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The Green Spring Plantation Greenhouse/Orangery And the Probable Evolution of the Domestic Area Landscape

A Research Report prepared by M. Kent Brinkley

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Colonial National Historical Park is pleased to present to you the attached report:

The Green Spring Plantation Greenhouse/Orangery and the Probable Evolution of the Domestic Area Landscape.

This study not only provides a thorough and sound analysis of the orangery but places it in context with the rest of the landscape and similar structures built during the 18th century.

Karen G. Rehm

Attachment

The Green Spring Plantation Greenhouse/Orangery and the Probable Evolution of the Domestic Area Landscape

A Research Report prepared by
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for
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National Park Service
United States Department of the Interior

[Under the terms of
Cooperative Agreement CA.4000-2-1017]

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Preface

This report has been prepared at the request of the National Park Service (NPS) to research the landscape context for the so-called "nursery," a presumed greenhouse/orangery ruin found at the Green Spring plantation site, located in James City County, Virginia. This undeveloped site is a unit of the Colonial National Historical Park.

While this presumed orangery structure has long reputed to have been a feature dating to the period of the ownership of Sir William Berkeley (1606–77) in the second and third quarters of the seventeenth century, archaeological investigations conducted in 2001 have determined that this building was, in fact, of much later, second quarter of the eighteenth-century construction, and that it could not have been built after circa 1740. Whether the structure actually functioned as a greenhouse and/or orangery is a key question that has not been firmly proven to date but will be addressed in detail in this report.

This investigation is intended to provide the NPS with additional information about the design and historical uses of greenhouses/orangeries within the colonial Chesapeake region, the probable uses of the ruined Green Spring structure in question, as well as landscape contextual information about the original Green Spring house and site and how they might have physically evolved over time. Working hypotheses about the evolution of the Green Spring landscape are offered to provide additional lines of inquiry for further examination by scholars and archaeologists. The primary intent of this project is to help focus future archaeological investigations of the site. It is hoped that these ongoing site investigations may better inform further site research, cultural resource documentation and management, and, ultimately, future public interpretive programs at the Green Spring site.

Executive Summary

This document is a study report of the findings and landscape context for the presumed greenhouse/orangery ruins found at the Green Spring plantation site, located in James City County, Virginia. This currently undeveloped site is a unit of the Colonial National Historical Park, National Park Service, United States Department of the Interior. This study of the landscape issues relating to this ruined structure has been completed under the auspices of an existing Cooperative Agreement No. CA4000-2-1017, drafted by and between the United States Department of the Interior, National Park Service (NPS), and the Colonial Williamsburg Foundation (CWF). A supplemental agreement, written specifically for this research project, has been appended to the former.

This report summarizes research conducted mainly during the winter of 2001–02, the spring and summer of 2002, and the spring of 2003 concerning the site and greenhouse/orangery structure, now a ruin, located at the Green Spring plantation historic site. For the scholarly researcher or cultural historian who attempts to discern what the original Green Spring plantation must have been like, the task becomes difficult because: 1. Gov. Sir William Berkeley, its creator, was a curious "renaissance" man and innovator who was quite determined to prove that Virginia's agricultural economy could be diversified; 2. For several generations, Green Spring was home to several of the wealthiest men in the Virginia colony of their day and, thus, was not fully typical of other mid-seventeenth- to mid-eighteenth-century Virginia plantations; 3. The original Green Spring landscape, in many ways, might well have been a trend-setting idealization (if not an actual realization) of a typical English country estate transplanted to the Virginia colony; 4. Too few physical traces of that original landscape have been revealed to date by archaeological excavation to derive a sense of how that domestic and agricultural landscape was spatially ordered

and arranged. Only the ruins of two structures remain on the site today: the Springhouse foundations and the walls of the so-called "Jail," actually a former storage barn. Both of these date from the eighteenth (vs. seventeenth) century.

For all of these considerations, however, Berkeley's Green Spring may have been the first plantation in Virginia to anticipate later, more common English ideas of incorporating views of the "borrowed" landscape beyond the bounds of the plantation itself. With a significant degree of agricultural experimentation having been documented as taking place during Berkeley's ownership, it is certainly plausible that Sir William may have been equally adventurous in laying out his prototypical grounds and gardens at Green Spring, which were probably based upon Stuart garden design principles of geometric regularity that he had seen and known in England before he emigrated to Virginia in 1642.

During the first years of Green Spring's existence (1643–50), bachelor Governor Berkeley was occupied with building a house (in circa 1645) oriented to and facing a main road to the west, in what was then the wilderness of James City County. Although the bulk of his time during this period was taken up with matters of state, he still was able to focus some of his attention to planting more than 1,500 fruit trees. Also, during this period following the completion of the first version of the original manor house, he probably completed at least basic, rudimentary fencing enclosures to subdivide the Green Spring landscape into functional use areas. Berkeley married for the first time circa 1650, and the coming of a new mistress to the plantation ostensibly would have driven other physical changes to the house and surrounding landscape to reflect the governor's new status and an increasing sense of permanence and stability to what had previously been a well-to-do, but probably much simpler, bachelor's plantation.

The grounds immediately surrounding the house would have been laid out in accordance with earlier English design conventions typical of Stuart- or Caroline-era gardening. Aside from being completely enclosed by a surrounding fence or brick wall to form a huge square or rectangle, with the house at its center, the precinct enclosure probably would have been further subdivided into smaller spaces by other fences or walls. One or more of the areas inside this enclosure would have been set aside as one or more service areas, possibly organized in a linear or L-shaped arrangement, with an array of the usual outbuildings located in or adjacent to this space: a detached kitchen, a laundry, a smokehouse, a dairy, a spring house, a cider press, a wood storage shed, a large brick stable to house some seventy-five horses, storage barns for grain, tobacco houses, privies, etc.

The remainder of this enclosure would have been further subdivided around the house itself, following Hartlibian geometrical design principles, with one or more spaces serving as garden areas. One of these spaces probably would have served as the pleasure garden, another as the kitchen garden, perhaps another as a fruit garden. At the rear or east side of the main enclosure, the rough earthwork that still survives could well have been a raised terrace that would have served as a backdrop or visual terminus for part of the scheme when seen from the house. It would also have served as a viewing platform overlooking the house and gardens within the composition and the surrounding orchards and fields without.

Concurrently, Berkeley would have acquired the services of the most skilled English craftspeople then available to serve him as indentured servants, including trained gardeners. This fact is evidenced by the wide array of material goods and agricultural commodities, including orange trees and wines that were produced on the plantation over the next few decades. This support staff of English indentured servants living on the plantation would have ostensibly created a much different social landscape setting at Green Spring in its earlier years than what ultimately evolved during the later years of the seventeenth century, when the labor system of white English indentured servants was gradually supplanted by black African slaves.

Due to its prominence as a model economic enterprise and the home of Virginia's governor, Green Spring during its Berkeley period probably always retained a certain number of skilled white indentured servants as a part of the household staff, as well as in the key labor positions on the plantation due to their need to be filled by skilled craftsmen. Yet, at some point between about 1680 and 1695, the years of Philip Ludwell I's ownership, the heavy labor force for most domestic and agricultural chores probably shifted over to black slave crews, working at both the home quarter and on other, more dispersed, quarters of the then roughly 2,000-acre plantation.

This social and economic change in the composition of the Green Spring labor force likely had a physical effect on certain ways the Green Spring landscape had previously been ordered and partitioned. Following the social and architectural conventions of those times, there were probably increasing distinctions and physical barriers placed between what were then deemed to be public spaces or areas open to family, friends, and visitors, and those private and more functional spaces intended for access and use only by family members, servants, and slaves.

Sometime during the third quarter of the seventeenth century, the Green Spring mansion house was probably expanded to an enormous size. This event might have occurred upon Sir William Berkeley's second marriage in 1670, or it would have happened not long after Ludwell I's second marriage to Berkeley's widow, Frances Culpeper Stephens Berkeley, in 1680. Regardless of when this was done, a huge western wing was added to the original (but also incrementally expanded) manor house. At this point, a major shift in the entire orientation of the house and the design of the site from west to south appears to have occurred. The new mansion addition faced to the south-southeast toward Jamestown. A new entrance road into the site extended across cleared fields and low, marshy ground and connected with the old Jamestown Road at The Maine. The new house was placed to take full advantage of views, optics, and perspective in a way that perhaps no other house in Virginia had yet done. As visual evidence included on a 1683 map indicates, the enlarged arcaded Green Spring house became even more of a dominant visual element when seen from afar. Although it surely must have been awe inspiring by the standards of its day in its earlier configuration, by 1685 Green Spring had apparently become the most famous, the finest, and the most notable private house in the entire seventeenth-century Virginia colony.

At some point during the long ownership of the Ludwell-Lee families (more specifically, between the years 1680 and 1803), most of the old manor house was torn down. (The actual configuration of what was retained from the old manor house has yet to be determined.) The best candidate among the owners to have effected this removal is Philip Ludwell II. He was the first of that family to live at Green Spring, and the likelihood is that this demolition occurred sometime after he inherited the property from his father (circa 1695–1700). This renovation then allowed the building of rectilinear brick walls to create the enclosed forecourt with a bowling green on the top of the hillside and with new pleasure and kitchen gardens being planted on the lower enclosed terrace level below. Both gardens were eventually separated by a collection of new outbuildings (probably built later by Philip Ludwell III sometime before 1740), all set within a brick-walled enclosure and which flanked the formal carriage drive entering that space from the south. Among these building is the presumed greenhouse/orangery structure located to the northwest of this lower courtyard space. Long thought to have been an architectural feature related to Sir William Berkeley, it is now known via recent archaeological excavations that it was built in the second quarter of the eighteenth century, and certainly was not built any later than circa 1740.

The continuation of the cultivation of orange trees, along with other fruit trees being grown at Green Spring since Governor Berkeley's day, is verified by primary document

sources dating from 1751 and 1778. These are the last known references that make specific mention of specialized gardening or other related horticultural activities taking place at Green Spring during the colonial period. Much of the presumption about the ruined Green Spring structure's probable use is based upon Louis Caywood's 1954–55 archaeological excavation of the presumed greenhouse/orangery structure, which revealed a square, cast-iron plate on the floor of the fifteen-foot wide by forty-five-foot long structure that would have likely served as a platform for a cast-iron warming stove to heat this building. Although not as large as the other known, surviving, or ruined eighteenth-century greenhouses/orangeries in the Chesapeake region, an old (circa 1897) photograph of the Green Spring structure's ruins shows that enough masonry was then still standing to suggest that this building originally was, in fact, a greenhouse or orangery. It contained a large room with probable glazed triple sashes in the masonry openings facing to the south.

The large room was separated by an internal brick wall to form a smaller room located at and accessed by a door in the structure's west end. It may well have been a later addition. This smaller room likely served either as storage space for flowerpots and tubs or for the storage of garden tools, or both. It also could have employed a firebox as a heating source to replace the earlier stove-type heating source. The height of the still-standing masonry in the 1897 photo strongly suggests that the structure originally had a solid, A-frame, or hipped, pitched roof of either wood or slate, a detail that would be consistent with the construction of other Chesapeake-region greenhouse/orangery structures of the 1740s.

Comparative analysis of the Green Spring ruins with other surviving greenhouses or greenhouse ruins in the colonial Chesapeake, coupled with an anthropological inquiry into the social and cultural meanings such structures represented by their presence in the eighteenth-century plantation landscape, explains the significance of the Green Spring structure as reflecting the aspirations of the builder, either Philip Ludwell II or his son, Philip III. This avenue of scholarly enquiry, along with a general review of the probable presence and arrangement of outbuildings, gardens, and other agricultural components of the long-lost plantation landscape, helps to establish a contextual basis or framework that one hopes will lead to a better understanding of the importance and historical significance of the several Green Spring mansion houses.

One of the central purposes of this study, aside from the most obvious focus on the ruins of one discrete greenhouse structure, has been to look at that structure in a broader context of *how* and *why* it was placed as it was in the Green Spring landscape. To this end, the author has seen fit to include an overview of the site's history and its various owners from 1643 until 1862 in Chapter One and to briefly discuss in that chapter and in Chapter Two the effects of Bacon's Rebellion, the Battle of Green Spring Farm in the American Revolution, and the Civil War Peninsula Campaign on the plantation and its domestic landscape. These were not only major historical events in their own right, but their direct impact upon Green Spring's buildings and landscape was significant. These important items needed to be included in this report.

Establishing a probable, chronological, landscape developmental context as a part of this research inquiry on the supposed greenhouse/orangery ruins is also essential to provide further clues to help direct future archaeological investigation of the Green Spring site and to enable the National Park Service to develop an interpretive plan to explain how the site changed and evolved over the course of more than a century and a half.

Sources and Sites Examined and Research Methodology Used

This report summarizes what is either known or can be inferred from scholarly analysis about the surviving ruins of the so-called nursery, greenhouse, or orangery structure located at the Green Spring historic site of the Colonial National Historical Park in James City County, Virginia. It is long supposed to have been built at Green Spring by early Virginia governor Sir William Berkeley (circa 1603/5–77), who cultivated oranges and, thus, might have had a greenhouse/orangery there. Recent archaeological excavations completed between 2000 and 2002 have determined that this ruined structure actually dates to a much later period (circa 1735–40) and later property owner, Philip Ludwell III (1716–67).

In undertaking the specific study of this ruined structure at Green Spring, the author was charged with determining if this identification of the structure's purpose is likely, pending a more complete archaeological examination of the structure. The author was also asked to examine how the structure was used and to suggest additional questions or areas to explore to help guide future archaeological efforts.

In conducting this study, the author consulted a number of primary and secondary resources to understand how and why such buildings were originally used in early Virginia. In addition, the typical cultivation methods used in the seventeenth and eighteenth centuries in raising citrus trees, specifically oranges, were examined to understand the role that such structures played in making citrus cultivation possible in a colder climate such as Virginia's.

What we know about the remaining Green Spring ruins has also been compared in this study with other surviving or ruined colonial-era greenhouse/orangery structures in the Chesapeake region. As a part of this investigation, a review of the available scholarship concerning the property's ownership by Sir William Berkeley and the Ludwell family has been surveyed for specific references to a fruit/citrus culture at Green Spring. This review includes a brief examination of other forms of agricultural and horticultural experimentation at Green Spring, from its earliest days in the mid-1640s until at least the third quarter of the eighteenth century. Significant information came from the Ludwell-Lee papers in the Virginia Historical Society.

Aside from this central focus, the author has deemed it important to step back from a narrow view of the ruins of one structure and pursue a much broader scholarly inquiry. This expanded picture may help to unlock the riddle of how, why, where, and when the Green Spring manor houses evolved and how changes over time influenced the organization of the surrounding landscape and, thus, the greenhouse's role within it.

To better understand how and why the so-called nursery, greenhouse, or orangery structure was important to the horticultural production of the Green Spring plantation, one needs a better contextual understanding of the larger domestic landscape and how it evolved. The structure can then be placed in its proper chronological and functional perspectives.

Time limitations required that this study focus mainly (but certainly not exclusively) on the documentary information available in printed, secondary sources. The author is especially indebted to the exhaustive research efforts of local historian Martha W. McCartney. Ms. McCartney's 1998 report of archival research for the Colonial National Historical Park, National Park Service, titled *The History of Green Spring Plantation,* has proven to be an invaluable, site-specific resource, which the author used extensively and repeatedly to inform and complete this landscape-focused research report.

To provide a broader context concerning the Green Spring landscape, the author consulted a number of primary resources, including historical maps showing changes to

the network of surrounding roads that served the plantation. These changes influenced the location of access points to and from the plantation and their changes over time. In this connection, a number of aerial photographs and contemporary GIS maps showed the relationship and location of former roads and other known archaeological features. They provided clues to layouts, site orientation, and positional relationships on the site that are invaluable to this study.

The special collections at a number of regional research libraries, including the John D. Rockefeller, Jr. Library of the Colonial Williamsburg Foundation, the Earl Gregg Swem Library of the College of William and Mary, and research library collections at the Virginia Historical Society and Library of Virginia, were mined for a considerable number of maps, portrait images, and other photographs that have been used to illustrate this report.

Mr. Dean Norton, horticulturist at George Washington's Mount Vernon, was most gracious in lending the author a number of articles, photographs, and other related materials that he has collected on eighteenth-century Chesapeake greenhouses.

The examination of early insurance policies from the Mutual Assurance Society of Virginia collections on microfilm at the Library of Virginia, both for early nineteenth-century Green Spring as well as several other Virginia plantation sites, has been helpful in determining specific on-site conditions, including specific building dimensions, numbers of outbuildings, relative values, and positional relationships between structures (including greenhouses).

The search for and examination of a few surviving late nineteenth-century photographs showing buildings and ruins that were then standing on the Green Spring site have also been helpful. The surviving circa 1897 photograph of the then-standing ruins of the so-called nursery structure provided the most complete impression we have today of the probable architectural character of the original structure. That one photograph gives us the most complete visual evidence of that former building. Such detail is impossible to see today when one views the remaining portions of ruins of the same structure. Some photographs thought to date from the same general period show other structures that were then standing on the site, virtually all of which have long since disappeared.

Another avenue of inquiry in taking a larger view of the overall development of the Green Spring home quarter landscape has been to review scholarship in the more generalized field of English garden history. Examining the precedents for garden design layout conventions and site development practices in Stuart and Caroline England has been deemed important for gaining a better understanding of probable influences on Sir William Berkeley. These designs provide clues to the layout of the earliest version(s) of the Green Spring plantation manor house and landscape, from their original development about 1645 until the apparent expansion and reorientation of the manor house from west to south around 1670 to 1680. The author contends that this admittedly circumstantial evidence, when coupled with more definitive, site-specific archaeological evidence found at Green Spring, suggests the earliest version of the probable layout of early Green Spring manor house and its gardens.

An examination of surviving visual evidence of English estate landscapes built before 1640 has also provided important data on the stylistic design conventions used in England in ordering manor house landscapes of that period. This points to the possible degree to which the early Green Spring landscape might have emulated those models. This information has also been compared to surviving Green Spring archaeological evidence to advance a working hypothesis on how the site was originally laid out. Although many questions remain concerning the specific nature of this landscape and the site's subsequent evolution, such hypotheses may help direct future archaeological excavations. One hopes that more conclusive physical evidence remains in the ground, which would serve to shed more specific light on how, where, and when such physical landscape changes occurred over time.

Another avenue of inquiry, although less definitive in determining specifically how and where it would have influenced actual evolutionary changes to the Green Spring landscape, examined recent scholarly literature on early Virginia for insight about the use of indentured servants as a source of labor in the seventeenth-century Virginia colony. Like other Virginia plantations of its era, Green Spring's physical layout and site arrangements were influenced by the gradual changeover from the use of white indentured servants to that of black slaves. Such a major shift in the cultural makeup of the labor force had to have affected the social and work spaces on the plantation and altered day-to-day interactions with the white overseer and the family members of the owner.

Without a much more comprehensive archaeological examination of the Green Spring site, it is difficult to quantify in discrete, site-specific, physical terms the ways that such change would have altered the ways the plantation's landscape had previously been partitioned and ordered. This limitation aside, such a change in the social and cultural landscapes of the Virginia colony also probably had at least a subtle, if not an always visible, impact on how the Green Spring landscape might have been altered in the last decade or so of the seventeenth century. As yet another catalyst for change in the Green Spring working landscape, its possible effects on the site's overall evolution cannot be altogether dismissed, but, since it is an ancillary line of scholarly inquiry, it was deemed to be outside the scope of this more particular study.

One more thread of inquiry briefly considered and examined (but not pursued) was the question of how illness and disease morbidity and mortality in the colonial Chesapeake might have affected life and, more important, the agricultural and horticultural production of Green Spring as an economic enterprise. Orangeries were used to produce fruit trees, and the fruit was used on the plantation and/or sold to make money for the plantation owner. Thus, fruit production was an economic exercise to enhance the aesthetic character of the plantation. Some excellent and thorough scholarship is available on the general topic of how disease outbreaks affected the early Virginia colony, especially in examining the devastating effects of typhoid fever and the more debilitating, seasonal malaria outbreaks on the economy and social demographics in seventeenth-century Virginia. However, without the survival of detailed household accounts for Green Spring that might reveal the plantation's production figures by year or at least by decades, further pursuit of this line of scholarly investigation was quickly revealed to be virtually impossible and of limited value to this study.

The author also took full advantage of the recent scholarship by a number of noted Chesapeake region historians, archaeologists, and anthropologists on the design conventions used in laying out seventeenth- and eighteenth-century Virginia plantations. This included a review of the evolution and types of outbuildings commonly constructed and used; the subdivision of outdoor and domestic area work spaces along racial lines, between the white master and his family, and the black slaves; and the role that *optics and sight* played in the construction of processional, formal landscapes that displayed the social position and sophistication of planters to their peers. The latter elements of landscape design were particularly significant in obtaining a better understanding of the probable reasons for and meanings behind the ways that the Green Spring landscape was carefully reordered in the second quarter of the eighteenth century. These studies give a new appreciation for the intended social, cultural, and iconographical statements embodied therein.

Finally, a comprehensive resource bibliography, listing all of the various primary and secondary sources (including journal articles) that were consulted for this study, is included in this report. A short title list provides bibliographic information on the most frequently cited sources.

The author gratefully acknowledges and the final report submitted incorporates critical review comments that were submitted to the author by readers Dr. Andrew Veech, Diane Stallings, Dorothy Geyer, and Karen Rehm of the Colonial National Historical Park, National Park Service; and Amy Speckert of the American History Studies Graduate Program at the College of William and Mary. Any remaining errors of fact or of interpretation are and must remain the author's sole responsibility.

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Chapter One

An Overview of Green Spring's General Site History and Significant Events

The site of Green Spring plantation is located in James City County, Virginia, about six miles west-southwest of Williamsburg and about three miles northwest of Jamestown. Its eastern boundary abuts Powhatan Swamp, part of the large Powhatan Creek watershed. The long history and documentary record of this important domestic site may be divided into several distinct historical periods: pre-European contact and early English settlement (before 1643), Sir William and Lady Frances Berkeley's ownership period (1643–80), the Ludwell-Lee families' ownership period (1680–1803), the Hodgson-Mason-Anderson-Ward families' ownership period (1803–62), and post-1862 until the present day. For the purposes of this study, only the Berkeley, Ludwell-Lee, and Hodgson-Mason-Anderson-Ward periods will be related, with the Berkeley and Ludwell-Lee periods being of particular interest.



