations are made to applicable historical archaeology that has been carried out. Most discussion ends ca. 1964 with the passing of the Civil Rights Act. I hasten to say that this is not to diminish the social events of the latter decades of the century, but because that and subsequent legislation concerning policies gender, ethnicity, age, and race are the first steps in an even more recent social, political and material revolution that characterizes the beginnings of the 21st century, and which will have its own physical, archaeological footprint.

Perhaps the greatest challenge to writing this chapter lies in adding the responsibility for the historical events of the 20th century to what some would consider the over-stretched and under-funded discipline of historical archaeology. As the following sections are reviewed, most would agree that the developments in technology and the “shrinking world” in the 20th century have led to truly significant, and revolutionary changes in our society and the material world that we take for granted. But, if we consider the number of sites, issues, and regions of the state that previous chapters have identified as significant and as a priority, and when confronted by limited resources to support field work, the question is raised as to how much effort should be dedicated in interpreting sites of this period. After all, isn’t everything of significance already housed in the vast libraries and archives of our time; and if not them, isn’t it all on the world-wide-web (www)? I would argue that, from my experience, the answer is no, and the place for historical archaeology in dealing with revealing the history of 20th century Virginia is real.

Let me cite an example. Stokesville, Virginia, was established at the end of track for the Chesapeake and Western Railroad in northwest Augusta County in 1901/1902. The town was developed as a “company town” for a major industrial complex affiliated with the Chesapeake and Western Corporation. After a brief, 11 year period of sporadic prosperity (Figure 6.1), the industrial base of the community closed, and by 1913 the once prosperous town had become a small rural community at rails end. The C& W closed up shop in

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Figure 6.1. View to the west into industrial center of Stokesville, ca. 1902. The Stiegle Lumber Company is in the distance. The Stokesville Stave and Heading Company is in the foreground. Business offices, workers barracks, and other support buildings are on the heights in the distance right (JMU 1998).

the late 1920s and in 1949 a devastating flood scoured the site locale (Figure 6.2).

The town was named after Col. Thomas Stokes, who invested in the town, the railway, and 50,000+/- acres of land in the hopes of taking advantage of the boom in coal. While the extraction of coal was minimal, the community did become a center for a local lumbering and tanbark industry that used 32 miles of n-gauge rail line to tap those resources along the Big and Little Rivers that joined to form North River just west of town. Some of the industries that were established at the town included the J. C. Stiegel Lumber Company, the Valley Tie and Lumber Company, the Imperial Extract Company (ooze factory), and the Stokesville Stave and Heading Company. The town existed to support roughly 1500 transient, seasonal male workers, and included the facilities to provide housing and entertainment for those

workers, many of whom worked at temporary camps in the mountain interior during the work week (Figure 6.2). There was also a smaller resident population which included the managers and officers of the businesses a railroad foreman and staff, and others who worked in a variety of support services including hotels, railroad facilities, restaurants, stores, a post office, a church, a school, etc. (Geier 1998; Geier and Nash 1998).

In 1996, a program of field archaeology, oral history, and historic research that lasted two years was initiated by George Washington and Jefferson National Forest in collaboration with the Department of Sociology and Anthropology at James Madison University. This research focused on identifying and interpreting the set lumber, tanbark, coal and railroad features on Forest lands on the Big and Little Rivers west of North River Gap and included support for the documentation of Stokesville, proper. The

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Figure 6.2. View to the west and north into area of Stokesville industrial area ca. 1997 (JMU).

project included visual reconnaissance and shovel test pit strategies of field archaeology, an extensive program of oral history, and historical research including the searching of land, deed, census, newspaper, and other forms of historiography. Research was helped by the availability of sets of professional photographs prepared by the C&W Railroad and saved from loss when being discarded, a small number of photos from local residents, aerial photographs, and a simple line map of the town prepared by Walter Daggy who was a young boy when the town was in operation. Another local resident provided invaluable service and worked as a guide, directing us to many of the buildings he had frequented during his childhood. As a result of this extensive program, a relatively accurate model of the town plan at its peak was created (Figure 6.3) which located many of the building sites, identified the function of many, and even provided the names of some of the storekeepers, etc. who operated them.

Despite this success, there were no local newspaper accounts from the town itself. Since the land for the town had been acquired by a holding company of the C&W Corporation, there were no county or state documents

that identified agreements between that corporation and any of the industries or support services in the town. Indeed, the next set of deed and land transfers that were filed dated to the time the interior mountain and town lands were being sold to the federal government or to local farmers. An available county atlas dating to 1885 documented the road system and agricultural occupation of the area and a land plat was found dating to 1897 that identified land parcels and owners; both resources pre-dating the transfer of land to the holding company. Ironically, the first USGS quadrangle documenting the

Stokesville area dates to 1944 (Parnassas Va.-W.Va. 15 minute USGS Quadrangle) at which time the features of the early town, including the railroad system, had been removed. There is, in effect, no map documenting the existence of the town (Geier 1988). No architectural plans for the industries or businesses constructed at the town were found and their accounts and personnel records appear to no longer exist. There is no information on how the town was managed or how public services such as housing, medical aid or schooling were made available (Geier 1998).



Figure 6.3. Hypothesized Plan for the Town of Stokesville based on historical and archaeological research conducted from 1986 through 1988 (Megan Swithers, JMU 1998). Area 26 notes location of Stiegle Lumber Company, 34 is the Imperial Extract Plant and 15 identifies the Chesapeake and Western Railroad sheds. Numbers 38 through 47 east of the river identify a community of shops, the post office, and the railroad passenger depot.

In the absence of a relevant primary record, oral history took on an important role in the study. While a small number of people were identified who were alive when the town was in existence, their memories varied in detail and none actually worked at the site. Some individuals had stories that had been passed to them, but most of the information that they were able to provide involved the town in the mid 20th century and well after the company town and rail head had passed into history (Geier 1998:6). In effect, while fortunate to create a generalized plan of Stokesville (Figure 6.3), no data exist to make it a living community. Little is known about the management of the town; the operations of the various industries; the social hierarchy of the community; the diverse nature and livelihood of the laborers; or the nature, role or seasonality of the support community that developed over time.

In the following discussion topics chosen for review include several that have been introduced in earlier chapters and which mark many of the significant areas of change that define the history of the Commonwealth. These include: warfare, agriculture, resource extraction, transportation, all of which are marked by significant changes in energy and power; and corresponding changes in regional demographics, gender and race relations. Throughout, suggestions are made concerning areas of potential historical archaeological research.

20th Century Warfare

Since the ‘War to end all Wars’, we have participated in WWII, the Korean War, the Vietnam War, the First Gulf War, and the Second Gulf War of 2003. Each of these has been associated with major American mobilizations of industry and manpower. As technology

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has changed the nature of war, those impacts have caused for major redesign of the harbor facilities in Norfolk, and at military facilities in Virginia Beach and farther inland in places like Fort Lee and Quantico. Both Hampton and Newport News have booming ports. Hampton Roads became a modern naval base and shipbuilding became an important industry. By the 1920s, the Newport News Shipbuilding and Dry Dock Company was the largest employer in the state (Virginia Historical Society 2015a). Currently Newport News Shipbuilding builds U.S. Navy aircraft carriers and submarines, and provides after-market services for both (Newport News Shipbuilding 2015a). While undergoing economic ups and downs and increased competition from foreign sources over the course of the century, Virginia in 2013, hired more workers in the ship building industry than any other state (Cavas 2013).

As an example of military modernization, the Front Royal Remount Depot was acquired by Act of Congress in 1911 and was established to serve as a source of quality horses for the U. S. Army in WWI and later. Given the evolution of military technology of the century, the horse has been replaced by the truck for supply transport, mechanized artillery, and the helicopter for rapid troop deployment. In turn, the state of the art horse breeding center is now owned by the Smithsonian Institution and serves as the Smithsonian Conservation Biology Institute (SCBI) which facilitates and promotes conservation biology programs at the National Zoo (<http://www.historic-fortmyer.com/2011/08/30/front-royal-us-army-remount-depot/>).

With respect to military sites archaeology in Virginia, perhaps the most significant work is that of John Milner Associates at Quantico Marine Base in Stafford County (Balicki, Corle, Traum and Jones 2005). In this study, previously discussed in Chapter 5, the need to train Marines for patterns of trench warfare faced in WWI is documented, as is the current status of the trench features constructed on the property for that training. Some field projects have noted the use of earlier military landscapes such as Wilderness (Geier, Brien and Fuller 2005) and Cedar Creek Battlefields (Geier and Tinkham 2006) for training of modern military troops and officers in military tactics. Field teams directed by Carole Nash have investigated the site of a WWII infantry, winter training camp at Big Meadow in the Shenandoah National Park.

Since the American Revolution, enemy prisoners of war have been held in camps across Virginia. For WWII,

these facilities include Camp Lee, Camp Pearly, Camp Pickett, Fort Eustis, Fort Patrick Henry, and the Hampton Roads. Camp Ashby in the Thalia community of Prince William County was the largest camp in south Hampton Roads, housing 6000 German soldiers, most from the famed Afrika Corps. Virtually no effort has been made to document these camps, the life of the prisoners, and their economic/ social impact on the communities which house them ([://en.wikipedia.org/wiki/Camp_Ashby](http://en.wikipedia.org/wiki/Camp_Ashby); [://en.wikipedia.org/wiki/List_of_World_War_II_prisoner-of-war_camps_in_the_United_States](http://en.wikipedia.org/wiki/List_of_World_War_II_prisoner-of-war_camps_in_the_United_States); >, accessed 9-16).

Agriculture

Revolutionary technological change has led the way in shaping the lifestyle and demography of agricultural communities across 20th-century Virginia. Starting with horse-drawn (mules) and horse power at the onset of the century, developments in the gasoline powered combustion engine dramatically impacted domestic and commercial transit and farm productivity. The horse and buggy has been replaced by families with two or more cars; the horse and plow with a whole generation of tractors and mechanized farm implements; and the horse and wagon with the pickup and an array of other trucks. Mechanized farm productivity has dramatically increased to the point that international markets are even more crucial to defining profit and prosperity. In fact, the cost of paying for, and maintaining “needed” machinery has become a true challenge to family farmers. As mechanized farming has evolved, the place of the profitable family farm has diminished in favor of larger corporate operations capable of dealing with the increased costs of mechanization. Carolyn Dimitri, Anne Effland, and Neilson Conklin in their study of 20th century agriculture (2005) start their discussion with the following:

American agriculture and rural life underwent a tremendous transformation in the 20th century. Early 20th century agriculture was labor intensive, and it took place on a large number of small, diversified farms in rural areas where more than half of the U.S. population lived. These farms employed close to half of the U.S. workforce, along with 22 million work animals, and produced an average of five different commodities. The agricultural sector of the 21st century, on the other hand, is concentrated on a small number of large, specialized farms in rural areas where less than a fourth of the

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U.S. population lives. These highly productive and mechanized farms employ a tiny share of U.S. workers and use 5 million tractors in place of the horses and mules of earlier days.

In a more recent article by Hamilton Lombard and Luke Juday on the state of farming in Virginia (2015), they state:

Today, farming continues to have a significant presence in Virginia. Agriculture is often characterized as Virginia's "largest industry" and farming is easily the most common use for land in Virginia. But the incredible gains in farm production during the 20th century have made the industry a victim of its own success. Increased yields mean farms can produce more food with far fewer workers and acres. Rising production has also caused considerably lower food prices than in the past, which means farmers need to produce much more to make a living. Modern farmers who are serious about farming are usually forced to go big or go home. After 1940 many Virginia many farmers went home. The percent of the workforce employed in agriculture declined from 25 in 1940 to less than 1 percent today... Though today Virginia still has nearly 46,000 farms (or about 450 farms per county), only a small portion of these farms provide their owners with income. In fact, according to the USDA 2012 Census of Agriculture, over three-quarters of Virginia farmers are losing money."

The impact of these changes can certainly be seen across the Virginia landscape as large numbers of houses, barns, etc. on farms that had thrived in the earlier 20th century, can be seen abandoned or existing as archaeological ruins. Faced with the inability to support families, residents of many established family farms left the land to search for jobs in developing industrial, urban centers. The towns that had supported these dispersed communities were left to search, often unsuccessfully, for a new identity and economic base. For those farms and farmers that prospered, much of this progression is reflected in the construction of more modern residences and agricultural support facilities such as mechanized milk parlors, dairies, machine sheds, barns etc. introduced to replace earlier less efficient structures.

One of Virginia's greatest success in the mechanization process lies in the area of poultry processing and production. Many contend that the modern U.S. poultry industry was born in the Shenandoah Valley during the early 1900s by Charles Wampler of Harrisonburg,

Virginia, who experimented with large-scale hatcheries and confinement systems. From these beginnings, Virginia is now home to a thriving poultry industry supported by six processing companies and 1,100 farm families and providing, directly providing more than 13,480 jobs and indirectly contributing to employment for 41,710 people (Farm Flavor.com. 2015). Associated poultry housing has moved dramatically away from the traditional "chicken coop" to climate controlled houses measuring hundreds of feet in length and requiring significant terrain landscaping too create the flat platforms required to support the flocks.

In contrast, for Virginia tobacco farmers the tie of tobacco to cancer and addiction, and with legal restrictions to public smoking set in the 1990s, the impact has been negative and severe. Since the onset of the settlement of the Virginia Colony, tobacco has been a predominant player in agricultural prosperity (See Chapter 1, this text). In 1899, 184,000 acres of tobacco was harvested in Virginia. Unfortunately, in response to challenges posed by the medical and legal communities, by 1999 the number of acres had dropped to 38,000 (Woodruff 2015) reflecting a deeply stressed industry and way of life for families, some of whom had prospered through tobacco for generations.

The production side of tobacco is not all that has been impacted by recent restrictions on tobacco use. A farmer sold his tobacco at centers across the state such as those at the southern Piedmont cities of Danville, and Martinsville. Subsequently the leaves were shipped to processing plants, where chopping and blending created different combinations with different flavors. Major centers of tobacco manufacturing were at Lynchburg, Petersburg, and Richmond. Today, only one cigarette factory remains in Richmond, that facility owned by Phillip Morris USA, a subsidiary of Altria. Altria's Richmond plant, built in 1973, now produces half of all the cigarettes sold within the United States, and that Richmond facility may be the largest cigarette production plant in the world. Despite this productivity, Richmond is dotted with old, abandoned or renovated tobacco facilities that reflect the previous status of that industry to the Commonwealth (Virginia Places 2015a).

Across the state, the challenges to today's farm economy has caused an increasing number of people to leave agriculture in favor of jobs in the in the industrial and service sectors of the economy typically found in

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more urban communities. This demographic shift has certainly impacted the economic viability of many rural towns which existed to serve an agriculturally focused community. As farms are abandoned and as support businesses close, the history of many of these towns enters the world of the historical archaeologists. While the physical impact of such transitions has not been a specific focus of most historical archaeological projects, overview and assessment studies that document the human occupation of large areas of space such as that dealing with the Cedar Creek and Belle Grove National Historical Park (Geier and Tinkham 2006), an area of potential physical threat by quarrying (Geier, Whitehorne and Wood 2014), or flooding (Geier, Raredon and Brenner 1978), often contain such considerations.

Resource Extraction (Timber, Mining, Fishing)

The importance of resource extraction to the late-19th century economy has been discussed in the previous chapter (5) with coal, iron, timber and salt leading the way. Over the course of the 20th century, the mining of over 50 different minerals contributed to the local and state economy, some only briefly. The only arsenic deposit east of the Mississippi spurred the operation of the Brinton Mine from 1912 to 1917. Barite production continued into the mid-1950s in Fauquier County and Titanium was processed in the State from the 1940s into the 1970s. The quarrying of construction materials such as clay, gneiss, granite, ravel, gypsum limestone, sand, sandstone shale, etc. remain important local and regional products (National Park Service 2015c).

The use of coal, as a source of domestic, industrial, and transit power, prospered into the middle decades of the 20th century. In Virginia, the coal fields of the Ridge and Valley Physiographic Province (including the Dora coal field in Rockingham County) had value, but were too small to support large-scale industrial extraction. Instead the principal sources of coal were concentrated in Buchanan, Dickenson, and Wise counties, and in that portion of the Appalachian Plateau that extends into Lee, Russell, Scott and Tazewell counties in southwestern Virginia. In those areas, coal mining became key to shaping the growth and prosperity of that part of the State. Despite their wealth in coal, however, the “coal counties” of southwestern Virginia were not able to take advantage of its presence until the 1880s when the construction of new railroads made it possible to ship it to

the commercial marketplaces in the north and east. Coal certainly became king, and with market access the coal mining industry flourished and the economic prosperity of the communities supporting it expanded and persisted into the third quarter of the 20th century. In the 1980s, however, the industry suffered a severe depression. The demand for coal as a fuel source dropped due to Clean Air Act requirements for low-sulfur coal, and the supply of low-cost coal from Virginia dropped with the exhaustion of the easy-to-mine coal beds (Virginia Places 2015b). As with agricultural communities discussed earlier, as the coal industry came under stress, workers left the area to seek employment elsewhere, and many towns designed to support the industry went into decline. Little effort has been made to document the coal mining industry in Virginia or the lifeways tied to it. With funding from the George Washington and Jefferson Forest a set of coal mines inside North River Gap at Stokesville, and the site of the Little Dora Coal Mine which dates to the Civil War and before, have been located and documented (Geier 1988; Elswick 1988).

During the 18th and 19th centuries, iron mines and furnaces using charcoal for fuel were in operation in the Piedmont and Great Valley; and until about 1925 the industry profitably served a restricted local market. After 1920, however, increased competition from Great Lakes ore, unfavorable freight rates, and more modern furnace practices, made it increasingly difficult for Virginia producers to operate. Meaningful industrial production finally ceased about 1930 because of economic problems rather than exhaustion of iron ore reserves (Gooch 1954). Many of the mines and the communities constructed to support them and their workers were abandoned, many now on lands that have been ingested into the National Forests and Parks of the State (Lignite, in George Washington and Jefferson National Forest, Botetourt County; John A. Alexander tract and iron mine on Madison Run in Shenandoah National Park).

By the first decades of the 20th century, uncontrolled exploitation and patterns of clear cut timbering of the hard- and soft-wood forests of western Virginia, dramatically diminished the availability of the lumber resources. Bare, deforested mountain walls contributed to uncontrolled water runoff, increasing the likelihood of stream flooding and silting. Many species of game animals were pushed to near local extinction including elk, white tailed deer and wild turkey. As the forests

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were lost and the industry moved away, local support communities dependent on timber were diminished, and workers faced with a lack of alternative labor, left (USDA 2015).

Under pressure from a concerned citizenry, the Forest Reserve Act was passed in 1891 which authorized the creation of Forest Reserves. In 1911 the Weeks Act was passed, which made it possible for the Federal Government to buy deforested mountain land and protect it for watershed purposes. In 1917, three northern Virginia purchase units were combined to become the Shenandoah National Forest, the name being subsequently changed to the George Washington National Forest to avoid confusion with the National Park bearing the same name. A second forest area known as Jefferson National Forest, was established in 1936 to protect and administer the Southern Appalachian Forests. In 1995 the George Washington National Forest and the Jefferson National Forest were administratively combined to form the massive George Washington and Jefferson National Forest which covers significant sections of the Blue Ridge and Appalachian Mountains from one end of Virginia to another (USDA 2015). The two year research project at Stokesville, discussed at the beginning of this chapter, documents the transitional history of such a woodland landscape and the rise and fall of the transient company town that served the extractive industries (Geier 1988; Geier and Nash 1988).

On August 25, 1916, President Woodrow Wilson signed the Organic Act creating the National Park Service, a new Federal bureau in the Department of the Interior responsible for protecting the 35 national parks and monuments then managed by the department and those yet to be established. An executive order in 1933 transferred 56 national monuments and military sites from the Forest Service and the War Department to the National Park Service (National Park System 2015d). Jointly these actions resulted in a phenomenal transfer of Virginia lands to the control of this federal system. As of 2012, there were 21 parks in Virginia under the control of the National Park System, including National Historical Parks such as such as Cedar Creek and Belle Grove in the lower Shenandoah Valley, Appomattox Courthouse, and the Colonial in Jamestown and Yorktown. National Military Parks and Battlefields include Fredericksburg and Spotsylvania NMP established in 1927, and Manassas Battlefield (NPS 2015e). By 2012, 2,358,071

acres of land, or 9.2% of the Virginia landscape, were under federal control (Gort, Vincent, Hanson and Rosenbloom 2012). Over 1,636 archaeological sites and 120 National Historic Landmarks have been identified within National Park lands (NPS 2015e), with many more remaining to be identified.

Not all of the federal programs of land acquisition were without controversy. The 200,000 acre Shenandoah National Park established in 1935 and controlling much of the ridge and valley land of the Blue Ridge Mountain Range, required the relocation, sometimes forced, of over 450 families in the process of its formation (NPS 2015f). Audrey Horning's historical archaeological work in Weakley Hollow Valley has provided a major contribution to understanding the implications of the resettlement program (Horning 2000a, 2000b; 2001; 2004; 2015).

The Chesapeake Bay and Atlantic Ocean provide a rich source of natural food resources and economic profit. In Virginia, the commercial fishing industry through most of the 1800s was relatively unimportant in terms of its contribution to the state's economy. In the early 1900s that began to change. In a 1928 Report of the Commission to Investigate and Survey the Seafood Industry of Virginia, it was stated that, at that time, there were approximately 100,000 persons that secured their livelihood, or a part of their livelihood, in some way through commercial fisheries with more than 30,000 individuals being entirely dependent upon the seafood industry. While 20th-century fisheries contributed only marginally to the larger state economy, the significance to coastal economies was significant. In 1950, the total value of agricultural production was 21 times the landed value of all fish, except menhaden. Out of 27 Virginia counties or cities with some coastal access or linkages, however, only 12 counties or cities had landed fish values in excess of 25 percent of the value of their agricultural production these including Accomack, Elizabeth City, Gloucester, Lancaster, Mathews, Middlesex, Norfolk, Northampton, Northumberland and Westmoreland. Improvements in shipping and extraction technologies contributed to the growing profitability and market of the industry, however, problems with over fishing and bay pollution reduced the availability of product in the latter decades of the century (Kirkley 1997; 5-7). Despite these problems, in 2013 Virginia was the third largest producer of seafood being out-produced only

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by Alaska and Louisiana. Reedville, Virginia is the fifth largest U.S. fishing port based on landings. Hampton Roads was the nineteenth wealthiest seafood port in the nation (Virginia Marine Products Board 2013). While John Broadwater's discussion in this text (Chapter 7) introduces the Chesapeake fishing industry, its nature and importance as part of Virginia's history still remains to be developed.

Transportation

Railroads: Changes in the modes and means of transportation over the course of the 20th century have contributed directly to the rise and fall of communities and regional economies across the Commonwealth. Despite its importance to both the Union and the Confederacy, no large-scale, systematic or integrated rail network was constructed in Virginia until after the Civil War. In the latter half of the 19th century, however, investors, many from outside the Commonwealth, realized the potential profit in railroads. As a result, lines of steel rails accessed the resource rich lands of western and southwestern Virginia providing a form of rapid access for raw and manufactured product to the capital of Richmond and the important markets and ports of the east. The Norfolk and Western and Chesapeake and Ohio railroads connected Virginia ports with the vast coalfields in southwestern Virginia and West Virginia. Newport News, a small village until the C&O established its terminus there, grew quickly and became one of the nation's leading ports and shipbuilding centers (Virginia Historical Society 2015b). By the mid 20th century, the inland port of Richmond was the served by six railroad companies, having numerous yards and facilities throughout the town (See J. Sanford 1975; Dutton and Associates 2013). The railroads also made possible the expansion of Virginia's fledgling tourism industry. By the 1890s, trains were carrying tens of thousands of out-of-state visitors to Luray Caverns, in the Shenandoah Valley, Virginia's beaches, and the springs and resorts in the western side of the state (Virginia Historical Society 2015b).