Fig. 1–1 Aerial view of the site of the Green Spring domestic complex (center), with the James River just visible at the top of the photo. (CWF photo)

Sir William and Lady Frances Berkeley Ownership Period (1643–80)

Sir William Berkeley (see Fig. 1–2), Green Spring's first and perhaps most famous owner, built and developed the site into perhaps the largest and finest plantation in seventeenth-century Virginia. A younger son of Sir Maurice Berkeley of Bruton, Somerset, England, William was born there in 1605–06, near the market town of Frome, and completed his education in St. Edmund Hall and Merton College at Oxford in 1629. He then read law at the Middle Temple in London for a time before touring the European continent for a year. Thereafter, young William returned to England and took his place at court, eventually being appointed by Charles I as one of his gentlemen of the Privy Chamber. Berkeley was active in court life during the 1630s, accompanying the king on his summer progresses throughout his realm, where he would have seen and stayed at a number of large country estate homes of his fellow courtiers who were privileged to entertain the English king, his French wife, Queen Henrietta-Maria, and their entourage.

Berkeley was appointed one of the royal commissioners to Canada, and King Charles I in 1639 knighted him for his services to the crown in the Bishop's Wars. In August 1641, the

king appointed him as governor of Virginia and, in the months that followed, Sir William arrived in Virginia still a bachelor, probably with a modest personal household staff as befitted a gentleman of the court and a governor.[1] Upon his arrival in Virginia at "James Citty" in February 1642, Berkeley did not waste much time in acquiring property there, and eventually owned a "town house," a three-and-one-half-acre lot, and another twelve-acre lot in the colonial capital. Berkeley had been ordered by his king to further develop Jamestown and diversify the colony's economy, and, in the years that followed, he devoted himself with energy in doing just that, while promoting the colony's interests via his letters back to England.

Sir William found Virginia's planter elite of the 1640s to be socially congenial enough and came to rely on their advice in formulating public policies. For his willingness to work with the Virginia General Assembly, Berkeley became immensely popular among the colony's leading men, and the assembly later presented him with two houses and an orchard that belonged to the government in Jamestown as a token of their esteem.[2]

In the summer of 1643, the governor acquired a 984-acre tract bounded by Governor's Land, the James River, the Chickahominy Path, and Powhatan Swamp for a country estate, located just three-and-a-half miles northwest of Jamestown, which he named "Green Spring." He gradually added to his holdings there over the three decades that followed. The name derives from a prodigious freshwater spring once valued by the aboriginal Paspahegh Indians of the area that, to this day, bubbles up from the ground in the center of the tract. A later visitor to the site noted that the water was "so very cold that 'tis dangerous drinking thereof in Summer-time, it having proved of fatal consequences to several."[3] Within two years of acquiring the Green Spring property, Berkeley had started to clear the land and had begun building his house there, as a surviving letter to Berkeley from the secretary of the colony, Richard Kemp, dated February 17, 1645, attests. Kemp wrote, "your people are all in good health and safetie att the Green Springe and the brick house there is now in hand."[4]

Within just a few years of his arrival in Virginia, Berkeley had a personal estate consisting of valuable properties and lots in Jamestown, along with some 5,000 acres, making him the wealthiest man in Virginia.[5]

The most significant local event during those early years was a second great uprising in Virginia by the indigenous Indian tribes on the morning of April 18, 1644, which killed over 400 English colonists. The English soon retaliated by taking the death and destruction to the Indians, burning their crops and villages one by one, led by the governor, Sir William Berkeley, who also personally led an expedition inland to find, capture, or kill the Indian's paramount chief, Opechancanough. In October 1646, the Indians finally signed a peace treaty with the English, giving them the entire James-York peninsula inland to the fall line (at the present-day city of Richmond) and all of the land on the south side of the James River south to the Blackwater River.

Forts were established along the frontier for defense from future Indian attacks; the existing forts at the coast and along the major rivers were also strengthened to prevent attacks by foreign invaders; and much land was thus opened up for further English settlement. All of these defensive measures garnered Berkeley an enormous degree of popularity among the people of the Virginia colony.[6]

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[1] McCartney, "History of Green Spring," 12.
[2] Ibid., 12–13; Carson, "Green Spring Plantation," 1.
[3] [John Clayton], "A Letter from Mr. John Clayton, . . . May 12, 1688," in *Tracts and Other Papers Relating Principally to the Origin, Settlement, and Progress of the Colonies in North America* . . . , ed. Peter Force, 4 vols. (1844; reprint, Gloucester, Mass.: Peter Smith, 1963), 3: 13.
[4] McCartney, "History of Green Spring," 16.
[5] Reiff, *Small Georgian Houses*, 195, 200.
[6] Ibid., 14.

During the late 1640s, after the war had concluded with the Indians, Berkeley was able to focus more of his energies on completing his house, developing the Green Spring plantation, and trying to further develop the colony's economy through agricultural experimentation. Although the manor house he initially built at Green Spring was relatively modest in comparison to what was ultimately added to it in later years, the first (circa 1645) bachelor's house built at Green Spring must have been the grandest in Virginia right from the start. Built initially of timber framing with a brick foundation and twin brick towers on its east elevation (at a time when virtually all other Virginia houses were being built of earth-fast timber and wood scantling), the early Green Spring house must have been the focus of much talk and attention, both as a significant landmark (being one of only two known brick houses then existing in Virginia) and as the home of Virginia's larger-than-life royal governor.[7] Like virtually all other Virginia farms of that day, Green Spring certainly must have started primarily as a tobacco plantation. However, it was soon to become much more.

Although tobacco had become Virginia's premier cash crop as early as 1615, ensuring the colony's economic survival, by the 1630s, overproduction had served to lower the price paid in England to a mere penny per pound. Thus, planters had to work very hard to make a profit. They acquired wealth very gradually by exercising thrift. This factor, coupled with high mortality rates, made life uncertain, and the earth-fast houses these planters lived in tended to be fairly crude, hastily constructed affairs with wooden chimneys. With the exception of Governor Berkeley, there were few other large houses and estates in the colony, and most Virginia planters remained small landowners. In fact, before 1650, the average-sized plantation in Virginia was not over 446 acres, and even after that time the average freehold was not over 674 acres.[8]

Berkeley must have deemed it important to make Green Spring into a showplace, not only as a place to reflect his status and political power, but also to show the Virginians he governed what was possible to create both architecturally as well as agriculturally.[9] As a result, he became both an innovator as well as a loyal subject in following the directive from King Charles I to do his utmost to diversify the Virginia colony's economy. In this respect, Green Spring plantation became for Berkeley a testing ground for agricultural experimentation to an extent not seen before in the colony.[10]

Many Royalists were forced to leave England after the Civil War, and Virginia quickly became a safe haven for them, mainly because Sir William Berkeley was also such a staunch and unyielding Royalist. Despite Berkeley's attempts to make Virginia a Royalist refuge, in the spring of 1652 the Puritans dispatched a fleet of ships to Virginia to occupy the colony by force if necessary. Although Berkeley put up a brave front, he was ultimately forced to surrender the colony over to the Parliamentarians. He later said of the incident, "They sent a small power to force my submission which, finding me defenseless, was quietly (God pardon me) effected."[11]

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[7] The first known reference to a brick house in Virginia concerns one erected in 1639 in Jamestown by Secretary Richard Kemp. Governor John Harvey mentioned it in a letter he wrote to London that year: "There are twelve houses and stores built in the Towne, one of brick by the Secretayre, the fairest that ever was knowen in the countrye for substance and uniformitye." The London authorities had encouraged building in brick in Virginia but to little avail; had any brick house existed earlier than 1639, the governor certainly would have referred to it in dispatches sent before then (Reiff, *Small Georgian Houses*, 194).

[8] Ibid., 192–193.

[9] Price, "Making, Remaking, and Unmaking of Green Spring," 23. Also see Carson, "Green Spring Plantation," 1, and McCartney, "History of Green Spring," 18.

[10] This author's notes of Warren Billings's comments at the "Scholar's Roundtable for Green Spring," Jamestown Visitor Center, June 24, 1998. Colonial National Historical Park sponsored the event, at which this author was also a panelist.

[11] Marcia Brownell Bready, "A Cavalier in Virginia—The Right Hon. Sir Wm. Berkeley, His Majesty's Governor," *WMQ*, 1st ser. 18 (1909–10): 119.

He had to step down as governor and turn over the reins of power to native Virginian Richard Bennett, who had been sent back by the Parliamentarians to take over. The new Parliamentarian government allowed Berkeley to stay in Virginia provided that he live quietly and peacefully, and thus he was simply able to retire to his country estate at Green Spring to devote all of his time and energies to further developing his plantation.

Although Berkeley's agricultural efforts at Green Spring were very successful, he had lost considerable income from the governor's office. Thus, like many other Virginia planters, Berkeley faced tough financial years in the 1650s, and on March 30, 1655, he was forced to sell his Jamestown town house and call in several debts owed to him to raise some cash to pay his mounting debts. He was still able to retain his considerable Green Spring holdings.[12] Despite these financial troubles and a fire that apparently damaged his house sometime during the mid-1650s, it was at some yet unknown point in the years between 1659 and 1668 that Berkeley apparently was able to improve and enlarge his dwelling house at Green Spring.[13]

In January 1660, the end of the Interregnum in England and the sudden death of Virginia's third Puritan governor, Samuel Mathews Jr., brought about changes in the political landscape in Virginia. Sir William Berkeley was asked to reassume the governor's office and, after careful negotiations with the assembly, he agreed to serve as governor "until such a command and commission come out of England as shall be by the Assembly judged lawfull."[14] Two months later, on March 13, the House of Burgesses reelected the popular Berkeley as their governor. Then, in May, Charles II returned from his long exile in France to assume the throne of England and reestablish the monarchy there. On July 31, 1660, King Charles II confirmed the Virginia House of Burgesses' selection of Berkeley and issued him a new commission to serve as Virginia's royal governor.[15]

Yet, the restoration of the Stuart monarchy in England brought few tangible benefits to the Virginia colony. The 1660s did not turn out to be a happy time for Gov. Sir William Berkeley in Virginia. While he further consolidated his power at home and tried unsuccessfully to reopen the tobacco trade with the Dutch, the glut of tobacco produced caused a severe drop in prices that reached the bottom of a depression in 1666. Moreover, Berkeley's considerable efforts to advance agricultural diversification ultimately failed. Most Virginia farmers lacked the technical knowledge and wealth needed to foster new experimental crops, and few were willing to risk their economic futures on what they must have perceived as risky ventures, at best.

To add further insults to these injuries, a series of other misfortunes in 1667 complicated the governor's life and added to the Virginians' economic miseries. It began in April of that year, when a severe hailstorm damaged spring crops and injured livestock in the colony. Then a Dutch fleet sailed up the James River in June and attacked a number of outbound ships that had been loaded with tobacco ready to be shipped abroad. The Dutch managed to sink or capture some twenty vessels, which dealt the colonists a major economic blow. July then brought an unusual rainy spell that lasted some forty days and ruined many summer crops. The final mishap came on August 27 when a ferocious hurricane hit the eastern half of Virginia. Damage throughout the colony was extensive, as the severe winds wrecked some 10,000 wooden dwelling houses and other structures, and the associated rain utterly destroyed what few corn and tobacco crops that had been salvaged from the earlier calamities.[16]

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[12] Price, "Making, Remaking, and Unmaking of Green Spring," 24–25; see also Billings, "Imagining Green Spring House," 92–93.

[13] McCartney, "History of Green Spring," 17; Price, "Making, Remaking, and Unmaking of Green Spring," 38.

[14] Emily J. Salmon, ed., *A Hornbook of Virginia History*, 3rd ed. (Richmond: Virginia State Library, 1983), 17.

[15] Price, "Making, Remaking, and Unmaking of Green Spring," 25.

[16] McCartney, "History of Green Spring," 23, 26.



Fig. 1–2 Sir William Berkeley (circa 1605–77). (The Berkeley Will & Trust/Virginia Historical Society)



Fig. 1–3 Lady Frances Berkeley (circa 1638–94). (Virginia Historical Society)

In April 1670, the sixty-four-year-old Berkeley married once again, to well-connected and wealthy Frances Culpeper Stephens (see Fig. 1–3), who was twenty-eight years younger than he. Lady Frances was the widow of Samuel Stephens, a former governor of Albemarle or Carolina. Despite their considerable age differences and the fact that both of them clearly benefited financially from the marriage, Sir William and Frances seem to have been happy together for the nearly seven years they were married and were quite devoted to one another, according to Sir William's own recorded statement.[17]

Lady Frances, a formidable woman in her own right, who has been described as being high spirited and intelligent, was fiercely loyal to Berkeley. Sir William and his bride executed a prenuptial agreement in which she was given a life estate of £600 sterling as an annual income. A year after their marriage, the Berkeleys sold a Warwick County plantation called Boldrup that had been left to Frances by her first husband. At the same time, Berkeley sold all three units of his brick rowhouse in Jamestown, including the dwelling he had once sold to Richard Bennett in 1655 and then later bought back.

The divesture of all of this real estate provided the Berkeleys with a considerable amount of cash, which they may have used to improve the Green Spring manor house, the plantation landscape, or both. It is interesting to note that when the General Assembly passed an act in 1674 confirming Sir William's title to his enlarged Green Spring plantation, it was noted that he "hath expended a great summe of mony in building and otherwise upon the said land."[18]

It is known that the couple often entertained graciously at Green Spring. These social gatherings probably helped to introduce to rural Virginians some of the fashionable life of courtly London that Berkeley must have missed. In a letter written in May 1666 to Lord Arlington, Berkeley hints of his feelings in this respect. He noted that most Virginians "live after the simplicity of the past age; indeed, unless the danger of our country gave our fears tongue and language, we should shortly forget all sounds that did not concern the business and necessities of our farms."[19] It is arguable whether what came to be the later famous and much-noted tradition of Virginians' hospitality and opening of their homes to others might have had its beginnings in the example of hospitality that was so generously offered by the Berkeleys at Green Spring.[20]

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[17] Ibid., 24; Price, "Making, Remaking, and Unmaking of Green Spring," 38–39; Jesse Dimmick, "Green Spring," WMQ, 2nd ser. 9 (1929): 129.

[18] McCartney, "History of Green Spring," 24–25.

[19] Louis B. Wright, *The First Gentlemen of Virginia: Intellectual Qualities of the Early Colonial Ruling Class* (San Marino, Calif.: Huntington Library, 1940), 76–77.

[20] Hudson, *Plantation, Refuge, Prison, Statehouse*, 6.

The events that occurred at Green Spring during Bacon's Rebellion will be recounted in more detail in the next chapter, but the physical impact that two military occupations had upon the plantation was significant. The grand, model plantation that had long served as the Virginia governor's home and as a showplace for agricultural experimentation and potential was ransacked, damaged, and nearly ruined during the turbulent months of the rebellion in late 1676 and early 1677. Since Berkeley died in England in mid-1677, Green Spring was left to his widow, Lady Frances, and it was she who paid for the necessary repairs to the place. While Sir William Berkeley reported that over £8,000 damage was done to his property and that the house was ransacked and looted of all its contents, by virtue of the fact that it only cost Lady Berkeley some £300 to repair the house in 1678, we may conclude that the house itself must have sustained only relatively moderate damage in comparison to the plantation landscape and the losses sustained in the value of crops and livestock.[21]

Lady Frances Berkeley continued to repair and live at Green Spring for a couple of years thereafter. For a few months in 1680, she lived in the rambling house while renting most of it to her cousin, Thomas, Lord Culpeper, who had been appointed as the colony's new governor. Tongues apparently wagged in some quarters over this cohabitation, with at least one person noting that they "live frankly together without any of your European selfishness of politic covetness to disturb" them.[22]

What the gossipers apparently did not know at that time was that Lady Frances had recently been courted by her dead husband's former friend, political ally, and secretary of the colony Philip Ludwell I of Rich Neck plantation (see Fig. 1–4), and in October of 1680, she consented to marry him. Despite her new marriage, she still insisted on retaining her former married name in social circles as Lady Berkeley or, more simply as Dame Frances. After the couple's marriage, she left Green Spring and went to live with her new husband at his home at Rich Neck plantation nearby, just outside Williamsburg.[23]



Fig. 1–4 Philip Ludwell I (1638–1723). (Virginia Historical Society)

The Ludwell Family Ownership Period (1680–1769)

By marrying Lady Frances Berkeley, Philip Ludwell I came to own both the house and the vast plantation acreage of Green Spring, along with all of the cachet of power, prestige, and reputation that went with it even though the couple never lived there. Green Spring remained in the Ludwell and the related Lee families' ownership for the next 125 years.[24]

In 1683, the James City County surveyor, John Soane, prepared a plat of the Governor's Land. Significantly, on that plat he made the first known sketch of the Green Spring house that has survived (see Fig. 1–5). Although crudely drawn, the Soane sketch clearly shows that the house at that time was an irregularly shaped, multilevel, and multifaceted structure of two major parts with multiple chimneys, and that one of its parts or components featured an arched arcade, clearly an unusual architectural feature for a Virginia house of that period. The only other known drawing or painting of a portion of this early house was drawn by architect Benjamin Latrobe in 1796 (see Fig. 1–6), and it clearly shows this arched, arcaded porch feature.[25]

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[21] McCartney, "History of Green Spring," 36, 42–43.

[22] Joanne Young, "The Prescient Minister of Jamestown . . . ," *CW Journal* 21 (Autumn 1998): 34.

[23] Ibid., also see Price, "Making, Remaking, and Unmaking of Green Spring," 56.

[24] Hudson, *Plantation, Refuge, Prison, Statehouse*, 9.

[25] Publications that include copies of Soane's and Latrobe's sketches include Wayne Barrett, "Editor's Chapbook: Forgotten

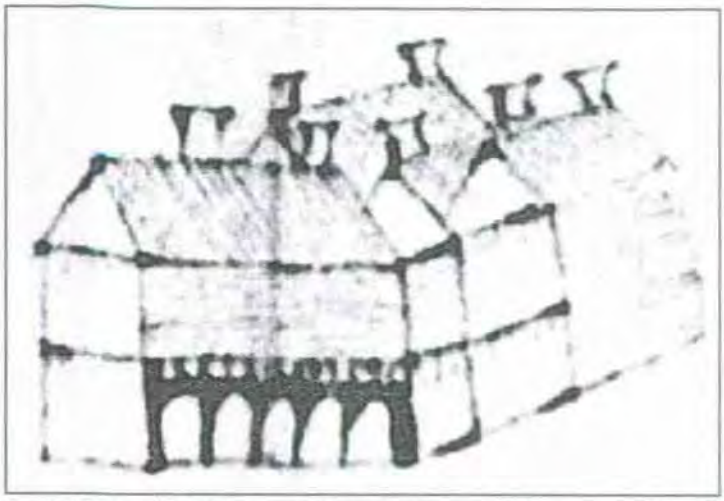


Fig. 1–5 Enlarged 1683 drawing of Green Spring house by John Soane. (CWF)

Interestingly, although there were a few other great brick houses built in Virginia in the last half of the seventeenth century, no doubt to express the same sense of power and status (including Bacon's Castle, Fairfield, John Page's house at Middle Plantation, and Arlington, on the Eastern Shore), none of them copied Governor Berkeley's design for Green Spring, nor is there any evidence to suggest that anyone ever tried to replicate its unique architectural design. Many decades later in the eighteenth century, however, it seems apparent that the arched arcade feature that was Green Spring's hallmark was repeatedly used in the design of public architecture, most notably in the construction of Virginia's many brick colonial courthouses.[26]

Even if (as Lady Berkeley stated in a letter to a cousin back in England) the plantation had only been restored to what could be termed a reasonably livable condition, Green Spring still was, as she described it, "the finest seat in America & the only tollerable place for a Governor."[27] Since the statehouse at Jamestown that had been burned by Nathaniel Bacon and his men in September 1676 was not rebuilt for nine years, the General Assembly also periodically met at Green Spring, making the house the temporary capitol of the Virginia colony from 1677 until 1684, when the statehouse was finally rebuilt at Jamestown.[28]

In 1695, Lady Frances Berkeley died in her fifty-sixth year and is thought to have been buried at Green Spring. (Due to vandalism there many years later, her headstone [alone] was moved to the churchyard at Jamestown, where a remaining fragment may still be seen today.) The General Assembly once again convened at Green Spring in 1694, during the term of Lt. Gov. Francis Nicholson. It is not known whether Nicholson rented Green Spring as his predecessors had done, but it is possible that he was a Green Spring tenant for at least a short while after his arrival in the colony.[29]



Fig. 1–6 Benjamin Latrobe's 1796 watercolor painting of the Green Spring mansion house in a state of decline. (CWF)

Green Spring," *CW Journal*, 15, no. 1 (Autumn 1992): 20; Hudson, *Plantation, Refuge, Prison, Statehouse*, cover; J. Paul Hudson, "Plantation, Refuge, Prison, Statehouse: This Was Green Spring," *The Iron Worker* (Winter 1970): 1; William H. Gaines Jr., "'Green Spring'–A Tale of Three Mansions," *Virginia Cavalcade* 6, no. 4 (Spring 1957): 34–35; and Billings, "Imagining Green Spring House," 84.

[26] Price, "Making, Remaking, and Unmaking of Green Spring," 44–45, 45 n. 33.

[27] McCartney, "History of Green Spring," 42.

[28] Hudson, *Plantation, Refuge, Prison, Statehouse*, 9.

[29] McCartney, "History of Green Spring," 51.

After his wife's death, Philip Ludwell I returned to England, where he had been born, to live out his final years in retirement there. At about the same time, his son, Philip Ludwell II (1672–1727) (see Fig. 1–7, below), came of age and moved out of his father's house at Rich Neck. The younger Ludwell took up residence in the vacant Green Spring manor house, where he lived for a few years as a bachelor, no doubt with at least a small staff of servants and slaves to wait on him and take care of the place. He courted, and on November 11, 1697, married, Hannah Harrison, the daughter of Benjamin and Hannah Harrison, of Southwarke Parish in Surry County (see Fig. 1–8).[10]

The couple lived most of their married lives together at Green Spring, and their union produced five children, three of whom lived to be adults: Hannah Philippa (Lee) (1701–49), Lucy (Grymes) (1698–1748), and Philip Ludwell III (1716–67).[11] In the 1710s, Philip Ludwell I died in England, and the formal ownership of Green Spring plantation finally passed to his son and heir, Philip Ludwell II.

By the 1710s, Philip Ludwell II had become a prominent man in Virginia. He served as a justice of the James City County court, was a militia officer for both Isle of Wight and James City Counties, was a member of the vestry for Bruton Parish Church in Williamsburg, and was elected a trustee of the College of William and Mary, serving as the rector in 1716.[12] The Ludwells must have been typical of their gentry class and clearly would have made some improvements to their plantation and their home to modernize and adapt it to their personal lifestyles.



Fig. 1–7 Philip Ludwell II (1672–1727). (Virginia Historical Society)

While it is not known what these specific improvements might have been, it is almost certain that they kept up with the aspirations, fashions, and conventions of their time. Even in 1710, the Green Spring mansion still remained as one of only a small handful of brick houses that had been built in the colony. The Green Spring manor house apparently still retained a measure of both its former importance and its visual prominence as a well-known James City County landmark, if its mention in letters and diaries is an indicator of its continuing preeminent place in the social life of the region.[13]



Fig. 1–8 Hannah Harrison Ludwell (1678–1731). (Virginia Historical Society)

Among the frequent visitors to Green Spring during this period were Robert "King" Carter, John Custis IV, Commissary James Blair, and the Byrds of Westover plantation in nearby Charles City County. Lucy Parke Byrd (circa 1688–1716), of Queen's Creek plantation in York County near Williamsburg, was Philip Ludwell II's niece[14] and had married William Byrd II (1674–1744) in a glittering double wedding (with her older sister, Fanny and her beau, John Custis IV), that was held at Green Spring on

[10] Ludwell–Lee Family Papers, 1676–1879, microfilm, JDR Library. Information gleaned from this collection is quoted here courtesy of the curator of Special Collections.

[11] Ibid.

[12] McCartney, "History of Green Spring," 58.

[13] Ibid., 52, 54–55.

[14] Nancy Ehrich Martin, "Lucy Parke Byrd: Inside the Diary and Out" (M.A. thesis, University of Rochester, 1994), 16.

May 4, 1706.[35] With both daughters married, their mother, Jane Ludwell Parke, came to live out the last two years of her life with her brother and sister-in-law at Green Spring.[36]

We know the frequency of the Byrds' visits and something of the activities at Green Spring through the survival of a number of William Byrd's coded diaries that he kept throughout his lifetime. His diary references are filled with occasional glimpses of the hospitality the Ludwells afforded to their relatives and friends and to the amusements that both the hosts and their guests alike shared there.[37] These various references indicate the continuing social importance of Green Spring, despite the fact that it was no longer at the center of the colony's political events, nor had it been home to Virginia's governors since about 1684.

One recurring amusement that was often mentioned is horse racing. In an entry dated August 19, 1710, Byrd recorded that while visiting at Green Spring, "Mr. W-l-s ran two races and beat John Custis [Byrd's brother-in-law] and Mr. Hawkins. He likewise jumped over the fence, which was a very great jump."[38]

Comparatively little is known about Philip Ludwell II's agricultural use of the Green Spring lands during his ownership, but it is known that he raised tobacco on a portion of his plantation and that his primary labor force consisted of gangs of black slaves who were managed by white overseers. While it is not known specifically at what point the Green Spring labor force shifted from being made up of mostly white indentured servants to that of predominantly black African slaves, we can assume that the shift at Green Spring must have followed the general pattern of change in labor that occurred in the Virginia colony in the last two decades of the seventeenth century.[39] Thus, by the early years of Ludwell II's ownership, it is assumed that while a few skilled workers on the plantation were white indentured servants, certainly the bulk of the field hands were enslaved blacks.

Additionally, slaves' presence at Green Spring plantation might have been a catalyst for certain changes in the physical layout of the plantation's home quarter, including the placement of fences, certain agricultural outbuildings, and slave quarters in their proximity to and relationship with the manor house.[40] Prior and currently ongoing archaeological excavations at Green Spring have only been able to provide the sketchiest glimpses of where some of these features might have been located.[41]

Young Philip Ludwell III (see Fig. 1–9) was his parents' only surviving son and their youngest child. He was born at Green Spring on December 28, 1716, and spent his formative years there with his family. His father, Philip Ludwell II, died just a month before his fifty-fifth birthday, on January 11, 1727, leaving his wife, Hannah, to manage the plantation and to raise their eleven-year-old son and heir alone. Hannah Harrison Ludwell managed

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[35] Helen Hill Miller, *Colonel Parke of Virginia: "The Greatest Hector in the Town; a Biography"* (Chapel Hill, N.C.: Algonquin Books, 1989), 165, 168.

[36] Jane Ludwell Parke died at Green Spring in September 1708. Her brother, Philip II, noted in a letter that "she was taken with a cold shivering which was succeeded by a feavour which never left her til it ended with her live. . . . We had the best advise we could gett, but when God calls the best Phisitians skill will not availe." Ibid., 172.

[37] Through the publication of Byrd's *Secret Diary and London Diary*, we have a clearer picture of just how popular Green Spring was with the Byrds. In the *Secret Diary* Byrd mentions that he or his wife visited Green Spring no fewer than 10 times in 1709, 10 in 1710, 7 in 1711, and 8 in 1712. Byrd's regular visits continued even well after Lucy Byrd's death in 1716 from smallpox. Byrd's *London Diary*, which covers the later 17 teens and early 1720s, mentions no fewer than 17 visits, including a few overnight stays. Clearly, the Byrds considered Green Spring their home away from home. William Byrd, *The Secret Diary of William Byrd of Westover, 1709–1712*, ed. Louis B. Wright and Marion Tinling (Richmond, Va.: Dietz Press, 1941).; Byrd, *The London Diary (1717–1721) and Other Writings*, ed. Wright and Tinling (New York: Oxford University Press, 1958).

[38] *Secret Diary*, entry for August 19, 1710, as noted in Pierre Marambaud, *William Byrd of Westover, 1674–1744* (Charlottesville: University Press of Virginia, 1971), 199; also noted in McCartney, "History of Green Spring," 52.

[39] C. Cary Carson, ed., *Becoming Americans: Our Struggle to Be Both Free and Equal; a Plan of Thematic Interpretation* (Williamsburg, Va.: Colonial Williamsburg, 1998), 60.

[40] Ibid., 78.

[41] *Final General Management Plan Amendment and Abbreviated Final Environmental Impact Statement: Green Spring* (Washington, D.C.: U.S. National Park Service, 2003), 15. Also see Green Spring Cultural Landscape Report (forthcoming).

by herself as best she could for a few years, but she was also taken by death on April 3, 1731, leaving fifteen-year-old Philip an orphan. He was soon enrolled as a student in the College of William and Mary, and it was sometime during this period that his portrait was painted (Fig. 1–9). Just six months before he reached his majority, Philip Ludwell III married well on July 29, 1737, choosing Frances Grymes, the daughter of Charles Grymes of Morattico plantation on the Northern Neck, as his bride.[42] No portrait of her is known to survive.



Fig. 1–9 Philip Ludwell III (1716–67) as a boy. (Virginia Historical Society)

Like his father and grandfather before him, Ludwell III soon took his place among the elite in Virginia politics. He, too, served as a vestryman for Bruton Parish Church, was a member of the House of Burgesses, and also served on Virginia's Governor's Council from 1752 to 1760.[43]

Philip Ludwell III and Frances lived their entire married lives at Green Spring, and their union produced three daughters: Hannah Philippa, born at Green Spring on December 21, 1737 (see Fig. 1–11), Lucy, and Frances.[44] The couple must have continued to make improvements to Green Spring throughout their marriage. William Byrd II, who had been friendly with Philip Ludwell III's parents and was related to him via his first wife, Lucy (she had been Ludwell III's cousin), who had died of small pox in 1716,[45] continued to make a few social calls to his kinsfolk at Green Spring during these years, although not as frequently as before, since by then he was an older man.[46]

Aside from politics, one major interest that Byrd and Ludwell seem to have shared was gardening and horticulture. Byrd noted in a 1729 letter that his solution for dealing with the isolation and solitude at his Westover plantation was to keep both a library and a garden. He wrote, "I have a library to entertain me within doors, and gardens to amuse me without."[47]

Ludwell not only had a fine library at Green Spring, but he also continued to cultivate and improve Green Spring's extensive orchards, raising citrus trees and other exotic, unusual plants there as well.[48] Green Spring's pleasure gardens (although virtually nothing is known about them or their extent today) had long been a source of admiration and renown locally, as well as abroad, due to the plants that made their way to other plantations and across the ocean to London. This practice of shipping trees and shrubs to others had actually started during the ownership of Philip Ludwell I, and not only were trees and plants traded, they were also sent as gifts to influential men to curry their friendship and political favor.[49]

Ludwell III was also successful in expanding the plantation's acreage and in growing a wide variety of crops on his productive lands, including tobacco, corn, wheat, and indigo. Like many of his peers with large plantations, Ludwell divided his holdings into separate farms or "quarters," each with its own slave crew and overseer to tend them. While there were several of these smaller dispersed quarters, the slave crew that was kept to

[42] McCartney, "History of Green Spring," 58–59, 61.
[43] Ibid., 59–60.
[44] "Ludwell Family," WMQ, 1st ser., 19, (July 1910–11): 213–214.
[45] Miller, *Colonel Parke*, 177; see also Kenneth A. Lockridge, *The Diary, and Life, of William Byrd II of Virginia, 1674–1744* (Chapel Hill: University of North Carolina Press for the Institute of Early American History and Culture, 1987), 83.
[46] Carson, "Green Spring Plantation," 7.
[47] Margaret Beck Pritchard and Virginia Lascara Sites, *William Byrd II and His Lost History: Engravings of the Americas* (Williamsburg, Va.: Colonial Williamsburg, 1993), 37 n. 58.
[48] McCartney, "History of Green Spring," 61.
[49] Martin, *Pleasure Gardens of Virginia*, 8, 10.

work just the Green Spring manor house or home quarter alone numbered some seventy-three slaves (twenty-nine men, thirteen boys, twenty-two women, and nine girls). While the home quarter was typically the largest on plantations, each quarter contained not only its complement of slaves, but also considerable herds of livestock such as cattle, hogs, horses, and sheep, along with a broad array of agricultural tools and implements.[50] By 1750, Green Spring was a large and prospering agricultural enterprise.

This prosperity at Green Spring could not soften the blow when Frances Grymes Ludwell died suddenly in 1753, leaving Philip Ludwell III a widower with three girls to take care of. Although he afterward threw himself into his farming and political activities to relieve the sense of loss he must have felt, Ludwell never again married. In the spring of 1760, Ludwell and his three daughters departed Virginia for London, leaving Green Spring in the care of a trusted overseer. The journey's purpose was ostensibly to see that the two youngest girls, Lucy and Frances, would receive a proper English education, but they also went to seek a treatment for Philip's declining health from an unknown medical condition.[51] Despite the care of several doctors, Philip Ludwell's medical condition continued to steadily worsen, and he died on March 25, 1767. With his death, the male line of the Ludwell family ended. He was buried in England in the Church of Bowe, near Stratford in Essex.[52]

By the terms of his will, Ludwell's considerable Virginia landholdings were divided equally among his three daughters, but the youngest, Frances, died only a year after her father, so Philip Ludwell III's estate was ultimately divided in half between the two surviving daughters, Hannah and Lucy.[53] The eldest, Hannah, inherited Green Spring along with other extensive lands west of Powhatan Creek. Lucy inherited the Rich Neck plantation, along with her father's other land holdings east of Powhatan Creek, a brick town house in Williamsburg, as well as the Chippokes plantation in Surry County.[54]

The Lee Family Ownership (1769–1803)

In 1769, just two years after their father's death, both surviving Ludwell girls married appropriate suitors. Thirty-two-year-old Hannah Philippa Ludwell married her first cousin, William Lee, a prominent London merchant and the son of Virginia's acting governor, Thomas Lee of Stratford Hall plantation on Virginia's Northern Neck (see Fig. 1–10). With their union, Green Spring thus passed into the hands of the noted Lee family of Virginia.

Sixteen-year-old Lucy married John Paradise, a London writer and literary figure.[55] John and Lucy Paradise made their home in England until John's death but did visit and stay with William Lee at Green Spring in 1787 and 1788. Unable to afford the high cost of living as a widow in London, in 1805 Lucy returned to her native Virginia to reside in the Williamsburg town house that she had inherited from her father. After only a few years of living in the former capital city, she grew increasingly peculiar in her habits, and Lucy Ludwell Paradise was finally committed to the Eastern State Hospital, where she died in 1814.[56]

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[50] Ibid., 66 n. 86, 69.

[51] McCartney, "History of Green Spring," 62. The oldest daughter, Hannah Philippa, had been schooled in the social graces by her mother, Frances, before her death. The two younger girls, however, were brought up primarily by their black slave mammy, Cress. Ludwell, therefore, thought they needed additional training and finishing in the social skills needed by the daughters of a man of his genteel class.

[52] Ibid.

[53] Ibid., 70; see also Carson, "Green Spring Plantation," 7.

[54] Carson, "Green Spring Plantation," 7.

[55] Ibid.; also see "Ludwell Family," 213–214.

[56] Archibald Bolling Shepperson, *John Paradise and Lucy Ludwell of London and Williamsburg* (Richmond, Va.: Dietz Press, 1942), pp. 273–274, 276, 278–280, 285–286, 433, 435, 440, 442–446.



Fig. 1–10 William Lee (1739–95). (Virginia Historical Society)

William and Hannah Lee lived in England and entrusted the operation and management of Green Spring plantation to William's brother, Richard Henry Lee of Westmoreland County, who hired a series of farm managers to oversee things.[57] Most of the contents of the house, such as books, furniture, etc., had been sold or given away in order to settle Philip Ludwell III's estate according to the terms of his will, and the proceeds from the sale were divided between the two daughters.[58] A letter from Richard Henry Lee to William Lee, dated July 7, 1770, contains a number of interesting landscape and slave-related references: "*The gardens and orchards at Green Spring are extensive and furnished with a variety of good fruit* [emphasis added]. Out of the 164 slaves . . . but 59 are crop negroes. I mean exclusive of boys. Twelve are house servants, 4 carpenters, one a wheelwright, two shoemakers, *three gardeners* and hostlers. . . . *The gardens are indeed in tolerable condition*. . . . The house at Green Spring wants repair much. . . . I am informed that Major Taliaferro says he will make a thorough repair for £500."[59] A map drawn by the James City County surveyor William Goodall, in 1770, shows the Green Spring plantation to have then consisted of a total of 4,296.1 acres (see Goodall's map, Fig. 1–12).[60]



Fig. 1–11 Hannah Philippa Ludwell Lee (circa 1740–84). (Virginia Historical Society)

For well over a decade the Green Spring house was apparently rented to a series of tenants while the land continued to be farmed, using slave labor, just as before.[61] All remained much as before until the last year of the American Revolution, when the war and its destruction finally came to Green Spring.

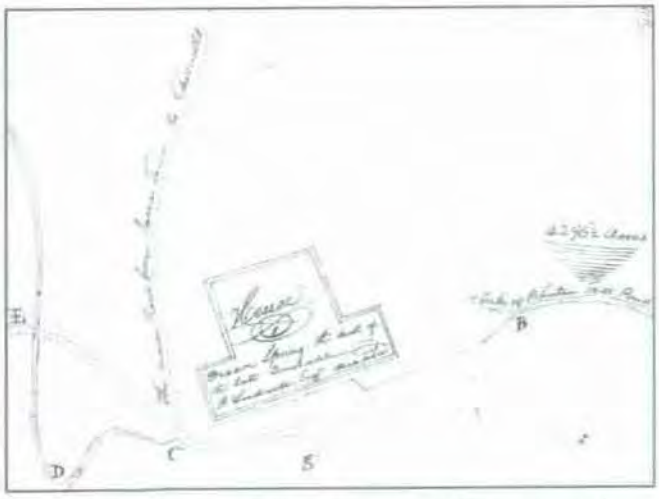


Fig. 1–12 Green Spring as indicated on a circa 1770 county map by William Goodall. (JDRL)

On a hot July 6, 1781, American and French forces operating in the area came to Green Spring in search of British troops who were reported to have landed on the north side of the James at or near Jamestown. Gen. "Mad Anthony" Wayne, commanding a large American reconnaissance force under the overall command of General Marquis Marie-Joseph-Paul-Yves-Roch-Gilbert du Motier de Lafayette, sent his troops down Green Spring's entrance drive (which was built on a raised causeway) across the low and swampy ground that extended part of the way from Green

[57] McCartney, "History of Green Spring," 71, 72.
[58] Ibid., 64.
[59] Ibid., 73–74, emphasis added.
[60] Copy of Goodall's map obtained from and included here courtesy of VHS, emphasis added.

Spring toward Jamestown Island in search of the British force under the command of Gen. Charles Cornwallis. Gen. Henry Lee described the land in front of Green Spring as "low, wet and sunken, reclaimed by ditches, which intersect it in various directions. The sunken ground extends for a considerable distance above and below the house and is nearly ½ mile wide. From the house to the road across the low ground, a causeway had been formed by the proprietor of Green Spring and presented the only practicable route for troops."[59] About a mile and a half from Green Spring, a large British force waited in ambush in a band of woods on the edge of William Drummond's old fields (today this area consists of a horse farm and the Drummond's Fields housing subdivision to the west of Route 614, see Fig. 1–13 above). A few of the American units walked right into the ambush that had been set for them. Heavy casualties resulted at the outset of the sudden battle, and fighting continued until darkness finally ended the engagement (see the 1781 Desandrouins Map of this battle, Fig. 1–14).



Fig. 1–13 Aerial view of the area of most intense fighting during the Battle of Green Spring. Jamestown Island is in the distance at the top of the photo. The British troops hid in the woods on the far side of the open fields in the middle of the photograph. (CWF photo)



Fig. 1–14 Portion of Desandrouins's overall 1781 map of Green Spring area with the site of the battle in the center and the Green Spring mansion near top left. (JDRL)

During that sultry summer night, Green Spring was a beehive of activity for several hours, as Lafayette's men gathered up their wounded and, with only a small rear guard force left behind to cover their retreat, quietly made good their escape to the north in the middle of the night. At dawn the next day, a heavy British cavalry force under the command of the notorious Col. Banastre Tarleton, galloped up the long causeway to the Green Spring house itself. Tarleton briefly made his headquarters in the springhouse while he remained there to assess the situation.[60] What the British found was, perhaps, predictable. The entire place had been left in a total shambles. Fences had been torn down, outbuildings had been looted of their contents, and whatever fine gardens, grounds, and lawns might have once existed there had, within the space of a few hours, been largely trampled underfoot by hundreds of soldiers, horses, and wagons, which had churned the yards immediately around the house into a confused mass of ruts. Many American soldiers who were too seri-

[59] Carson, "Green Spring Plantation," 7.
[60] Ibid., 86 and 86 n. 108.
[61] Ibid., n. 109.

ously wounded to be moved had been left behind in the barns and outbuildings for the British to take care of as prisoners. The dead of both sides were left in the fields for the British to bury where they had fallen (and where some of them probably remain today).[64]

The English soldiers carried off sixty head of cattle and more than sixty slaves with them when they departed. Before leaving, they burned down a massive brick barn filled with a quantity of tobacco (its ruins were still standing in 1796).[65] One contemporary account by Ralph Izard, who visited the place shortly after the battle, stated that the Green Spring house itself was left "in a . . . ruinous condition."[66] Although "the Battle of Green Spring Farm," as it came to be called, was a tactical victory for the British forces, the war would come to an end just a few months hence at Yorktown, with the ultimate victory going to the combined American and French armies.

The Lees lived in England from the time of their marriage in 1769 until 1783, when they prepared to relocate back to Virginia to make a life for themselves at Green Spring. William Lee and his eight-year-old son, William Ludwell Lee, arrived by ship in Hampton Roads on September 20, 1783, to prepare the Green Spring house for the rest of the family's eventual arrival in about a year or so. Despite his well-documented dissatisfaction with what he found, William Lee resolved to renovate and repair the Green Spring house over time. For nearly a year, Lee labored diligently to get the old house at Green Spring repaired and refurnished for the much-anticipated return of his wife to the childhood home she had left more than twenty years before.

Sadly, however, Hannah Philippa Ludwell Lee never saw her childhood home again, since she fell ill and died in Ostend, Belgium, several weeks before her return journey to Virginia. Her body was returned to England, where she was buried.[67] A short time later, Lee sent for his two young daughters, Portia and Cornelia, to join him and their brother in Virginia.[68]

Despite the grief he must have felt over his wife's death, Lee had to think about the welfare of his three children, and he continued to take an interest in Green Spring.[69] In 1786, he commenced making the long-postponed major repairs to the house and, as a part of that effort, ordered locks, wire netting, window glass, and padlocks from London and Belgium to improve the house's security. In 1792, Lee also was doing well enough financially to purchase some of the surplus Governor's Lands from the College of William and Mary and, thus, increased the size of Green Spring plantation by 1,238 acres.[70] Yet his health had been deteriorating, and he was going blind. William Lee died at Green Spring on June 27, 1795, and was buried in the Jamestown churchyard.

The younger William Ludwell Lee, Lee's only son and heir, who was just twenty-two years old at the time of his father's death, inherited the Green Spring house that he had lived in since coming to Virginia with his father at age eight.[71] By this time, the house (or at least a part of it) was almost a century and a half old and was apparently still in need of more substantive repairs. Since Lee was uncertain whether to rehabilitate the ancient dwelling or tear it down and build anew, he invited English architect Benjamin Henry Latrobe to give him his skilled advice on what would be best to do.

Latrobe visited Green Spring on at least two occasions. In 1796, he assessed the con-

[64] Edward Cline, "Mad Anthony Wayne's 'Unexpected Happening,'" *CW Journal* 19, no. 4 (Summer 1997): 34–44.
[65] McCartney, "History of Green Spring," 91; the reference to the burning of the barn is on 107. Benjamin Latrobe noted in his diary in 1796 that the ruins of this barn were still standing.
[66] Hudson, *Plantation, Refuge, Prison, Statehouse*, 9, 11; see also McCartney, "History of Green Spring," 91.
[67] McCartney, "History of Green Spring," 71, 95, 100.
[68] Ibid., 100.
[69] Ibid., 100, 101; also see family genealogy chart in Price, "Making, Remaking, and Unmaking of Green Spring," viii.
[70] McCartney, "History of Green Spring," 101, 103.
[71] Ibid., 104,-106.

dition of the place, and in 1797, he presented drawings and sketches to Lee showing proposed alterations to the house.[72] Latrobe's pocket diary entry for July 28, 1796, is very descriptive and reveals his professional opinions of the old place, a major portion of which is quoted here.

> *I went in the stage to Williamsburg, where I found horses that carried me to Mr. William Ludwell Lee's house at Greenspring about six miles SW of the city. Greenspring is well known in the history of the American war—has been the scene of action between part of the American army under General Waine [sic] and the British under Lord Cornwallis in which the Americans were defeated. The British did no great damage to the buildings. They destroyed however a quantity of Tobacco which had been housed in a large brick barn and having hauled out a boat which was also secured in the same place they set fire to it. The barn caught fire from the boat and the horse prevented the negroes from putting it out. This was all the injury done. The massive ruins of the barn are a main proof of the superior value of this plantation in former days when Jamestown was the capital of Virginia. The principal part of Green Spring house was erected by Sir William Berkeley who was Governor of Virginia the latter end of the last century. It is a brick building of great solidity, but no attempt at grandeur. The lower story was covered by an arcade which is pulled down. The porch has some clumsy ornamental brick work about the style of James I. The Estate descended to the present proprietor by Natural descent. He is just of age—He was born in England but came out to Virginia very young. He seems activated by a spirit of improvement, and indeed the Estate wants it in every respect. . . . The worst circumstance belonging to Greenspring is the swarm of Muskitoes or galinippers which at this season of the year torment men and horses day and night. They made my stay perfectly miserable. . . . Greenspring derives its name from a very copious spring of excellent water which bursts from a gentle knoll upon which the house stands. It is enclosed in a brick house and discharges about as much water as would run through a nine inch pipe from a level with its upper edge. It is Mr. Lee's intention to pull down the present mansion and to erect a modest Gentleman's house near this spot. The antiquity of the old house, if in any case, ought to plead in the project, but its inconvenience and deformity are more powerful advocates for its destruction. In it the oldest inhabited house in North America will disappear, for it was built in 164_.*[73] *Many of the first Virginia assemblies were held in the very room in which I was plotting the death of Muskitoes.*[74]

During his first visit to Green Spring, Latrobe completed sketches of the ground floor plan of the house (see Fig. 1–15), made notes about the structure, and, in early August 1796, painted a panoramic watercolor view of the south front of the house as seen from the southwest (see Fig. 1–6) showing an "ell" addition on the west end of the house that dated from the early eighteenth century.[75] The latter is one of only two pictorial drawings that survive to tell us anything about what the old house looked like. Latrobe's painting

[72] Hudson, *Plantation, Refuge, Prison, Statehouse*, 11.