As discussed in the chapters on the 19th century and Civil War in this text, the coming of the railroad meant potential prosperity and along their lines new towns developed and established communities thrived. Citizens of Big Lick, Virginia, for example, raised \$10,000 to induce the proprietors of the Shenandoah Valley

Railroad to select their hamlet as the junction point with the Norfolk & Western. In 1882, Big Lick became Roanoke, and within two years its population had grown from 400 to 5,000 (Virginia Historical Society 2015b).

Since World War II, highway construction and airpower have successfully competed to significantly peel away passenger and freight customers from railroads. Following the 1940s, increased access to expanding road systems and air service caused railroad passenger service in particular to decline significantly, the use of rails to carry freight going through a slower decline. Efforts to enhance rail efficiency in the 1950s did not work and the decline persisted through the 1960s (American Rails.com 2007). Today, Virginia has two Class 1 freight railroads (CSX and Northern Southern), several "short lines" carrying local freight (such as the Bay Coast Railroad on the Eastern Shore), one major commuter rail system (Virginia Railway Express), portions of the Washington-area Metrorail network, and the Tide light rail system in Norfolk (Virginia Places 2015c). Many communities that had depended on the economic benefits provided by the railroads went into depression, many gradually fading into history.

The collapse of the rail system across much of Virginia has resulted in abandoned rail lines and railroad structures of all kinds standing in disuse. Many passenger depots that were once important focal points of local commerce and transit stand abandoned, were torn down, or were repurposed into businesses such as restaurants. For example, Richmond's Broad Street Station is now the Virginia Science Museum and the former SR Station on Hull Street is now the ODC/NRHS Richmond Railroad Museum. Abandoned railroad beds are being repurposed as bike trails, hiking trails, or greenways. Since most rail facilities were in private hands, existing preservation legislation was of little value in their preservation or in the documentation of their removal.

Late 19th and 20th century railroading and the socio-economic impact of its rise and fall has not been a priority consideration to historical archaeology (see Duncan and Associates 2013). The most significant research on the 20th century rail industry is clearly that sponsored by the Alexandria Historical Museum at the Potomac Yard, in Alexandria, Virginia. This major rail complex was established in 1906 and remained active, though in decline, into the early 1980s. At the onset of the 20th century this was possibly the largest railroad

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classification yard in the United States interchanging and classifying freight for five, then six, railroad companies. The Museum's web page on the *Archaeology and History at Potomac Yard* (updated Dec. 15, 2015) reference eight historical archaeological reports conducted on this major rail complex site since the 1980s which as a whole chronicle the continuing importance of Potomac Yard to the transportation industry and indeed the economy of Alexandria and the region.

Trains, Planes and Automobiles:

Automobile ownership increased rapidly during the second decade of the 20th century spurred by numerous innovations in the gasoline powered engine and vehicle designs made during WWI. But a car was only as good as the road system over which it traveled. Road building and maintenance was the responsibility of each locality, so there was a great disparity in the quality of roads. Those areas of the state that provided good roads, such as the Shenandoah Valley, opposed paying taxes to improve roads in other areas. As a result, the overall road system was poor enough so that in 1921 the Automobile Club of America recommended that motorists traveling from New England to Florida bypass the state of Virginia. Road construction became an important political issue in Virginia in the 1920s, financing of new construction remaining a primary concern. In 1922 a state referendum on highway bonds was defeated by a large margin ensuring that Virginia's roads would be financed through existing revenues through a plan that became known as "pay as you go." During the Great Depression, federal relief money that the state received was distributed through its highway department, the most significant result of Virginia's relief efforts being the construction of new roads. As the number of paved roads increased, so did the presence of services related to the automobile and travelers. Service stations, motor courts, and drive-in restaurants all sprang up, and destinations such as Colonial Williamsburg attracted motorists and their families. In 1956, the U.S. Congress passed the Interstate Highway Act. This law authorized the construction of "superhighways," or limited access highways, 1,070 miles of which would be in Virginia (Virginia Historical Society 2015b). Designed for rapid transit, the construction of many interstates served to bypass towns and communities that had earlier developed as commerce hubs or which had otherwise expanded in

response to tourism. The interstate caused many of these communities to diminish economically, and to this day the skeletons of abandoned motels and service stations line the bypassed corridors, many of them entering the realm of physical history or archaeological ruins.

Previous chapters have discussed the importance of roadways as critical conduits of commerce and travel. The rise of the railroad networks of the late 19th and early 20th centuries often changed the balance of economic prosperity as those towns with railheads often prospered while those without were diminished. Ironically, the resurgence of roadways in the 20th century in support of personal automobile travel and the transport of commerce and freight by truck, saw a significant reduction in the use of railroads for passenger service and freight transport. As railways closed, new road systems changed the economic importance of towns and communities. Yet even more ironically, the Interstate Highway System started in the 1950s created non-access transit corridors that allowed tourists and freight carriers to bypass numerous small communities, which had prospered earlier on the primary road systems of the prior decades.

The history of airpower and its tie to Virginia is well beyond this paper. It is clear, however, that military, commercial, and transport contributions that provide local, national, and international access to markets, business and tourist destinations have had a key role, not only in the demise of the railroad industry, but in shaping the relative economic prosperity of towns and regions across the State. Most Virginia airports are designed for general aviation, allowing private planes to land, and offering ground services such as refueling, parking, maintenance etc. These airports typically lack air traffic control towers, and pilots must pay close attention to other aircraft in the area when taking off or landing. Such an airport in a rural area may not see a lot of traffic, but can be essential to the local economy by providing a fast connection to urban and other centers and by providing a resource that can be used to recruit industry and other businesses. Of the nine airports in Virginia such as Dulles or Richmond, that offer scheduled local, national and international passenger service, only two (Roanoke-Blacksburg Regional Airport and Shenandoah Valley Regional, near Waynesboro) are west of the Blue Ridge. Airports that offer scheduled commercial passenger service are clearly beneficial to economic development in a community. Five of the nine

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commercial airports providing direct or indirect national and international service are in Virginia's crescent-shaped population center, stretching from Northern Virginia through Richmond to Hampton Roads (Virginia places.org 2015c).

Labor, Gender and Race Relations

Given previously described changes in energy sources, land use, and transportation; demographic and human relations during the 20th century underwent dramatic changes. As the population of the state moved away from rural agricultural and resource extractive labor, the move to new hopes in local urban centers spawned new growth and physical expansion of some communities. Segregated racial and gender traditions of the late 19th century persisted and developed through the first half of the century often being seen in segregated residential racial and ethnic neighborhoods and support systems such as schools. In the latter half of the century many of these trends were dulled in light of significant legal and social revitalization which in turn spurred physical redesign in certain aspects of community plan and residence.

Early in the 1900s, Virginia attempted to adapt to a modern age shaped by industrialization, mechanization and mass production. As mechanized agriculture and the markets for Virginia's resources changed, changing labor demands caused Virginians to move in increasing numbers into white- and blue-collar jobs associated with emerging industry. Jobs in railroading, mining, and maritime trades initially remained strong, though as noted above, underwent significant transitions and downsizing over the course of the century. Agriculture remained important but became less labor intensive and dependent as machines tended to replace manpower. Tobacco and cotton remained important crops and fed an expansion of low-value added industries which converted these abundant crops into inexpensive consumer products. Well into the third quarter of the century, furniture, textile, clothing and cigarette manufacture dominated industry in the Commonwealth and shaped the economies of many urban centers. To attract mills, factories and new businesses, cheap labor became as much a marketable commodity as inexpensive raw materials and cities across Virginia promoted its availability (Love 2015).

In the decades after 1900, rapid growth in the industrial, retail, and service sectors of the economy

redefined the workforce from one that was predominantly white and male towards a mixed-gender work place into which young white women were increasingly recruited. Business, supported by political interests, responded by appealing to racial solidarity and by promoting the idea of wage labor as being appropriate work for white women. In order to ensure the protection of white women in this new setting, steps were taken to racially segregate work places and establish an image of strict supervision and protection by white male supervisors. By 1920, women (including African-American women) accounted for more than 50 percent of all textile workers, 90 percent of clothing workers, 80 percent of tobacco workers and almost 45 percent of those in paper manufacturing and printing. The pay of women workers was most often based on piece-work rather than on a daily or weekly wage, and was often seasonal in nature. Wages were less than male factory workers. Despite being among the lowest-paid industrial workers in the nation, white workers in Virginia were clearly favored in terms of all trades needed to keep an industrial plant operating. With exceptions in areas such as furniture and textile manufacture (personal communication, Elizabeth Moore), few African Americans would ever be employed as mechanics, craftsmen, machine tenders, or any of the other "skilled" positions in Virginia's factories. Ironically, whereas in the 19th century all tobacco products had been made by skilled black hands, in the 20th century billions of cigarettes would be turned out by machines tended by white women, supervised by white men (Love 2015).

Movements toward racial segregation emerged almost immediately following the abolition of slavery in the 19th century, with informal practices of separation developing in many public and academic venues. In response, Congress enacted the Civil Rights Act of 1875, which made discrimination in places of public accommodation illegal. The Supreme Court held the act unconstitutional in the Civil Rights Case of 1883, concluding that the Fourteenth Amendment, which prohibited states from denying equal protection of the law, did not authorize Congress to adopt laws dealing with private discrimination. After Reconstruction, whites sought to reinforce patterns of racial hierarchy with many southern states adopting laws requiring racial segregation in transportation, school and education, residence, and elsewhere. In 1896, the Supreme Court upheld such laws, arguing that the Fourteenth Amendment prohibited discrimination only

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in connection with civil and political rights but not in connection with social rights such as were involved in education and transportation. The court's doctrine indicated that states could require racial segregation only if the facilities provided the races were actually equal, though, in fact, such facilities were typically worse than those available to whites (Tunsnett 2003).

With respect to work, what skilled jobs or professional opportunities there were for Virginia's black citizens generally existed within the African American neighborhood itself. Separated from the larger white community, black enclaves throughout the state offered work to plumbers, carpenters, lawyers, doctors, and other blacks skilled in trades and professions. Black shopkeepers and entrepreneurs operated successful businesses. In the wider economy outside of the enclaves, work for black Virginians was essential. Women worked in some of the simpler cotton or tobacco manufacturing jobs, with men usually engaged in jobs requiring heavy labor. For both, work was often demeaning, seasonal, and low paid (Love 2015).

Virginia's white male workers had organized labor unions in a variety of trades during the Antebellum Period. The early 20th century brought labor organization to both male and female factory workers, utilities employees, machine tenders, retail clerks, firefighters, and office workers who were seeking better working conditions, benefits of seniority, and improved living standards. Female unionists, however, faced the cynicism and skepticism of male workers and were confronted by traditions which placed women them in a subordinate role to men. Similarly, while facing near total segregation in the workplace, Virginia's African Americans often showed a far greater interest in organizing than whites, and their efforts resulted in the appearance of all-black union locals representing workers in a handful of trades such as railroading, shipbuilding, and tobacco processing. Despite the best efforts of labor organizers, however, most of Virginia's working people, for a variety of reasons, never joined a union (fewer than 15% in the 1930s)(Love 2015).

The Great Depression of 1929 through 1939 was the deepest and longest-lasting economic downturn in the history of the Western industrialized world. In contrast to many areas of the nation, Virginia's diversified economy and conservative fiscal policies protected Virginians to some degree. Most of Virginia's farmers, although lacking

in material goods, grew enough food to feed their families. White-collar workers in cities and towns suffered pay cuts but, for the most part, managed to keep their jobs. Virginia's industrial workers, especially in major cities, felt the most severe effects of the depression as manufacturers cut production, jobs and salaries (Love 2015).

The Civilian Conservation Corps (CCC):

Established by Congress on March 31, 1933, the CCC provided jobs for young, unemployed men during the Great Depression. Over its 9-year lifespan, the CCC employed about 3 million men nationwide and made valuable contributions to forest management, flood control, conservation projects, and the development of state and national parks, forests, and historic sites (NPS 2015g). In its nine years of work, the CCC spent \$109 million in Virginia, the fifth-largest state expenditure in the country. The state ranked fourth in the number of camps (more than eighty, twelve of which were for black Virginians) and seventeenth in the total number of enrollees. The CCC employed 107,210 men statewide, 64,762 of whom were Virginia youth and 10,435 of whom were local camp officers and supervisors. The agency put most of its effort into projects controlling erosion and flooding and improving forest landscaping and wildlife conditions. In Virginia: 15.2 million trees were planted in reforestation and erosion control, 986 bridges were constructed, fire hazards were reduced over 152,000 acres, 2,128 miles of new telephone line were strung, and 1.3 million fish were stocked. The conservationists also worked on the restoration of historical sites at Jamestown, Williamsburg, Yorktown, Fredericksburg, and Spotsylvania and combated floods along the James and Potomac rivers (Heinemann 2014). On June 15, 1936, just three years after the CCC began, Virginia simultaneously opened six state parks established through the efforts of the organization: Douthat, Westmoreland, Hungry Mother, Fairy Stone, Staunton River and Seashore, and First Landing. The CCC also helped develop what would become Pocahontas State Park and the National Park Service's Prince William Forest Park (Virginia Department of Conservation and Recreation 2015).

In his master's thesis (1982), John P. Byrne discussed the place of the CCC in Virginia during its nine years of service. He noted that Virginia had, on the average, more CCC camps in national parks than did any other state.

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Enrollees performed a major role in the development of Colonial National Historical Park and Shenandoah National Park. During the New Deal, the National Park Service (NPS) concentrated on parkway construction, assumed the supervision and interpretation of Civil War battlefields, and devoted increasing attention to historic site administration. Within the state's National Forest System, the CCC developed recreation areas in the Jefferson National Forest and in the George Washington National Forest. In keeping with the segregationist policies of the South, enrollees erected separate white and black recreation areas in Jefferson National Forest (Byrne 1982:40, 43, 48).

Certain of the federal parks which recognize the significant role of the CCC to their history, and which to this day benefit from their construction efforts, have made efforts to at least identify and assess the archeological and occasionally architectural remains that are left of the camps on their lands. To this end Shenandoah National Park invested in historical archeology at Camp Fechner located at Big Meadows in a project directed by Dr. Carole Nash of JMU. Similar, but less intensive efforts have been made to identify the camp on Wilderness Battlefield (Geier, Brien and Fuller 2005) and on the National Forest lands on the headwaters of North River west of Stokesville (Veith 1999: 47-49).

Right to Work:

World War II (1939–1945) brought a wave of cooperation between labor and industry. At the end of the war, however, a series of strikes convinced many conservative businessmen and politicians that organized labor had become both communist-influenced and dangerously powerful politically. In Virginia, labor's actions bolstered an anti-union campaign already underway in the immediate postwar period and strikes by utility and mine workers cost organized labor the respect and support of most Virginians, prompting the General Assembly to act quickly on passing the so-called right-to-work laws. Right-to-work laws were essentially voluntary union membership laws. In states like Virginia where union-organizing seemed a particular threat, politicians saw right-to-work as a means by which the political power of unions could be curtailed, if not eliminated (Love 2015).

In 1947 passage of the Taft-Hartley Act banned closed and union shops under federal law as “unfair

labor practices,” and prohibited unions from engaging in supportive, secondary boycotts. In Virginia, Taft-Hartley complemented the state's ban on union shops in intrastate commerce by providing a Federal ban on union shops in interstate commerce and providing the workers in all of Virginia's industries the “industrial democracy” of right-to-work. Despite this battery of legislation, race- and gender-based work hierarchies that developed within Virginia's trades and industries showed a remarkable staying power. By the 1960s management, labor, and union alike, continued to ensure that white men's jobs and seniority would be protected. It was not until the 1970s that federal and state courts began to mandate changes intended to eliminate and redress the damage done by workplace segregation. By the end of the century, however, employment in industry had reached an all-time low of only 5.6 percent of the state's work force, employment in the last decades of the century increasingly focused on service, retail and government sectors (Love 2015).

With respects to racial and gender issues, challenges to racial segregation continued through the century focusing at first on the inequality of facilities. National housing policy from the 1930s through the 1950s reinforced residential segregation, as federal housing authorities required developers to include restrictive covenants and supported decisions by local housing authorities to segregate the buildings they owned. When combined with differences in the wealth of African Americans and whites, these policies helped create urban ghettos in which African Americans concentrated (Tunstall 2003).

Often influenced by labor unions and early feminists, state legislatures adopted what were known as protective labor laws that barred women from particular occupations regarded as inappropriate, or restricted the hours women could work. Sincerely defended as being in the best interests of women who would become ill if they worked long hours, or morally degraded if they worked in certain occupations, the protective labor laws rested on assumptions about women's proper role that were part of an established system of gender hierarchy. With the creation of separate educational institutions and curricula, women typically took courses different from men and tended to specialize in subjects thought particularly suitable for women who would be running households and caring for others, including children (Tunstall 2003).

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Civil and Gender Rights:

Efforts by civil and gender rights activists proved particularly fruitful in the 1960s. President John Kennedy, prior to his assassination, In June 1963 he proposed by far the most comprehensive civil rights legislation to date, saying the United States “will not be fully free until all of its citizens are free.” In 1964 the Civil Rights Act was passed and became law. Under this Federal legislation:

...segregation on the grounds of race, religion or national origin was banned at all places of public accommodation, including courthouses, parks, restaurants, theaters, sports arenas and hotels. No longer could blacks and other minorities be denied service simply based on the color of their skin. The act also barred race, religious, national origin and gender discrimination by employers and labor unions, and created an Equal Employment Opportunity Commission with the power to file lawsuits on behalf of aggrieved workers... Additionally, the act forbade the use of federal funds for any discriminatory program, authorized the Office of Education (now the Department of Education) to assist with school desegregation, gave extra clout to the Commission on Civil Rights and prohibited the unequal application of voting requirements. The Civil Rights Act was later expanded to bring disabled Americans, the elderly and women in collegiate athletics under its umbrella. It also paved the way for two major follow-up laws: the Voting Rights Act of 1965, which prohibited literacy tests and other discriminatory voting practices, and the Fair Housing Act of 1968, which banned discrimination in the sale, rental and financing of property (History.com staff 2010).

The Civil Rights Act of 1964, which banned workplace discrimination based on race and sex, led courts to invalidate protective labor laws and employer work rules that had the effect of creating different departments for men and women, and housing and facility access based on race, among other things. This and other supporting legislation, in effect, started another era of social revolution in the ending decades of a century already defined by dramatic social revolution. These changes and spinoffs from them are significant, ongoing, and will left to another generation of anthropologists, political scientists, historians, and historical archaeologists to review.

Much as the issues of slave, bond persons and later tenant and freed-black life were seen as significant issues in the historical archaeology of the early centuries of Virginia history and to the latter 19th century. Differences in housing and access to material culture on the part of racially and ethnically segregated communities should be a major topic in the historical archaeology of the 20th century. Similarly differences in the nature and quality of racially and gender segregated educational institutions should be of major professional and scholarly interest. Significantly, however, many of the segregated communities/neighborhoods that were a part of the post-Civil War freedmen migrations, and the segregation tendencies of the early to mid 20th century have undergone, are undergoing, or are scheduled to undergo “urban renewal”. Towns such as Richmond, Alexandria, and even Harrisonburg, have undergone such projects with the intent of either clearing “blighted” areas for resettlement or repurposing, or improving the quality of low-cost housing for the less advantaged.

Again, the Alexandria Museum of Archaeology has taken some leadership in this through their work at “the Fort”; an African American community that existed for nearly a century after the Civil War (1861-1865) into the Civil Rights Era of the 1960s and which received its name from its location on and around the remnants of Fort Ward, one of the fortifications that were built as part of the Defenses of Washington. The Museum’s web page *Archaeology and History at Fort Ward Park* (2015c; revised Dec. 16, 2015), provides access to several historical archeological projects, the most recent carried out from 2011 through 2012.

Immigration:

As a nation of immigrants, the idea of peoples coming from around the world and introducing new ideas into the melting pot that is America is not surprising. However, in 1970, only one in every 100 people living in Virginia had been born outside the United States. In 2012, the figure was one in nine. In 2014, estimates place the number of foreign-born Virginians at just under one million, out of a total population of 8.26 million, and nearly half of these new residents of the state are between the ages of 25 and 44—prime years for work as well as child-bearing. Among the children of adult immigrants, documented as well as undocumented, 96 percent today are U.S. citizens. In 2014, in Arlington County alone,

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6,755 public school students spoke a language at home other than English, and two-thirds of these were born in the U.S. to immigrant parents. “The impact of Virginia’s changing demographics can already be felt across the state: in large cities and rural areas, in public education, in electoral politics and local economies, and in a social fabric that has long been held together, in part, by a sense of shared history, as difficult and complex as that history has sometimes been”(David Bearinger 2014). While issues of segregated communities along the lines of race and ethnicity are not new, these statistics, and the fact that most of the new wave are from areas different from those traditionally entering the U.S and Virginia pose significant implications for the 21st century.

The Material World Architecture

If changes in construction modes, social aspirations, and functions of domestic, agricultural, and industrial architecture aid in defining the periods of history in Virginia since initial settlement, the varieties of architecture to be documented and interpreted for the archaeologist of the 20th century promises to be a challenge. The late 19th and early 20th century was a period of transition architecturally, marking the entrance into a new era of forward looking architectural design with styles not solely based on previous building forms. Changes in construction materials and techniques, especially in the development of multi-story and sky scraper technology, and a desire to create houses that fit visually into the natural environment influenced the developing styles of this era. For residential structures, American architectural force Frank Lloyd Wright along with other Chicago architects created the *Prairie Style* which included houses with gently sloping roofs, deeply overhanging eaves, and horizontal emphasis (American foursquare in Virginia). The *Bungalow* or *Craftsman Style* is another residential style that developed at the turn of the 20th century and became widespread throughout the country in various vernacular forms. Known for their heavy columned front porches, front facing gables, and overhanging eaves, Bungalow Style houses often have exposed rafters and other decorative wood trim as well. Pattern books and mail order catalogs enabled the Bungalow Style to become very popular in the developing suburbs of the early 20th century (Pennsylvania Historical and Museum Commission 2015)

An article posted by the Southern University Construction Management School notes that 20th century architecture “is one of the most visible forms of art in our day-to-day lives. Many of the buildings that surround us were designed and constructed with an aesthetic purpose, and if they were done right, they immeasurably enhance the location in which they’re situated. The 20th century was an interesting time for architecture as several movements came and went, reflecting the styles, sensibilities and priorities of their eras” (Southern University 2015). They go on to identify and describe ten essential architectural movements of the century: 1) Art Nouveau, 2) Arts and Crafts, 3) Art Deco, 4) Futurist Movement, 5) Modernist, 6) The International Style, 7) Expressionist, 8) Brutalism, 9) Postmodern and 10) New Urbanism (Southern University 2015).