[73] On the watercolor sketch of the house that Latrobe completed during his initial visit, he wrote that the dwelling was built in 1640. Ibid.

[74] Ibid. Excerpts extracted from the full text of Latrobe's diary entry in McCartney, "History of Green Spring," 107–109, with supporting data included in her footnotes on those pages. This information was cross-checked with Edward C. Carter II et al., eds., *The Virginia Journals of Benjamin Henry Latrobe, 1795–1798* (New Haven, Conn.: Yale University Press for the Maryland Historical Society 1977), 182–183.

[75] Price, "Making, Remaking, and Unmaking of Green Spring," 119.

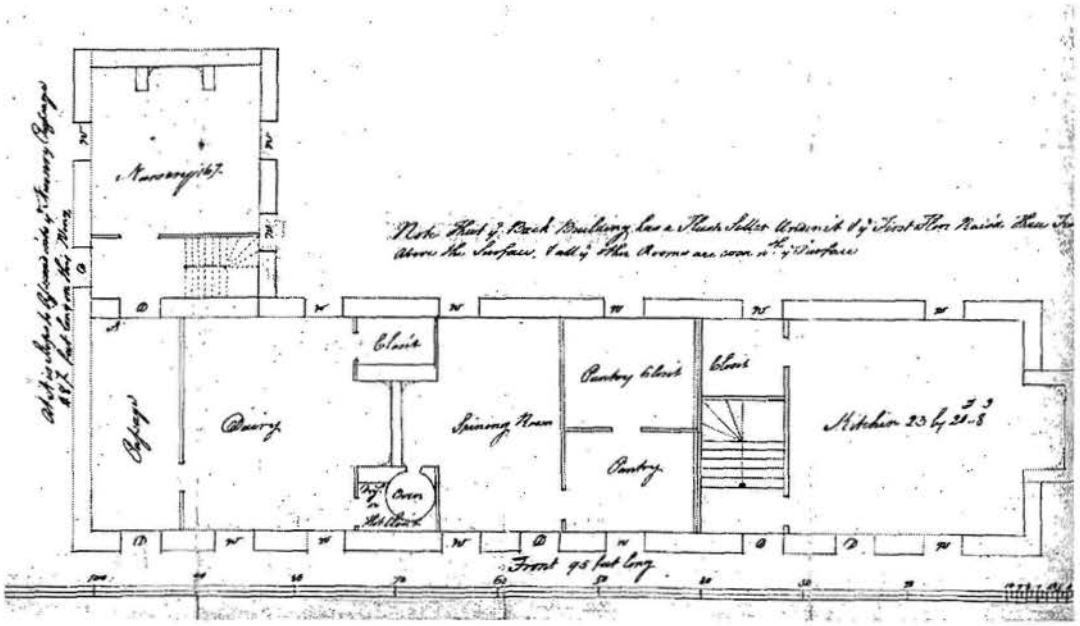


Fig. 1–15 Benjamin Latrobe's 1796 plan drawing showing the first (ground) floor layout of Green Spring house. (Ludwell-Lee Papers, reproduced here by courtesy of the Virginia Historical Society)

also showed a number of outbuildings that were located to the east of the house, arranged in a line with the front of the manor house and with each other. Additionally, Latrobe's watercolor view illustrates the height, nature, and configuration of a serpentine garden wall that served to separate the forecourt of the house, clearly a more formal public space, from what must have been nonpublic service areas that were located to the east and west of this area.[76]

Although in his diary Latrobe seemed to acknowledge the antiquity of the house while advocating its destruction, he must have been conflicted over whether it should be saved or destroyed. His apparent uncertainty about this is suggested by the fact that he

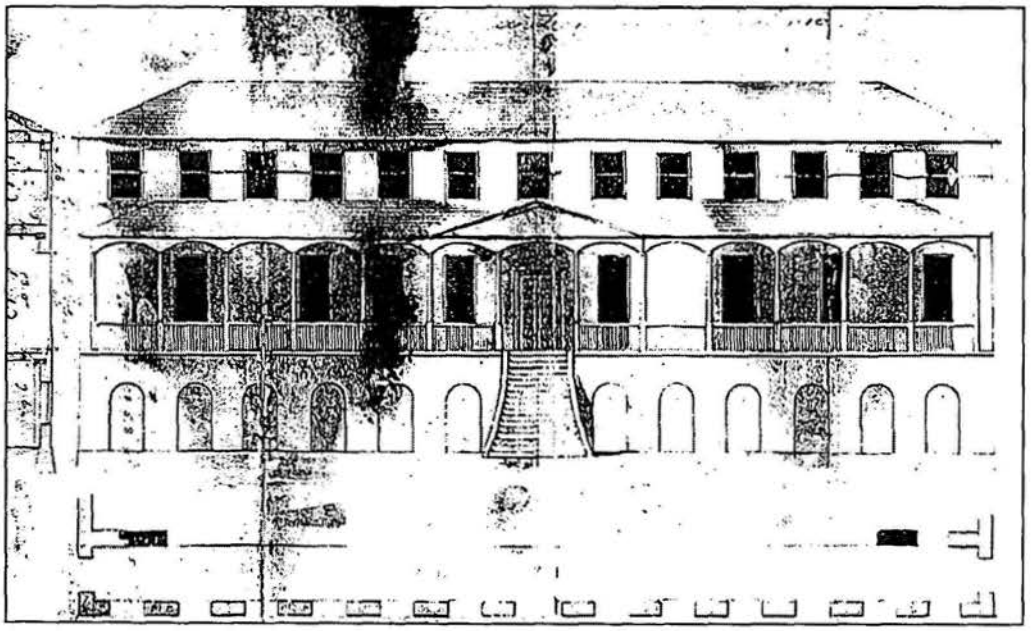


Fig. 1–16 Benjamin Latrobe's circa 1797 proposed elevation of a remodeled Green Spring mansion. It was not implemented. (Virginia Historical Society)

[76] These elements of Latrobe's sketch agree with the landscape features shown on the Desandrouins Map of 1781 (JDR Library), and Louis Caywood's and Andrew S. Veech's archaeological excavations corroborated the location and extent of the serpentine garden wall. Early 20th-century photos indicate that the several outbuildings in Latrobe's sketch are accurately located with respect to the old mansion house site as well.

made detailed notes, a plan, and elevation drawings, dated in March 1797 (see Fig. 1–16), to show Lee (either before or when he made his second visit to Green Spring later in 1797) how the old house could be repaired, updated, and improved to make it more habitable and aesthetically acceptable.[77] At Lee's specific request, Latrobe also prepared other drawings for a new house, but these items have not survived.

In any event, none of the drawings that Latrobe prepared for Lee's review and approval suited him, and, by Latrobe's second visit in 1797, Lee had finally resolved to tear down the old house and had done so by September of that year. Dissatisfied with the two previous proposals, Lee then directed Latrobe to proceed with a third set of plans for an entirely new house.[78] Latrobe provided the desired plans, but their relationship had apparently deteriorated. It reached the breaking point when he and Lee had a disagreement over the way Lee treated his own workmen. Two days later, Latrobe left Green Spring, never to return. He formally severed his professional relationship with Lee shortly thereafter.[79]

The question of whether Lee subsequently followed Latrobe's final set of plans, turned to someone local for advice, or came up with his own design for his new house at Green Spring is not known. Some of Latrobe's drawings may not have survived and no other drawings for another house at Green Spring exist. Lee may have sold off some of his slaves to raise the cash he needed to build a new dwelling, since by 1798, the number of taxable blacks in his possession had dropped by more than half, from fifty-seven to twenty-eight.[80]

However it may have come about, by 1800, Lee had built a smaller, but more up-to-date, two-story "Gentleman's House." From a policy that he took out that year to insure the dwelling (see Fig. 1–17, right), we know that this last mansion house at Green Spring was constructed of brick covered with wood, facing to the south-southeast, and was sited on a series of two low terraces, located about 300 feet to the north of the location of the former houses.[81] The central two-story portion of the house was fifty feet wide by thirty-eight feet deep. On each side of this main block were one-story wings, both constructed of brick and twenty-five feet across by seventeen feet deep each. Lee indicated that he occupied the building personally and insured his house for $10,000.[82]

Although not listed or insured on the 1800 insurance policy for the house, from other sources we know that the property at that time also included a smokehouse, a corn crib, a storehouse, barns for the livestock, stables, a sawmill, a cotton mill, a dairy, a

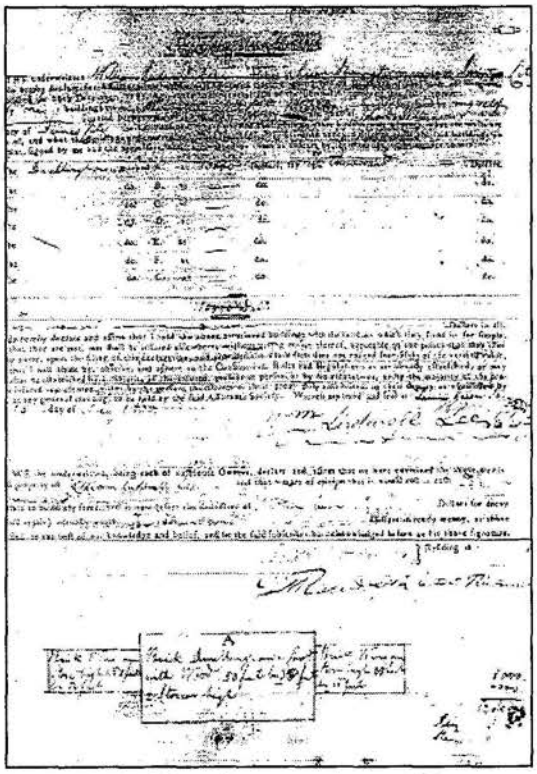


Fig. 1–17 1800 Mutual Assurance Society of Virginia policy for Green Spring, showing a plan drawing of the house at the bottom. (Library of Virginia)

[77] For a detailed explanation and thorough analysis of the probable stylistic intentions behind Latrobe's proposed renovation for Green Spring, see Price: "Making, Remaking, and Unmaking of Green Spring," 120–128.

[78] Ibid., 120 n. 7.

[79] Ibid., 119–120; see 120 n. 9 for additional data and references.

[80] McCartney, "History of Green Spring," 109. McCartney notes that the estate of Lee's father, William, was finally settled about this time, and that the number of slaves on the property could have been divided equally between William Ludwell Lee and his two sisters.

[81] Price, "Making, Remaking, and Unmaking of Green Spring," 129.

[82] Declaration for Assurance, Insurance Policy No. 408, May 25, 1800, Mutual Assurance Society of Virginia Records, microfilm, Library of Virginia, Richmond.

distillery, an overseer's house, and quarters for the slaves. There were also mature orchards of apples, peaches, pears, and figs, and a garden that contained roses and berry bushes.[83]

William Ludwell Lee was not able to enjoy his new house for very long, since the bachelor caught a fatal cold[84] while hunting and died in his late twenties at Green Spring on January 24, 1803. He was buried near his father in the Jamestown churchyard. In his will, made in 1802, Lee turned his back on his social peers and took the radical step of freeing all of his remaining slaves, providing housing for them on his Hot Water tract and giving each of them a year's supply of corn, all at the estate's expense. Although these moves were far-sighted and socially and morally responsible, they would ultimately have disastrous consequences for his heirs and the economic viability of the plantation as an agricultural enterprise.[85]

The Hodgson-Mason-Anderson-Ward Families' Ownership (1803–62)

William Ludwell Lee's only heirs were his two sisters, Cornelia, who had married John Hopkins, and Portia, who had married William Hodgson. Both women and their husbands were living in the Alexandria area at the time of Lee's death.[86] Hodgson, who was named as Lee's executor, initially assumed that Lee's wealth in land and other assets would be more than sufficient to provide both his wife and sister-in-law with a substantial income upon the settlement of the estate. Unfortunately, he got involved in a more complicated situation than he ever bargained for.

What Hodgson did not know, at least initially, was that Lee had made so many bequests in his will that they substantially diminished the ultimate value of his estate.[87] Also, because of Lee's manumission of his slaves, the ability of the Green Spring lands to be farmed profitably had been reduced. Moreover, the settlement of the estate was tied up for years in the state's Supreme Court.[88]

Hodgson was paying county taxes by 1806, and by 1809, his brother and sister-in-law were renting and living in the Green Spring house for at least part of the year. John Hopkins was listed as living on the premises in another 1810 insurance policy taken out on the house by Hodgson (see Fig. 1–18).[89]

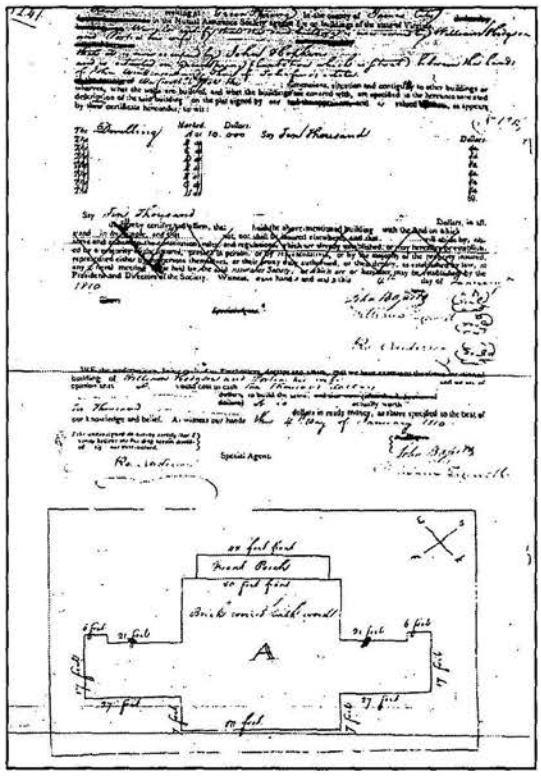


Fig. 1–18 1810 Mutual Assurance Society of Virginia policy for Green Spring, showing another plan drawing of the house at the bottom. (Library of Virginia)

[83] Various letters in Lee's brother-in law, William Hodgson's Letterbook 1803–07, Library of Virginia, as cited in Price, "Making, Remaking, and Unmaking of Green Spring," 142.

[84] Price, "Making, Remaking, and Unmaking of Green Spring," 138 n. 56, in which Price speculates that tuberculosis could have also weakened Lee's respiratory system, which might account both for his writing a will at such a young age and his death from a common cold.

[85] For a more detailed narrative of the difficulties involved in settling Lee's estate and the consequences the terms of his will had on his heirs and executor, see McCartney, "History of Green Spring," 110–112, and especially Price, "Making, Remaking, and Unmaking of Green Spring," 135, 138, 139, 144–145, 147–149.

[86] Price, "Making, Remaking, and Unmaking of Green Spring," 137; McCartney, "History of Green Spring," 112–113.

[87] Price, "Making, Remaking, and Unmaking of Green Spring," 144; for a detailed quote from part of Lee's will, see 144 n. 71.

[88] Ibid., 140 n. 60, 145.

On Friday, September 30, 1814, Hodgson placed an advertisement for Green Spring's sale in a Washington, D.C., newspaper, *Daily National Intelligencer,* describing its many attributes for prospective buyers. Major portions of it are quoted here for general information:

> *This valuable estate, the residence of the late William L. Lee, Esq., is situate in the county of James City in the state of Virginia, about six miles from the city of Williamsburg, and contains 2,934½ acres. . . . The buildings and other improvements on this estate, constitute another important item in the estimate of its value; they were planned and executed ten or twelve years ago, under the direction of the late proprietor, Mr. Lee, in a style of superior excellence, and on a very extensive scale. The mansion house and office are all of brick, completely finished and in good order. The orchards are extensive, various and of the choicest fruits; the water is excellent and abundant; A considerable part of this tract is low-ground, suitable for Timothy meadows; the Powhatan Swamp consisting upwards of 200 acres, is heavily timbered and of inexhaustible fertility. The higher lands are generally in good heart and improvable, being friendly to the growth of clover and small grain: All the arable lands are well enclosed, and divided into convenient fields. . . . The proprietor of this estate resides at a great distance from it, and would for that reason give a very great bargain for it, with considerable time for the payment of a great part of the purchase money. . . . For the terms and other particulars, application must be made to the subscriber living near Alexandria.*[90]

While the plantation with all of its many attributes had significant value, Hodgson seems to have had difficulty selling it. Presumably because no slaves went with the property, a prospective buyer would not be able to profitably farm the land.

In March 1816, Hodgson still possessed Green Spring, and, once again, he placed a sales notice in the *Richmond Enquirer.* In that ad, he stated that the 2,934½-acre plantation contained a "mansion house and wings of brick [that] were erected by the late proprietor W. L. Lee."[91] Despite the glowing descriptions of the plantation, once again, no one expressed interest in buying it. Although the land and the house were rented to tenants over the next several years, Portia and William Hodgson were forced to retain the place and pay taxes on Green Spring until they were finally able to sell it to one George Mason, on December 31, 1824.[92]

Mason was living at Green Spring by 1826, but his financial fortunes declined, and he was forced to sell the place in 1834 to David I. Anderson, a local James City County farmer. Anderson and his brother, John C. Z. Anderson of Williamsburg, farmed the lands together and bred horses there. This arrangement lasted until 1839, when David Anderson took in another business partner, Robert C. A. Ward of New Jersey. An ink wash drawing done in about 1840 by John Galt Williamson shows the Green Spring house built by William Ludwell Lee in its landscape setting (see Fig. 1–19).

In 1842, David Anderson moved to New York, and the next year he finally sold out his interest in Green Spring to his partner Robert Ward.[93] Ward was an absentee landlord who lived in Hackensack, New Jersey. He soon went into partnership with his brother, John, to run Green Spring farm via a trusted resident white overseer, who managed the

[89] Declaration of Assurance, Insurance Policy No. 1247, January 4, 1810, Mutual Assurance Society of Virginia Records. Microfilm, Library of Virginia, Richmond.
[90] "Green Spring, 1814, for Sale," *WMQ,* 2nd ser., 14 (1934): 17.
[91] McCartney, "History of Green Spring," 114.
[92] Ibid., 115.
[93] Ibid., 115–117.



Fig. 1–19 The last Green Spring manor house as it appeared about 1840, in a brown ink wash drawing by John Galt Williamson. (Galt Collection, Department of Special Collections, Earl Gregg Swem Library of the College of William and Mary)

plantation and its slaves on a day-to-day basis.[94] Under the Ward brothers' long-time ownership of the Green Spring property, the number of slaves and the livestock herds kept there grew, and the plantation, once again, became a successful agricultural enterprise.[95]

All was well until early August 1862, when Union Gen. George B. McClellan finally abandoned his failed Peninsula Campaign, and his troops pulled back from their huge encampment at Harrison's Landing in Charles City County (near which place in early July they had made their closest point of advance to Richmond). The Civil War finally came to Green Spring. While most Federal forces were withdrawn down the James River by boat to Fort Monroe, some units marched by land on roads leading back down the Peninsula. One group of Federal forces marched east down what is today Route 5 and crossed the Chickahominy River at Barrett's Ferry, proceeding into James City County via the Green Spring area. They sacked and burned several homes as they traveled, including Green Spring. Despite the entreaties of the overseer who protested that the owners of the place were both loyal Northerners, a squad of Union soldiers put Green Spring's modest "Gentleman's House," which had been built in 1797–98, to the torch. The brick house was left a gutted ruin and was never rebuilt[96] (see Fig. 1–21).

Some of the walls of the house were still standing in photographs that were taken circa 1900; however nothing remains of it today but a pile of rubble spread over the surface of the ground.[97] This second site has original landscape terraces and other building sites on it but has never been examined archaeologically (see Fig. 1–22: View of the site of the Lee mansion as seen from the site of the original mansion houses).



Fig. 1–20 Enlarged portion of John Galt Williamson's 1840 view of Green Spring, showing detail of the manor house. (Galt Collection, Department of Special Collections, Earl Gregg Swem Library of the College of William and Mary)

[94] "The Burning of Green Spring" *Tyler's Quarterly Historical and Genealogical Magazine* 10 (1929): 177.

[95] McCartney, "History of Green Spring," 118.

[96] "Burning of Green Spring," 176–177.

[97] In fact, the one or two surviving late 1890s photos show only the standing walls and one chimney of the western wing, one of the two one-story wings originally built to the east and west of the house's two-story main block. David Cronin, a



Fig. 1–21 Circa 1900 photograph of the ruins of the last Green Spring manor house that was burned in 1862. (Virginia Chamber of Commerce Photo Collection, Library of Virginia)

It remains an important site for revealing more information about this final period of occupation.

This concludes the overview of several of Green Spring plantation's historical periods of significance. The next chapter will review the impact of Bacon's Rebellion on Green Spring, and the subsequent two chapters will examine in more specific detail the physical improvements that were made during the Berkeley and Ludwell-Lee ownership periods.

Summary/Conclusions

- A chronological review of the history of the Green Spring plantation site indicates multiple, distinct, and continuous periods of cultural and historical significance that stretch from pre-European contact (pre-1607) down to the burning of the plantation's last manor or dwelling house in 1862.
- The many individuals who owned Green Spring are inextricably coupled with each of the historical epochs of the site, giving each period a separate identity and impor-

Union soldier who served with occupation troops in Williamsburg during much of the war, also visited Green Spring and sketched the house's ruins not long after it burned. His sketch, however, is not very clear, and it is difficult to establish specifically what portion of the house he drew and where he was standing when he drew it.

tance in terms of their respective agricultural, social, political, cultural, architectural, landscape, and horticultural activities/attainments.