The New Dominion Architectural Guide published by the VDHR identifies a list of architectural styles that appeared in Virginia across the 20th century (Figure 6.4). While duplicating certain of the movements mentioned

Architectural Styles	
Colonial Revival	1880–Present
Cape Cod Cottage	1920–1950
Raised Ranch	1958–1975
Split Foyer	1958–1978
Brutalism	1955–1980
Neo–Expressionism	1955–Present
Mission 66	1956–1966
New Formalism	1960–Present
Postmodernism	1965–Present
Neo–Eclecticism	1965–Present
Transitional	1985 to Present
Modern	1925–1940
International Style	1932–1960
Minimal Traditional	1935–1950
Corporate Commercial	1945–Present
Miesian	1945–1990
Wrightian	1950–Present
Contemporary	1950–1980
Ranch	1950–1970
Split Level	1955–1975

Figure 6.4. Architectural Styles in Virginia in 20th Century (VDHR 2014:6).

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previously, they are described in detail in the publication noted. Certain summary comments concerning the historical changes in architectural styles presented in the Guide are useful to this discussion. The guide notes that the majority of the existing built environment in the U. S. was constructed following WWII (VDHR 2014:8-9). This is significant, not only because it is true, but for historical archaeology the construction of much of this transportation, industrial and residential architecture contributed to the destruction or threat posed to many of the historic resources/sites in the traditional and emerging areas of professional interest discussed in Chapters 1 through 5.

As part of many field projects, it is not uncommon for architectural features dating to the New Dominion to be removed to access more “significant” sites buried beneath them. As noted previously, throughout the Commonwealth many towns in the early and mid 20th centuries grew and benefitted from the migration of farm, mining, and other rural laborers to jobs in urban industry. Ironically, *urban renewal*, which includes the structural replacement and/or redesign of many of these late 19th and earlier 20th century industrial complexes and associated residential communities/neighborhoods, has contributed to modern historical initiatives such as the work at the Freedman’s Cemetery in Alexandria; or the Shockoe Bottom project described by Dutton and Associates (2013) (See also: Cromwell and Hills 1988; 1989). As a process *urban renewal*, or urban renovation, started following WWII and continued into the early 1970s. It referred primarily to public efforts to revitalize aging and decaying inner cities, although some suburban communities undertook such projects as well. Including massive demolition, slum clearance, and rehabilitation, urban renewal proceeded initially from local and state legislation (Hirsch 2004). Spurred by the passage of Title I of the 1949 Housing Act: the Urban Renewal Program provided matching funds for projects that “provided for wholesale demolition of slums and the construction of some eight-hundred thousand housing units throughout the nation. The program’s goals included eliminating substandard housing, constructing adequate housing, reducing de facto segregation, and revitalizing city economies” (The Gale Group 2003).

In Virginia, “The oil crisis of the early 1970s, coupled with a significant slowdown in economic growth, marked a watershed in which the prevailing [architectural] themes

of the decades immediately following World War II gave way to those that would shape American life into the early twenty-first century (VDHR 2014:7-8).” In general, however, among the major developments of the New Dominion Period are the end of legally required racial segregation, the victories of the civil rights and women’s rights movements, and the increasing complexity of federal, state, and local government relations in social programs such as health, education, housing, community development, and welfare. Many significant architectural resources of the New Dominion Virginia Period (1946-1991) are tangible manifestations of the cultural, social, economic, industrial, and technological forces in play at the time (VDHR 2014:7-9).

Commercial architecture proliferated after World War II at a rate unparalleled in Virginia’s history, and accommodated such movements as the widespread adoption of automobiles for personal transportation needs, the growing impact of mass-marketed consumer goods on the overall economy, and a heretofore unmatched degree of personal disposable income and leisure time among the American middle and working classes. As stated in the guide:

“Among the character-defining aspects of post-World War II commercial architecture are autocentric design, use of national, standardized architectural motifs, and greatly simplified construction methods. “Corporate architecture” emerged as companies established “chains” of multiple locations with identical designs and services intended to assure customers of having a predictable and familiar experience whether they were in a store in Norfolk, Bristol, or anyplace in between. Chains could be local, regional, statewide, or even national in scope... Familiar national chains with a decades-long presence in Virginia include fast food restaurants such as McDonald’s and Burger King, gas stations such as Gulf and Texaco, and hotels such as Howard Johnson’s and Holiday Inn “ (VDHR 2014:12-13).

The previous comments do not even begin to address the massive construction across much of Virginia that is a product of the ongoing industrial revolution in multiple sectors of the economy as transportation, factories and industrial complexes are constructed, renovated, abandoned and in some cases, rebuilt. The physical scope of ongoing expansion in places such as airports, colleges and universities, and even k-12 school systems can be spatially staggering in their impact on existing landscapes.

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Material Culture

The abilities to identify artifacts by type, age, and function and to interpret events from the spatial patterning they exhibit are principle interpretive goals of the archaeologist. To move from time periods prior to the 20th century when significant change in material culture could be relatively slow, to a time when at least stylistic, if not functional changes, are expected on almost a yearly basis across a wide range of our domestic production, can be daunting. Failure to innovate in clothing styles, automobile design, menus in fast food restaurants, household décor, toys, perfume, electronics of all sorts, and mousetraps, can place modern manufacturers at a competitive disadvantage in a society where “keeping up with the Jones’s” or being the “first kid on the block” takes on a high priority in social imagery.

As a society we have moved from one in which used items are either re-used or repurposed to a throw-away society in which used products are discarded, and those that are broken, rather than being repaired, are replaced in whole or part. On a more disruptive level, the ability to recover artifacts of all sorts, domestic and industrial, is being challenged as places of secondary deposition take on a new form. Items are rarely left where they fell and are less frequently deposited in secondary areas within the grounds of the site where produced. Instead, in the modern world, waste has necessarily become a commodity that is to be recycled, or more frequently removed by a multi-billion dollar a year industry that is dedicated to taking garbage, for a price, to massive landfills or dumps where the items are destroyed and or mixed with those from numerous other residents or sources. One of the more celebrated of these “dumps” is Mount Trashmore, which has been converted to a city park in Virginia Beach.

Another factor gifted to archaeology and the preservation of archaeological sites by the industrial era has to do with structure demolition. Very often, the removal of structures, even complex structures, through the latter 19th and early 20th century, involved the demolition of the superstructure of the building, with the foundation footprint being left in place, occasionally backfilled with demolition debris, and then covered with a deposit of fill soils to prepare a new construction surface (Lynchburg: Geier and Sherwood 1986; Nieswander’s Fort Site: Geier, Whitehorne and Wood

2014; Alexandria: Cromwell and Hills 1989). Thanks to the development of new earth moving and demolition machinery, even large architectural structures can be torn down with all foundation and associated archaeological remains being carried away in dump trucks, these materials often used as fill at new construction sites. In effect, the product of modern efforts at urban renewal can leave **no** archaeological evidence of earlier human activity to be recovered or interpreted.

The evolution in industry and mechanization in the 20th century has certainly had an impact on the nature, diversity and availability of material goods across the spectrum of the economy. New systems of domestic and industrial energy, principally in the form of electricity, some generated by even newer nuclear power, has revolutionized the technology available in households and at industrial sites. Hand worked clothes washers have become replaced in a sequence of steps with modern, energy efficient washers and dryers; men and women have been freed from the drudgery of drying dishes by the introduction of dishwashers; hand-powered brooms and sweepers have been replaced by electric sweepers; open windows and air flow have been replaced by air conditioners; and household entertainment has evolved from telling stories, to listening to stories on the radio, to watching stories on television, to watching movies on television using DVD and Blue Ray discs, to wifi streaming services; and finally to the wide world of electronic and computerized games. Hand-writing letters and documents has become almost a lost art with the introduction of typewriters, electric typewriters, computers with spell- and grammar- check software, and modern generations of laptops. Communications have evolved from handwritten letters and documents, to the telegraph, through a sequence of telephones, to battery operated cell phones of increasingly small size with multiple functions; to digitized communications systems such as e-mail, facebook, etc. Available dictionaries yearly add a battery of new words derived from the use of electronic media. Household heating has shifted from the wood fired fire-hearth to wood-fired stove, to coal fired furnaces, to oil fueled furnaces, to modernized natural gas, to solar heating systems; the systems themselves becoming smaller, yet more productive. Mass mechanized production has made items of all sorts and qualities available in large numbers, making them accessible to individuals across the social spectrum.

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Innovation in the nature and power potential of gasoline based fuels and the technology they drive through the combustion engine has had a profound effect on individual and community development and the manner in which people and products moved. Over the course of the 20th century domestic, individual transportation has evolved from foot, to horse, to mass transit (rails, trollies), to an evolved sequence of personal cars and trucks, to houses with two car+ garages. The lowly hand sickle has been replaced by increasingly more powerful and less expensive lawn mowers, which have redefined the whole concept of a maintained house yard. As cars became more critical to domestic use and commerce, road networks were modified from earthen traces to hard surface roads, to multi-lane interstate highways designed for military as well as domestic transit. Similar fuel-based developments led to the invention of flight and then to a sequence of stages in its practical application for military power, domestic and commercial transport. In a manner similar to roads, as flight became more essential to defense and economy, airfields moved from leveled, earthen strips to massive paved complexes which include ever enlarging passenger terminals, aircraft hangers, warehouses and other support facilities.

The principally 20th century skill to break materials down into their basic elemental components and re-combine them into comparable natural organically derived forms (fertilizers for example) or create entirely new compounds or materials not naturally existing in nature, has dramatically expanded the range of resources available for use across domestic and industrial technology. The development of *synthetics* or compounds formed through a chemical process by human agency as opposed to those of natural origin ([//dictionary.reference.com/browse/synthetic](http://dictionary.reference.com/browse/synthetic)) have generated a continuing flow of new raw materials and resources. Examples of some of the more significant synthetics include fiber production and plastics.

Synthetic Resources, Textiles and Clothing.

Prior to the 20th century the use of fiber was limited to whatever was available from harvests in the natural world (wool, cotton, silk, etc.). The industrial production of rayon ca. 1910 began a shift to the world of manufactured fibers which are now used in modern apparel, home furnishings, medicine, aeronautics, energy, industry, and more. Fiber engineers can combine, modify and

tailor fibers in ways far beyond the performance limits of naturally raised or grown fiber (Fiber Source 2011). The first commercially successful production of “artificial silk” or rayon was accomplished by the American Viscose Company in 1910. By the end of the century rayon and other synthetic fibers would account for 70% of the national fiber market (Fiber Source 2011).

In 1931, American chemist Wallace Carothers reported on research carried out by the DuPont Company which led to the development of nylon aka the “miracle fiber”. Nylon was revolutionary in being synthesized entirely from petrochemicals. By the end of the 1940s, it was being used in the manufacture of parachutes for the Army, hosiery for women, and was also being used in carpeting and automobile upholstery (Fiber Source 2011). In the 1950s, Dupont introduced a wool-like product called “acrylic” and J. T. Dickson and J. R. Whinfield produced a *polyester fiber*. In the summer of 1952, “wash and wear” was coined to describe a new blend of cotton and acrylic applied to a wide variety of manufactured fiber blends that marked the onset of the polyester fiber revolution in textile product performance in the 1960s and 1970s (Fiber Source 2011).

Leon Kaye, writing in 2015, stated:

Listen to the generations before us, and our elders will tell us how instead of a walk-in closet full of clothes, they had a tiny crevice in their room, or a wardrobe, where they stored a few garments: One nice coat, maybe a handful of shirts, and a couple of pairs of trousers were the norm for men, for example. Clothes were not always washed, but often brushed to keep clean, and shoes were polished daily. Fast forward to today, and fast fashion is all the rage. It is common to have several colors of the same shirt or pants, and many consumers do not think twice about discarding a garment — not to Goodwill or charity, but literally into the trash can — after a few wears.

This quote points to two noteworthy impacts of the synthetic fiber/polyester revolution. As clothes made of these fabrics became more cheaply produced, the number and diversity of clothing types that could be purchased “off the rack” increased. The lower costs made a wider range of clothes more accessible to the common and not-so-common buyer, and quickly fell victim to stylistic changes that drove the clothing manufacturing industry through most of the 20th century, but particularly after WWII. Clothes became synonymous

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with personal wealth, status, group identity, etc., and to wear the newest styles, and being “fashion conscious” was a desired attribute, particularly to the upwardly mobile. Corresponding stylistic changes to those in clothing design and manufactures expanded to accoutrements such as buttons, zippers, belts and other decorative features. In addition, the social awareness of apparel extended to shoes, hats, etc.; shoes in particular being the period to the sentence made by the clothing ensemble.

The second point made by Kaye in the previous quote, marks the impact of clothing availability to architectural design. It was the case that in the 19th century and earlier, clothes were frequently stored in trunks or a free-standing wardrobe. With the addition of turn of the century house styles such as the American Four Square, closets were introduced. These small, often no more than 4 feet wide, doored enclosures allowed for the storage of a still commonly small assemblage, of clothing items and shoes. As the number of pieces of clothing (and shoes) perceived as needed to meet appropriate social expression increased, walk-in closets, sometimes the size of small rooms, were added, not only as extensions to the main bedroom, but frequently in the rooms of teenaged children as well.

Plastics.

Plastic is:

“a synthetic material made from a wide range of organic polymers such as polyethylene, PVC, nylon, etc., that can be molded into shape while soft and then set into a rigid or slightly elastic form a synthetic material made from a wide range of organic polymers such as polyethylene, PVC, nylon, etc., that can be molded into shape while soft and then set into a rigid or slightly elastic form” (www.google.com/?gws_rd=ssl#q=definition+of+plastic).

While varieties of plastic were introduced in the 19th century, the most important developments in their use have taken place since 1910. The first decade after World War II saw the development of polypropylene and high density polyethylene. These new materials began to compete with the older plastics and even with more traditional materials such as wood, paper, metal, glass, and leather in a vast array of product manufacturing (Plastics Industry Trade Association 2015) that is almost all inclusive. A short list of items includes: toys of all

sorts; grocery bags; numerous drink containers; food packaging; flower pots; kitchen utensils in whole or part; credit cards; buttons and other clothing accoutrements; faux leather; pen casings; and varieties of strengthened plastic used in the frames of television sets, various household electronics, and as lightweight but strong features in the automotive industry.

International Markets.

The last of the general comments to be made concerning American and, by default, Virginian material culture involves international market access. Prior to the middle of the 19th century, access to items and commodities made in foreign lands, because of their scarcity and difficulty in acquisition, were often used as signs of social status and an effort to place one’s self and family into world-wide (European) patterns of social consciousness. As new modes of transportation have developed and as world markets were opened, the value of many previously costly items and raw materials was reduced, and their presence and use expanded into the architecture and material culture of more socially diverse households. After WWII, as part of programs of economic revitalization, industries in Europe and more so in Japan/Korea were developed specifically to produce low cost toys and household items for the American Market. In our more modern society, companies like Pier 1 Imports and other smaller stores specialize in providing art and materials from exotic areas of the world to the domestic market.

20th Century Artifacts

There are few, if any historical archaeologists working in Virginia, who have not had to deal with artifacts of the 20th century, if for no other reason than to date archaeological strata overlying “significant” historical components that were the focus of their work. It is not uncommon in such efforts for these artifacts to be sampled, gathered for “future study” (which rarely happens), or simply discarded as belonging to historically insignificant site components. To my knowledge, few historical archaeologists have attempted detailed analyses of 20th-century assemblages, or provide scholarly studies of particular artifact categories.

Fortunately, if needed, there are literally thousands, if not tens of thousands, of references for the material culture of the 20th century. Starting with the yearly publication

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of merchandise catalogs by companies such as Sears & Roebuck; J. C. Penney, etc., available items crossing the gamut of household goods, hardware, clothing types, and even agricultural implements are listed by type, cost, decorative patterns available, etc. Early Sears-Roebuck catalogs even referenced prefabricated houses. Other sources include manufacturers or salesman's catalogs which often illustrate available items for order or sale by year or sequence of years. Automobile catalogs produced by specific manufacturer and on a near yearly basis, illustrate available automobile styles and decorative or automotive variants. Associated with such vehicles are catalogs of parts or components along with repair manuals that are made available to dealership and/or private repair shops. Collectors of all sorts have fed an industry of books that describe, date and value categories of items from military buttons, hardware, and guns to comic books, toys, dolls, marbles, different ceramic types and decorative motifs, bottles, glassware and particular forms such as depression glass, clothing parts and styles, and even more recent antiques such as early computers, computer games, etc.

Conclusion

In conclusion, I return to the question asked at the beginning concerning justifying the use of limited personnel and resources to the study of 20th century archaeological sites. In response I submit the following:

As discussed above, truly revolutionary changes in the nature of Virginia demography and culture have taken place over the course of the 20th century which have had historically significant, and varying impacts at the local, regional and state-wide level. As such, sites of this period which exhibit such features qualify for preservation, protection and nomination to the National Register.

While not the earliest period of their history, for many parts of the state the era of the extractive industries (mining, timbering, stripping bark, etc.) and the vast network of standard and narrow-gauge rail lines that supported them, brought jobs, wealth and prosperity in the early decades of the 20th century. For many areas this marked the economic and demographic high point of their histories. To suggest that such communities retain a documentary record of that historic era is, unfortunately, not the case. Using the model of Stokesville presented in the introduction to this chapter as an example; despite

the very real economic significance of this community in the early 20th century, there are virtually no legal, governmental, cartographic, industrial, personnel, newspaper, record of accounts and correspondence, personal diaries or journals, or any other sort of historic documentation that addresses the development or plan of the community. As a result, questions remain unanswered concerning the management of the town; the social hierarchy and political structure of the community; the lifestyle of the transient, seasonal work force; and the operation of the industries and support businesses that served as the heart of the community. While field archaeology, oral history, and historic photo-analysis allowed the plan of the overall community to be defined and certain of the structures found to be identified (Figure 6.3), by any standard, this extensive effort only marks the beginning of the process to understand this dynamic early 20th-century industrial town. In my experience (I emphasize my experience), early industrial records addressing structure architectural design and plan, plant operations, human-relations or hiring records, job descriptions, purchasing and sales records, etc. often do not exist, and were in many cases deliberately destroyed. Oral histories that might be gathered, are often not available, and when they are, they typically present a very narrow insight into a phenomenally complex cultural situation. In addition, there are often, no local or regional histories that address these communities except in the most general of ways. *Historical* archaeology, not just archaeology, is the solution to interpreting these cultural centers.

Industrial centers and their support communities dot the mountains and mountain walls across the ridge and valley sectors of Virginia, and I would suggest that the situations with towns such as Stokesville and Lignite, mentioned earlier, are not uncommon. I would also suggest that many of the agricultural and rail communities that flourished in the early decades of the century are in a similar plight, as are many of the early 20th century racially, ethnically, and economically segregated neighborhoods, ghettos, etc. that have been subject to the urban renewal of the latter decades of the century. The problem is that as the members of these communities were relocated or moved away, the communities lost their historical voice. The advocates needed to point to their historic or anthropological importance are no longer there.

I am also realistic. My field teams have excavated through layers of fill covering the cultural strata that I was to identify and interpret, and I have been confronted with boxes of recovered 20th-century artifacts that came from the site but were of little value to my project goals. I do know, that in our modern era there are numerous sites of a particular type that occur, are common, and are “typical” of a particular cultural genre. I am well aware of the adage “you can’t save them all” and I totally agree with it. However, I am also of the opinion that any cultural remains that are to be lost, regardless of the justification, should at least be understood for what they are and the historic

place they held. Regardless of the time period, until a site is understood for what it is, its status of preservation, and for the historic information that it provides, as archaeologists we do not know its significance and cannot assess its loss. Hindsight doesn’t work, and we all know the urban dictionaries definition of “ass-u-me” (www.urbandictionary.com/define.php?term=Assume).

Acknowledgments

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Contributions From Underwater Archaeology to a More Comprehensive Understanding of Virginia History

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Introduction

Before discussing the main topic, it seems appropriate to explain why contributions from underwater archaeology to Virginia history are grouped within a separate chapter rather than integrated into the other chapters according to temporal theme. One reason is that underwater archaeology, as a scientific discipline, dates back only to the 1950s (Bass 1966; Throckmorton 1987) and therefore has not developed the volume of reports and publications that exist for terrestrial archaeology and anthropology. One could argue that the primary reason is that far fewer archaeologists conduct their research under water; however, that disparity does not fully explain the dearth of publications that integrate underwater data into mainstream scholarly literature. Nautical publications from the Americas have lagged behind those of Europe partly due to more robust Old World naval and maritime histories and archaeological sites which extend back for millennia. Even though historical, or Post-Medieval, archaeology, is a relatively new specialization, the production of scholarly works by terrestrial archaeologists has far outpaced those by archaeologists concentrating on underwater sites.

As illustrated by the underwater Proceedings of the Society for Historical Archaeology's Conferences on Historical and Underwater Archaeology, until very recently, the majority of publications on submerged cultural resources were very particularistic in nature, dealing primarily with shipwrecks and shipwreck construction. Although the situation is improving, there

does not yet seem to be sufficient incentive for terrestrial archaeologists to include maritime perspectives or to seek nautical and maritime sources in their research. Underwater archaeologists themselves are partly to blame since most of them have chosen to publish in nautical-specific books and journals, some of which are not peer reviewed, rather than seek opportunities to contribute maritime perspectives for mainstream thematic publications. However, in fairness, most terrestrial archaeologists who have demonstrated enthusiastic interest in the particularistic details of Native American and Colonial Period houses and related structures have shown little or no interest in early watercraft and water trade routes that were so essential to early Virginia history. As more archaeologists complete academic programs in maritime archaeology and history the quality and quantity of publications will increase and will offer data that should be compelling and relevant to the field in general (Broadwater 2011:177-179).

So what is underwater archaeology and why does it remain detached from other archaeological specialties? The term *underwater archaeology* (in a Virginia context) is a broad category that includes shipwrecks and ship construction; the watercraft and maritime practices of Native Americans and European immigrants; drowned terrestrial sites, both historic and prehistoric; and all other types of submerged cultural resources. Keith Muckelroy (1978:4), a pioneer in underwater archaeological theory, differentiated between the term *maritime* archaeology as "the scientific study of the material remains of man and his activities on the sea" and *nautical* archaeology as "the

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specialized study of maritime technology [including] ships, boats ... and the ancillary equipment necessary to operate them.” For this publication, we will use the all-encompassing *underwater* archaeology.

In order to progress, let us attempt to dispel the confusion and mystique surrounding underwater archaeology that tends to widen the gap between it and other forms of archaeology. George Bass, the first practitioner of scientific underwater archaeology, attempted to clarify the situation a half-century ago when he asserted (1966:13): “Archaeology under water, of course, should be called simply archaeology. We do not speak of those working on the top of Nimrud Dagh in Turkey as mountain archaeologists, nor those at Tikal in Guatemala as jungle archaeologists. ... Is the study of an ancient ship and its cargo, or the survey of toppled harbor walls somehow different? ... It is all archaeology.” This should be obvious, but somehow the myth persists that underwater archaeology *is* fundamentally different, that the results of its practice are not relevant, or only peripherally relevant, to the field of archaeology.

Almost any archaeologist can learn to dive in order to investigate submerged sites of interest. For instance, an archaeologist specializing in prehistory may want to examine Native American sites that are partially or completely inundated; or, a historical archaeologist might choose to search the bottom of a river near a house or town site in hopes of finding associated features or material culture. However, poor visibility and strong currents plague Virginia’s bays and waterways, and a poorly trained diver will not be able to safely accomplish much useful research.

Theories and methodologies for underwater archaeology can be found in a variety of books, including those of Bass (1966), Muckelroy (1978), Dean (1992), Gould (1983; 2000), Babits and Van Tilburg (1998), Green (2004) and the Nautical Archaeology Society (2009). Historic vessel reconstruction, i.e., the naval architecture and archaeological interpretation of wooden ships, is thoroughly treated in Steffy (1994). Excellent descriptions of major underwater archaeological projects throughout the world and their contributions are found in Bass (1972; 1988), Muckelroy (1980), Fagan (1985), and Throckmorton (1987), Delgado (1998), and Ruppé and Barstad (2002). Several works delve into the social history of our maritime heritage, including Rediker (1987) and Duke (1993). More current information

can be found in the underwater archaeology proceedings from the Society for Historical Archaeology Conference on Historical and Underwater Archaeology. Four documents, however, provide specific information and recommendations on underwater archaeology in Virginia: Broadwater (1984; 1987; 1996) and Blanton and Margolin (1994).

One important area where underwater archaeology often contributes to the field of archaeology is the excellent organic preservation present at many submerged sites. The anoxic sediments of Virginia’s bays and rivers offer the possibility of discovering organic objects not normally preserved on land. These could include Native American structures, such as wooden fish weirs or bridge pilings; canoes—even bark canoes; fishing and hunting implements such as spears, nets, bows, arrows; and possibly clothing. This claim may seem far-fetched, but consider *Mary Rose*, a Tudor warship that sank near Portsmouth, England, in 1545. Archaeologists excavated scores of bows and thousands of arrows, along with a wealth of other organic materials including human remains, some still wearing bits of clothing (Rule 1982:184-186; Marsden 2003:117, 121). Shipwrecks also provide a “snapshot” of the past, since they contain material culture that was captured within the wreck at a single point in time. This “time capsule” aspect of shipwrecks has proven very useful to modern archaeologists.

The purpose of this chapter is to present specific evidence of how results from underwater archaeological research are contributing to a more comprehensive understanding of Virginia’s past, and to suggest specific topics for future research. Following a general overview, the timeline utilized for the other chapters is followed to provide more specific comment. For brevity and focus, discussion is limited to maritime topics; since details of each time period are found in the other chapters. This is by no means an all-inclusive portrayal of Virginia’s maritime past, but the attempt is to touch upon key aspects of Virginia’s maritime past and provide archaeological examples when available. Hopefully, future researchers will expand upon all of these themes and to do justice to Virginia’s rich and diverse maritime heritage.

General Overview

It seems inescapable that a comprehensive history of Virginia cannot be told without frequent reference to the vast and intricate maritime system that helped shape

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the character and progress of European settlement in the New World. From ambitious voyages of exploration, to humble beginnings at Jamestown, to the grand commercial scale of the 18th century, to American independence and beyond, ships and seafaring played an essential role in Virginia's development. So did the Chesapeake Bay, whose extensive coastline and numerous tributaries comprised an expansive network of waterways that encouraged and augmented rapid, widely dispersed settlement, provided water transport for communications and commerce, and strongly influenced the very character of Chesapeake colonies. Yet, in spite of

the obvious historical significance of the Chesapeake Bay Region as a major extension of British trade and culture, the Bay's maritime history has not received the attention from historians and archaeologists that it deserves (Tate 1979:3). The Chesapeake Bay (Figure 7.1), with its many tributaries, resources, and settlements, can be usefully examined as a fundamental maritime landscape.

Maritime historians and archaeologists frequently express disappointment at the apparent lack of professional interest among their colleagues concerning maritime and nautical research. One historian, upon completing a treatise on American maritime heritage, titled his

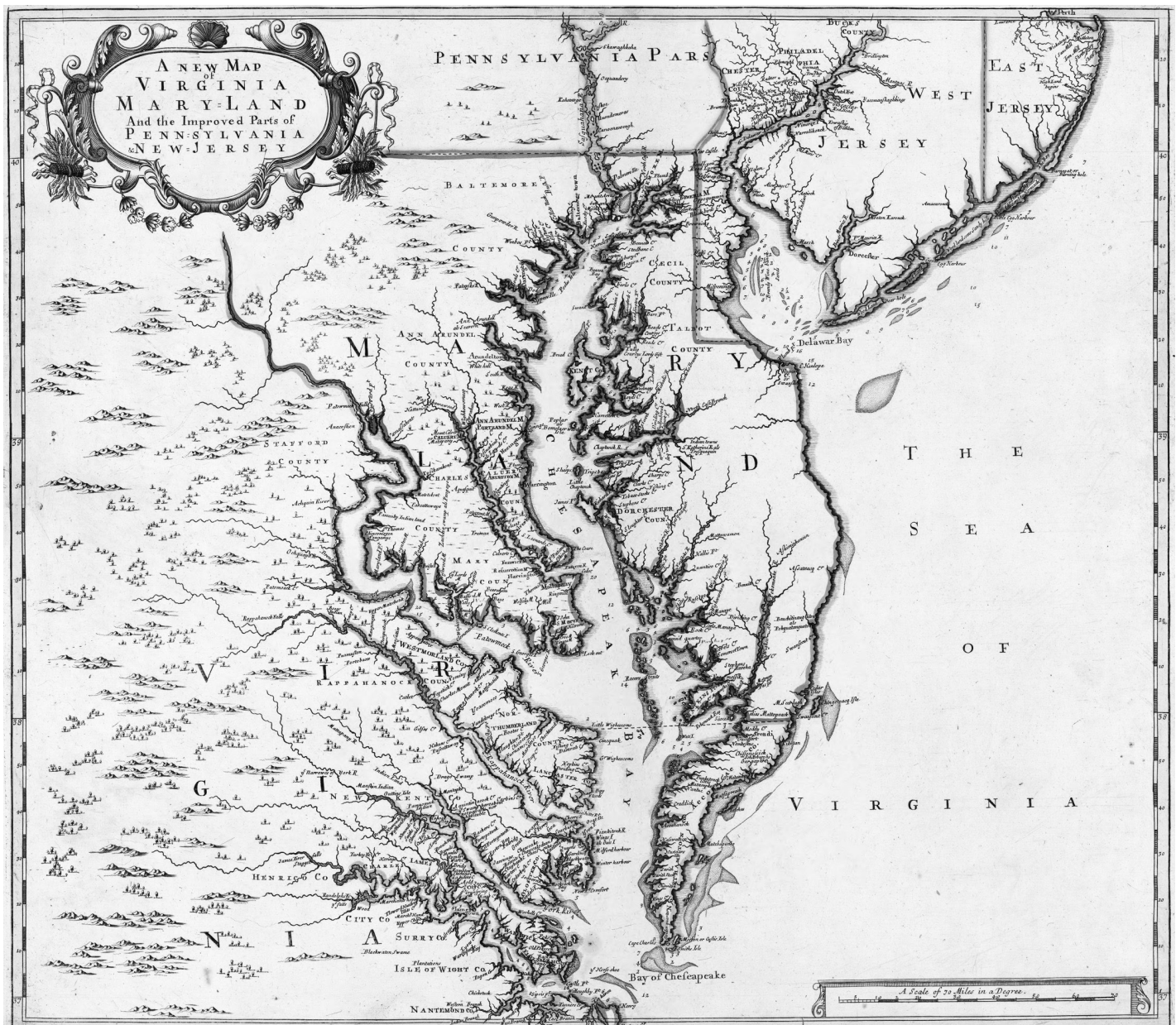


Figure 7.1. Map of the Chesapeake Bay, originally published in 1685 by Christopher Brown, illustrating the intricate web of tributaries that made Virginia such an attractive area to settle (Courtesy Library of Congress).

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manuscript “The Neglected Element” (Morris 1979:v). Another wrote that his maritime history of the United States was intended to “correct that oversight [of] the role of maritime affairs” (Bauer 1988:xii). I subtitled a previous paper, “Underwater Archaeology in Virginia: the Missing Link” (Broadwater 1996). This apparent neglect seems particularly remarkable in the Chesapeake area, where the Bay and its many tributaries constitute such an integral and unavoidable geographical feature of the landscape. In Tidewater Virginia, native inhabitants and European colonists alike experienced water-related interactions every day, yet this aspect of life does not seem to be adequately portrayed in even the most recent publications.

We are therefore fortunate that Arthur Pierce Middleton produced *Tobacco Coast* (1953), a monumental volume on the economic history of the Chesapeake from a maritime perspective. In his foreword Middleton (1953:xxiv) stated:

My purpose is to deal with every aspect of the maritime history of colonial Virginia and Maryland and thereby to show how Chesapeake Bay and its many tributaries profoundly influenced the historical development of those colonies by providing a natural system of waterways that facilitated rapid settlement, made possible the large-scale production of tobacco, rendered seaports unnecessary below the fall line, and presented Virginia and Maryland with problems of internal transportation and of naval defense quite unlike those of other British American colonies. As a by-product, the study reveals ... that the Chesapeake Bay country, despite its division into two colonies, remained a single economic and physiographic unit.

More recently, Bauer (1988) has published an excellent maritime history of the United States that helps place that of Virginia in perspective.

In spite of these truly remarkable and inspiring investigations into almost every facet of American and Chesapeake maritime heritage, it does not seem to have inspired scholarly research that satisfactorily expands on Middleton’s themes, especially with regards to archaeological publications. It is a fact that Virginia’s extensive underwater cultural resources offer the possibility of developing a much more complete and accurate picture of early Virginia, the lives of its people, and the growth and maturation of the region’s significant maritime heritage.

European–Native American Contact (pre-AD 1550)

First Contact

Theories abound concerning who first made contact with the indigenous people of North America. In spite of many entertaining stories and theories (Freedman 2007; Loker 2009; Menzies 2003), proof is scarce for visits by Phoenicians, Romans, Irish, Africans, or Chinese. Apparent evidence can be deceiving. Ancient cultural material such as Roman coins and ceramics was sometimes transported inadvertently in European ships’ ballast, which often consisted of rock scooped up from riverbeds and subsequently deposited on American shores. Similarly, ancient objects found in North America may simply have been brought here with household goods or as items for sale. Nevertheless, it is not impossible that an ancient vessel could have been swept across the Atlantic by storms, winds, and currents, eventually fetching up on a Virginia shore.

There is ample evidence that Vikings from northern Europe first reached what is now Canada some five centuries before Columbus, thanks in part to their lightly-built but extremely seaworthy boats. Archaeologists have documented an impressive settlement at *L’Anse aux Meadows*, at the northern tip of Newfoundland (Ingstad and Ingstad 2001; Kolodny 2012). There is no material evidence that the Norse ventured as far south as the Chesapeake Bay, yet, they certainly could have.

The Century of European Exploration

During the century following Columbus’ arrival in the West Indies, Europeans—Spanish, French, English, and Dutch—conducted voyages of exploration and discovery to the Americas. The wide entrance to the Chesapeake Bay would have attracted exploring vessels like a trap. A ship sailing north or south along the Mid-Atlantic coast would most likely turn into the bay, attempting to follow the coastline. Inside, it could have wrecked in shallow water or have been driven aground by a storm, its remains eventually covered in protective silt.

Most scholars agree that the first European ships to enter the Chesapeake Bay were Spanish or French. The bay appeared on official Spanish charts as the *Bahia de Santa Maria* as early as the first quarter of the 16th century, probably as a result of voyages in 1521 and 1525 by the Spanish explorer Pedro de Quexos (Dent 1995:260). Some researchers have postulated that Lucas Vasquez de Ayllon

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attempted to establish a settlement at Jamestown Island in 1526 (Blanton and Margolin 1994:17) but Milanich and Milbrath (1989:14-15) make no mention of this attempt nor have recent excavations at Jamestown by Preservation Virginia produced evidence of such a settlement (Straube 2015:pers.comm.). A rumor of five Spanish exploration ships being dashed against Virginia's Western Shore during a storm has proven tantalizing but elusive.

Early Settlement Attempts

Surviving accounts of early European voyages to the New World confirm that attempts were made to establish Spanish settlements in the Chesapeake, possibly as early as 1526 (see Chapter 1, this text), and again in 1570. The latter attempt was made by a small group of Jesuit missionaries who established a mission believed to lie on the shore of the York River, above present-day Yorktown, at a place known as Ajacán. Local Indians soon killed the missionaries and the site was abandoned after less than two years (Dent 1995:260; Lewis and Loomie 1953:15-55; Rountree 1990:16-17). This mission site, which may lie partially or completely underwater, would be a major find, although the Indians who killed the missionaries probably took away the Spanish cultural material that might help locate and identify it.

The next documented period of active exploration is the English voyages to Roanoke, in present day North Carolina, between 1584 and 1590. Even though at least one ship is thought to have entered the Chesapeake Bay there is no indication that any attempt was made to establish a settlement or that any ships or boats were lost. In 1587 the English sailed with orders to settle within the Chesapeake Bay; unfortunately, once again they made landfall to the south at Roanoke Island where they established what came to be known as "the Lost Colony" (Dent 1995:260). Not long after, the London Company sponsored the first successful effort to establish a permanent English settlement in the Chesapeake.

Maritime Aspects of Early Virginia

When English settlers arrived in the Chesapeake Bay in April 1607, they were awed by its sprawling system of waterways. The bay so impressed early colonists that it was referred to by such names as the "Great Bay" and the "Noblest Bay in the Universe" (Middleton 1953:38). A visitor remarked in the 17th century that the bay

and its many tributaries would eventually make the Chesapeake tidewater "the richest place in all America" (Middleton 1953:38). It would be difficult to overstate the importance of the bay's geography to the success, growth, and prosperity of the English colonization that began at Jamestown. Middleton (1953:382) effectively argued that the Chesapeake Bay was the principal factor in the development of Virginia and Maryland. Subsequent settlement patterns underscore the close relationship between geography and settlement strategy. A Frenchman visiting Virginia in 1686 wrote that "none of the plantation houses, even the most remote, is more than 100 or 150 feet from a 'crik' [creek] and the people are thus enabled not only to pay their visits in their canoes, but to do all their freight carrying by the same means" (Durand, quoted in Middleton 1953:48).

Archaeological evidence supports Durand's description. Smolek (1984) demonstrated that the spatial distribution of known 17th-century English archaeological sites in Maryland and Virginia correlated well with the criteria for domestic site selection expressed by colonists in surviving documents: those of access to navigable waterways, fertile soil, and fresh water. Smolek (1984:7) stated: "In Maryland the median distance inland of domestic sites is about 660 feet from the modern shoreline of navigable waters.... [T]he Virginia sites show virtually the same distribution with the median being 600 feet from the modern shoreline." He (1984:8) further determined that "...in a coastal zone just over a quarter of a mile wide there are 60% of the Maryland sites and 82% of the Virginia sites."

Proximity to navigable water is only one reason to think of 17th-century Virginia settlements as maritime communities. Colonial Virginians were continually involved with maritime activities. Herbert Stone stated that the first colonists became "a seafaring stock of necessity, even though their roots were buried in rural England" (Chapelle 1936:vii). Almost all 17th century Virginians must have become intimately familiar with ships and boats, beginning with their crossing of the Atlantic. All the way to the fall line, Virginians established plantations near navigable waterways, relying upon Chesapeake tributaries for transporting their goods and maintaining contact with other settlers and settlements. This pattern was consistent with colonists who needed to grow and market a crop requiring large acreages (Middleton 1953:41-42; Kelly 1979:183-191).

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Wealthy Virginians built their plantations to overlook major waterways in order “to be in full view of the colonial populace” (Kelso 1984:14).

Decades passed before Indian paths could be converted to roadways capable of supporting the weight of burdened carts and wagons. Therefore waterways were the colonists’ highways, and boats were their vehicles. The first colonists would undoubtedly have procured canoes from local natives, there being no established boatbuilding capabilities. Later on, vessel types such as ships, shallops, sloops, and canoes would have been as well known to colonial Virginians as cars, trucks, vans, and motorcycles are to us today. Individual ships and boats that frequently plied Virginia’s waterways would have been recognized by name, as would some of their crews.

Previous Archaeological Investigations

We have almost no archaeological evidence from underwater historical sites dating to this period—none from sunken ships or boats—making this an attractive period for research.

Topics for Archaeological Research

1. Ancient Explorers. Discovery of an ancient (pre-Columbian) shipwreck in Virginia waters—a very unlikely event—would certainly attract widespread attention and warrant immediate protection and scientific investigation. Nautical specialists could easily differentiate between a ship of antiquity and one from the modern age of exploration (15th to 17th centuries). Likewise, the construction of Scandinavian vessels is quite different from those of Southern Europe or Asia. Therefore, if a shipwreck is found to contain material culture of exceptionally early date, the details can be sorted out by the usual archaeological methodology of documenting cultural material, hull remains, and context.

2. The First European Explorers. A shipwreck from the period of European exploration and first contact would also be a significant find, providing information on early European ship construction, life aboard an exploration vessel, and the types of supplies and equipment carried aboard ships tasked with exploring and possibly settling the New World. Although there are no known Chesapeake Bay shipwrecks from this period, it is possible that undocumented shipwrecks occurred. Current remote sensing technology is capable of locating

such vessels, but without specific locational information, a find is more likely to be accidental.

3. Submerged European Camps and Settlements. The first Europeans to investigate the Chesapeake Bay may have established temporary base camps or even small settlements along Virginia’s shoreline, and some or all of those sites may now be under water, due to erosion and land subsidence. Without documentary clues, finding such sites will be accidental.

4. Submerged Prehistoric Sites. Although this publication focuses on Virginia’s historical period, it is worth noting that some of the best-preserved evidence of the region’s earliest inhabitants may well lie off our coast, due to a sea level rise of approximately 80 meters (262 ft.) over the past twelve millennia (Titus, et al. 2009:16). More than twenty-five years ago Turner (1989:87) remarked, “[W]e also must recognize the remarkable potential [for locating early prehistoric sites] of submerged lands both within the Chesapeake Bay and off Virginia’s coast in the Atlantic Ocean.”

Emery and Edwards (1966), Lowery (2009), and Stanford (2014) have sought to determine the archaeological potential of the waters of the Chesapeake Bay and the Outer Continental Shelf, primarily by examining objects recovered by commercial fishers. Unfortunately, prehistoric sites are very difficult to locate since they are likely to be scattered or buried and will be devoid of ferrous materials that could be detected by sensitive magnetometers (Lowery 2009:50-53). Predictive modeling followed by remote sensing and ground truthing may begin to reveal patterns of site preservation. Within Virginia, most of the prehistoric sites classified as “underwater” are only partially submerged (Blanton and Margolin 1994:66; Lowery 2009:50-53). As with the offshore sites, detection of completely submerged sites near shore is difficult without good predictive modeling and association with known land sites.

5. Prehistoric Dugout Canoes. Prehistoric dugouts have been discovered throughout the Mid-Atlantic, but they are not common. Lake Phelps, in North Carolina, provided a remarkable twenty-four prehistoric canoes dating as early as 4380 BP (Lawrence 1989:55). A regional effort to locate, date, and document prehistoric canoes could produce useful results. Rountree (1990:32) suggests: “the most expensive objects, in terms of labor, that the Powhatans produced were dugout canoes.” Therefore, Native Americans would have constantly been

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seeking more efficient and effective means of producing canoes. If a regional study could document enough canoes from a wide range of construction dates, it might be possible to identify significant evolutionary changes in their form and construction techniques. Results could be compared to a timeline of tool evolution to look for matching changes. Such a study might even reveal that certain tools were developed specifically for canoe making.

Virginia's Long 17th Century (AD 1550–1720)

Native American Watercraft

The first English colonists learned much about Chesapeake waterways and navigation from the Native Americans who lived in the region. When the colonists first arrived in Virginia they encountered a well-established native population that was at home on and near the water. Indigenous watercraft would have been numerous on the bays and rivers, being employed for a variety of uses including fishing, commerce, communication, and warfare.

Captain John Smith reported two distinct types of Native American watercraft, one “made of the barks of trees, sewed with barke, and well luted with gumme...” and another being the ubiquitous dugout canoe, made from a single tree (Barbour 1986 I: 8, 166; Adney and Chappelle 1964:7; Leshikar 1988:14). Barbour (1986 I:8), Adney and Chappelle (1964:7) and Leshikar (1988:14) stated that bark canoes were confined to regions north of Massachusetts Bay. Later in his narrative, however, Smith clarifies this point, stating that on one of his explorations further north he encountered a group of Massawomecks, an Iroquoian people living near the head of the Patowomeck River, using bark canoes. Apparently, the Massawomecks had become familiar with bark canoes while trading with the Iroquois of the Great Lakes and Canada, where birch bark canoes were the dominant watercraft (Barbour 1986 I:232).

There is no evidence at all for a third type of primitive boat, made from a framework of curved wooden ribs covered with animal hides. No bark or skin boats have been reported, but scores of the more durable dugouts have been discovered throughout the Chesapeake and Carolinas, some dating back thousands of years (Lawrence 1989:55).

Although no mention is made of them in early

narratives, some researchers believe that log rafts were “almost universal” throughout North America (Leshikar 1988:19), and it is likely that at least a few were present in the Chesapeake. No ethnographical or archaeological evidence exists to suggest the use of sails by any North American Indians (Chappelle 1935:5; Leshikar 1988:20).

Of dugout canoes John Smith (Barbour 1986 I: 163) wrote:

Their fishing is much in Boats. These they make of one tree by burning and scratching away the coals with stones and shells, till they have made it in forme of a Trough. Some of them are an elne deepe, and fortie or fiftie foote in length, and some will beare 40 men, but the most ordinary are smaller, and will beare 10, 20, or 30, according to their bigness. Instead of Oares, they use Paddles and stickes, with which they will row faster then our Barges.

For details, we are fortunate to have Theodor de Bry's excellent engravings, based on the drawings of John White, and the accompanying narrative of Thomas Harriot to further define Native American boatbuilding and boat usage (Harriot 1588). Engraving XII illustrates “the manner of making their boates.” On the upper side of a log they would build successive fires that would consume the wood in a controlled manner, thus creating a hollow that was further enlarged by using shells to scrape away the charred portions. Engraving XIII is, in many ways, more valuable as a means of understanding how the Indians conducted their fishing activities. The illustration depicts a completed dugout canoe being used for fishing, and in the background are several types of fish traps, or weirs, as well as fishermen wading in the shallows taking fish with spears. Beneath the water can be seen an impressive variety of fish and shellfish.

Early Colonial Watercraft

Virtually no detailed information on early Virginia boats or boatbuilding has been located. Early narratives of Virginia make frequent reference to bays, rivers, and other waterways, but offer relatively little about watercraft. Captain John Smith recorded that when the colonists reached Virginia in 1607 one of their first acts was to assemble a *shallop*—a small boat that could be rowed and sailed—that had been carried from England in collapsed form (Barbour 1986 I:17). Two smaller craft were supposedly constructed before 1614, but four years later it would seem that the colony possessed almost no

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watercraft. (Tyler 1907:10; Brewington 1956:9). From what we know, it seems evident that the first colonists relied heavily on dugout canoes, procured from local Indians, for much of their transportation.

George Percy wrote that in 1609: "...wanteinge more Boates for fisheinge and other nedfull ocassions Capte: DANIELL TUCKER by his greate industry and paines buylded A Large Boate wth his owne hands" (Horn 2007:1100). Tilp (1982:10) concluded that the first Virginia-built vessel was a shallop built of "yeiwe pyne" at James City in 1621. In 1622 the London Company finally sent 25 ship carpenters to Virginia to fill local needs for small boats (Goldenberg 1976:6). Two years later the company sent another ship carpenter who built two shallops of about 30 ft. length and began two ketches before he died of a fever (Goldenberg 1976:7). By the middle of the century, a variety of boats and a few coasting craft were being built. However, in spite of an act passed by the House of Burgesses in 1622 for the "encouragement of building vessels in this country," we know of only one ocean-going ship constructed in Virginia by 1663 (Goldenberg 1976:24). Historians have theorized that Virginians were so preoccupied with the growing and sale of tobacco that for them there was little incentive to build ships, since they were easily leased and since tobacco was usually sold to English merchants who supplied their own vessels (Goldenberg 1976:25).