- Several notable persons visited and participated in specific historical events that occurred at Green Spring, making the site a metaphorical "stage set" for many of the dramas of early Virginia and United States history.
- These actors included Sir William and Lady Frances Berkeley; Nathaniel Bacon, William Drummond, and many other personalities associated with Bacon's Rebellion; Thomas, Lord Culpeper; Francis Howard, Lord Effingham; Francis Nicholson; Robert "King" Carter; Philip Ludwell I; Rev. John Clayton; Philip Ludwell II; William Byrd II; Alexander Spotswood; John Custis IV; Philip Ludwell III; Robert Dinwiddie; William Lee; Richard Henry Lee; Thomas Jefferson; Gen. Anthony Wayne; the Marquis de Lafayette; Col. Banastre Tarleton; William Ludwell Lee; and Benjamin Henry Latrobe.
- Other important figures who also *may* have visited Green Spring (as suggested by undocumented circumstantial evidence) include Rev. James Blair, Benjamin Harrison, and George Washington.
- The physical (that is, architectural and landscape) improvements made to the site during the two major and most important periods or epochs for this study, those of Sir William Berkeley (1643–77), and of the Ludwell-Lee families (1680–1803), will be explored in more specific detail in subsequent chapters.



Fig. 1–22 View of the site of the Lee mansion as seen from the site of the original mansion houses. Note the low terraces and grading that was done when the Lee mansion was built. The house stood where the rubble fill creates the highest visible point on the upper terrace in the center of the photo. (Photo by author)

Chapter Two

BACON'S REBELLION OF 1676 AND ITS IMPACT ON GREEN SPRING PLANTATION

Background

By the mid-1670s after various political and economic setbacks, Sir William Berkeley had become frustrated with Stuart imperialism and colonial policies and had also become petty, possessive, and increasingly intolerant of anyone who dared to disagree with him. His style of governing became more arrogant and autocratic than it had been during his first term. He became rather content with trying to maintain the status quo and was progressively less willing to listen to others. Aside from a slowly diminishing circle of close friends and political allies, Berkeley began to mistrust the bulk of the common people he was in office to govern. He took good care of his friends among the colony's planter elite, but those outside of his small circle of friends became increasingly discontented at the way a select few were making a lot of money while the majority of planters struggled just to get by.[1]

The unique mix of tough economic times, Berkeley's growing obstinacy, increasing taxes from England, and troubles with the Indians on Virginia's frontier combined by the mid-1670s to disillusion Virginia planters. Together these challenges created a volatile atmosphere in Virginia that would finally erupt in 1676 into an armed rebellion.[2] It was into this simmering state of affairs that Nathaniel Bacon Jr. arrived in the Virginia colony in the spring of 1674.[3]

Who Was Nathaniel Bacon?

Nathaniel Bacon Jr., aged twenty-seven, was the younger son of an influential Suffolk gentleman and, in fact, was the cousin of Sir William Berkeley by his marriage to Lady Frances. Bacon's wife was Elizabeth Duke Bacon. One of his uncles, Col. Nathaniel Bacon, was already in Virginia and was a prominent man within Berkeley's inner circle, being a member of the Governor's Council. By August, Bacon had purchased a cleared James River plantation of 1,200 acres with a dwelling house at Curles Neck in Henrico County.

For a few months, young Bacon was looked upon fondly by his elder kinsman. Berkeley tried to see to it that the young man was given opportunities like his uncle had been afforded to take his rightful place among Virginia's planter elite. In March 1675, Berkeley appointed Mr. Nathaniel Bacon as a member of the governor's Council of State, where he joined his uncle in the elite circle of the colony's leading men.[4] A short time later, Bacon was also elected to serve in the House of Burgesses to represent rural Henrico County.[5]

Bacon spent the bulk of his time during his first year or so in Virginia getting his plantation and farming operations established.[6] After he had gotten himself reasonably well settled at Curles Neck, Bacon wrote to England to have his young wife join him in their new Virginia home.

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[1] McCartney, "History of Green Spring," 25–26.
[2] Ibid.
[3] Carson, *Bacon's Rebellion*, 4.
[4] McCartney, "History of Green Spring," 27.
[5] Hudson, *Plantation, Refuge, Prison, Statehouse*, 7.
[6] Carson, *Bacon's Rebellion*, 4.

Catalysts for Rebellion and Civil War

Aside from reasons previously mentioned, the main trouble in Virginia started in July 1675 with another bloody chapter in the sustained contest between the English colonists and the Indians over land. By 1675, with so many white settlers arriving in Virginia looking for land on which to grow tobacco, the growth of the colony had extended to the fall line and was pushing the Indians ever farther inland. This inflamed tensions that had long existed between the Native Americans and the English over land.

The frightened colonists quickly appealed to the governor for help. Berkeley called for an investigation but let matters escalate further until they got out of hand. His failure to act decisively to protect those living on the frontier further frustrated and alienated the colonists, who interpreted his slow response either as disinterest or an unwillingness to upset several standing (and lucrative) fur trade agreements the governor had previously negotiated with the Indians.[7]

Nathaniel Bacon's few months of life on the frontier had given him a firsthand familiarity with the problems of Indian-white relations, and he saw for himself the hazards of living beyond the minimal protections afforded by a line of dispersed frontier forts designed to protect the settlers living within the region. By March 1676, nearly 300 colonists had been killed in Virginia, and the planters who lived along the upper James River fumed for revenge and asked the governor to allow them to take the war back to the Indians.[8] Governor Berkeley's answer was no. Instead, he wanted to build more frontier forts.

Bacon denounced the governor's negligence and promised to go after and destroy the enemy—with or without a commission from Berkeley. Bacon was then elected as the leader of the band of his neighbors and poorer planters who formed themselves into a small army of about seventy men. Governor Berkeley then sent word to Bacon ordering him to cease his military operations and report to him at Jamestown. Bacon countered by asking Sir William for a military commission to continue the fight. The governor flatly refused and withdrew his consent for any and all further military strikes. Failing to endorse or approve of any more vigilante action, he told Bacon that leading the volunteers further would constitute mutiny and rebellion on his part.[9] Thus began Bacon's Rebellion, one of the most important events in the history of seventeenth-century Virginia, and one that would have a profound impact upon the history of Green Spring plantation. It was to play a very important role since many events surrounding the conflict occurred there.

Rise and Fall of the Rebellion

Ignoring the governor's orders, in early May 1676, Bacon, heading a force that by then numbered some 300 men, marched south to attack a large Susquehannock Indian war party who were believed to be camped on or near Occaneechee Island in the Roanoke River. Enraged at Bacon's defiance of his authority, Berkeley declared him and his men to be rebels, and traitors.[10]

On June 1, Lady Berkeley sailed for England to serve as Sir William's agent at court and to plead his case to appoint another governor to serve in his place. She would be gone for many months, which was probably fortuitous for her, given what later transpired at Green Spring.[11] From this point and over the next few months, Berkeley and Bacon

[7] Price, "Making, Remaking, and Unmaking of Green Spring," 26.
[8] Carson, *Bacon's Rebellion*, 5.
[9] McCartney, "History of Green Spring," 27.
[10] Ibid.; also see Carson, *Bacon's Rebellion*, 6.
[11] Carson, *Bacon's Rebellion*, 6, 7; James Hagemann, *The Heritage of Virginia: The Story of Place Names in the Old Dominion* (Norfolk, Va.: Donning Company, 1986), 65.

would both be locked in a virtual duel to the death for control of the hearts and minds of their fellow Virginians.

In early September, Berkeley and his men entered Jamestown and fortified it against a suspected attack from Bacon's forces. On September 13, 1676, Bacon and his army of several hundred men arrived at Berkeley's Green Spring plantation and occupied it. Although the governor was then at Jamestown and Lady Berkeley was away in England, Bacon curiously decided not to set up his headquarters in the mansion house, but elected to camp in a nearby field. Here, he prepared his army for combat with the governor's men by giving a dramatic talk to his troops. In a field at Green Spring, Bacon is reported to have said, "Come on my hearts of gold, hee that dyes in the field lyes in the Bedd of honour." He also told them "that if ever they will fight they will doe it now."[12] Later that day, Bacon's men finally arrived at the isthmus that led to Jamestown Island, and found that the governor had barricaded it with a defensive palisade to prevent their access.

Bacon rode on horseback to within a short distance of the wall, had one of his men sound a trumpet to get the attention of the governor's men, then discharged his carbine. When the governor's troops realized who it was and returned fire with muskets, Bacon beat a hasty retreat and realized he would have to lay siege to the town or else lure the governor out of his refuge. With a force of some 300 men, Bacon began to dig a deep trench and defensive earthwork beside it at the other end of the isthmus and parallel to the governor's palisade. Since they had few supplies on hand, Bacon dispatched a force of men on horseback back to Green Spring to raid Berkeley's provisions and steal his livestock. Furious at being outfoxed by Bacon, the next day the governor determined to launch an attack on the rebel force to disrupt their work and drive them from their cover. However, the well-armed and vigilant rebels poured such an accurate and intense gunfire at the loyalists that several men were killed and wounded. The remaining soldiers were forced to beat a hasty retreat in ragged disorder to regain their cover behind the palisade wall. Having managed to procure two cannon, the rebels then began shelling Jamestown, and several more loyalists were killed.[13]

After five days of this murderous standoff, and as the death toll mounted, Berkeley's supporters began to desert him. Other supporters who realized the hopelessness of their position urged Berkeley to abandon the capital and flee. Finally realizing that his men were right, Sir William reluctantly boarded a ship, and he and his men abandoned Jamestown to flee to Virginia's Eastern Shore. The next day, September 19, Bacon triumphantly entered the virtually deserted Jamestown, and after considering what he should do next, defiantly had his men sack and burn the entire town to the ground.

The next day, Bacon went back to Green Spring and camped there for several days of rest. His men, now full of confidence at their apparent victory over the governor's forces, were spoiling for another fight, but the governor and his troops were gone and there were no Indians left to fight. Being bored and restless, some men returned home to tend to their families and crops.[14] Many more of Bacon's idle followers then plundered the Green Spring mansion house and outbuildings of everything they could take. Although they did not burn the huge structure down, they apparently caused a considerable amount of damage to both the house and the plantation. In June 1678, Lady Frances Berkeley, a widow once again, wrote to her cousin describing the damage "like one of those (buildings) the boys pull down at Shrovetide, & was almost as much to repair as if it had beene new to build, & noe-signe that ever there had beene a-fence about

[12] Hudson, *Plantation, Refuge, Prison, Statehouse*, 7; McCartney, "History of Green Spring," 30.
[13] Ibid.; also see Carson, *Bacon's Rebellion*, 9, and Hudson, *Plantation, Refuge, Prison, Statehouse*, 7.
[14] Price, "Making, Remaking, and Unmaking of Green Spring," 27.

it, in soe much that it had cost about £300 to make it habitable, & if I had not bestowed that money upon it, the Plantation had not beene worth £100."[15]

The records are silent about the location and activities of the large number of Governor Berkeley's servants during this period. Like many indentured servants in tidewater Virginia during those turbulent months, at least some of them might have joined Bacon and his men, or else were forced to stand by helplessly and watch as scores, if not hundreds, of armed men sacked Green Spring.

After wreaking utter havoc at Green Spring, Bacon's men then rode out in small bands on horseback into James City and adjoining counties and began plundering the plantations and farms of those men who had remained loyal to Sir William. Crops in the fields were destroyed, livestock were either taken or killed, and food and household goods were stolen. Stores of wine, beer, and cider were especially prized, and, after getting drunk on their plunder, the soldiers burned personal papers, letters, bed linens, and even household furniture in senseless and wanton acts of destruction. Bacon's men had become a law unto themselves. Even friends were not immune to these vicious raids. While Bacon did attempt to control his followers and bring an end to the depredations, many of his supporters would not listen to orders, having become nothing but an unruly and uncontrollable mob. These unprovoked attacks were the beginning of the end for Nathaniel Bacon and his rebellion.[16]

After staying several days at Green Spring, in late September Bacon left a small force there to keep an eye on the place and moved his army across the York River into Gloucester County.[17] By late October, Bacon was seriously ill, probably suffering from a combination of exhaustion, fever, pneumonia, body lice, exposure, typhus, and dysentery. On October 26, the rebellion's charismatic leader died (most likely from typhus), at the Gloucester County home of Maj. Thomas Pate, located just a few miles east of what is today the town of West Point. Fearing eventual retribution and desecration from the governor, one of his followers (probably Richard Lawrence) buried Bacon's body in a secret location (unknown to this day).[18]

Command of the ragtag army passed to Joseph Ingram who was very different from Bacon. Lacking his predecessor's boldness and charisma, he never had the full confidence of his men.[19] In the wake of Bacon's death, Ingram's unimaginative strategy was to divide the rebel army into several smaller groups and disperse them to various sites around the colony, where each group fortified itself against the attacks that would soon be coming from Berkeley and his forces.[20]

Ironically, one of the strongest and most heavily armed of Ingram's bands of men had been sent to occupy and fortify Green Spring plantation. The band, under the command of a Captain Drew, consisting of about 100 men and boys, turned the Green Spring house into a hilltop fortress. Drew, a miller by trade, had apparently owed the governor a large sum of money and, according to contemporary witnesses, was considered "most likely to keepe him out of his owne Howse." Drew determined "to keep the place in spite of all opposition." In order to help him "better keepe his promise he caused all the Avenues and approaches to the same to be Baracado'd up, and 3 grate Guns planted to beat of [off] the Assailants." Drew, having thus turned Green Spring into what was called "the strongest place in the Country what with grate and small

[15] Hudson, *Plantation, Refuge, Prison, Statehouse*, 8.
[16] McCartney, "History of Green Spring," 32.
[17] Carson, *Bacon's Rebellion*, 9–10.
[18] Thomas J. Wertenbaker, *Bacon's Rebellion, 1676*, 4th printing, Jamestown Booklet 6 (Charlottesville, Va.: University Press of Virginia), 43.
[19] Ibid., 45.
[20] Carson, *Bacon's Rebellion*, 10.

Gunns," bided his time and waited there "upon his gard and refuseth to Surrender, but upon his own terms."[21]

Due to the formidable defenses Drew had managed to put together, some of Berkeley's forces apparently decided to bypass Green Spring for the time being as they turned their attention to other portions of Ingram's dispersed troops, "til such time as Sir William should, in parson [*sic*], come and take possession" of Green Spring himself.

Berkeley's Restoration and Revenge

By mid-January 1677, Ingram had surrendered at West Point, the rebellion had collapsed, and the leaders were being captured one by one and brought to trial. The records are silent as to whether Captain Drew gave himself and his men up without a fight at Green Spring, but it seems that he must have eventually capitulated. All we know for sure is that on January 22, Gov. Sir William Berkeley finally returned to Green Spring, where he found his plantation had been "much spoilt and plundered in his absence."[22] His dwelling house was almost ruined and his household goods were totally plundered. All of the foodstuffs and corn, the seventy-five horses that Berkeley had once kept there, and 300 sheep had been taken away, and the fences were gone. Berkeley wrote later that he had "lost at least Eight thousand pounds Sterling in houses, goods, plantation servants and cattle and never looke to be restored to a Quarter of it."[23]

With the ringleaders captured one by one, Berkeley began a series of trials and executions marked by a vengeance and brutality seldom surpassed in American history. Having seen his once-lovely plantation virtually all but destroyed, Jamestown burned to the ground, his government overthrown for a time, and his retreat to a remote part of the colony, Berkeley was now keen on exacting revenge on the ringleaders who had perpetrated these crimes against the colony and him. For a few weeks, his vindictiveness against the surviving officers of Bacon's army knew no bounds.[24]

For the next several months, Green Spring took on a new importance as the interim capital and seat of the colony's government. Two days after Berkeley's arrival there, a number of Bacon's lieutenants who had been captured in the previous weeks were gathered together at Green Spring and brought before a military tribunal convened there by Sir William. The group included James Crewes, Giles Bland, John Digby, William Cookson, William Rookings, William West, Henry West, and John Turner. All were subsequently found guilty of treason and rebellion against the king and all of them, except Henry West, were sentenced to be hanged. Because it was thought that "he hath not been so notorious as the rest," West was merely banished from the colony for seven years.[25]

Over the next two months, a large number of rebel prisoners (estimated to have been between thirty and forty men) were held in confinement at Green Spring (probably in the house or a barn), and some were brought to trial there. According to local lore, these men were supposedly held in a brick building (now in ruins), which has been called "the Jail." It is now thought that this building dates from the eighteenth century, and may, in fact, have been built initially to serve as an elaborate banqueting house or garden pavilion (see photos, Figs. 2–1, 2–2, and 2–3).[26]

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[21] Ibid., 33.

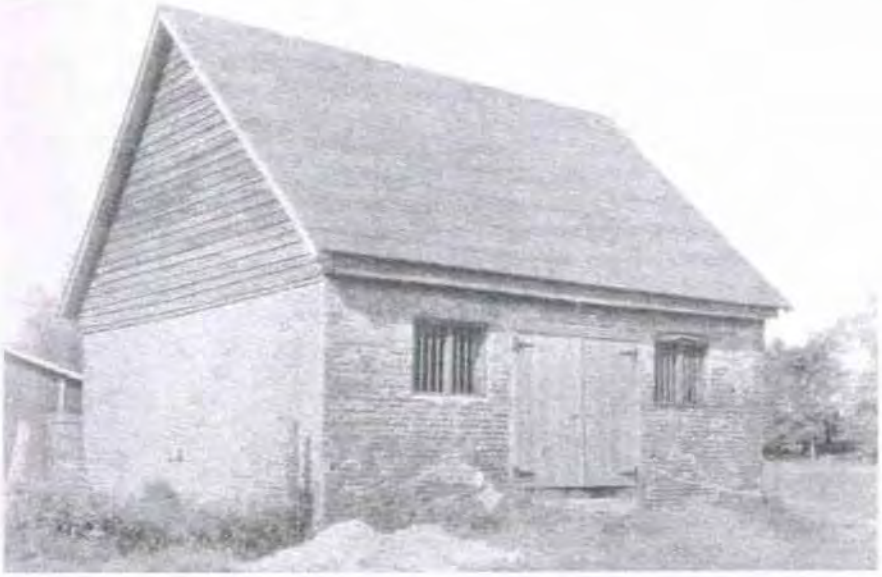
[22] Ibid., 33–34, 10.

[23] Jesse Dimmick, "Green Spring," *WMQ*, 2nd ser., 9 (1929): 130; Ivor Noël Hume, "Ghosts at Green Spring," in Noël Hume, *In Search of This & That: Tales from an Archaeologist's Quest; Selected Essays from the Colonial Williamsburg Journal* (Williamsburg, Va.: Colonial Williamsburg, 1996), 144; McCartney, "History of Green Spring," 36.

[24] Wertenbaker, *Bacon's Rebellion*, 47.

[25] McCartney, "History of Green Spring," 33–34.

[26] Price, "Making, Remaking, and Unmaking of Green Spring," 41, 42.





Figs. 2–1, 2–2, and 2–3 Green Spring's so-called jail, when it still had its roof (circa 1900) and the ruined brick walls of this structure as it appears today. (CWF photos)



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[21] Ibid., 33.

[22] Ibid., 33–34, 10.

[23] Jesse Dimmick, "Green Spring," *WMQ*, 2nd ser., 9 (1929): 130; Ivor Noël Hume, "Ghosts at Green Spring," in Noël Hume, *In Search of This & That: Tales from an Archaeologist's Quest; Selected Essays from the Colonial Williamsburg Journal* (Williamsburg, Va.: Colonial Williamsburg, 1996), 144; McCartney, "History of Green Spring," 36.

[24] Wertenbaker, *Bacon's Rebellion*, 47.

[25] McCartney, "History of Green Spring," 33–34.

[26] Price, "Making, Remaking, and Unmaking of Green Spring," 41, 42.

Of the fourteen men who were ultimately tried and condemned to death at Green Spring, we do not know how many of them were actually executed on the plantation, but at least three or four men are believed to have been hanged on the site. Several were executed at Middle Plantation and a few others at "Bacon's Trench," probably at the isthmus location near Glasshouse Point on the James River, where Bacon and his men had dug their fortification when they had laid siege to Jamestown Island the preceding September. No doubt this location was symbolic, chosen specifically as a stern warning to anyone who might contemplate committing treason in the future.[27]

The General Assembly convened at Green Spring on February 20, 1677, and, at Berkeley's prompting, a number of acts pertaining to Bacon's Rebellion were passed. One observer said that most of the burgesses were the governor's "own creatures and chose by his appointments."[28] The burgesses overturned and nullified all of the legislation that Bacon had urged upon them in June 1676, and limited pardons were extended to all but the twenty-three men who had been executed up to that time.

In March, there were eight trials convened at Green Spring to try these captured rebel leaders. Although some among these men were tried and ultimately received mild sentences, ranging from payment of fines to public humiliation and banishment, at least nine more men were sentenced to death by hanging.[29] In all, some thirty men died at the end of a hangman's rope for their participation in the rebellion, later prompting King Charles II to remark upon hearing this report, "The old fool has killed more people in that naked country than I have done for the murder of my father."[30]

On May 5, 1677, after three months' delay, Sir William Berkeley finally set sail for England as he had been directed. With his departure, his nearly thirty-year autocratic and corrupt grip on the reins of power in Virginia finally loosened. He had hoped eventually to be able to explain his actions to the king. It was, however, a meeting that was never to be, since Berkeley was by then an ill man. Shortly after his arrival in England, Sir William was confined to his bed, where he died on July 13, 1677. His body was interred in the parish church at Twickenham.[31]

The Lasting Effects of Bacon's Rebellion

Bacon's Rebellion had a profound and lasting influence upon the colony of Virginia, economically, politically, and socially. More important for this study, the events surrounding Bacon's Rebellion at least partially destroyed much of what Sir William Berkeley had worked for decades to build at his Green Spring plantation. While the house sustained some damage from being ransacked and looted by Bacon's men, the landscape suffered the most, with outbuildings ransacked and destroyed, fences and brick walls torn down, gardens trampled underfoot, orchards damaged, and livestock killed or run off. Because of the rebellion, the Green Spring landscape of Governor Berkeley may have never been the same thereafter. In short, what happened to Berkeley's Green Spring could explain why the governor was as embittered and vindictive as he was in the months immediately afterward. Even after all the destruction, Lady Frances still considered it "the finest seat in America & the only tolerable place for a Governor."[32]

The plantation did continue to be the home of Virginia's governors for yet a while longer.

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[27] McCartney, "History of Green Spring," 35.
[28] Ibid., 52.
[29] Ibid., 38–39.
[30] Hudson, *Plantation, Refuge, Prison, Statehouse*, 8.
[31] Wertenbaker, *Bacon's Rebellion*, 53–54; Hudson, *Plantation, Refuge, Prison, Statehouse*, 8–9.
[32] McCartney, "History of Green Spring," 42.

Summary/Conclusions

- Once popular with the Virginia colonists he was sent to govern, by 1676 an aging Sir William Berkeley could no longer maintain control over restive Virginians who fumed under his increasingly autocratic rule.
- What began as a dispute between a group of colonists and the governor over how to respond to Indian attacks and to protect English settlements along the frontier, turned into open confrontation and an armed rebellion that soon engulfed the Virginia colony in a civil war.
- The colonists' charismatic leader, Nathanial Bacon, defied the governor in ways that no one had before dared, leading up to a fight to the death.
- Bacon and his men occupied Green Spring, sacking the place, and laid siege to Jamestown. The governor was forced to flee, taking refuge on the Eastern Shore. Bacon's army entered Jamestown and burned the town to the ground.
- Bacon and his men returned to Green Spring for several days, doing even further damage as well as sacking many homes in the surrounding region. When his army departed, a small force remained there as a garrison.
- After Bacon's death, the army was dispersed to different plantations, including Green Spring, where a force of 100 men turned the place into a hilltop fortress, covering three approaches to the place with cannon.
- By January 1677, the rebellion was over, and Berkeley returned to Green Spring. The leaders were captured and held prisoner there briefly before being tried and hanged. At least three or four men were hanged at Green Spring.
- Most importantly for this study, it has been established that Green Spring suffered unspecified damages, although we know that the house and outbuildings were looted, the livestock was killed, and the fences around the house were pulled down. Irreparable damage to Berkeley's Green Spring landscape *may* have been the result.
- Sir William Berkeley was removed and recalled to England, but shortly after arriving there he died and was buried in Twickenham.
- Because Jamestown's statehouse had been burned in the rebellion, Green Spring served for several years thereafter as a meeting place for both the Governor's Council and the House of Burgesses. As such, it served temporarily as the de facto capital of the colony. It also was rented as a residence by at least two governors of the colony in the 1680s.

Chapter Three

SIR WILLIAM BERKELEY'S BUILDING AND HORTICULTURAL PURSUITS AT GREEN SPRING

Having examined the chronological history of the Green Spring site in Chapter One, with a more specific focus on the particular sequence of events that surrounded Bacon's Rebellion in Chapter Two, we turn our attention in this chapter to what is known about the Green Spring site during Governor Berkeley's thirty-five-year tenure. Although there have been three separate archaeological examinations of this site over the last seventy-five years, most of the attention of these excavations was focused on the ruins of both the oldest and newer mansion houses that were adjacent to each other. This work, coupled with some documentary research in surviving records collections, as well as sketches and drawings of the newer mansion house as it appeared in 1796–97, done by English architect Benjamin Latrobe, tells as much as is currently known about these houses today.

Less well documented (and, thus, less well known) is the full scope of the agricultural and horticultural dimensions of Green Spring during Governor Berkeley's lifetime. Yet, enough references are available to us to provide at least a glimpse of how much Berkeley was determined to build Green Spring into both a showplace, as the home of a royal governor, and as a tangible and visible example of what, with vision, innovation, and determination, it was possible to create in the rich soil of Virginia.

The primary thesis of this chapter, however, is that what little documentary evidence is still available about early Green Spring strongly suggests to scholars that (except for the house itself) the earliest Green Spring plantation landscape is long gone, and its remaining traces have yet to be either found or extensively explored to determine what, if anything, might remain hidden in the ground to be found. Discovering more of the vestiges of this deepest layer of what is, obviously, a complex multilayered domestic site would help us to learn far more about the scope and extent of Berkeley's Green Spring, as contrasted with the Green Spring of the later Ludwell-Lee periods, which we now realize represents most of what we know about the site's former layout and the organization of its domestic area landscape.

The "Manor" and "Mansion" Houses

During the seventeenth century, there were, in essence, two large manor houses built at Green Spring. The first, generally referred to by NPS archaeologist Louis R. Caywood as the "old manor house," was built some time between when Berkeley first acquired Green Spring in April 1643 and February 1645, when a letter documented that by that date, "the brick house there is now in hand."[1] Houses built entirely of brick did not become

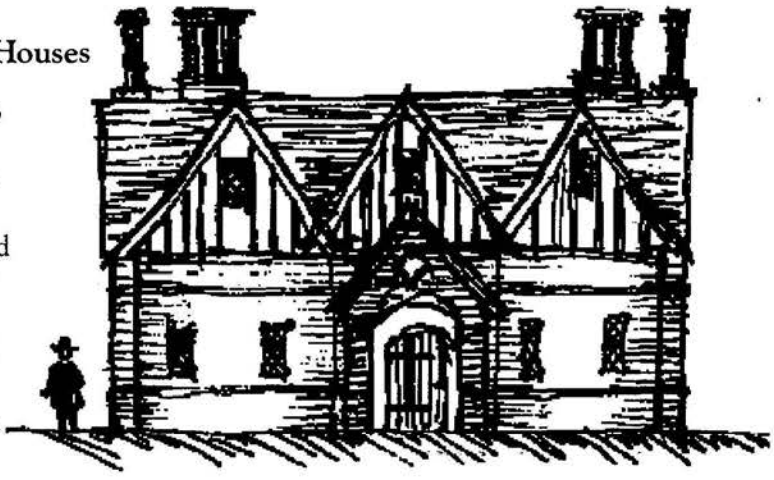


Fig. 3–1 Author's elevation sketch of the possible appearance of Berkeley's original Green Spring "manor" house.

[1] McCartney, "History of Green Spring," 16.

common in Virginia until after 1680. This was, in fact, a timber frame building, measuring sixty-eight by seventy feet, built on brick foundations with two brick towers attached. As such, it was the first large plantation house in the Virginia colony to be built with the extensive use of bricks.[2] In the 1886 publication *Virginia Carolorum*, author Edward D. Neil mentioned that the first Green Spring house consisted of "six rooms, as many closets, a spacious hall and two passages, with garret rooms." Neil failed, however, to cite the source of this information, which apparently has not survived, since his is the only source that provides this data.[3] Governor Berkeley married for the first time in about 1650, although the name of his first wife and details about her life are not known. He likely made some improvements to the original Green Spring house during the years of his temporary retirement (1652–60), although these improvements or repairs could have been prompted by and made after a fire that extensively damaged the house sometime during those years.[4] Daniel D. Reiff stated that the fire occurred later, during the 1660s, when the house was either badly damaged or entirely destroyed, necessitating its renovation or rebuilding.[5] (See Fig. 3–1.)

Specific information as to when the second house was built, called by Caywood the "new mansion house," is not documented in any surviving historical records. Historians have suggested two primary theories about when the second and much larger house might have been constructed. Both ideas have their respective merits.

The first thought was that the second, or "new mansion house," might have been constructed shortly before or after the date when Berkeley married for the second time, in 1670. Lending credence to this theory is the fact that it is known that he would have acquired additional money and property from his second wife, Lady Frances Culpeper Stevens, upon their marriage. At about that time, both he and his wife sold off considerable real estate holdings that each had brought to their second marriages. This sale of their extensive property holdings would have provided the couple with a considerable amount of ready cash that, ostensibly, could have been used to build a much larger, more imposing, and more commodious house at Green Spring than the earlier house had been. This similarity of dates between the sale of property and the probable construction date of the house appears to be more calculated than merely an interesting happenstance.[6] In any event, the new mansion house at Green Spring was an impressive twenty-four feet nine inches wide by ninety-seven feet five inches long, with brick walls that measured a massive two feet four inches thick to support three stories.[7]

The second theory related to the Green Spring "new mansion house" is that it was not built until a full decade later, in about 1680, when Lady Berkeley, by then a widow, married for a third time to Philip Ludwell I.[8] This theory has considerable merit because Ludwell I also brought extensive wealth to this marriage. Once again Lady Berkeley also sold off some of her real estate holdings after her marriage to Ludwell, which would have produced liquid assets for a building project.[9]

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[2] Reiff, *Small Georgian Houses*, 195.

[3] Edward D. Neil, *Virginia Calorum*, 204; McCartney, "History of Green Spring," 17.

[4] Ibid., 17–18. Dr. Warren Billings, however, expressed an equally plausible view that Berkeley, with his income severely curtailed during his retirement, would have been hard-pressed financially to make significant additions to his house. Billings hypothesizes that Berkeley built the western wing in 1652, not long after his first marriage (1650) and within a decade of arriving in Virginia. See Billings, "Imagining Green Spring House," 93. The author of this report disagrees with this earlier dating, feeling that changing the entire orientation of the plantation house to face south surely would have been done, at least in part, in response to changes in the few roads surrounding Green Spring. There is no evidence that such external changes occurred in 1652. The earliest evidence for any road approaching Green Spring from the south dates to 1676, and the first visual evidence is shown in John Soane's 1683 "'Salt Map'" (See Fig. 4–1) (copy, JDR Jr. Library, CWF).

[5] Reiff, *Small Georgian Houses*, 200.

[6] McCartney, "History of Green Spring," 24–25.

[7] Reiff, *Small Georgian Houses*, 201.

[8] McCartney, "History of Green Spring," 43, 50.

[9] Ibid., 43–44.

Moreover, the second house's appearance in the Green Spring landscape represents quite a radical and dramatic departure in the earlier layout and physical orientation of the site with its relationship to the surrounding network of roads. The smaller earliest house and site were accessed from and were clearly oriented to face west toward the north-south, so-called Newcastle Road, which ran to the west of the plantation's domestic complex. The larger second house was built adjacent to and slightly to the northwest of the earlier house, but now faced to the south, toward the capital at Jamestown. At some point, a long extension of the Jamestown road was built across the lower swampy ground of the plantation, leading straight up to the new house, sited as it was on the highest elevation of a natural bluff. Approaching visitors received an impressive view of the house set upon its commanding hilltop, overlooking gardens and agricultural fields. Exactly when this work was done is also not definitively known; however, this author will offer at least one theory about a possible date when the road was built or straightened in the next chapter.

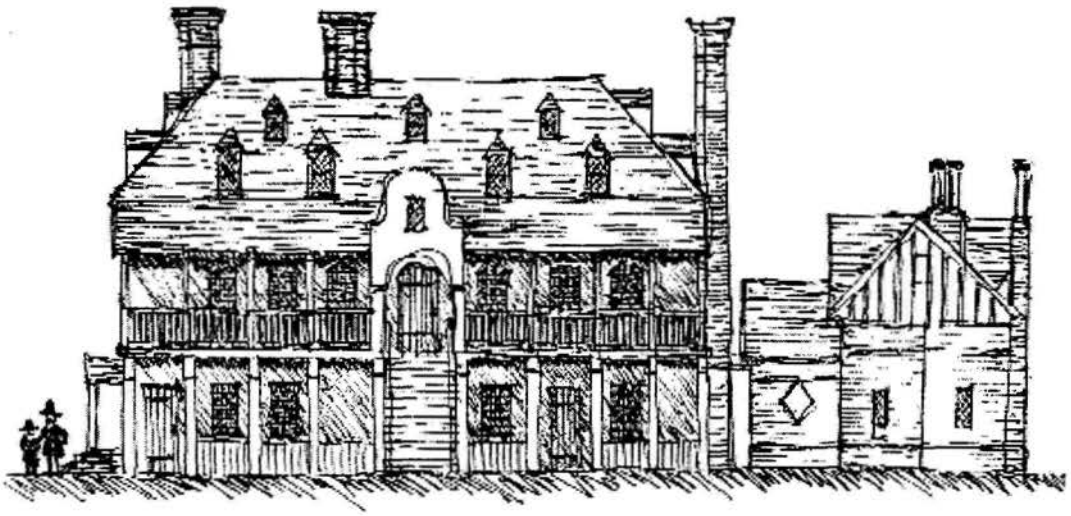


Fig. 3–2 Author's elevation sketch of the possible appearance of both Green Spring houses when they were standing together circa 1683, as seen from the south-southeast.

On the one hand, this new orientation seems to befit the aspirations and ideals of the wealthiest man in Virginia. On the other hand, the change seems almost too abrupt and radically different for an older man to attempt in the last few years of his life. A good argument can, therefore, be made that such a radical change in access location and site orientation strongly suggests the presence, vision, and influence of a brand new owner, rather than the work of the previous owner, who is far less likely (in circa 1670–74) to have decided to completely abandon the earlier layout he had worked hard to build and refine for most of three preceding decades.[10]

However, one must consider that Ludwell I and his lady apparently never elected to live at Green Spring after their marriage, residing instead at Ludwell's nearby Rich Neck

[10] This theory has been arrived at in consultation with archaeologist Ivor Noël Hume and architectural historian Edward Chappell, both noted experts within their respective fields. Based on their careful examination of the most recent archaeological evidence and on deductive reasoning expressed during several on-site meetings in spring 2002, both of these colleagues feel that the construction of the second house should be attributed to Philip Ludwell I rather than Sir William Berkeley. The author adds here the additional arguments of the too-radical nature of the change in the house site's orientation to the south and the new house's relationship to the surrounding roads (see n. 4 above) as other reasonably compelling reasons why Sir William Berkeley probably was not the builder of the so-called "new mansion house," as Dimmick, Caywood, Waterman, Forman, Billings, McCartney, Price, and others have long supposed.

plantation. Despite this apparent inconsistency, in 1678, Lady Berkeley wrote to a friend in England that "as it is I thinke (it) the finest seat in America & the only tolerable place for a Governor."[11] It is apparent that she felt that Green Spring was a grand place to rent to subsequent governors, even in 1678, only a short time after it had been damaged in Bacon's Rebellion. Green Spring was, in fact, rented in the 1680s to several royal governors for their use as official residence, and the house also served periodically during those years as the temporary capitol and meeting place of both the Governor's Council and the House of Burgesses.[12]

A determination about the actual construction date of the new manor house has proven elusive, with many reasonable theories having been offered, but the question remains a mystery to this day. In her recent study, architectural historian Elizabeth Barrett Price theorizes that Sir William Berkeley himself in fact, built the second house, in about 1674.[13] Until further archaeology allows another forensic look at the houses' foundations, the questions surrounding the dating of the Green Spring manor houses will likely remain.

In any event, regardless of when the second house was actually built (that is, circa 1668–70, or 1674, or 1680) both houses were clearly shown on the 1683 Soane Map as then standing side-by-side[14] (see Figs. 1–5 and 3–2). How long the earlier house remained standing before it was torn down is not known, but apparently it was not very long. Ludwell I may have torn it down sometime before the end of the century. It was more likely done by his son, Philip Ludwell II, who took up residence at Green Spring at the time of his marriage in about 1697. He inherited the place from his father upon the elder Ludwell's death in England, sometime after 1710.[15]

Other Outbuildings

As was mentioned before, not as much is known today about other specifically located buildings that stood on the site during Sir William Berkeley's ownership. Archaeological excavations in 1954–55 revealed an early brick kiln to the east-southeast of the house area. This kiln was where pottery was fired during the post-1665 period of the seventeenth century and, so, was clearly a Berkeley-era site feature.[16]

Unique environmental conditions in the colonial Chesapeake affected the type and arrangement of outbuildings on larger Virginia farmsteads and plantations by the mid-seventeenth century. The service functions were removed from dwelling houses and placed into detached outbuildings to keep heat, odors, and vermin from the dwelling house. Also, changes in the labor force in the fourth quarter of the century further hastened this process. Where white indentured servants had often lived in the same dwelling houses with their master and family, the general switch in the late seventeenth-century Chesapeake region to using black slaves as the primary labor force to perform agricultural tasks necessitated the building of detached housing for the slaves as well as providing houses for their white overseers.[17]

[11] McCartney, "History of Green Spring," 42.
[12] Ibid., 44–45.
[13] Price, "Making, Remaking, and Unmaking of Green Spring," 58.
[14] In 1796, William Ludwell Lee apparently told Benjamin Latrobe that what is today known as the "new mansion house" (then still standing) dated to sometime in the 1640s, for that was the date Latrobe noted for the age of the house as he noted in his ca. 1796 watercolor painting of the house [The Virginia Journals of Latrobe by Carter]. This oral history, however, almost certainly must have referred to the "old manor house," which apparently had long been torn down by the time of Latrobe's visit. See n. 10 above for related comments on this topic.
[15] McCartney, "History of Green Spring," 51.
[16] Ibid., 22; see also Caywood, *Excavations at Green Spring*, 12–13.
[17] Donald W. Linebaugh, "'All the Annoyances and Inconveniences of the Country': Environmental Factors in the Development of Outbuildings in the Colonial Chesapeake," *Winterthur Portfolio: A Journal of American Material Culture* 29, no. 1 (spring 1994): 1–18.



Fig. 3–3 Springhouse in foreground with supposed kitchen in left background. (Function of the building at right is not known.) Of all the structures shown in this circa May 1897 photo, only the foundations of the springhouse are visible today. (JDRL)



Fig. 3–4 Closer view of supposed summer kitchen (as it appeared circa May 1897). (JDRL)



Fig. 3–5 A fuzzy photo showing the interior of the kitchen's brick hearth as it appeared in May 1897. This chimney hearth has completely vanished today. (JDRL)

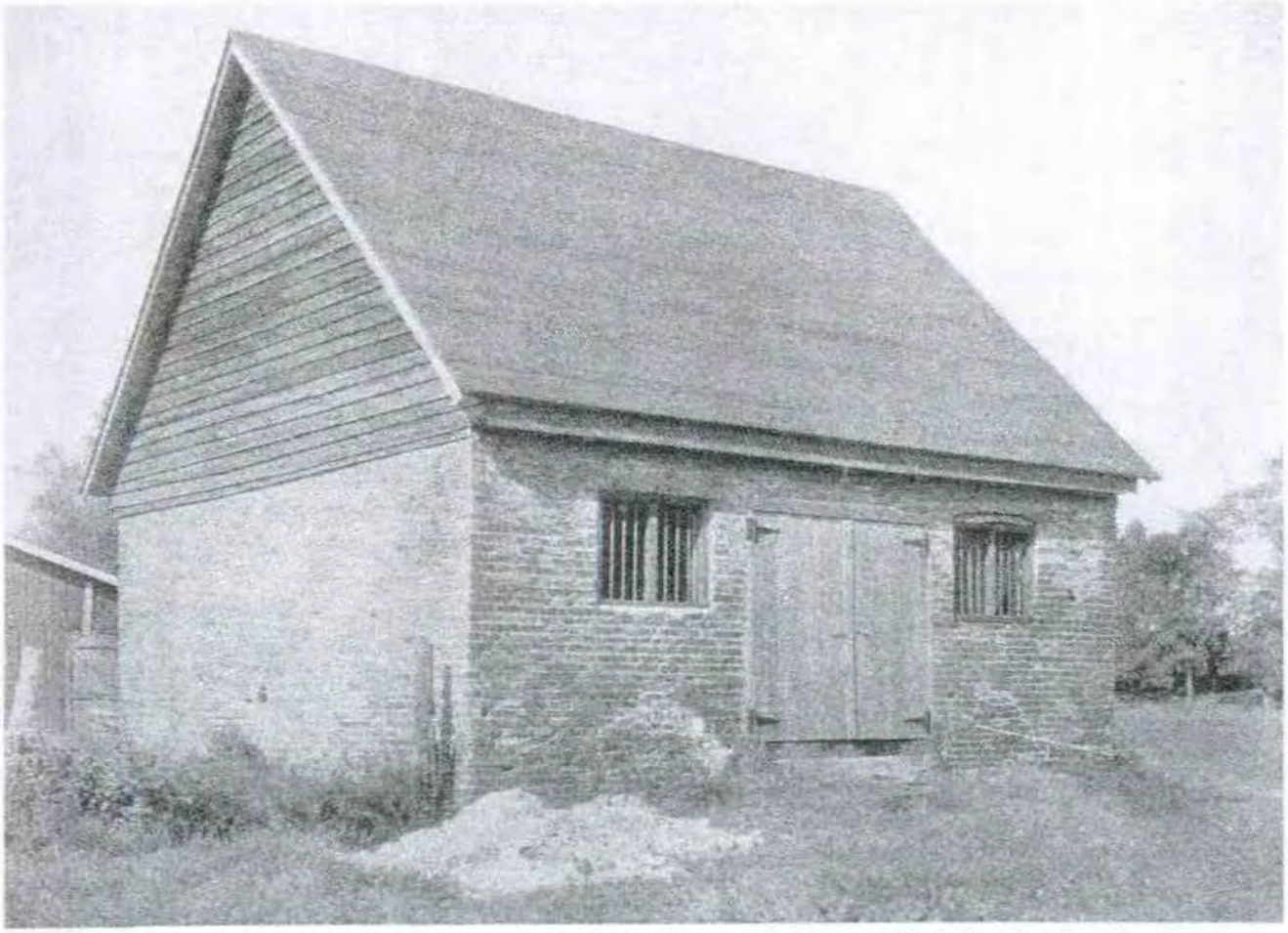


Fig. 3–6 Photo (date unknown) of the "old jail" when it still had a roof and doors. Only fragments of the brick walls still stand.

This seems to have also been the case at Green Spring. A large wooden kitchen and bake house once stood to the east of the old manor house site. This large structure, with its large central brick chimney was shown in the right background of the watercolor drawing of the Green Spring house by Benjamin Latrobe in 1796 (see Figs. 1–6 and 4–9). What appears to have been the same structure was still standing and was photographed in May 1897 (see Figs. 3–3 and 3–4). From artifacts dating to the early nineteenth century found within the structure, it appears that the building was later used as a blacksmith's shop in the nineteenth century. From the type of brick used and the method of construction, Caywood thought that this structure was attributable to the seventeenth century (this assertion is debatable today). Caywood also based his assumption on the fact that there were two very large brick hearths that were built within the structure (see Fig. 3–5) (apparently also photographed in May 1897) and two bake ovens, also of brick construction.[18] If his assumptions were correct (which is currently unverifiable since the structure has disappeared over the last century), then this structure very well could date from the Sir William Berkeley period.

Other buildings that might have been standing on the site during Green Spring's earliest period probably included a springhouse and a large brick barn (which is mentioned in documentation but is no longer standing, its exact location long lost). The springhouse remnants standing on the site today are the ruins of a modern brick and cinderblock structure built by the NPS sometime in the late 1960s on top of much older brick foundations. This building replaced one or more older structures located on top of the source of the spring that gave the site its name.[19] Amazingly (given the population growth in James City County in recent decades), the spring water still bubbles up from the ground, although it is now just a trickle compared to what it once must have been. The ruins of the springhouse, the so-called old jail, the north wall of the greenhouse/nursery structure, and the ruins of another brick building at the southeast corner of the lower terrace's east range are the only masonry ruins now still visible or standing on the site (see Fig. 3–6 for a photo of the "jail"). As this old (but undated) photograph of the "jail" building (when it still had an intact roof on it) shows, this eighteenth-century structure seems to have served as some sort of storage barn, at least during part of its existence as a functional building. The structure may have had several uses over its active life. It may have originally been built to serve as a banqueting house for entertaining guests during the warm months, but later could have been converted into a more practical use as an agricultural building. These are, however, as-yet untested speculations.[20]

The bars that appeared on the windows of this building in the old photograph were common for storage buildings, beginning at least during the eighteenth century and continuing through the twentieth, and allowed the structure to be locked and made secure from pilfering by overseers, slaves, or later, perhaps, by tenant farmers. The bars appear to have been later additions to the substantially built structure.