Virginia colonists frequently emigrated from regions

where watercraft were designed for use in open sea and deep-water rivers. They soon found that Virginia's shoal waters required flat-bottomed craft with shallower draft than the boats to which they were accustomed. Thus began the development of vernacular watercraft, based on European designs but modified to accommodate Chesapeake conditions and available raw materials. A few boat designs took advantage of some characteristics of the Indian dugout canoe. The New England colonies built more large vessels than in Virginia where small, shallow-draft vessels, many of which could be both rowed and sailed, were ideal for commerce and communication along the rivers and creeks where most of the population was settling.

During the 17th century, a rich diversity of watercraft abounded on Virginia waterways (Figure 7.2). Middleton (1953:242) summed up Tidewater Virginia's inseparable connection to its watercraft as follows:

Because of the multitude of rivers and creeks as well as the Bay itself, boats were a universal necessity.... Shallops, bateaux, canoes, skiffs, wherries, and pinaguas were in constant use for transportation, ferrying, visiting friends, and going to church. Flats, Moses-boats, small sloops and schooners served to lighter tobacco and other produce to ships anchored in the channel. Various kinds of smaller vessels and boats were employed...for communication, as fishing vessels for seining, crabbing, and oystering, and as traders up and down the Bay,

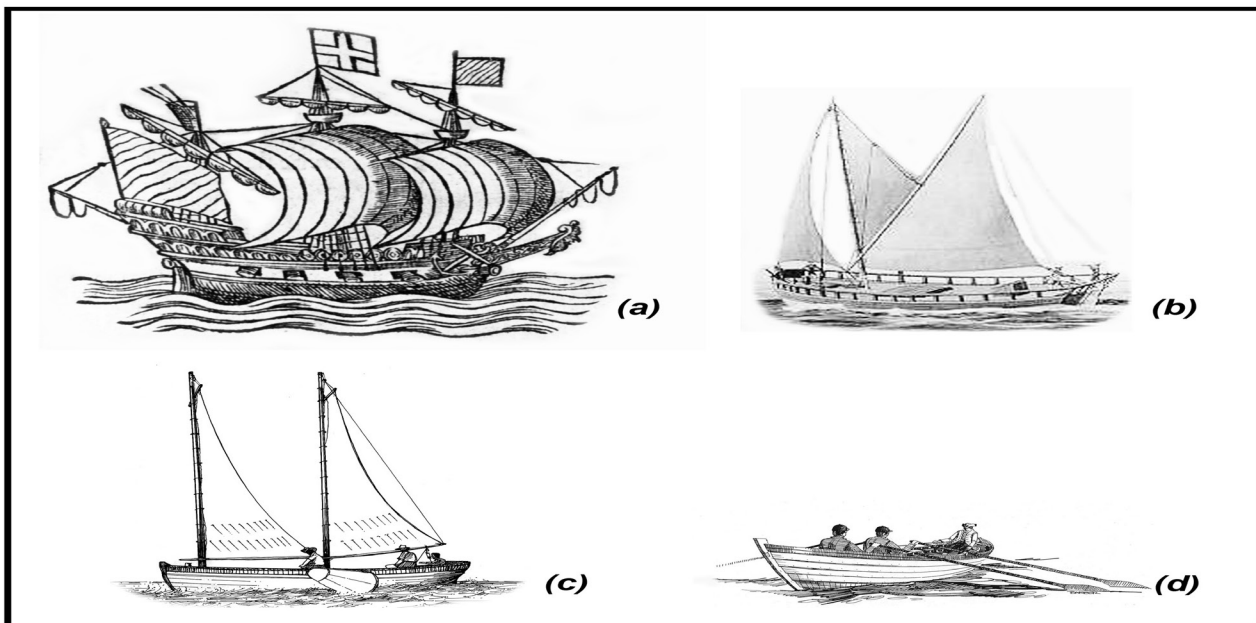


Figure 7.2. Typical Early Colonial Watercraft: (a) ship (Courtesy Library of Congress), (b) pinnace (Courtesy WikiMedia), (c) shallop, and (d) wherry (Both from Tilp 1982, Courtesy Chesapeake Bay Foundation).

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from shore to shore, and river to river.

Middleton (1953:243) also reported that a variety of woods were utilized for the building of small boats and that they were often painted in bright colors.

There were five major vessel types during this period, the largest being the *ship*, which was rigged with three masts with rectangular (square) sails set on spars (yards) that crossed the fore- and mainmasts, and a lateen fore-and-aft sail on the aftermost mast, or mizzen. Next were the coasting vessels that were capable of oceanic voyages, the *pinnace*, *bark* and *ketch*. Finally, the *shallop* was the smallest Colonial craft capable of coastal navigation (Middleton 1953:5). Along with them could be found a variety of small boats and canoes used for river navigation, fishing and other tasks.

Although many early Chesapeake watercraft very probably retained a striking resemblance to Old World forms, others were new types, better suited for Virginia's waterways. Undoubtedly, some took the form of hollowed-out logs in the manner of the local natives, while others were purpose-built on the shores of isolated plantations or in small, private shipyards, reflecting the ideas of individual builders. Some of the experiments were highly successful, while others undoubtedly failed and were quickly discarded. Of these craft we have general descriptions but very few details (Chapelle 1935:5; Middleton 1953:242; Goldenberg 1976:6). Baker (1962, 1966) described a variety of colonial craft, including a Chesapeake Bay sloop of 1707 (Baker 1966:109) and a Virginia-built sloop, the *Mediator*, 1741 (Baker 1966:115). Chapelle (1936) and Greenhill (1976) also described Chesapeake vessels, however, virtually no archaeological information is available to supplement and verify their assumptions.

Small watercraft were needed in Colonial Virginia for a variety of tasks. For the most part they were simple to construct, and wood—the only essential raw material—was readily available in abundance and variety. Therefore, these watercraft were produced throughout the Chesapeake in great diversity and varying quality. Large vessels were another matter altogether, as discussed below.

The Growth of Shipping in the 17th Century

Few would disagree that tobacco growing heavily influenced the character and growth of the Chesapeake colonies. Horn (1994:142) stated, “Without tobacco, a very different kind of [Chesapeake] society would

have evolved.” From a maritime perspective, the rapid growth of the English tobacco market resulted in an extraordinary quantity of this product being transported to England from the Chesapeake, almost all in British-owned ships. Consider that the 400,000 pounds exported in 1630 swelled to 15,000,000 pounds by the late 1660s. Even though that growth slowed later in the century, it still averaged 20,000,000 to 30,000,000 pounds (Horn 1994:142; Middleton 1953:107).

With the increase in shipping came a higher frequency of shipwrecks. Sir William Berkeley boasted: “fewer ships miscarry going to *Virginia*, than to any Port at that distance in the world” (quoted in Middleton 1953:35). In spite of the basic accuracy of Berkeley's claim, Virginia still had its share of hazards to navigation, including storms, wars, and piracy. The yearly threat of hurricanes was overshadowed by frequent local storms, particularly the “nor'easters” that often sprang up with little warning, driving sailing ships ashore, particularly on the Virginia Capes and Middle Ground Shoals (Middleton 1953:56). Naval action during this period led shipping losses as well; particularly a Dutch raid in 1667 on a tobacco fleet, and raids by French and Spanish privateers during Queen Anne's and King George's Wars (Middleton 1953:314, 338, 347-349, 353, 358, 360). Between wars, privateers often turned to piracy. Piracy threatened shipping throughout the Colonial Period, but was most severe between 1660 and 1730 (Middleton 1953:353-356).

By the end of the century, Virginia was trading with neighboring colonies and was expanding rapidly into the West Indies trade (Middleton 1953:201). After 1698, when the monopoly was lifted on the slave trade, there was an increase in the number of ships arriving from Africa with slaves to work the tobacco fields (Middleton 1953:149). A significant number of ships were involved in privateering, piracy, and smuggling (Middleton 1953:205-210).

Coastal and Caribbean trades could be conducted with smaller ships and shorter voyages than trade with England, thus creating attractive markets for merchants with limited resources. It also inspired the growth of colonial shipbuilding.

The Growth of the Virginia Shipbuilding Industry

As early as 1612 Samuel Argall established a shipyard at Point Comfort, where he performed maintenance

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and repairs and also constructed boats and ships (Evans 1957:9-10). There was still a shipyard there a century later (Evans 1957:28-29). In 1697, Governor Sir Edmund Andros reported that Virginia had recently built 8 shallows, 11 brigantines, and 15 sloops, for which ship carpenters and most equipment were sent from England (Middleton 1953:250). In spite of these early enterprises, Virginia was slow to embrace the building of large ships. Even by the middle of the 17th century, Virginia was building only boats and small coasting vessels at a time when Massachusetts was launching large ships (Goldenberg 1976:24). After 1662, when the House of Burgesses passed an act for the “encouragement of building vessels in this country” and providing for a bounty in tobacco for every ton of cargo capacity, Virginians still were slow to act. Building large ships capable of ocean voyaging was a major commercial undertaking and can be examined within the context of a maturing worldview in colonial America. Large vessels made possible both inter-colony and international trading voyages that were not dependent upon foreign ships or merchants, but building such vessels required a major commitment of capital.

As tobacco, timber and other local products found profitable markets in England, Virginia gradually began to develop its own shipbuilding industry, taking advantage of the abundant forests that still covered much of the land. The design and construction of large vessels represented a much more difficult challenge for Colonial America than the building of small watercraft. Ocean-going ships were the most technologically sophisticated of all 17th and 18th century mobile structures (Muckelroy 1978:230; Steffy 1994:5). The construction of such vessels required specialized craftsmen and extensive capital. Although large vessels were built in the Chesapeake, we have very little detailed information on their design, construction or performance. Almost all that we know of ships from this period comes from documents on warships of major European navies, which had begun to build warships from plans by the 18th century. A few seamen’s journals survive, again mostly from those who served on warships.

Of merchant ships, which made up the vast majority of ships afloat in any given historical period, we know very little. Even in the 18th century most were built without models or plans and most of their builders and seamen were illiterate. Large vessels constructed in

Virginia during the 17th and early 18th centuries probably differed little from their English counterparts since, for the most part, they were built by English shipwrights who had immigrated to the Colonies.

Bridges and Ferries

The extensive network of Tidewater Virginia’s rivers and creeks, while generally useful, never-the-less created transportation issues that had to be resolved through the construction and maintenance of bridges and ferries. Adam Thoroughgood is thought to have established the first ferry in Virginia in 1636, at the convergence of the eastern and southern branches of the Elizabeth River between Norfolk and Portsmouth (Evans 1957:37; Yarsinske 2011:35). Early in the century, most ferries were funded by user tolls, but in 1641, the House of Burgesses enacted a provision that required county commissioners to maintain the ferries and bridges, and “that the fferymen should give their due attendance from sunne rising to sunne setting” (Henning 1823 1:269). The earliest ferries were little more than human-powered dugouts, rafts, or rowboats. They were poled, paddled, rowed, or pulled along a rope secured to both banks. For larger bodies of water, small sailing craft were employed. By the end of the century, ferries were numerous and were often purpose-built “scows” or “flats” with gangplanks or ramps for loading and unloading (Evans 1957:37-41; Middleton 1953:70-72). Thomas Chalkey’s 1703 account of a ferry crossing provides an interesting example of the variety of vessels in use. His party of eight men and seven horses made an eight-mile river crossing in a ferry consisting of two canoes lashed together. The horses were positioned with their forelegs in one canoe, their hind legs in the other (Middleton 1953:71). In 1705 the General Assembly published a list of ferries on each of the major rivers (Evans 1957:39-40). The totals were: James River, 20; York River, 20; Rappahannock River, 8; Potomac River, 1; and Eastern Shore, 2.

Previous Archaeological Investigations

Virginia’s First Underwater Archaeology Project.

The earliest known underwater archaeological survey in Virginia dates to the mid-1950s, when little was known about scuba diving and no scientific underwater survey methodology existed. The objective was to seek evidence of the original Jamestown fort and settlement. A crane

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was used to repeatedly scoop up James River sediment using a “clamshell” bucket. Shore-based transits recorded the approximate position of each scoop, which was then screened for artifacts. Of 65 random “drops”, 19 produced 17th century artifacts, most from within 200 feet of the seawall. The archaeologists concluded that there was insufficient evidence to speculate on the fort’s location (Cotter 1958:17-18). In the early 1990s two surveys were conducted in the James River in attempts to locate the Jamestown Fort using modern remote sensing instruments. The Virginia Institute of Marine Science and the Thomas Smythe Foundation sponsored the first, while the National Park Service conducted the second (Hobbs, et al. 1994). An interesting rectilinear object was detected on side-scanning sonar, but subsequent efforts to actually locate and map the object were unsuccessful. Then in 2006 another survey was conducted in cooperation with the National Park Service, searching the water all the way around Jamestown Island. The team located sixteen wrecks, an additional six probable wrecks, a prehistoric midden and a probable 17th century landing near the property of Sir George Yeardley. Many of the wrecks were barges, but at least one centerboard vessel was identified (Carpenter 2007).

Wolstenholme Towne Survey.

In 1978, underwater archaeologists from the Virginia Historic Landmarks Commission (now the Department of Historic Resources) conducted testing in the James River at Carter’s Grove, below the bluff where the early 17th century Wolstenholme Towne was being excavated. The team excavated a series of test pits in the river along several transects perpendicular to the shoreline using an induction dredge that suctioned material from the river bottom and directed the flow to a screen. Although the search for cultural material was unsuccessful, the project did provide useful geological evidence suggesting the approximate shoreline at the time Wolstenholme Towne was occupied (Noël Hume 1991:258-260).

Church Point Survey.

During several surveys, the most recent of which was in 2014, Tidewater Atlantic Research and Sprintsail Enterprises attempted to locate the remains of the original Lynnhaven Parish Church, built in 1639 on land owned by prominent colonist Adam Thoroughgood. The church

and an associated graveyard were submerged by erosion and river encroachment after the opening of Lynnhaven Inlet in 1667. Sonar surveys provided several promising “targets” but ground-truthing has not yet taken place (Watts and Broadwater 2014a).

Topics for Archaeological Research

1. Evolution of Post-Contact Dugout Canoes. After contact, Virginia Indians must have immediately recognized the advantages of metal tools for a variety of tasks, especially the labor-intensive construction of canoes. Likewise, colonists undoubtedly procured Indian dugouts for their own use. Eventually, there would have been a proliferation of watercraft based on the simple dugout—some built by Indians, others by colonists, and all made with iron tools. A study of canoes from both the Late Woodland and Early Colonial Periods might provide evidence for defining the evolution of dugouts. English colonists may have built their dugouts from a design based on their own ideas of how a boat should look; the Indians may have modified their own hull forms based on the new freedom afforded by iron tools. Burgess (2005:2) believed that by the late 1660s colonists had begun to experiment with log canoes made from more than a single log (Burgess 2005:2). (This experimentation eventually resulted in large, multi-log sailing craft, as discussed later.) Canoes were eventually fitted with sails. A Swiss visitor to Virginia in 1702 reported seeing a single-log canoe rigged as a sloop, that is, fitted with a single mast and a triangular fore-and-aft sail (Middleton 1953:243). In Matthews County, Virginia, a recently discovered canoe from the post-contact period is fitted with a mast step and was probably sloop-rigged (Barber 2015:pers.comm.).

2. Emergence of a Colonial Boatbuilding Tradition. Just as the study of British Colonial architecture is important to understanding early Virginians, so too is the study of their locally built watercraft. As discussed above, the earliest colonial boats may well have been a melding of the Indian dugout with traditional English plank-on-frame construction. Hicks (2009:ix) posed, “This was the beginning of a unique style of craft distinctive to Chesapeake waters.”

Greenhill (1976:26) states that the major factors that give rise to a particular boat are “the timber available, the general environment, the building traditions of the society which produced her and, above all, the

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purpose for which she was built.” Based primarily upon documentary sources, Hopkins (1987:107) found evidence that Chesapeake Bay craft developed in response to economic needs. Hopkins’ theory became a primary hypothesis for one of the most significant archaeological surveys ever conducted in the Chesapeake: The Patuxent River Survey (Shomette 1981; Shomette and Eshelman 1981). Planned and organized by Donald G. Shomette, this project thoroughly examined four test area within the Patuxent River in Maryland, documenting all evidence of human activity. The results proved to be more fruitful than originally anticipated, documenting “examples of all the boat forms used on the river from the earliest colonial times up through the present” as well as landings and wharves (Leone 1983:177). Additionally, the survey provided evidence for the shift of commercial centers, alterations in boat forms to compensate for increased siltation rates, town siting, and more (Leone 1983:177, 185).

Examination of the physical remains of early Virginia boats could provide valuable insight into the mental templates with which the first boat builders arrived, as well as local economic pressures and perceptions of need. Leone (1983:187) suggests: “understanding ships as part of land-based economic processes, particularly those of capitalism, allows for creation of a larger context. Certainly all the ships and boats off North America... are tied to one stage or another in the emergence of capitalism.” Hamilton (1984) proposed that shipwrecks could be used as indicators of regional economic systems. Virginia needed simple boats, easy to build with local materials and with few if any shipwright’s skills, and shallow draft to maneuver into smaller tributaries and close to shore. These unique requirements were posed by the local situation and were different from what the colonists had known in England. A Virginia survey modeled after that in the Patuxent River could provide archaeological data of interest to terrestrial archaeologists.

Unfortunately, physical evidence of 17th- and 18th-century boats and ships is rare. Almost all of the Virginia shipwrecks that have been investigated date to the Revolutionary War Period or later. We need systematic and frequent surveys of Virginia waterways that would have been heavily travelled during the early colonial period—and the range of travel was extensive. Boats of all shapes and sizes constantly plied Virginia waters for communication and trade. Tobacco boats, and even

ships, were able to take advantage of Virginia’s extensive riverine system to reach many of the remote plantations and farms. An 18th-century visitor observed; “’tis the Blessing of this Country and Virginia...that the Planters can deliver their Commodities at their own Back doors, as the whole Colony is interflow’d by the most navigable Rivers in the World” (*William and Mary Quarterly* 15(1):147). This water access was even more important during the 17th century when few roads could bear the weight of tobacco casks or other heavy cargo.

3. Early Oceangoing Ships. Increasing trade demanded the employment of hundreds of oceangoing ships. Most were English built, but later in the 17th century more Virginia-built ships entered the trade. We know that some large ships were wrecked within Virginia’s waters, but none from the 17th century have been studied.

4. Early Methods of Transportation: Wharves, Bridges and Ferries. Little is known about early bridge and ferry construction, but they were important to communication and commerce in Virginia. The discovery and documentation of ferryboats would be of particular interest, since their form varied widely, depending on the body of water to be crossed, the imagination and skills of the builder, and the purpose for which each was intended. Thoroughgood’s 1636 ferry, for instance, was initially operated by several rowboats before being bought out by Norfolk and improved (Yarsinske 2011:35). Others were as simple as dugouts or rafts being poled or paddled by one or more men and carrying a few passengers or a small amount of cargo. We have lists of the principal ferries in Virginia from the beginning of the 18th century to well into the 20th, when bridges had replaced almost all of them. Therefore, a priority list could be established to guide field surveys.

Every plantation and settlement would have built a wharf at the nearest body of water that afforded sufficient depth for boats to reach. Some were undoubtedly larger and more complex than others, and quite a bit of variety in their construction can be expected. However, few, if any, of these structures have been dated to the 17th or 18th centuries.

5. Chesapeake Small Craft Typology and Evolution. Quite a bit of work has been done on this topic in Maryland (Shomette and Eshelman 1981) and North Carolina (Alford 1989) but not in Virginia. Several books already mentioned have described many of the bay’s small

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craft, but no comprehensive study has been conducted.

6. “Drowned” Terrestrial Sites. Erosion has caused the submergence of countless 17th-century sites, and sea-level rise is now contributing to further erosion and submergence. By carefully examining historic maps and archaeological site reports, it should be possible to identify high-probability areas to survey.

Path to Nationhood (AD 1720-1790)

The Transformation of Virginia’s Maritime Culture

By the early 18th century, Virginia society was much different from its inception at Jamestown. As planters and merchants acquired more wealth and property they became more detached from the bay and rivers. As roads, bridges and ferries improved, they often traveled by roadway instead of sailing or rowing their own boats. If boat travel was called for, they generally tasked servants or slaves with the work. Similarly, transport of tobacco and other goods was assigned to specific workers who had developed skills in boat handling, sailing, and rigging heavy loads.

These changes resulted in the emergence of a new maritime community populated largely by career mariners, many of whom were actually servants or slaves. These maritime specialists thus became a part of what some historians have called the “global maritime community,” linked by the oceans. They were the people who sailed to distant ports and who greeted ships arriving from other places. They were the crews that were often multicultural and multiracial, sharing their stories and experiences with others within this global mixing pot. They were part of the Virginia culture, but now they represented a small, specialized segment of society, consisting primarily of poorly educated, low wage earning men. Wealthy planters and merchants had risen to a higher social order, one more focused on running businesses and ordering others to conduct work activities.

Finding evidence of this transformation in the archaeological evidence from submerged sites will be difficult if not impossible, but probably could be teased from written records and estate inventories from Virginia’s first century.

The Evolution of Virginia-Built Ships

As Virginia continued to grow during the 18th century, so did the numbers and types of watercraft.

Seagoing Colonial vessels generally conformed to European designs with few modifications. Colonial shipbuilders and mariners were able to observe new European vessel types that called on nearby ports and to obtain information on new design ideas and trends. As 18th-century vessels evolved, so did the method for classifying them. Earlier vessels were defined by both hull form and sail arrangement, but by the second quarter of the 18th century they were classified by their rigs, while hull form varied significantly within each type (Middleton 1953:77). Of the five major types of 17th century vessels described in the previous section, only the *ship* continued to be built after the early 1700s (Middleton 1953:77). In their place, four new classes emerged: *sloop*, *schooner*, *brig/brigantine* and *snow*. The sloop was a single masted vessel (except when referring to a sloop-of-war), while the rest were two-masted (Figure 7.3).

Chapelle (1935:8-9) believed that Virginia, Maryland and Pennsylvania possessed a well-developed, if small, shipbuilding industry by 1700. Relatively few large ships were built in the southern colonies during the first half of the 18th century (Middleton 1953; Kelso 1964:8; Goldenberg 1976:52). By the second half of the century, however, port records and newspaper advertisements indicate that Chesapeake shipbuilding had begun to develop more rapidly (Kelso 1964:9; Goldenberg 1976:119). This pattern coincides with the growth of the British merchant marine in the 18th century (Davis 1962:40). Middleton (1953:243) states that in the half-century prior to the American Revolution, Virginia and Maryland became a shipbuilding center second only to New England.

In 1767, Andrew Sprowle purchased waterfront land near Portsmouth and established a small shipbuilding facility that soon became the Gosport Navy Yard, property of the Commonwealth of Virginia. A huge granite dry dock was completed in 1834, the first such facility in the U.S. During the Civil War, this dry dock held the hull of USS *Merrimack* as it was converted to the CSS *Virginia* (Butts 1951). Now part of the Norfolk Naval Shipyard, the dry dock is still in use today.

Most tobacco ships built in the Chesapeake region were in the range of 100-200 tons (a measurement of carrying capacity); vessels built for the West Indian trade were usually smaller (Middleton 1953:260). For comparison, a large English merchant vessel in mid-century measured about 400-500 tons. Kelso examined

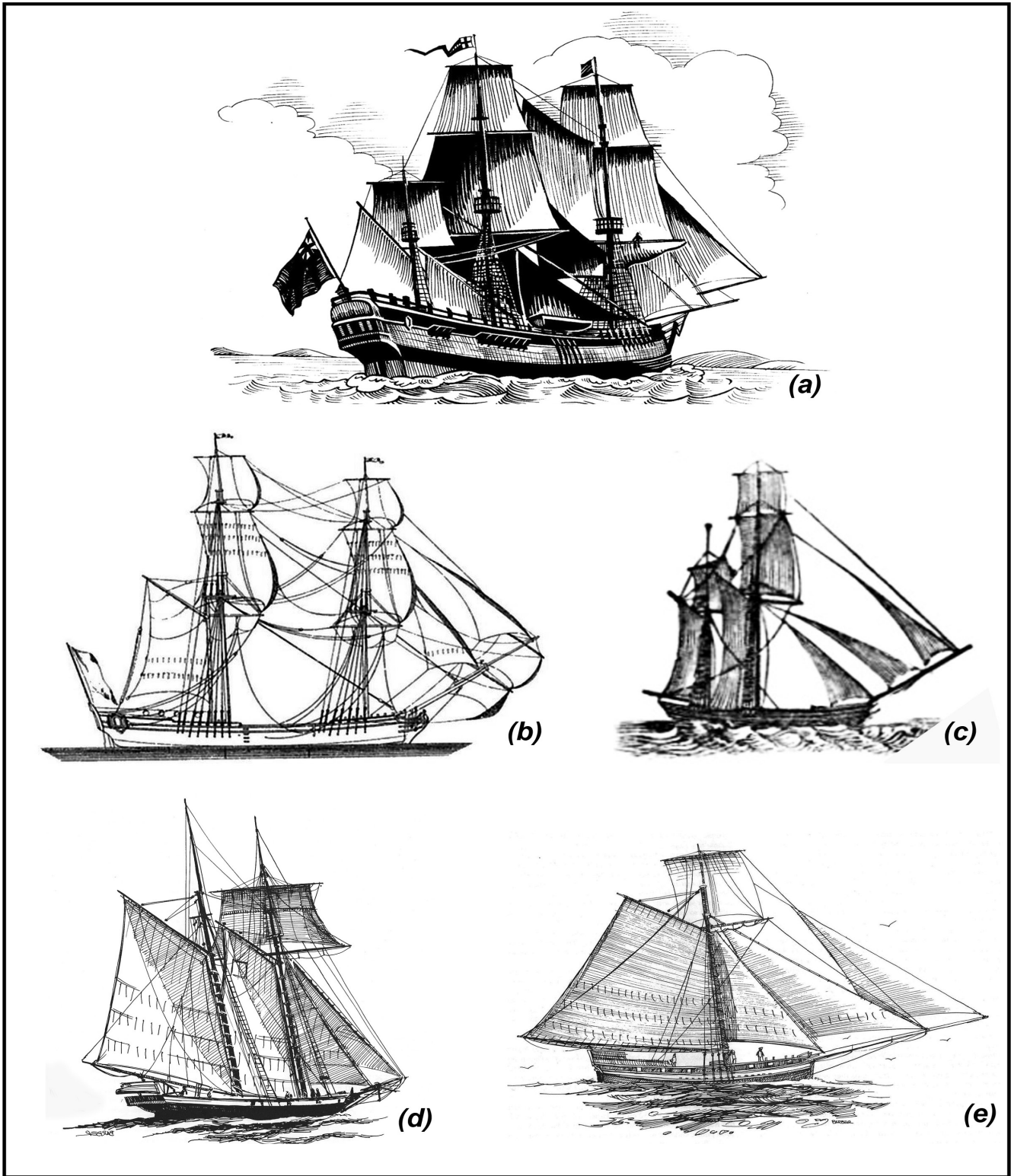


Figure 7.3. Typical 18th-Century Vessel Types: (a) merchant ship (Courtesy CdP Illustration), (b) brig/snow, (c) ketch (Both courtesy Wikimedia), (d) topsail schooner, and (e) sloop (Both from Tilp 1982, Courtesy Chesapeake Bay Foundation).

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Naval and Customs records in order to develop a picture of Virginia shipbuilding during the period 1763-1774. He found that 360 vessels were built in 17 Virginia shipyards during that 12-year period. Twelve of the 17 shipyards were located within a 35-mile radius of Hampton Roads (Kelso 1972:1, 5). The compiled list of vessels includes only those registered by the Navy or Customs, and Kelso estimated that they may represent as few as half of those actually built in Virginia during the period (Kelso 1972: 10). Just over half (53%) were relatively small sloops and schooners, while only 17% were larger ships and snows; the remaining 21% were brigs. The average size of the 360 ships was 71 tons and that the vessels ranged in size from two tiny 12-ton schooners to the 305-ton ship *Nelly Frigate* built in 1770 (Kelso 1972:2).

By the middle of the 18th century, Chesapeake shipbuilders began to experiment with designs for faster ships, a move that led to entirely new vessel types and brought new attention and respect to the region. One theory holds that colonial merchants desired faster ships that could outrun British revenue vessels and, therefore, escape paying duties under the despised British Navigation Laws. Others have suggested that the development of faster ships was a manifestation of an emerging American fascination with speed (Chapelle 1967:3). Regardless of the underlying motivation, this “quest for speed,” as characterized by Chapelle, led in the 1730s and 1740s to development of the famous “Baltimore (or Chesapeake) Clipper,” forerunner of the legendary clipper ships of the mid 19th century (Chapelle 1935:31; 1967:322). Burgess (1963:104) asserted that by the 1730s Chesapeake shipbuilders, “having admired and studied the fast Bermuda sloops that visited the Bay, were turning out a much improved model.” He claimed that these vessels were the forerunner of the Baltimore Clippers and were widely referred to as “Virginia-built” or “Virginia model.”

In addition to the specialized watercraft already mentioned, slave ships also visited Virginia on a regular basis. Although none are known to have been built in Virginia, it is possible that one or more could have wrecked within Virginia waters. During the period 1700-1770, Virginia planters imported more than 100,000 Africans (Carr, Morgan and Russo 1988:11-12). This notice of sale, dated July 9, describes a typical arrival (Duke 1993:68):

Just arrived from Africa, the Snow Nancy, James E. Colly Commander with about two Hundred and fifty fine healthy Windward and Gold Coast Slaves, the Sale of which will begin at Osborne’s, on James River, on Wednesday the 29th Instant and continue until all are sold. Merchants Notes, payable at the General Courts in Williamsburg, will be received in Payment. JOHN LAWRENCE, WILLIAM CALL and CO.

Marcus Rediker (2007) has produced an accurate and detailed description of life aboard a slave ship with a glimpse into the attitudes and emotions of slavers and slaves. Africans were transported to the colonies in specially fitted ships about which few details are known. One partially preserved slave ship, *Henrietta Marie*, was excavated in Florida (Burnside 1995) and others have been located, but details are still sketchy. Archaeological investigation of more slave ships would provide physical evidence to enhance written accounts of this terrible trade.

Virginia’s shipbuilding industry spawned a number of support trades, including logging, water and tide mills, naval stores production (tar, pitch, rope) and repair yards. Not much archaeological evidence is available except, possibly, for mills.

Fishing and Specialty Vessels

From the earliest days of Virginia settlement fish were harvested for food, but they were not exported commercially until the middle of the 18th century. It is unclear if specialized fishing craft were developed during this period, or if general boat types were adapted for fishing as required. In 1766 George Leslie of Hampton claimed to have developed a successful method for curing sturgeon and sent a consignment to the West Indies. At that same time, George Washington and William Byrd III were involved in commercial fisheries and in the 1770s shipped large quantities of salt herring to the West Indies (Middleton 1953:224). Little deep-sea fishing took place in the Chesapeake region before the Revolution (Middleton 1953:225). The sloop *Experiment*, of Norfolk, was successfully employed in 1751 in “the Whale Fishery on our Coast” but apparently did not inspire others to follow suit (Middleton 1953:226). More importantly, the harvesting of oysters was becoming an important industry that would lead to development of new bay watercraft (Middleton 1953:67-68).

Yachts were occasionally mentioned in records from this period, but most were vessels that could be used for

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cargo as well as for “sport”. Fithian’s journal mentions several small boats that were built for pleasure usage, such as transporting the family to church. (Middleton 1953:246-248).

The Growth of Virginia Ports

In the early years, Jamestown was the single port of call for the Virginia Colony. Bridenbaugh (1980:143) states, “Throughout the [Virginia] Company’s existence from 1607 to 1624, Jamestown was the seaport and transfer point at which manufactured goods and other items entered the colony and from which local produce was shipped off to England.” By 1633 large English and Dutch ships were routinely trading directly with other Virginia ports (Bridenbaugh 145-146). This was the beginning of a century during which the cultivation and marketing of tobacco was “the colonists’ economic life blood” (Billings, Selby and Tate 1986:66).

Norfolk was the principal port in the Chesapeake Bay by the third quarter of the 18th century, followed closely by Annapolis. Baltimore assumed that distinction after Norfolk suffered severe property destruction during the American Revolution (Middleton 1953:259). Other Virginia ports were active as well, especially Yorktown, one of the few deep-water ports in the mid-Atlantic. In 1721 a customs house was built for the regulation of shipping.

The Disruption in Virginia’s Progress During the American War for Independence

The American War for Independence disrupted all aspects of life and commerce in the American colonies. Battles were fought on Virginia’s soil and on her bays and rivers, resulting in the destruction of homes, commercial facilities and shipping. A large but unknown number of vessels of all sizes were sunk or burned during this period. Major losses occurred in 1781, including the burning and destruction of the Chickahominy Shipyard by General Benedict Arnold in April, followed three days later by his routing of most of Virginia’s remaining ships at Osborne’s Wharf on the James River (Goldenberg and Stoer 1981). In October, the British lost an entire fleet of warships and transport vessels during the Battle of Yorktown. An estimated 26 vessels of various sizes remain at the bottom of the York River between Yorktown and Gloucester Point. These losses are discussed below in more detail.

Coastal Navigation and Lighthouses

Beginning near the end of the 18th century, Virginia finally began to construct a protective network of navigation aids to mark shipping channels and reduce the number of shipwrecks. The first permanent lighthouse in Virginia was completed in 1792 at Cape Henry (Middleton 1953:35). As satellite navigation has rendered lighthouses obsolete the U.S. Coast Guard has been disposing of them. A dozen Virginia lighthouses have been preserved and documented (de Gast 1973), thanks in part to the Chesapeake Chapter of the U.S. Lighthouse Society, but twice that number are gone.

Previous Archaeological Investigations

Earliest Shipwrecks Discovered in Virginia.

While conducting a survey at Newington Plantation, on the Mattaponi River in King and Queen County, archaeologists with the James River Institute for Archaeology discovered the remains of two wooden vessels on the shoreline below the plantation. In May 2009, the Department of Historic Resources Threatened Sites Program contracted with Tidewater Atlantic Research, Inc. (TAR) for a survey and assessment of the vessels. Although the hulls had been damaged by fire and salvage, TAR archaeologists were able to determine that both were about 36 feet in length and exhibited framing and fastening patterns that reflected traditional 18th-century English construction (Figure 7.4). Their small size and the locations of their respective bilge pump wells suggested that both were rigged as sloops, that is, single-masted with fore-and-aft sails. Both would have been rated at about 25-35 tons cargo carrying capacity (Watts 2013).

Artifacts included fire-tempered nails, glass and ceramic fragments, a pipe stem fragment, and shoe leather, all dating to approximately 1730-1740. Several ceramic samples are associated with red bodied, lead glazed earthenware produced in Yorktown during the second quarter of the 18th century. Therefore, the Newington vessels are the earliest shipwreck remains yet identified and investigated in Virginia. Both were likely built locally and employed in coastal trading, possibly to Bermuda and the West Indies. One vessel contained distinctive ballast that originated in Dover, England, implying at least one transatlantic voyage. Both hulls were sheathed with thin pine boards, which were nailed

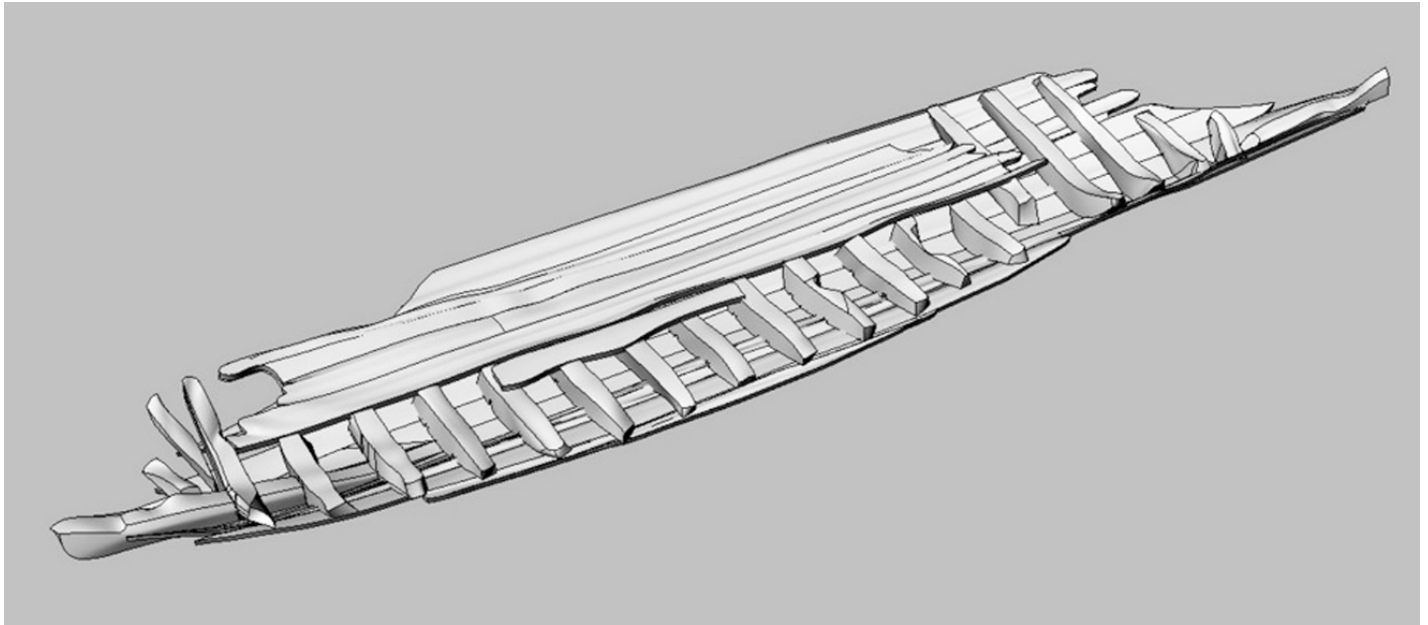


Figure 7.4. Three-dimensional Rendering of Newington South Vessel (Courtesy Tidewater Atlantic Research).

over the hull planking to protect against shipworms. This is another indication that the vessels were intended for saltwater use. The vessels' dates and location at Newington Plantation make it likely that they were associated with one or more of the George Braxtons who owned the property in the 18th century (Watts 2013).

Chickahominy Shipyard (44JC0014).

Few details are available on Virginia's 18th century shipyards. Fortunately, the Virginia State Shipyard on the Chickahominy River has filled gaps in our knowledge of this early industry. The fledgling Virginia Navy was operating the Chickahominy Shipyard when General Benedict Arnold sacked and burned the shipyard in April 1781, leaving the galley *Lewis* sunk and *Thetis* and *Safeguard* burned on the stocks (Cross 1981:72-73; Goldenberg and Stoer 1981:194). Archaeological surveys, both on land and underwater, revealed valuable insights concerning shipyards, including the location of buildings, fabrication and storage areas, and ship construction and launching sites (Short 1976). A volunteer team led by East Carolina University and the Maritime Archaeological and Historical Society conducted an extensive survey in 1994. Two shipwrecks were located and mapped along with associated land features. One wreck was recorded as 44JC0050, but the second wreck does not seem to have been added to the state files (Utley and Morris 1994; Morris 2000). The site was placed on the National Register in 1979.

The British Fleet at Yorktown.

Following the Battle of Yorktown, 1781, an estimated 26 British vessels lay on the York River bottom between Yorktown and Gloucester Point. During the 1970s and 1980s the Virginia Department of Historic Resources conducted investigations that discovered nine of those wrecks, seven along the Yorktown shore and two off Gloucester Point (Broadwater 1980; Sands 1983). In 1980 research proved that one of the wrecks near Gloucester Point was the largest British warship at the battle, HMS *Charon*, 44 guns (Steffy et al. 1981; Sands 1983). During the 1980s one of the transport vessels was excavated from within the protection of a steel cofferdam, an enclosure within which the water was filtered to provide better visibility for the excavation team (Broadwater 1992, 2005). The vessel was eventually identified as the collier brig *Betsy* (Figure 7.5), built in Whitehaven in 1772 and employed in the coal trade to Dublin until leased as a Royal Navy transport. *Betsy's* excavation proved to be extremely informative, since it provided rare details on the layout and construction of an 18th century merchant vessel as well as insights into the activities in which such vessels could be employed during wartime (Broadwater 2005).

Breakwaters installed along the Yorktown beach during the 1990s have altered erosion patterns, resulting in a tenth shipwreck being exposed just downriver from *Betsy*. This is a small vessel, possibly a sloop or schooner



Figure 7.5. Model of *Betsy* based on archaeological research (Courtesy Jennifer N. Miller).

built in Virginia, sunk along with the other British vessels in 1781 (Watts and Broadwater 2011). At least two surveys were conducted prior to major renovations to the Coleman Bridge construction (Koski-Karell 1988; Watts 1995).

Topics for Archaeological Research

1. York River Shipwrecks at Yorktown/Gloucester Point. Although the York River shipwrecks have been the subject of extensive archaeological investigations, they contain much more information. Several of the wrecks, particularly YO89 and YO94, are well preserved and their excavation would contribute more rare details on the construction of merchant vessels and their use as naval transports. Yet to be discovered are three fireships, including HMS *Vulcan*, that lie somewhere downriver from Yorktown. Due to the installation of breakwaters along the Yorktown shore in the vicinity of the wrecks, erosion patterns have changed and need to be studied in order to develop a long-range preservation plan for these significant vessels.

In 2015 a group was formed for the purpose of nominating these wrecks for consideration to become the York River Maritime Heritage National Marine Sanctuary. This group, which includes the author, plans to submit the nomination to the National Oceanic and Atmospheric Administration in 2016 (Watermen's Museum 2015). The nominating committee hopes that the sanctuary designation will increase research efforts at

the site and also create opportunities for education and public archaeology programs. Growth of public interest and tourism is also anticipated.

2. Osborne's Wharf. Near Osborne's Wharf on the James River, General Benedict Arnold destroyed virtually the entire Virginia State Navy on April 27, 1781, just five days after burning the Chickahominy Shipyard (Cross 1981:76; Goldenberg and Stoer 1981:194-5). In 1985 the National Underwater and Marine Agency and Underwater Archaeology Joint Ventures conducted a remote sensing survey but "found no trace of the Virginia Navy shipwrecks (National Underwater and Marine Agency 2015). This site deserves additional attention.

3. Spanish Convoy of 1750. In 1750 a hurricane forced several ships from the Spanish flota (convoy) ashore in North Carolina. Others put in at Norfolk for repairs before resuming their voyage back to Spain, carrying a variety of cargo that included treasure from South America. Another storm drove several of these ships aground along Virginia's Eastern Shore, providing an enduring lure of Spanish treasure. None of the wrecked ships has been positively identified, although the largest, *La Galga*, is believed to lie ashore near Assateague. One or two of the vessels may also rest in the same general area, but in deeper water (Amrhein 2007; Lewis 2009). Location of these vessels would shed new light on the construction and lifeways of 18th century Spanish ships, along with providing possible confirmation of the illicit practice of carrying undocumented cargo.

Antebellum Period (AD 1790-1860)

The Early National Period

In the peace following the American Revolution, both the Continental and states' navies were disbanded. However, attacks upon American merchant ships by Barbary pirates in the Mediterranean prompted the new Congress to pass the Naval Construction Act of 1794, authorizing the building of six frigates. This resulted in the founding of a permanent United States Navy with ships that soon gained a worldwide reputation for strength and effectiveness. The Gosport Navy Yard in Portsmouth received a contract for building the 36-gun USS *Chesapeake*. (Butt 1951:3) In 1807, a notorious encounter between *Chesapeake* and HMS *Leopard* contributed to the outbreak of the War of 1812. (Morris 1993:28-29). During the war, British ships conducted

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raids on towns and shipping throughout the Chesapeake, resulting in the destruction of houses, commercial buildings and ships.

The Evolution of Naval Technology

Merchant vessels changed little up until the mid-18th century, although there was a trend towards larger hulls and fore-and-aft sails. By mid-century, many large vessels carried the fore-and-aft schooner rig, but the square-sail rig persisted on ships, barques, brigs, brigantines, and snows. By this same period wooden warships had reached the pinnacle of design and construction, and their form was becoming quite different from merchant vessels. Magnificent ships such as Spain's *Santisima Trinidad*, the largest warship at the Battle of Trafalgar (1805), was nearly 200 feet long, four decks high, and weighed about 5,000 tons. It carried 136 guns and a crew of more than 1,000 men (Lavery 1983: 155; Lambert 1984:122). The growth trend in wooden warships could not be sustained due to the realization that these ships had reached the structural limits of wooden construction.

Fortunately, the Industrial Revolution provided new technologies for shipbuilding, and they caught on rapidly, first for warship construction and then for merchant vessels as well. England, whose Royal Forests were almost depleted of suitable wood, had begun to substitute iron for structural support on wooden hulls, and by mid-century iron replaced wood almost exclusively. By 1842, William Laird and Sons of Birkenhead, England, pioneers in iron construction, had launched or under construction 44 iron vessels (Baxter 1933:33; Gardiner 1992:79-80). It was during this same period that navies began an escalation of guns vs. armor that resulted in the development of rifled cannon barrels, exploding shells and, for defense, iron hull armor.

Arguably, the most significant naval and maritime development of the age was the application of steam power to ships. Inventors in Europe and the United States had been experimenting with steam power since the 1770s, but it was another half-century before steam engines were sufficiently efficient and compact for shipboard use. Robert Fulton's *Demologus* ("Word of the People"), 36 guns, launched in 1815, is considered the world's first steam warship. *Demologus* was commissioned by the U.S. Navy as USS *Fulton* in 1816, too late to participate in the War of 1812. By the 1850s, smaller, more powerful, steam engines, coupled to screw propellers, had created

new and effective fighting machines, although most were still built with wooden hulls.

On June 17, 1833, USS *Delaware* entered Dry-dock Number One at Gosport Navy Yard (now the Norfolk Naval Shipyard), the first dry-docking of a ship on the East Coast. The massive dry dock is constructed of massive granite blocks that were reportedly so well cut and dressed that "not \$100 was spent in altering stone." Much to the displeasure of Norfolk-area stonemasons, it was discovered that in a cost-saving measure African American workers had been hired to do the final dressing of the stone (Clancy 2008). In 1862, the facility became famous as the site where USS *Merrimack's* damaged hull was converted into the Confederate ironclad CSS *Virginia*. Dry-dock Number One, still in service, was declared a National Historic Landmark in 1971.