Whether or not this obviously once-secure structure was actually ever pressed into service right after Bacon's Rebellion in 1676 as a temporary prison to incarcerate Bacon's followers (the structure actually seems to date from a much later period), a persistent local oral tradition has long had it that this building did, in fact, serve as a jail for some period. It is entirely possible that this oral tradition may have gotten started many decades later merely because of the notable presence of the iron bars on the windows. However, this is a supposition that, while certainly plausible due to the building's substantial masonry walls, is not easy to prove or disprove. The fact that Sir William Berke-

[18] Ibid., 14–15.

[19] Ibid., 14.

[20] Price, "Making, Remaking, and Unmaking of Green Spring," 41 and 41–42 n. 26. See also Billings, "Imagining Green Spring House," 94.

ley himself indicated that he was keeping at least thirty prisoners *in his house* (emphasis added due to a literal reading of his words) under a guard of fifty men, tends to discredit any notion that this brick structure ever served as their temporary jail.[21] It may date as far back as the seventeenth century, but such an early attribution seems highly unlikely, and most local historians today feel this structure is of eighteenth-century origin.

Other outbuildings that might have stood during the Berkeley period are certainly one or more tobacco barns, storage barns for grain, a dairy, the large brick stable (already mentioned), a greenhouse (possibly a free-standing structure later incorporated into the expanded mansion house), an icehouse, and, perhaps later in the seventeenth-century period, a wooden smokehouse.[22] None of the locations of any these probable structures (in relation to the main house sites) are known (with the possible exception of a greenhouse). However, this author will advance several theories of general locations on the site for some of these lost structures for further consideration and for possible future archaeological examination.

Brick Stable and/or Brick Barn

A couple documentary sources state that Governor Berkeley built at Green Spring what must have been a truly enormous brick stable, one that was large enough to house some seventy-five horses! One would surmise, then, that a brick stable or barn that large would certainly have been the largest structure of its kind in the colony of Virginia and would have surely elicited comments and descriptions from observers and visitors in their diaries and letters. Curiously, this is not the case. Did this massive structure exist, or is its presence based merely on some fanciful, apocryphal story that was concocted years later by local storytellers? If this building actually *did* exist, what ultimately happened to it to cause it to disappear without a visible trace, and why didn't more people of Berkeley's day comment on it in the correspondence that survives from that period? Future archaeological excavations may reveal the facts behind this story.

One historical reference for a brick barn that once stood at Green Spring was written and substantiated by English architect Benjamin Latrobe. In his pocket diary in 1796, Latrobe referred to the fact that the British did no great damage to the buildings during their visit to the site in 1781. He stated that "they destroyed however a quantity of Tobacco which had been housed in a large brick barn, and having hauled out a boat which was also secured in the same place they set fire to it. The barn caught fire from the boat and the horse [cavalry troopers?] prevented the negroes from putting it out. This was all the injury done. The massive ruins of the barn remain a proof of the superior value of this plantation and former days when Jamestown was the Capital of Virginia."[23]

Latrobe obviously felt that the ruins of this brick barn that had burned during the American Revolution served as tangible evidence of the quality of construction that had been incorporated in its building and, by extension, to the entire plantation. Whether or not this same brick barn had also once served as Governor Berkeley's brick stable is not known, but it very well might have, in which case the story of Sir William Berkeley's brick stable would not be just some fanciful local myth. It is a question, however, that merits further archaeological examination to try to find this potentially important, long-lost building.

An early aerial photograph of Green Spring that was taken in the late 1920s (see Fig. 3–7) shows the location of what appears to have been a large relatively modern stable or barn that was then standing about fifty yards to the north-northwest of the "old Jail."[24]

[21] McCartney, "History of Green Spring," 37.

[22] Carson, "Green Spring Plantation," 11.

[23] Edward C. Carter II et al., eds., *The Virginia Journals of Benjamin Henry Latrobe, 1795–1797* (New Haven, Conn.: Yale University Press for the Maryland Historical Society 1977), Vol. 1, 181.

[24] This photo appeared in Jesse Dimmick, "Green Spring," *WMQ*, 2nd ser., 9 (1929): 130.

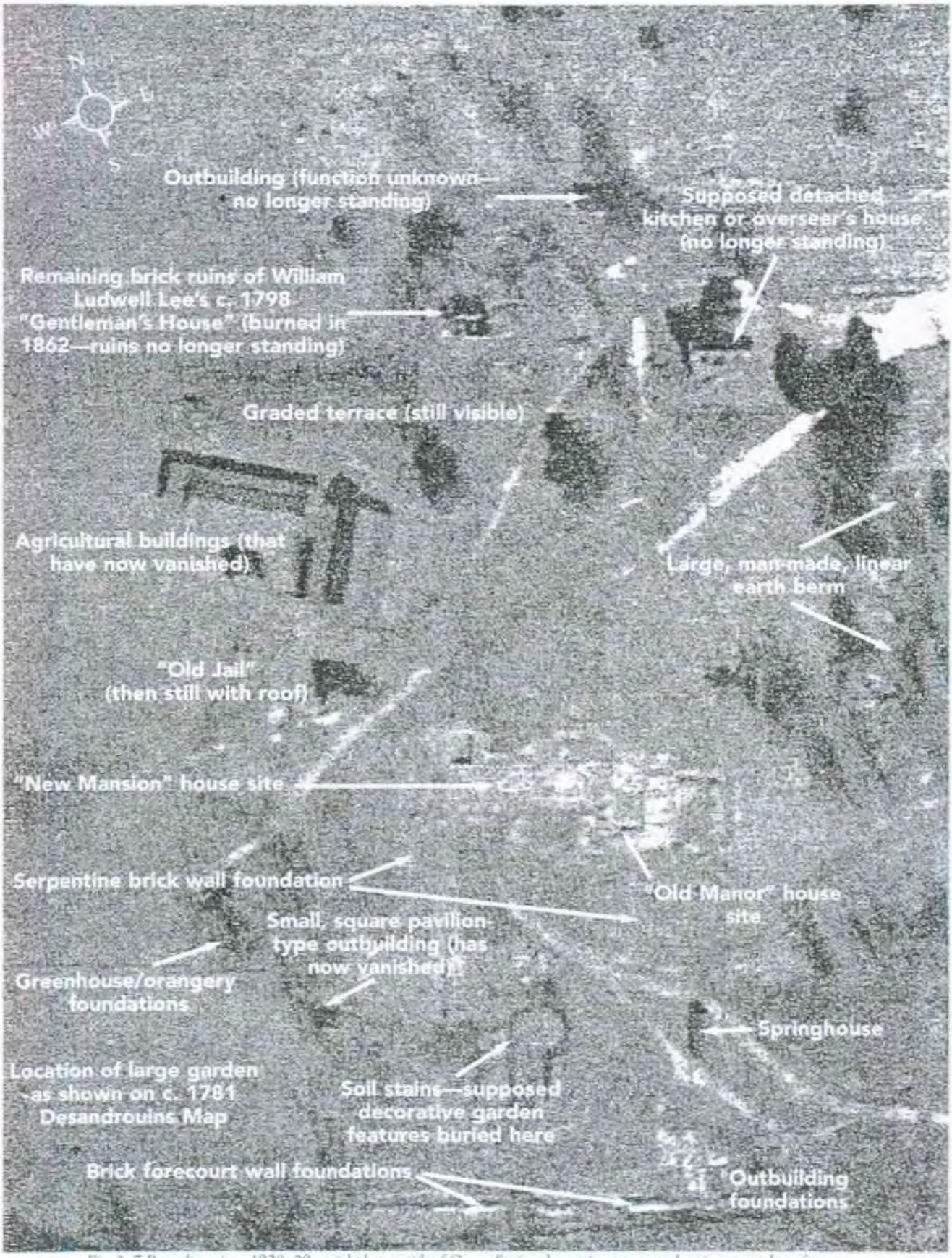


Fig. 3–7 Revealing circa 1928–29 aerial photograph of Green Spring domestic core area showing a number of important site features, including several buildings that have since vanished. (VMHB)

Today this area is overgrown with weeds, vines, and other wild vegetation, consisting mostly of young volunteer species of trees that typically are found growing around the ruins of old building foundations. This area probably marks the location of the former buildings that were shown in the aerial photo, and perhaps the location of buildings that may have preceeded them. Further archaeological investigation may find the traces of one or more buildings that once stood before it at this location, possibly including Berkeley's supposed brick stable or barn. This location in its relationship to the houses sites, along with its brick construction, would suggest that any such structure (if, in fact, such had been built by Berkeley) would most likely have been built during the latter stages of his ownership of Green Spring.

Greenhouse

The tradition of a greenhouse having been built during Berkeley's period presents another mystery that needs further examination. Several passing references to a greenhouse during Berkeley's tenure appear in the published body of work on Green Spring, including the histories written in recent years by historians Jane Carson, J. Paul Hudson, and Martha McCartney.[25] The problem is that most of these references appear to refer to the ruined structure at the Green Spring site that is the focus of this current study. Apparently, the long-standing assumption by all of these scholars was that this ruin was, in fact, Sir William Berkeley's lost greenhouse. We now know via recent archaeology that this is *not* the case, and that the fragmented ruins visible today at Green Spring were probably built by Philip Ludwell III and could not have been built much before 1740.[26] Since this is the case, we are left with two remaining questions: 1. Did Governor Berkeley, in fact, have a greenhouse during his lifetime at Green Spring, or has this assumption been based on the ruins of the structure that have now been proven to date from a half a decade later? 2. If he *did* build a greenhouse (which would then make it a candidate for being the earliest one built in the English North American colonies), where else might it have been located on the site?

A closer look at the available archaeological and documentary evidence reveals some intriguing clues to one distinct possibility, one that has never been considered by other architectural or landscape historians before now. This evidence and several hypotheses are cited in detail in the section below.

Another Berkeley Greenhouse Possibility

In reviewing Benjamin Latrobe's ground-floor plan (see Fig. 1–15), we see that the northwestern portion of the main house merits closer examination. At first glance, this appendage to the building, labeled by Latrobe as the *nursery* is curious for several reasons. First, it appears to have been built earlier or had been added later than the rest of the building, since the floor levels of this wing do not match those of the rest of the main house. Second, at the time of Latrobe's visit, the owner, William Ludwell Lee, was not married, so the name *nursery* that Latrobe gave to the wing is curious.

Considering this plan and these anomalies, archaeological and architectural advisors Ivor Noël Hume and Edward Chappell realized that the common wall separating the wing from the house was the one element that provides the real clue to this wing's probable origin.[27] Latrobe's 1796 watercolor sketch of the house (see Figs. 1–6 and 4–9) clearly shows a

[25] See Source Bibliography for full citations of these works.

[26] National Park Service archaeologist Dr. Andrew S. Veech has recently determined via archeological excavations the probable construction date and builder's attribution for this structure.

[27] This theory was first expressed by these colleagues and was discussed at some length by the author of this report and Colonial National Historical Park superintendent Alec Gould, chief historian Karen Rehm, and archaeologist Andrew Veech at an on-site meeting June 12, 2002.

vertical seam or joint where the wing joins the main portion of the house and indicates that these two portions were not built at the same time. While the differences in floor levels between the two areas are significant, the common wall is noticeably thicker than any other interior or exterior walls in the house. This suggests that instead of the wing being a later addition to the western wing of the house, apparently just the opposite is true: that this wing was actually a freestanding structure of much earlier construction incorporated into the house when the western wing was added to the old manor house sometime between 1670 and 1680. This theoretical explanation of the probable construction sequence of these two very dissimilar structural components is plausible and appears to make some sense.

This author takes the Noël Hume/Chappell theory one step further by postulating another theory that might lead to other clues concerning Sir William Berkeley's lost Green Spring plantation landscape. Two possibilities seem to exist concerning the attribution for the dual-meaning term *nursery* given by Latrobe to this portion of the structure. 1. The most obvious reason is that this room had once served as a *children's nursery* during the period when Ludwell II's children or William Lee's children were living at Green Spring (roughly the years from circa 1700 to perhaps as late as 1788), or 2. The other, equally plausible possibility is that the term was a holdover from a much earlier period indicating that the structure was originally built as Sir William Berkeley's *plant nursery*, or greenhouse.

If this latter hypothesis can be proved, the structure's orientation and location to the northwest of the old manor house (while a bit problematical because it would have been located in front of and to the north side of the west-facing house), could provide further evidence that one or more of Sir William Berkeley's gardens or orchards was located adjacent to this building (that is, to the north of it and perhaps even stretching east and north of the manor house).

Berkeley's Gardens and Related Landscape Features



Fig. 3–8 Photo of the tree-covered earth berm to the east-northeast of the early house site as it appears today. (Photo by author)

The possibility of long-lost gardens having once been arranged in this general area of the site is further suggested to this author by the survival at the site of a curious, long, linear earthen berm that runs parallel to today's Route 614 (Centerville Road) (see Fig. 3–8 at left). While now highly eroded and overgrown with heavy vegetation, this landscape feature appears to be very old, and yet no previously published histories, articles, or reports (save one) have ever ventured to suggest what the probable purpose of this significant landscape feature might have been.[28]

[28] Although Louis Caywood did not archaeologically examine this feature, he did state in his 1955 report that it was "a huge man-made structure of unknown age," calling it a *mount*. Caywood, *Excavations at Green Spring*, 15. The ca. 1862–3 John Francis Gilmer map of the Green Spring area (copy at the JDR Library) shows a noteworthy road orientation to the east of the domestic core of the site (see Fig. 3–10). The triangular-shaped orientation of these roads appears to enframe, or enclose, the area where the large earthen berm area is located today. This fact strongly suggests that the earth berm was a prominent landscape feature in 1863, if it is not, in fact, much older. Small portions of this berm clearly appear in one of the few surviving early photographs of the site, which was taken in 1897 (see Figs. 3–3 and 3–4).



Fig. 3–9 Circa-1818 map of James City County showing that the main road still passed to the west of the house and domestic area at that time.

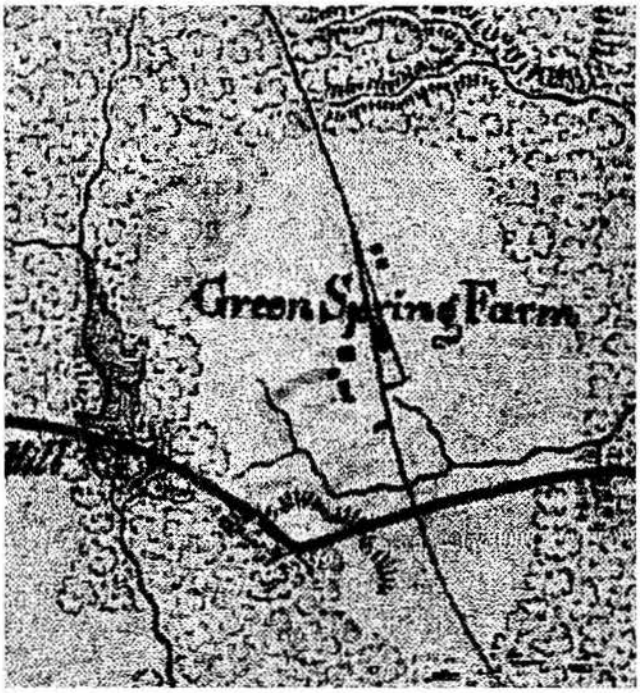


Fig. 3–10 Gilmer map. This circa-1863 map clearly shows that the main road had changed to the east and through the center of the site by the time of the Civil War.

Latrobe's 1796 watercolor sketch of Green Spring's new mansion house and outbuildings beyond (see Figs. 1–6 and 4–9) shows what might be significant vegetation growing on this earthen berm. This author finds it plausible that this feature may have been built to serve as a linear mount, or viewing terrace, that was placed as a terminal axis at the eastern perimeter of a geometrically arranged pleasure garden.[29] Both the location to the north and east of the old manor house site, and the north-south orientation of the feature itself, lend themselves to this landscape hypothesis.[30]

Further archaeological reexamination of the critical northwestern portion of the new manor house foundations and the open landscape both to the north and east of it may help to provide more compelling and irrefutable proof or disproof of these several probabilities. The mere possibility of the northwest wing of the new mansion house having, in fact, originally been Berkeley's lost nursery or greenhouse is certainly an intriguing one that deserves further study.

Possible Stuart and Caroline-Period English Garden Influences on Green Spring

Gardening was undergoing a revolution in seventeenth-century England, being heavily influenced from the 1620s and 1630s by the design of renaissance Italian gardens, and the mannerist tastes of a French queen consort to England's King Charles I.[31] Garden designers

[29] Berkeley's pottery kiln was found in 1955 at the southern end of this linear berm. The berm's overall length, however, suggests that, although the kiln area was clearly used in a utilitarian way, the northern portions and adjacent section to the west could have served as a garden area, perhaps separated from the pottery kiln area by a taller, screening-type fence.

[30] Numerous paintings and engravings of 17th-century English estates show viewing terraces in garden designs. A number are illustrated in John Harris, *The Artist and the Country House: A History of Country House and Garden View Paining in Britain, 1540–1870* (London: Sotheby Parke Bernet, 1979), and Leonard Knyff and Jan Kip, *Britannia Illustrata*, edited by John Harris and Gervase Jackson-Stops (1707; reprint, Bungay, Suffolk, Eng.: Paradigm Press for The National Trust, 1984).

[31] Roy Strong, *The Renaissance Garden in England* (London: Thames and Hudson, 1979), 167.

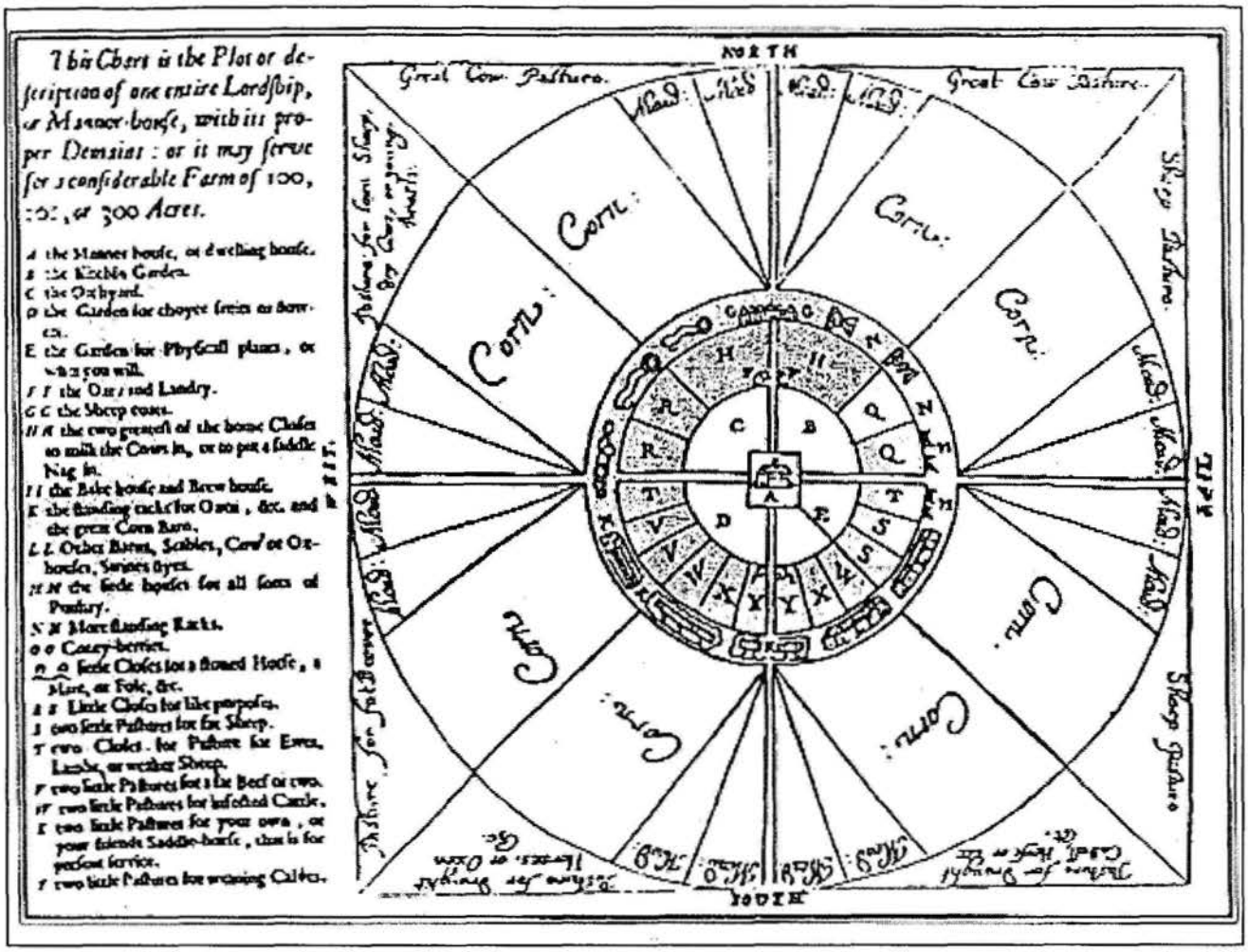


Fig. 3–11 Graphic from Samuel Hartlib's book showing in plan an idealized vision of the proper way to lay out an estate.

of the Stuart period, such as Inigo Jones and brothers Salomon and Isaac de Caus, created highly complex, geometric, and enclosed estate gardens in England that began to symbolically take on political, scientific, and religious overtones. Among these elaborate garden creations were Arundel House by Jones and Wilton House by de Caus.[32] The garden at Wilton became a favorite of King Charles I, and he visited there every summer to walk through the true Arcadian expression of his political ideals.[33] Because of Sir William Berkeley's high position among the king's courtiers, he undoubtedly was also a frequent visitor to Wilton House and was, thus, very familiar with its famous parterre garden filled with statues, fountains, grottoes, and other decorative features. Its probable influence upon him and his aesthetic tastes, thus, cannot be lightly dismissed out of hand. Moreover, during the years he spent at court (1632–41), he also knew and would have had many occasions to discuss gardening with the royal gardeners, the John Tradescants, older and younger.[34]

Whether Berkeley would have attempted to create anything even remotely like Wilton (albeit on a smaller, simpler, and more intimate scale) upon his immigration to Virginia remains open to question. However, even the possibility that he might have at-

[32] Ibid., 148, 170–173.
[33] Ibid., 164.
[34] Billings, "Imagining Green Spring House," 94–95.