After falling behind England in steam development after the War of 1812, the United States reentered the arena in 1841 with the launch of the steam frigate USS *Mississippi*, followed two years later with USS *Princeton*, the navy's first steam warship fitted with an Ericsson screw propeller replacing the vulnerable and inefficient paddlewheel (Baxter 1968:14; Beach 1986: 202-203.). In 1855, the U.S. Navy launched the 3,200-ton steam-screw frigate USS *Merrimack*, the first of an improved class of warships armed with guns firing exploding shells. In spite of much progress in naval construction, *Merrimack* was still built with a wooden hull and rigged with square sails on three masts; the steam engine was inadequate for anything but auxiliary power (Baxter 1968).

Commercial Steam Transportation

According to the *Norfolk Gazette & Publick Ledger* of May 24, 1815, Norfolk was treated to the arrival from New York of "the elegant Steam Boat Washington," the first such vessel in Virginia's waters. The following month, the steamboat *Eagle* made a passage from Norfolk to Baltimore, setting the stage for regular packet service in the Chesapeake (Tazewell 1982:61-62). These events took place only eight years after Fulton's *Clermont* became the first successful steamboat in America (Tazewell 1982:61). Thereafter, steamboat travel and shipping increased rapidly, developing an industry in the Bay that would prosper for more than a century. Unlike sailing vessels, steamships could maintain regular schedules, independent of the vagaries of winds and tides.

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In 1840 the Maryland and Virginia Steam Boat Company, founded in 1828, became the Baltimore Steam Packet Company, familiarly known as the “Old Bay Line”, which endured until 1962 (Tazewell 1982:62). Other companies followed, providing reliable transportation throughout the Bay. The growth of steamship transportation somewhat paralleled that of the railroads, and both managed to thrive during this phase of the Industrial Revolution.

Chesapeake Bay Watercraft

While “fast-built” schooners remained popular in the coastal, privateering, and illicit trades, bay watercraft were adapting further to local conditions. Erosion caused by intensive agricultural activity was beginning to silt up active water routes leading to development of boats with shallower draft. Shortly after the War of 1812 another innovation allowed vessels to navigate shallow water while maintaining good cargo capacity and sailing qualities: the centerboard, a retractable keel (Burgess 1963:104; Leone 1983:177).

Canals and Western Expansion

Virginia launched a canal-building program during the late 18th century, motivated by a desire to expand existing transportation networks into outlying regions. In Virginia, canals directly linked the existing waterway network to western hinterlands, thus expanding settlement and providing new sources of produce and raw materials. As early as 1728, William Byrd II noted “the advantage of making a Channel to transport by water-carriage goods from Albemarle Sound into Nansemond and Elizabeth Rivers, in Virginia” (Brown 1981:9-10). George Washington, too, anticipated an extensive series of canals and waterways joining the major ports and hinterlands into a massive commercial network. The steady development of the canal network was critical to economic growth and continuing western expansion. There is a great deal of documentation available on Virginia’s canals, providing an excellent body of information for formulating research designs (Terrell 1992). Trout (1971) assembled a compendium of valuable documents and field notes on Virginia canals and associated structures, and the Canals Society offers a number of “river atlas” publications on their website (Virginia Canals and Navigations Society 2015).

Previous Archaeological Investigations

Lynnhaven Inlet Wreck (44VB239).

In 1994 a U.S. Army Corps of Engineers dredge struck the remains of a shipwreck at Lynnhaven Inlet, Virginia Beach. Local mariners had known about this wreck for years, and had recovered several iron cannons and wood fragments. The site was often referred to as the “pirate wreck” or “privateer wreck.” Knowing that future channel dredging would have to take place at the inlet, the Corps contracted with Tidewater Atlantic Research, Inc. to investigate the site. Investigations in 2003-2004 revealed a ship from the late 18th to early 19th century. Following documentation and artifact recovery, the wreck was removed and the components transported to Tidewater’s facility for further study. So far the wreck has not been positively identified (Watts 2009:44).

The Portsmouth Wreck.

Proving that not all shipwrecks are underwater, the Portsmouth Wreck was discovered in 1997 during excavations for a ferry slip on the Portsmouth waterfront. An archaeological examination by Tidewater Atlantic Research documented two sections of a nearly intact hull lying 20-25 feet below street level. The hull was documented and some of the timbers were removed for additional study. The wreck is believed to date to the late 18th or early 19th century, and could be associated with the Revolutionary war or War of 1812 (Watts 2006; Watts 2009:45-46).

War of 1812 and Fort Albion.

During the War of 1812, British warships and soldiers ranged throughout the Chesapeake Bay, burning or seizing countless ships and boats. The Royal Navy coordinated its Chesapeake operations from the relative security of a deepwater anchorage at Tangier Island, just south of the Maryland border. On the island, the army built an earthen fortification, naming it Fort Albion. With the British withdrawal, the fort was destroyed and abandoned. The entire southern portion of Tangier Island where the fort was located has eroded into the bay. In 2014 a survey funded by VDHR’s Threatened Sites Program conducted a remote sensing survey of the submerged area where the fort should have been, identifying a series of anomalies that have not yet been physically confirmed (Watts and Broadwater 2014b).

Contributions From Underwater Archaeology

Topics for Archaeological Research

1. War of 1812. A follow-up survey to ground truth the 2014 anomalies at the presumed location of Fort Albion could provide new information on this temporary fortification. Special methodologies may have to be developed in order to investigate this eroded site. A review of state site files and the Virginia Shipwreck Inventory (in progress) may reveal additional sites that could add new information on British

2. Canals and Canal Boats. Virginia's canals and the specialized boats that worked within them are representative of an important period in Virginia's western expansion and economic diversity. Working with the dedicated volunteers of the Virginia Canals and Navigations Society, a statewide research design should be developed to guide field work.

3. Steamship Transportation. There is still evidence of abandoned steamship piers, and there are undoubtedly wrecks from the steamboat era. One possibility is the 19th-century paddlewheel steamer *Kennebec*, believed to lie in the York River near Yorktown (Watts 2009:41).

4. Virginia's First Naval Shipyard. Access to Drydock Number One at the Norfolk Naval Shipyard is restricted, but working with the Naval History and Heritage Command it should be possible to have the entire structure laser-scanned to create a three-dimensional, digital record. There are other historic buildings at the facility that could be documented at the same time.

Civil War in Virginia (AD 1860–1865)

Throughout the American Civil War numerous significant military actions took place on Virginia land and water, with the James and York Rivers playing major roles. From the outset, Virginia was embroiled in the conflict. From the Confederate capture of the Gosport Navy Yard (now the Norfolk Navy Yard) in April 1861 to the fall of Richmond in April 1865, scores of Union and Confederate warships and auxiliaries in the Chesapeake were captured, burned, sunk, or scuttled (Mills 1996). Some of those vessels remain today as testament to the raging naval battles that took place during that four-year period. Since the War of 1812, new and more effective military equipment had been developed, and this new technology changed the face of battle on land and on the water.

The Ironclad Revolution and the Battle at Hampton Roads

In 1861, when hostilities broke out between North and South, all large warships were rigged with sails, and only a few were fitted with steam engines. The South, possessing only a few small captured warships, was desperate for a means of defeating the Atlantic naval blockade ordered by President Abraham Lincoln. The Confederate strategy was to acquire from Europe a fleet of iron-armored, steam-powered warships. When this proved impossible, the South set out to build its own (Rawson and Woods 1898:67-69; Still 1971:11). This effort resulted in the conversion of the damaged hull of USS *Merrimack* into CSS *Virginia*, a radical vessel indeed. *Virginia's* hull was submerged except for a heavily armored "casemate" containing ten guns, and there were no masts or sails (Porter 1892:342–380; Still 1971:23; Broadwater 2012:39).

When news of this "Rebel Monster" reached Washington, Lincoln became sufficiently concerned to order the Navy Department to seek proposals for an ironclad that could defeat the *Virginia*. After an interesting series of events, the Navy awarded a contract to John Ericsson, who produced USS *Monitor* in only 118 days (Broadwater 2012:47-48). If *Virginia* was a radical design, then *Monitor* was nearly otherworldly. Its hull was almost completely submerged, its deck and sides were plated with iron armor, and its only superstructure was an armored "tower" or turret positioned amidships (Broadwater 2012:44-47).

In a battle that has been reported countless times, the two vessels clashed on March 9, 1862 in the Battle of Hampton Roads, an epic naval duel that is still taught to schoolchildren in the U.S. and elsewhere. The battle was essentially a draw, but it dashed the South's hopes of defeating the Union blockade (Broadwater 2012:51-61). Two months later, with the Union capture of Norfolk, *Virginia* was scuttled on the bank of the Elizabeth River at Craney Island (Broadwater 2012:61). *Monitor* sank on the last day of the year off Cape Hatteras, North Carolina (Broadwater 2012:61). *Virginia* was not without success, however. The day before battling *Monitor*, *Virginia* first steamed into Hampton Roads, destroying two proud Union ships, *Cumberland* and *Congress*, along with several merchant vessels (Broadwater 2012:49-51). Naval action in Virginia caused the loss of many more ships and boats.

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Only days after Virginia seceded from the Union, Confederates seized the side-wheel steamer *George Page*, fitted it out as a gunboat and stationed it at Aquia Creek on the Potomac. Less than a month after its capture CSS *George Page* had to be burned at anchor, along with the schooner *Fairfax*. By war's end, the schooner *Martha Washington* had joined them on the bottom (Utley 2013:2-6).

During 1861, in an effort to prevent Union ships from reaching the capitol at Richmond, Confederates obstructed the James River just below Richmond with stone cribbing, pilings, and several sunken vessels, including two schooners. The river obstructions were placed between Confederate fortifications at Drewry's and Chaffin's Bluffs, which had commanding artillery positions over the river approach (Coski 1996:40-41). On May 15, 1862, Federal ships put Confederate preparations to the test. The Union flagship *Galena* approached the obstructions and anchored approximately 600 yards downriver, where it was joined by the ironclad *Monitor*. The wooden ships remained further downriver, out of range. The Union assault was quickly thwarted from the cannons on Drewry's Bluff. Firing down, they severely damaged *Galena* and left its decks awash with blood and body parts. *Monitor's* armor provided better protection, but its heavy guns were unable to elevate high enough to reach the bluff. For the time being, Richmond seemed to be safe from a naval attack (Coski 1996:43-47).

Lacking an effective navy, Confederates always sought alternative means for fighting Union ships. One of the most effective devices they devised later in the war was the "torpedo" or mine. On August 4, 1863 the Union gunboat *Commodore Barney* struck a mine in the James River, but survived. A mine sank USS *Commodore Jones* on May 6, 1864, also in the James (Coski 1996:152; Mills 1996:238). Never lacking for ingenuity, Confederate forces attacked and burned the grounded Union steamer *Kingston* in July 1864 with only a single cannon on a nearby shore and a flotilla of log canoes (Mills 1996:256-257).

In June 1864 the Union Navy established its own obstruction across the James, sinking five small vessels across Trent's Reach Bar. This obstruction not only prevented the Confederate's James River Squadron from steaming downriver to attack Union positions, but also blocked Union ships from attempting to reach Richmond

(Coski 1996:163). On the night of January 23, 1865, the James River Squadron, with the ironclads *Richmond*, *Virginia II*, and *Fredericksburg* and several smaller vessels, steamed quietly down to the Federal obstruction at Trent's Reach, hoping to break through. Their efforts were thwarted, resulting in the loss of the armed tender *Drewry* and the retreat of the Confederate fleet (Coski 1996:196-209; Mills 1996:264; Kiser 2009:48-49).

On April 3, 1865, with Richmond's fall imminent, the Confederate ironclads of the James River Squadron were moved to the obstructions at Drewry's bluff where they were set afire and abandoned. (Coski 1996:219-220; Watts 2009:42-44). This event marked the end of the Confederate Navy in Virginia.

Previous Archaeological Investigations

USS Cumberland and CSS Florida.

Lying near each other in the James River off Newport News Shipbuilding, *Cumberland* and *Florida* were located and tentatively identified in 1981. Additional surveys were conducted in 1986 and 1993 (Margolin and Townley 1991:108; Margolin 1994; James, Simmons, Hannahs, and Duff 1994; Watts 1987). Both were determined eligible for the National Register, but more data to support their identities was requested. USS *Cumberland's* remains were disturbed and purposefully looted for many years, and artifacts were sold openly in area shops. In 1990 the FBI conducted raids on several locations, confiscating objects from *Cumberland* and possibly *Florida*. The material is now under the care of the Hampton Roads Naval Museum (Margolin and Townley 1991:109)

White House Landing.

During 2005-2006 the Maritime Archaeological and Historical Society has conducted several investigations at this site on the Pamunkey River where supply vessels and barges were sunk during McClellan's Peninsula Campaign. The teams identified and mapped the remains of at least four vessels at this location (Dowdle 2006).

Drewry's Bluff/Chaffin's Bluff.

The Confederate wrecks at Drewry's and Chaffin's Bluffs have been surveyed on several occasions and an avocational archaeologist has been conducting dives at the site for several years. A 1982 Survey by the National

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Underwater and Marine Agency and Underwater Archaeological Joint Ventures located and tentatively identified the remains of the Confederate Ironclads *Fredericksburg, Virginia II*, and *Richmond*, and the steamer *Northampton* (Margolin and Townley 1991:108-109; Margolin 1994). Tidewater Atlantic Research conducted additional investigations in 1993 and 1995 identifying the casemate and deck of CSS *Richmond*, and confirming two large magnetic anomalies beneath 12-18 feet of sediment that may be the CSS *Fredericksburg* and CSS *Virginia II* (Watts 2009:42-44).

Quantico Creek

At Quantico Creek, Confederates lost the sidewheel steamer CSS *George Page* and the schooners *Fairfax* and *Martha Washington*, all burned and sunk. The *Page* may have been partially salvaged by Union forces (Utley 2013:2-6). Although this site is very close to the Potomac River, its location within the mouth of Quantico Creek places it in Virginia waters. Sites believed to be *George Page* and *Martha Washington* were located in the late 1980s by Donald Shomette, then relocated and investigated by the Institute for Maritime History beginning in 2008. It appears that two wrecks may lie close together in water less than ten feet deep. The site location matches closely to Union descriptions and sketches. Research is ongoing (Utley 2013).

Topics for Archaeological Research

1. CSS *Virginia* (ex-USS *Merrimack*). In 1986 Tidewater Atlantic Research conducted a remote sensing survey in the area where CSS *Virginia* was scuttled. Although a promising sonar target was recorded, the site was not located (Watts 1987). There should be some evidence lying in the Elizabeth River, near Craney Island, but access to the area is restricted. The recovery of significant archaeological information is unlikely, since *Virginia's* magazines exploded, casting debris into the air. Later salvage efforts removed most of the remaining hull and armor. However, there may well be surviving sections of the hull and casemate that could provide the only physical confirmation of the builder's plans for the ironclad.

2. USS *Cumberland* and CSS *Florida*. As described above, the remains of *Cumberland* and *Florida* have been surveyed several times; however, additional dives could

provide valuable new information on both ships and lead to their addition to the National Register.

3. Drewry's Bluff/Trent's Reach. The Confederate wrecks at Drewry's Bluff have been surveyed to some extent, but more work should be done, especially on the better-preserved resources outside the navigation channel. Future channel dredging will continue to erode these sites and destroy evidence of wrecks that should be eligible for historic registers. A remote-sensing survey at Trent's Reach could establish the exact position and extent of preservation of the sunken vessels employed as a Federal river blockade (Foster 1992).

4. USS *Commodore Jones*. In 1985 the National Underwater and Marine Agency and Underwater Archaeological Joint Ventures searched for the USS *Commodore Jones*, a Union gunboat sunk by a Confederate torpedo (mine) in the James River below Trent's Reach. A large magnetic anomaly was located in the area indicated for the sinking on an 1862 map, but subsequent probing did not encounter the wreck. The researchers later reported that the James River has cut through Jones Neck, isolating the wreck from the navigation channel (Margolin and Townley 1991:109). Possibly a high definition sub-bottom sonar could provide the depth and outline of the wreck which, coupled with a magnetometer survey, could provide the necessary data for estimating the amount of iron in the anomaly. In turn, that might be sufficient for confirming the identity of the wreck.

5. Quantico Creek. The three wrecks at Quantico Creek are significant enough to warrant more attention. The Institute for Maritime History has already conducted some very thorough archival and field work, but they have expressed the need for additional support for locating and mapping buried remains at the site. The *George Page* was a sidewheel steamboat, and documentation of its hull would provide new information on Chesapeake steam vessels. That, plus its role in the Civil War should be sufficient for inclusion on the historic registers.

6. White House Landing. For decades divers have explored the sunken Civil War vessels at White House Landing on the Pamunkey River, and recently at least four wrecks have been documented. However, remote sensing surveys and scientific dives may well locate additional sites and form a more complete picture of the events that occurred at this important supply location and how these vessels relate to the failed Peninsula Campaign.

Reconstruction and the New Dominion
(AD 1865–1917)

The Reconstruction Period following the Civil War was an interesting one from a maritime point of view. Changing commercial fishing and transportation needs led to the development of a series of new boat types and the area became a center for naval shipbuilding and commercial trade.

The “Second Evolution” of Bay Vessels (Figure 7.6)

By the end of the Civil War *log canoes* had been evolving for two hundred years, and could be still observed in a remarkable array of small craft, from multi-hull tobacco boats to ferries, to sailing canoes built of multiple logs. One new type dominated: a multi-log hull fitted with two masts in a “ketch” rig, with a retractable keel (centerboard) for sailing into shallow water (Burgess

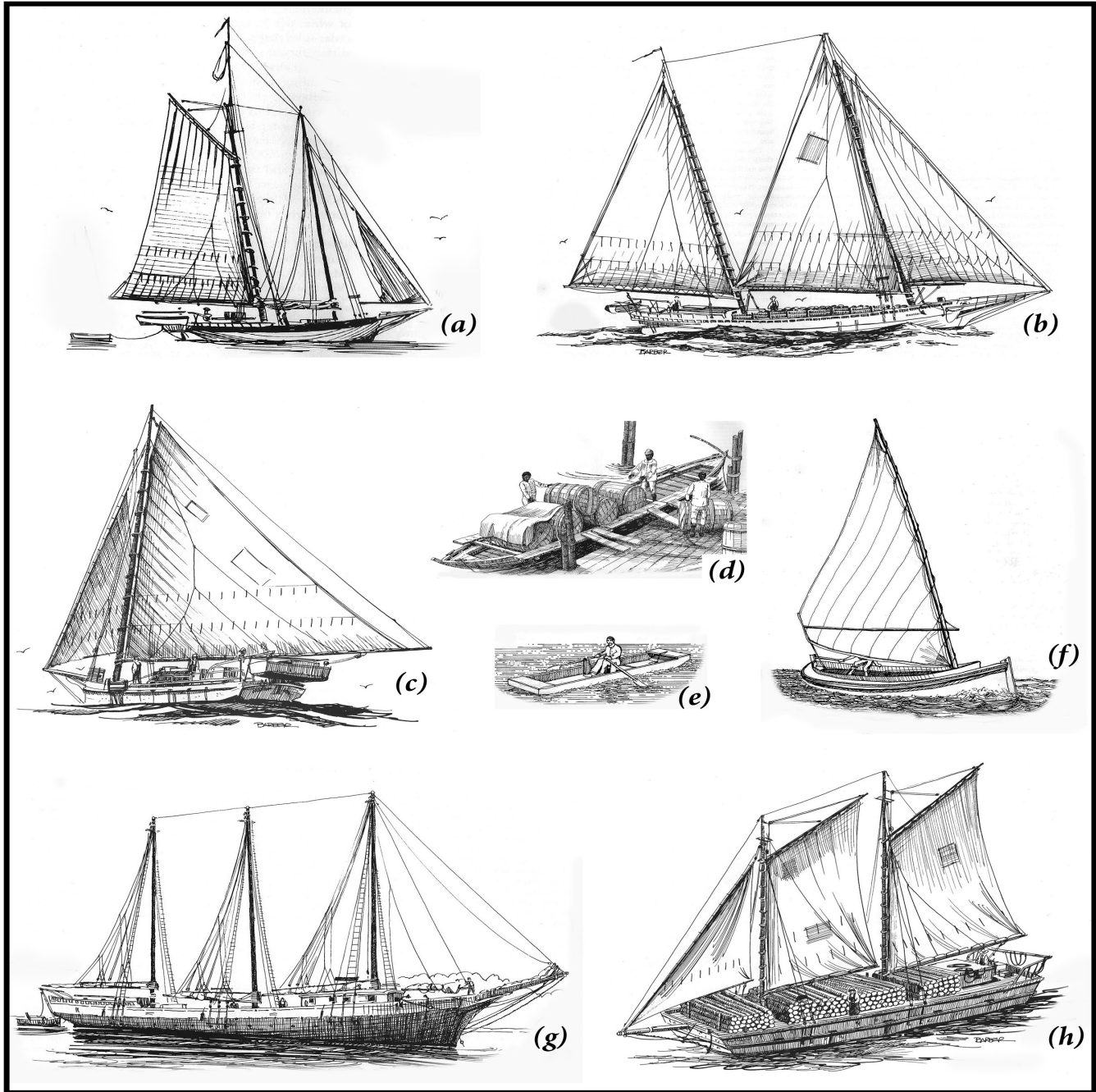


Figure 7.6. Nineteenth/Twentieth-Century Vessel Types: (a) pungy, (b) bugeye, (c) skipjack, (d) bateau, (e) punt, (f) log canoe, (g) ram, and (h) scow-schooner (All from Tilp 1982, Courtesy Chesapeake Bay Foundation).

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2005:2). Emerging early in the century, this “coasting canoe” or “brogan” became the famous *bugeye* (Figure 7.6b), about 35-40 feet long, consisting of two to five large logs carved into a flat-bottomed hull and “ketch-rigged,” that is, two masts, with fore-and-aft sails. The bugeye proved to be powerful enough to pull heavy oyster dredges, which were coming into use as a faster means of extraction than hand-operated patent tongs (Burgess 2005:13).

The *pungy* (Figure 7.6a), noted for its attractive lines, deep keel and schooner rig, was a design descended from earlier “fast” privateers. Its size ranged from 50 to 70 feet, and in the 1850s it gained in prominence over the “clipper” design because of a larger cargo capacity. By the 1880s most were built with centerboards (Burgess 2005:13).

Rams (Figure 7.6g) were long and narrow, designed for operating in canals that limited width to less than 24 feet. They were barge-like, with good cargo capacity, and were even capable of coastal voyages. They were classified as three-masted centerboard schooners (Burgess 2005:193).

Sloops were not indigenous to the Chesapeake, but they became popular as small vessels that could be utilized for a wide variety of tasks. They carried a gaff mainsail and jib (sometimes with a topsail and additional jibs) on a single mast, and were fitted with centerboards. The building of sloops nearly ceased by the end of the century, being replaced by bugeyes and skipjacks (Burgess 2005:75).

Schooners (Figure 7.6h) were the most common vessel type in the Bay for a long period of time. Unlike earlier “fast” models, late 19th century schooners were built to handle bulk cargos, particularly wood and lumber (Burgess 2005:83). Schooners carried fore-and-aft sails on two masts, and usually topsails and jibs. Burgess (2005:83) refers to schooners as the tractor-trailers of their day, before railroads replaced them for most bay transportation. As shipping needs increased, schooners began to grow larger and were fitted with as many as seven masts, the most common having three or four. The earliest recorded four-master was the William T. Hart, built in Alexandria in 1883. After 1925 these large schooners preferred to remain in the shelter of the Bay (Burgess 2005:261).

The last boat type developed in the Chesapeake was the *skipjack* (Figure 7.6c) a beautiful vessel with only

one mast and two sails. The mainsail, however, was huge and provided impressive driving power for the skipjack’s single purpose: dredging for oysters. The origin of the skipjack, as is the case with most indigenous craft, is unknown, but it probably evolved from early skiffs, plank-on-frame boats similar to those built in England. Skipjacks emerged in the late 18th century from yards on the eastern shore of Maryland and Virginia to become one of the most popular and enduring of all the Bay craft (Burgess 2005:223). Quite a few are still afloat, most in Maryland, but a noteworthy survivor is the *Ada Mae*, built in 1915 and still sailing in New Bern, North Carolina, the oldest working vessel in the state (Carolina Coastal Classrooms 2015).

From Wood to Iron and Sail to Steam

This period witnessed the conclusion of the trend in warships toward steel and steam construction. Large, steel-armored warships with breech-loading guns and larger, more complex steam machinery were the new standard. Interestingly, the U.S. Navy continued to operate “monitors”—evolved from the Civil War USS *Monitor*—until the turn of the century, and even built a new class of monitors in the 1880s (Canney 1993).

By the end of the Civil War the transfer of naval technology to commercial shipbuilding was evident. Wooden ships were rapidly being replaced by vessels with hulls made of riveted iron or steel plates. Commercial sailing craft were being rapidly supplanted by steam-powered vessels. Efficient screw propellers were replacing bulky, space-robbing paddlewheels. Steam power had become safer and more reliable, permitting packet ships to maintain regularly scheduled port calls, which led to a significant increase in passenger service (Gardiner 1993:53-58). There was one significant exception to this trend, that of the bulk cargo carriers. For that trade, large schooners dominated well into the 20th century (Tazewell 1982:108-110; Burgess 2005:261).

Hampton Roads Becomes a Major Shipbuilding Center

The Norfolk Navy Yard, which is actually located in Portsmouth, continued to receive naval contracts, mostly for repair and refit. In 1892 the yard launched America’s first battleship, the steel-hulled USS *Texas* (Burgess 1963:26; Foss 1984:48-49). Before the Norfolk

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Operating Base-Hampton Roads opened in 1917 at the site of the 1907 Jamestown Exposition, the Norfolk Navy Yard was the primary naval facility in the area (Foss 1984: 66-67).

In the 1880s railroad magnate Collis P. Huntington purchased the Chesapeake and Ohio Railroad and extended its line to Newport News, an undeveloped area, where he built coal piers and mercantile wharves. In 1886 he incorporated the facility that four years later became the Newport News Shipbuilding and Dry Dock Company. The yard's first vessel, the 180-ton steam tug, *Dorothy*, was launched on December 17 of that same year (Brown 1976:1; Tazewell 1982:104). *Dorothy's* hull has been rescued and restored, and is on display at the shipyard, but it retains little of its original fabric.

The yard's first government contract, for three gunboats, was completed in 1895. One of these, *Nashville*, fired the first shot of the Spanish-American War (Brown 1976:11). In 1898 the yard performed an amazing feat when it launched the twin 11,500-ton battleships *Kearsarge* and *Kentucky* on the same day (Brown 1976:23). This even placed the shipyard in an exclusive category—builders capable of constructing the largest warships. Newport News Shipbuilding continued to grow and to produce iron and steel hulls for naval and commercial clients. The steamship *Medina*, built at Newport News in 1914 for the Mallory Steamship Company, holds the record as “the world's oldest active passenger oceangoing ship”, having served in two world wars and remained in service until 2009. *Medina* (now named *Doulos Phos*) was 100 years old on August 22, 2014, and is still afloat in Singapore (Goossens 2015).

Naval Activities in Hampton Roads

On April 26, 1907, Hampton Roads was the scene of an impressive international naval review, staged as a feature of the Jamestown Exposition, the tri-centennial commemoration of the settlement of Jamestown. Warships from around the world fired salutes and presented an impressive spectacle. Dozens of U.S. warships participated, and President Theodore Roosevelt, aboard the presidential yacht *Mayflower*, was honored by the salutes of countless guns (Foss 1984:49). The president returned on December 6, again aboard *Mayflower*, for the departure of the “Great White Fleet” (Foss 1984:50). Less than a year later, Hampton Roads witnessed the first

step toward naval aviation when Eugene Ely successfully launched his Curtiss biplane from an improvised deck on the scout cruiser *Birmingham* (Foss 1984:51-52; Tazewell 1982:110-111).

Cotton and Coal Shipments from Hampton Roads

By the mid-1870s, Norfolk was a major cotton port, second only to New Orleans. But another commodity was about to become the major export from Hampton Roads (Tazewell 1982:101). To fuel their expanding industrialization, northern states required prodigious quantities of coal. Virginia soon became a major supplier, thanks to the development of three rail lines to deliver coal from the western fields to Hampton Roads.

The Norfolk and Western Railroad Company delivered the first carload of coal to Norfolk in 1883 (Tazewell 1982:101). At about the same time, Huntington's Chesapeake and Ohio Railway began delivering coal to Huntington's terminal in Newport News (Tazewell 1982:103-104). A third company, Virginia Railway, began operations in 1909, delivering coal to terminals at Sewells Point (Tazewell 1982:104-105). Three railways feeding the ready supply of coal from West Virginia and western Virginia to Hampton Roads ensured that this area becoming the greatest coal port in the world (Tazewell 1982:105). Initially this coal was shipped north, along the coast, by steamers or purpose-built colliers; eventually, Hampton Roads coal was shipped to destinations around the world.

Previous Archaeological Investigations

Elizabeth River Derelicts.

During 1996 and 2000 the Virginia Marine Resources Commission funded a derelict removal project in the Elizabeth River. Tidewater Atlantic Research reported that approximately 34 vessels were removed, including numerous barges and other mundane craft, but also several vessels of significance. One from the Southern Branch of the Elizabeth River proved to be the remains of the U.S. Coast Guard Cutter *Omondaga*, built in 1898 in Cleveland, Ohio, while two in Scott Creek were identified as World War I submarine chasers. Several tugboats in the Southern Branch were thought to be associated with Richmond Cedar Works in the Great Dismal Swamp, somewhere between 1868 and the 1960s (Watts 2000; Watts 2009:45).

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Virginia's Canal System.

The determined efforts of a group of historians, archaeologists, and canal enthusiasts resulted in the study and recording of more than 60 bateaux in downtown Richmond. This impressive collection of canal boats was discovered during the excavation of a deep foundation for a new building. This site was formerly the Great Basin of the James River and Kanawa Canal, the Richmond terminus for river and canal boats between 1800 and 1880 (Steffy 1988:137-138; Terrell 1991). A variety of canal boats, locks, and related structures have been located, mapped, and reported throughout the state, largely through the efforts of the Virginia Canals and Navigations Society. In northern Virginia pre-construction excavation revealed valuable information on the Alexandria Canal Tidal Lock (Shephard 1991).

Topics for Archaeological Research

Due to increased shipping during this period, there are hundreds of reported vessel losses. Examination of the DHR site files and the Virginia Shipwreck Inventory (in progress) should permit the development of high-probability survey areas offering the opportunity to learn more about traditional Bay watercraft, coastal steamers, and oceangoing ships.

1. The Schooner *Esk*. The *Esk*, a 148-ton schooner wrecked on September 7, 1888, two miles south of Parramore Beach Lifesaving Station. All seven crewmen were saved although the ship was a total loss. *Esk* is believed to have been carrying dyewood from Venezuela to Rhode Island (Pouliot and Pouliot 1986:186). The wreck has been known for decades, buried in the sand below mean low water. Suddenly in 2015 it was discovered that storms and erosion had exposed *Esk's* hull and pushed it onto the beach where it has broken in two. In late 2015 a team was being organized to document the wreck before it was destroyed.

2. Chesapeake Bay Target Ships. After the Spanish-American War, two American ships were used as targets for gunnery practice in the Chesapeake Bay. In 1909 the ironclad ram *Katahdin* was decommissioned and intentionally sunk at Rappahannock Spit in a naval gunnery exercise (NHHC 2015a). Two years later USS *Texas*, the nation's first battleship, built at Norfolk Navy Yard, was decommissioned, renamed *San Marcos*, and sunk by naval gunfire in Tangier Sound (NHHC 2015b;

Burgess 1963:26-29). These vessels should be located and investigated to determine if there is evidence of naval gunnery damage and salvage. *Texas*, if found, should be nominated to the historic registers.

Modern Era (AD 1917–1945)

World War I Boom in Hampton Roads

World War I created a shipbuilding boom in the Old Dominion. Both the Norfolk Naval Shipyard and Newport News Shipbuilding had to expand operations to keep pace with orders for warships and transports (Butt 1951:9; Tazewell 1982:117-118). A dire shortage of merchant vessels to serve as auxiliary ships prompted the U.S. Shipping Board in 1917 to inaugurate a wooden-hulled shipbuilding program, and the Newcomb Shipbuilding and Dry Dock Company began constructing wooden ships at a new facility in Hampton. These ships were still under construction when the armistice was signed, so only a few were completed (Burgess 1963:166-169).

While the United States remained neutral during the early years of World War I, exports from Norfolk and Newport News to the Allies nearly quadrupled (Tazewell 1982:116-118). Naval ships and transports were constantly moving in and out of the area and the Naval Operating Base in Norfolk would soon become the world's largest naval base. This boom was accompanied by double-digit inflation and followed in 1929 by the Great Depression (Tazewell 1982:120-121).

Between World Wars

The steamship industry began to decline rapidly after World War I, victim of the widespread and increasing use of railroads, cars, trucks, and ships powered by diesel engines (Burgess 1963:73-74; Brewington 1956:44). After 1929, Chesapeake steamship companies began to fail, one by one, until only the Old Bay Line remained. Railroads, too, suffered. But they had become too indispensable to be allowed to disappear (Tazewell 1982:121).

As steamship transportation waned, countless boats, piers, and other facilities fell into disuse and disrepair. The remnants of some of these facilities can still be seen along Virginia's waterways, and the remains of abandoned steamboats should still lie, wholly or partially submerged, in Virginia waters. Only the ferries, which

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ironically remained an integral link for the Bay's growing road system, were to remain in demand (Brewington 1956:58).

Fortunately, the U.S. Navy still operated its facilities in Hampton Roads and maintained a constant, if reduced, level of shipbuilding. In 1921 the Norfolk Navy Yard converted the collier *Jupiter* into the world's first aircraft carrier, USS *Langley* (CV-1), commissioned the following year (Tazewell 1982:122; Foss 1984:80). Newport News Shipbuilding won a Navy contract in 1930 for the USS *Ranger*, the first purpose-built aircraft carrier, and another contract in 1933 for two additional carriers (Tazewell 1982:122; Foss 1984:81). This slow but steady pace of shipbuilding began to speed up with the anticipation of another world conflict.

There was considerable coastal growth and development during this period—a trend that has accelerated in recent years. Erosion is destroying evidence of some of that growth, especially on the Eastern Shore, where Smith Island structures have been washed into the sea. Of special interest to the author is the erosion and submergence of Broadwater Island on the Eastern Shore (Anon. 1920).

World War II in Hampton Roads

Hampton Roads suffered in 1931 when Japanese expansionism prompted President Hoover to move most of the major warships of the Atlantic Fleet to the West Coast. Soon after his inauguration in 1933 President Franklin Roosevelt used funds from the National Industrial Recovery Act to increase funds for naval shipbuilding and modernization, a move that helped Virginia's shipyards maintain their work forces and capabilities (Foss 1984:83). By the time the U.S. entered World War II, Hampton Roads was already fully engaged in wartime efforts, shipping supplies to England and ramping up its warship construction.

Except for relatively minor incidents Virginia was spared from war damage during both world wars. No shipwrecks from this period are known to lie in Virginia waters.

Previous Archaeological Investigations

"Billy Mitchell Wrecks."

Ten wrecks lying in deep water off the Virginia coast, including the World War I battleships *SMS Ostfriesland*,

USS *New Jersey* and USS *Virginia*, are the result of bombing and shellfire tests conducted by Brigadier General Billy Mitchell in 1921 (Morris 1979:95; Tazewell 1982:118). These wrecks have been located and dived by "technical" divers using special gas mixes (Darby 2015). The battleships lie upside down, making it difficult to inspect them. Several of the wrecks have also been investigated by NOAA maritime archaeologists using sonar and remotely operated vehicles (ROVs). They lie outside the territorial waters of the Commonwealth.

Submarine Warfare

Virginia's coastal waters were part of World War II's "Torpedo Alley," which extended down the coast of North Carolina where German U-Boats regularly cruised in search of merchant ships to sink. NOAA and Virginia maritime archaeologists have examined some of these wrecks, including the British minesweeper *Kingston Ceylonite*, which struck a mine laid by a U-Boat in 1942 (Gentile 1992:85-87).

Topics for Archaeological Research

1. "Billy Mitchell Wrecks." Even though these wrecks lie beyond Virginia's jurisdiction, they represent an interesting and pivotal event in the emergence of naval air power that forever altered the way wars were fought at sea. They may never be explored by archaeological divers, but could be examined in more detail using submersibles and ROVs. It might be possible for Virginia to partner with NOAA on future explorations of these wrecks.

2. Submarine Warfare. Numerous freighters, tankers and transports were sunk by German submarine action off Virginia during World War II, and the locations of their wreckage has been determined, primarily due to the efforts of recreational divers. Some lie within Virginia's waters, while others are directly offshore of Virginia. NOAA, through the *Monitor* National Marine Sanctuary, with headquarters at The Mariners' Museum in Newport News, is currently conducting a "Battle of the Atlantic" research program off North Carolina and has expressed interest in expanding the research further north to include the relevant wrecks off Virginia's coast. This is another partnership opportunity.

3. Commerce and Shipping. Literally hundreds of boats and ships have wrecked in Virginia waters in modern times, and the remains of many of them lie along the shore

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or in deeper waters of the bay and ocean. Many of these wrecks have been located and explored by recreational divers and some offer useful research opportunities.

Summary and Recommendations

Current Status of Maritime Archaeology in Virginia

Hopefully it is clear that Virginia's maritime cultural resources are significant and that through archaeology those resources have contributed to a better understanding of Virginia history. Much more can be accomplished, however, if the Virginia Department of Historic Resources (VDHR) can take advantage of partnership opportunities for maritime archaeology. In 1985, when VDHR employed an underwater archaeologist, Virginia was identified as having one of the five best underwater archaeology programs in the U.S. (Giesecke 1985). Virginia has fallen behind since 1990 when the underwater archaeology program was abolished, and no maritime archaeologist is currently employed at VDHR.

To put the situation in better perspective one must understand the very tenuous nature of Virginia's underwater program back in the 1970s and 1980s. Because funding was not available for an underwater specialist, the author was hired through federal grant funding for an investigation of the sunken British ships near Yorktown. VDHR's strategy was to use grant funds to get the program up and running, then allocate state funds for one or more permanent positions. Once grant funds were expended (after years of federal support) the underwater program was abolished in 1989 by then-governor Douglas Wilder.

Today, most of America's coastal and Great Lakes states employ maritime archaeologists to protect and manage their submerged cultural resources. Some of the state programs are well developed and active, while others are attempting to meet minimum requirements in an unfriendly economic climate. Given that it may be years before VDHR is able to hire a maritime archaeologist, the question becomes: what can be done to improve the situation using currently available resources? Fortunately, current VDHR management has demonstrated concern about submerged resources by awarding a number of small grants from the VDHR Threatened Sites Program for underwater investigations, and through a concerted effort by existing staff to protect and manage submerged cultural resources.

Significant Threats to Virginia's Maritime Resources

The past half-century has seen new attention paid to the protection and management of submerged cultural resources. Virginia's Underwater Historic Property Act (§ 10.1-2214) became law in July 1976; the U.S. Congress passed the Abandoned Shipwreck Act (U.S. Congress 1988, Public Law 100-298) and the Sunken Military Craft Act (U.S. Congress 2004, 10 U.S.C. § 113 *et seq.*), specifically directed at protection and management of shipwrecks. Internationally, the UNESCO Convention on the Protection of the Underwater Cultural Heritage entered into force in January 2009, after ratification by twenty nations (UNESCO 2001; 2016). These and other laws have made it easier for cultural resource managers to protect their submerged resources.

In spite of these new laws, however, Virginia's submerged resources are still at risk. Although the UNESCO Convention prohibits commercial exploitation of underwater cultural heritage and includes annexed rules of best practices, it has not been ratified by most industrialized nations, and may never be ratified by the United States. As for the Virginia Underwater Historic Property Law, its wording is vague and leaves significant loopholes that make it relatively ineffective. Currently, the Virginia Marine Resources Commission controls access to submerged cultural resources ("underwater historic property") and may issue permits to divers. An effort is currently underway to revise the permit guidelines, but enforcement is another matter. Divers have been recovering artifacts from Virginia shipwrecks since the mid 20th century, when scuba gear became available and no funds are available for enforcement of permitted activities.

There is a constant threat to resources from human activities (construction, dredging, bottom fishing, diving, etc.) as well as natural activities (storms, waves, currents, erosion). A relatively new—but very serious—threat comes from global climate change. There are many scientific reports predicting that sea levels will continue to rise, and at an accelerating rate, resulting in severe erosion and inundation of coastal areas (Lowery 2003). Some areas of Tidewater Virginia are predicted to see higher-than-average rises (Dietrich 2015). Bernd-Cohen and Gordon (1999:187-217) estimated that 26% of Virginia's shoreline is "critically eroding." Rising sea levels are altering natural processes, including erosion, submergence, subsidence, currents and other factors

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that will increasingly affect maritime resources along the shoreline and submerged sites as well.

In summary, Virginia's maritime resources are increasingly being threatened and the state needs to take these threats into account in its long-range planning to counter human and natural threats. One of the main ways VDHR can take action is through partnerships.

Recommendations for Partnerships and Assistance for Virginia's Maritime Heritage

1. Partnerships with Maritime Archaeology Programs in Neighboring States. During informal discussions with the author, both Maryland's and North Carolina's maritime archaeology staffs have expressed strong interest in advising and assisting Virginia with management, protection, and research concerning Virginia's maritime resources. Both programs are well-developed and actively conducting surveys and research. VDHR could reach out to these programs, possibly proposing an informal meeting in Richmond to discuss opportunities for cooperation and collaboration.

2. Partnerships with Maritime Archaeology Programs in the Federal Government. The past couple of decades have witnessed a major increase in the number of maritime archaeologists and historians employed by federal agencies. Maritime professionals now work for the National Oceanic and Atmospheric Administration (NOAA, Maritime Heritage Program, Office of National Marine Sanctuaries), National Park Service (NPS, Maritime Heritage Program and Submerged Resources Center), Bureau of Ocean Energy Management (BOEM, organized by regional offices), U.S. Army Corps of Engineers (COE, organized by regional offices), and others. NOAA and BOEM have already established partnerships for surveying and assessing submerged cultural resources, including the "Battle of the Atlantic Project." There should be partnership opportunities with BOEM, especially for offshore oil and wind farm surveys. NOAA's *Monitor* National Marine Sanctuary, located at The Mariners' Museum in Newport News, has already offered assistance with maritime surveys. Other possibilities include Fort Monroe National Monument, COE Norfolk District, and military installations, especially Mobile Diving and Salvage Unit Two, Little Creek.

3. Partnerships with State and Private Organizations. VDHR already coordinates closely with the Council of

Virginia Archaeologists (COVA) and the Archaeological Society of Virginia (ASV). Both organizations would like to see more attention paid to maritime archaeology, and may be willing to help. The Virginia Institute of Marine Sciences (VIMS), Gloucester Point, has an active program of marine surveys and diving and they provided essential support to VDHR during the Yorktown Shipwreck Archaeological Project. Universities could provide skilled students to serve as interns or to develop research papers and theses involving Virginia's maritime heritage. The College of William and Mary, Christopher Newport University, and Old Dominion University are nearby, and the Maritime History and Archaeology Program at East Carolina University is always looking for good projects for student research.

The Mariners' Museum, Newport News, has an impressive maritime library with extensive records on Virginia ships and shipwrecks. The Watermen's Museum, Yorktown, is already partnering with state and federal agencies for cultural resource surveys in the York River. At the northern end of the Chesapeake Bay there are two avocational archaeology organizations (Maritime Archaeological and Historical Society and the Institute of Maritime History) that could provide immense assistance in Virginia. The Watermen's Museum (2015) is also heading up a grassroots effort to nominate a portion of the York River containing 18th-century shipwrecks as a National Marine Sanctuary.

4. Partnerships with Virginia's Recreational Diving Community. Virginia's recreational scuba divers represent possibly the most knowledgeable and underutilized resource in the effort to study and protect Virginia's maritime heritage. Week in and week out, divers around the state are venturing into state waters, often to search for or dive on shipwrecks. In the late '80's VDHR's maritime archaeologists held two weekend workshops—one at VIMS, the other in Virginia Beach—to inform recreational divers of opportunities for education and participation in shipwreck investigations. Nearly one hundred divers attended the workshops and many left contact information and offers to participate. Unfortunately, Virginia's underwater archaeology program was abolished shortly afterwards, and the program abruptly ceased.

One attractive option for engaging recreational divers would be to follow the same path as has worked so well for avocational archaeologists on land. The ASV has already

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expressed interest in creating an underwater archaeology chapter to provide education and coordination for divers interested in proper survey, excavation, and protection methods. With VDHR coordination, this chapter could be created with little effort, but would require volunteers to develop and conduct training and provide research opportunities.

Unlike the agencies and organizations discussed above, Virginia's divers are not organized by state or region; they must be approached through dive clubs and retail shops. A good way to begin would be to visit dive shops, give talks at dive club meetings and get to know the key persons. If responses are encouraging, consideration could be given to holding workshops, as was done in the late '80s.

Available Resources

There are many documents available to assist Virginia in establishing a maritime heritage program. NOAA, NPS, and UNESCO provide a wealth of information on their websites; Spirek and Scott-Ireton (2003) edited a publication on submerged cultural resource management that contains case studies and recommendations for state programs; and the Nautical Archaeology Society (NAS) published a book (2009) that presents details on principals and practice for avocational maritime archaeologists. NAS also developed a very high quality, multi-tiered training program that is in use around the world. NOAA's Maritime Heritage Program partners with NAS to provide training in the U.S., and courses could be taught in Virginia.

Documents specific to a Virginia maritime heritage program include several publications by the author (Broadwater 1985a; 1987; 1996), a detailed assessment, with recommendations, prepared by Blanton and

Margolin (1994) and a bibliography of Virginia underwater archaeological research material (Walker 1993). V-CRIS, Virginia's excellent online, interactive site catalog, contains 643 underwater sites (including 95 shipwrecks, 5 canoes, 19 canal resources, and 271 prehistoric sites). A project in progress, funded by the VDHR Threatened Sites Program, is the digitization of approximately 2000 shipwreck reports generated about 1980 but stored away when the underwater program was abolished.

Implementing and Coordinating Partnership Programs

While many of the above partnerships and programs could be undertaken almost immediately, they will obviously require VDHR staff time for implementation and coordination. Given current staff workloads, this will not be easy to implement. This is where concerned VDHR staff and supporters must seek workable solutions, possibly involving assistance from interns and volunteers.

Archaeologists and historians in the state can contribute by publishing more information on topics related to Virginia's maritime heritage. One ready outlet is ASV's Quarterly Bulletin, and there are good outreach opportunities to be developed on existing educational websites.

Implementation of a VDHR maritime heritage program will not be easy, but it is hoped that this chapter has made a strong case for the importance of doing so. Among the above recommendations, there are almost certainly a few that can develop into a support network that will allow VDHR to take the initial steps toward developing a more robust capability for protecting and managing Virginia's important submerged cultural resources.

The Authors

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