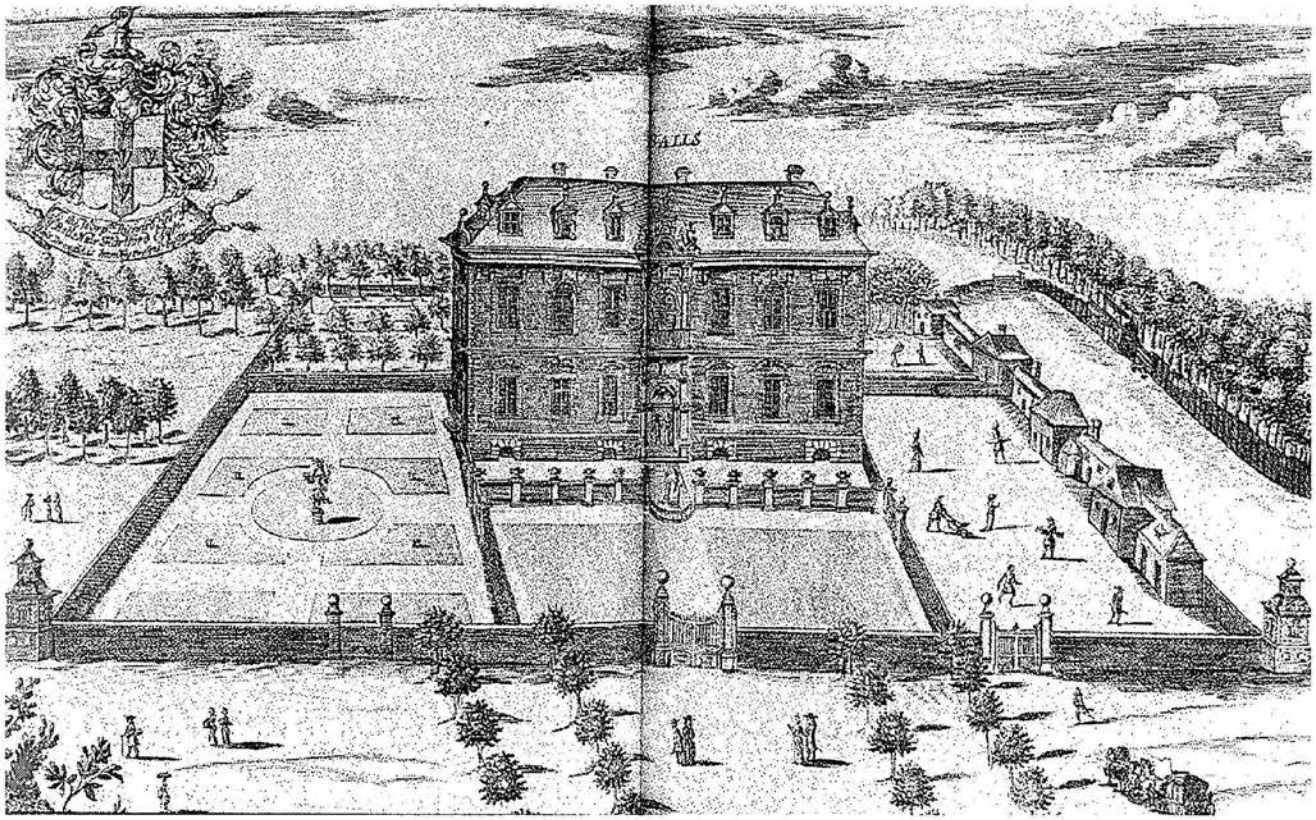


Fig. 3–12 Layout of grounds at Ball's Park, Hertfordshire (circa 1640).

tempted to create a much simpler, less ambitious version of this Arcadian vision at Green Spring to serve as an example for the provincial Virginia gentry class to ponder is an idea of intriguing ramifications. Other potentially less tangible and more philosophical influences were also at work in England at that time.

One of the important theorists of that period, though little known today, was Samuel Hartlib (died 1662). Hartlib, a German who settled in England in 1628, was an apostle of Protestant pansophism, a philosophy that urged that perfection was attainable in this world and could be achieved by the free and universal sharing of every scientific advance between nations. Education and agricultural reform were two of the major linchpins of this philosophical outlook, and in time the upper classes in England enthusiastically embraced it.[35] Given his position as a member of King Charles I's court in the years before he became Virginia's governor, Sir William Berkeley might well have become familiar with Hartlib and the pansophist world view before he came to Virginia in 1641. Did it influence his ideas? We do not really know. His efforts, however, with agricultural innovation strongly suggest that it did.

What is especially significant about Hartlib is that, in 1653, he co-wrote an important book with agricultural authority Cressy Dymock. In *A Discoverie for Division or Setting Out of Land as to the best Form*, the authors espouse an idealistic, but straightforward, utilitarian system for laying out estate grounds, with the house being centrally placed. "Here your house stands in the middle of all your little world enclosed," serving as both the spiritual and physical center of the complex of service buildings, gardens, agricultural fields, and pasture lands. Gardens were an important part of this proposed system of estate design, since the English gentry were beginning to catch the contagion of flower

[35] Mowl, *Gentlemen & Players*, 12.

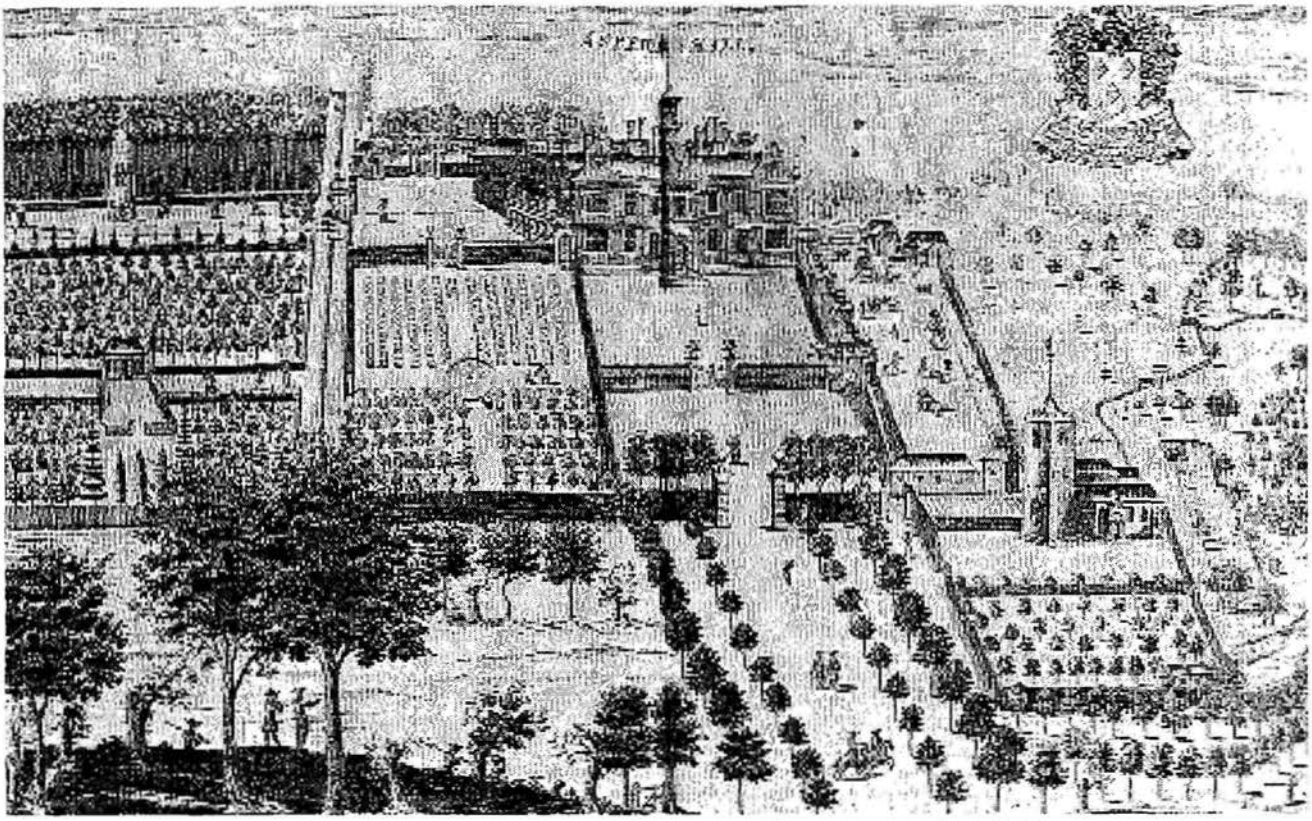


Fig. 3–13 Layout of grounds at Aspenden Hall, Hertfordshire, circa 1650 (note avenue of trees leading to entry gate).

mania from Holland[36] (see Fig. 3–11). Hartlib's abstract conception of an idealized estate may be viewed today as overly ambitious and, in some cases, perhaps unrealistic for a colonial enterprise in the New World. In fact, while the suggested details may have been altered to suit local needs, the general, organizational theory seems to have been followed in the overall design of at least the larger Virginia plantations from a fairly early date (that is, by the third quarter of the seventeenth century).[37]

In practice, Hartlib's ideas, and those of Gervase Markham as set forth in *Farewell to Husbandry* (1631), influenced the design of English estates away from the old open field system to one embracing a series of geometric, rectangular enclosures. Interestingly, these ideas were universally taken up even by political opponents among both the Royalists and the Parliamentarians at the highest levels of English society. Thus, although far removed from the wilds of the Virginia colony, Hartlib must have had at least some degree of influence in plantation building here, even if minimized by the exigencies of local conditions.[38]

One of the most influential and well-known English gardens that encompassed the pansophic idealism of Hartlib's vision, long before his book was published, was the Oxford Physic Garden, opened in 1632. Engravings showing a number of English estates that were built during the 1630s and 1640s, such as Balls Park and Aspenden Hall in Hertfordshire (see Figs. 3–12 and 3–13) show the clear influence of Hartlibian geometric design, with four equal-sized, enclosed gardens surrounding the house and the stable

[36] Ibid., 13, 14, 15.

[37] Although the earliest (first half of the 17th century) known examples of randomly placed, earth-fast plantation buildings and their enclosures clearly do not fit this suggested layout, later sites of the emerging wealthier planter class appear increasingly less random and better organized, suggesting a possible awareness of, if not a more explicit tie between, prevailing English estate-layout practices and the adaptations and evolution of colonial Virginia practices.

[38] Mowl, *Gentlemen & Players*, 18.

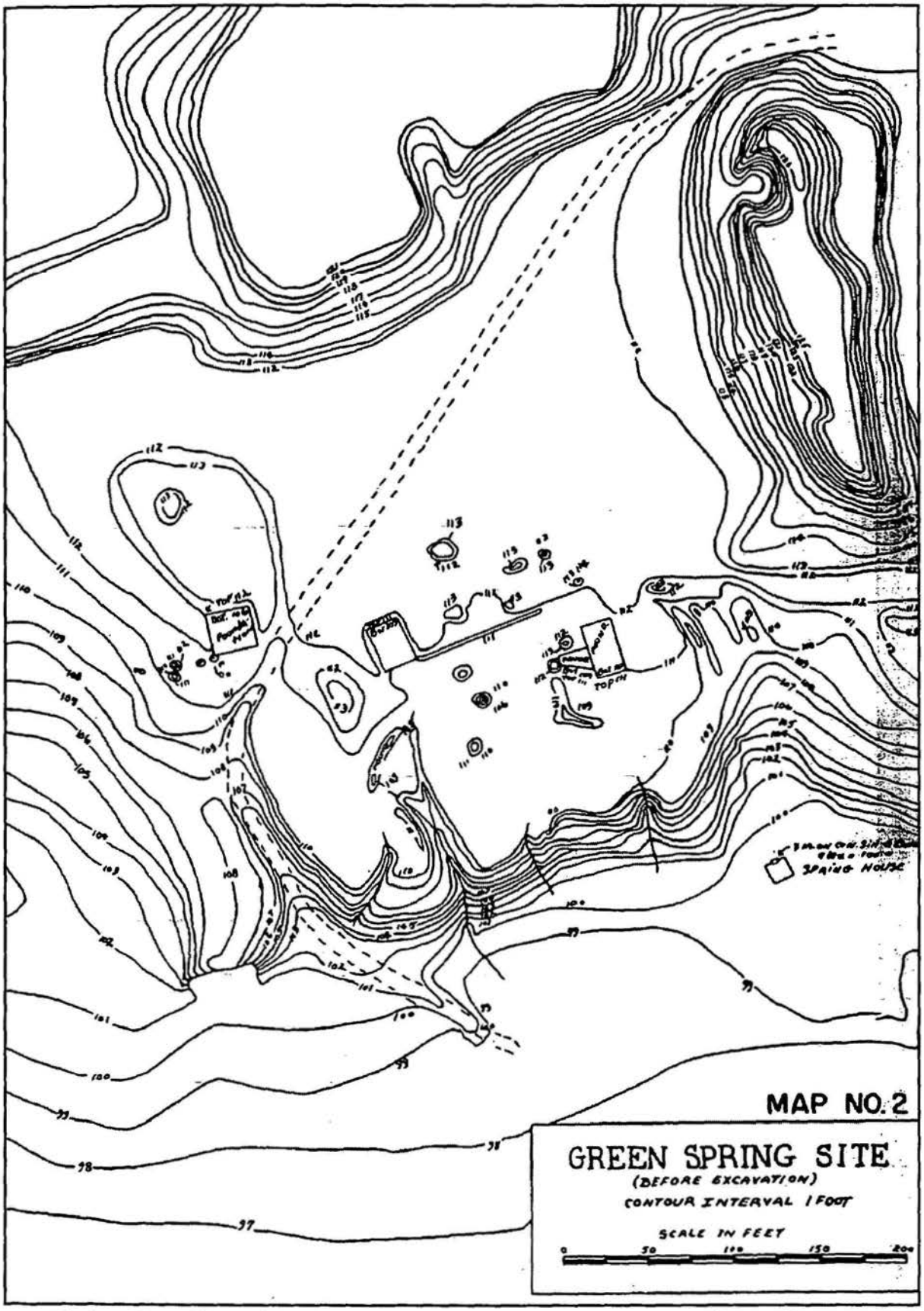


Fig. 3–14 Circa 1955 map of Green Spring showing contour lines and large berm to the east of the two older manor/mansion house sites. Note the circular anomaly at its northern end, which may indicate a collapsed icehouse shaft. (From Louis Caywood's Archaeology Report, NPS–Yorktown)

ranges and utilitarian functions further removed from the house. They seem to be the exact embodiment of Hartlib's description in *Discoverie for Division* of "here your house stands in the middle of all your little world enclosed."[39] These estates also sometimes included a raised viewing walk to allow the master and his guests to overlook the choice flowers that would have grown in the pleasure garden. The manor, its farm, and its gardens were a complete, self-supporting world of their own.[40]

If Sir William Berkeley, in his ultimate vision for Green Spring, did not lay out his plantation with such specific Hartlibian philosophical views in mind, he surely would have been familiar enough with the pansophist worldview and philosophy before immigrating to Virginia that it could have indirectly influenced his design of Green Spring plantation.[41] If so, he may well have consciously intended it to be the model of industry and utilitarian economy that surviving historical references indicate it became during his lifetime.[42]

Western Orientation of Entry Drive to Early Green Spring

One interesting aspect of early Green Spring's probable layout is how visitors would have approached the house. During the earliest period of Green Spring's history, the main north-south road between Jamestown and points to the north of Green Spring passed to the west of the house. The fact that the earliest Green Spring house was oriented with its main entrance facing to the west supports this assumption as do later maps that show the existence of what became the "Newcastle Road" to the west of the house site.[43]

Avenues of trees planted along approach roads leading to a house were a common feature of English estate design long before the English Civil War. Gentry houses would typically have just one avenue of trees extending away from the main entry or front façade of the house. (See Fig. 3–13 as one example.) These trees had a dual role in the landscape: Their placement improved the prospect of the surrounding landscape as seen from the house itself. When seen from the opposite direction, as one approached the dwelling, the resulting one-point perspective view (formed and framed by the parallel row of trees on either side of the entrance drive) focused the viewer's attention on the house. One common trick with avenues was to widen them as they moved away from the house.[44] At the far end, this resulted in the false perspective of converging lines, which exaggerated the distance and made it seem longer than it really was, while also making the house appear to be much larger than it was. Creating an avenue such as this was a statement of confidence in the future and served as an illustration that the landowner had consolidated his landholdings and enclosed them.[45] It is certainly conceivable that an avenue of trees such as this might have been an important component of Berkeley's design for early Green Spring, with orchards possibly planted to either side.

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[39] Ibid.

[40] Ibid., 20–21.

[41] Billings, "Imagining Green Spring House," 95.

[42] Although the author concedes that these ideas may be nothing more than speculative "long shots" beyond the scope of this study, they should not be dismissed as idle whims. In order to gain a better understanding of the probable layout of Berkeley's lost Green Spring, the design precedents and philosophical underpinnings of Stuart and Carolinian English gardens need much further examination for clues as to how the erudite and sophisticated governor might have approached the design of his Virginia estate. As the colony's leading and most wealthy man, he may even have felt it to be both his prerogative—as well as his duty—to provide tangible examples of what industry coupled with English cultural influences could achieve in helping the young, still-provincial Virginia colony become the economic resource that the king and others desired it to be.

[43] Refer to Caywood, *Excavations at Green Spring*, Soane's 1683 map, and even later ones such as Goodall's ca. 1770 and Desandrouins's 1781 maps of the areas around Green Spring. Soane, "'Salt Map'"; William Goodall, Survey Map of James City County, Va., VHS; Jean-Nicholas Desandrouins, "Carte des Environs de Williamsburg en Virginie . . . ," JDR Library.

[44] In the 18th century, George Mason used perspective in this manner in the layout of an avenue of cherry trees along the approach to his home, Gunston Hall, in Fairfax County, Va. By the 1750s, the practice of playing optical tricks with altered perspective was probably both well known and, no doubt, often employed by gentry plantation owners.

[45] Charles Quest-Ritson, *The English Garden, A Social History* (London: Viking, 2001), 76.



Fig. 3–15 Brick-lined interior of the substantial and well-built icehouse at Shirley Plantation. (Carter family photo in JDRL)

Possibility of a Berkeley-Era Icehouse at Green Spring?

While the existence of an icehouse at Green Spring is not specifically mentioned in the historical record, the idea that there might have been one built there is certainly plausible. During his exile in France, King Charles II had seen icehouses there and had been delighted by meals that included chilled wines and iced desserts. After his restoration to the English throne in 1660, icehouses soon became the rage among the English upper classes because ice, being a luxury as well as a scientific curiosity, seemed to be a unique prerogative of the gentry as well as royalty.

That this craze for ice soon made its way to Virginia is proven by a royal warrant, dated December 22, 1665, from King Charles II and issued to Sir William Berkeley, directing him "to gather, make and take snow and ice . . . and to preserve and keep the same in such pits, caves and cool places as he should think fit."[66] The fact that the governor was specifically charged by the king in a royal warrant to preserve ice in this manner considerably raises the possibility that an icehouse was built sometime after 1650 at Green Spring. If so, it must have been among the earliest icehouses built in the Virginia colony. However, this is pure speculation. Archaeological excavations conducted in recent years at several other seventeenth-century tidewater Virginia sites have revealed what are thought to have been icehouse pits. Such a pit (thought to date from about 1660) was found at Samuel Matthew's Denbigh plantation in Newport News, Virginia. Another one, dating from about 1650 or slightly before, was found at the Boldrup site (coincidentally, the plantation where Lady Frances Berkeley lived with her first husband, Samuel Stephens, before she married Governor Berkeley in 1670), also near Denbigh in Newport News. Yet another was found at Jamestown and another at the Archer's Hope plantation site near Williamsburg, Virginia.[67]

[66] Olmert, "Icehouse Mania," 57.
[67] Ibid., 63–64.



Fig. 3–16 Barred entrance as seen today of the restored icehouse at the Governor's Palace in Williamsburg. (CWF photo)



Fig. 3–17 Interior view of the restored vaulted brickwork of the Governor's Palace icehouse ceiling. (CWF photo)

Yet, for all of these examples, icehouses would still remain a relative luxury for most Virginia plantation owners until the eighteenth century, when a large number were built at plantations along the James River and even at several plantations located on the Middle Peninsula of Virginia. It is known today that icehouses were built in the eighteenth century at Shirley plantation (dating from between 1723 and 1738) (see Fig. 3–14), which remained in use until 1937; at Rosewell plantation in Gloucester County (dating from sometime after 1730); at the Moore House in Yorktown; and at Toddsbury and Lysbourne plantations, both in Gloucester County, Virginia. George Washington's Mount Vernon had a total of three icehouses during the eighteenth and nineteenth centuries, and, in 1801, Jefferson built one at his home, Monticello, and another at the White House in Washington, D.C.[48]

Still other icehouses in the region date from the early nineteenth century, including one built sometime after 1811 inside the old greenhouse at Westover plantation. Its pit was lined with bricks that had been taken from that dismantled building, as they still show traces of the plaster wall coating from the former structure. Another icehouse was built at the nearby North Bend plantation in Charles City County, between 1800 and 1819, and yet another at Wood Park, dating from the mid-nineteenth century. Yet another was built between 1801 and 1817 by the Tayloe family of Mount Airy behind their fashionable Washington, D.C., town home, the Octagon House. Perhaps the most elegant is James Madison's icehouse, built at Montpelier in 1811, covered by a classical temple that still stands.[49]

Icehouses were typically brick-lined holes or pits dug fifteen to twenty feet deep into the ground and covered by a brick or wooden roof. The bottom of the pits would usually be left with a thick layer of gravel to serve as a sump so they would drain properly as the ice melted. The entire structure could be built partially underground with a top portion of freestanding masonry walls with a wooden conical roof, such as was done at Rosewell, or it could be a brick vaulted, enclosed structure covered over by an earthen mound, as seen today at the Governor's Palace in Williamsburg (see Figs. 3–16 and 3–17), and as was done in constructing the icehouses at Toddsbury and at Lysbourne.[50]

Chunks of ice were cut into blocks from area creeks and rivers during the coldest part of the winter, in January and February, and would be stacked inside the icehouse, with straw packed around its sides and covering the top. With this form of insulation, the ice would only slowly melt in the constant underground temperatures of about fifty-four or fifty-five degrees, lowering the thermodynamic margin between the thirty-two-degree ice and the surrounding air. With this protection from light, drying breezes, and the summer heat and humidity, the ice would last through the rest of the year, well into the fall months. Fruits and vegetables could be kept for an amazingly long time inside icehouses. One plantation owner wrote in 1793 that he enjoyed a "very good Water Melon" taken from his icehouse that had been stored there since the previous summer.[51]

Given this information, it seems highly plausible that Sir William Berkeley built an icehouse at Green Spring at an early date. If solidly constructed of brick (which most likely it would have been), it could have been used by both the Ludwell-Lee families and subsequent owners well into the nineteenth century. This author submits that two of the most likely locations for building such a site amenity would have been the extreme northern end of the large linear earthen berm that runs parallel to Centerville Road (that is, adjacent to the present driveway entrance to the site), or somewhere into the face of

[48] Ibid., 60, 62–63, 64.
[49] Ibid., 61–63, 65.
[50] Ibid., 58.
[51] Ibid.

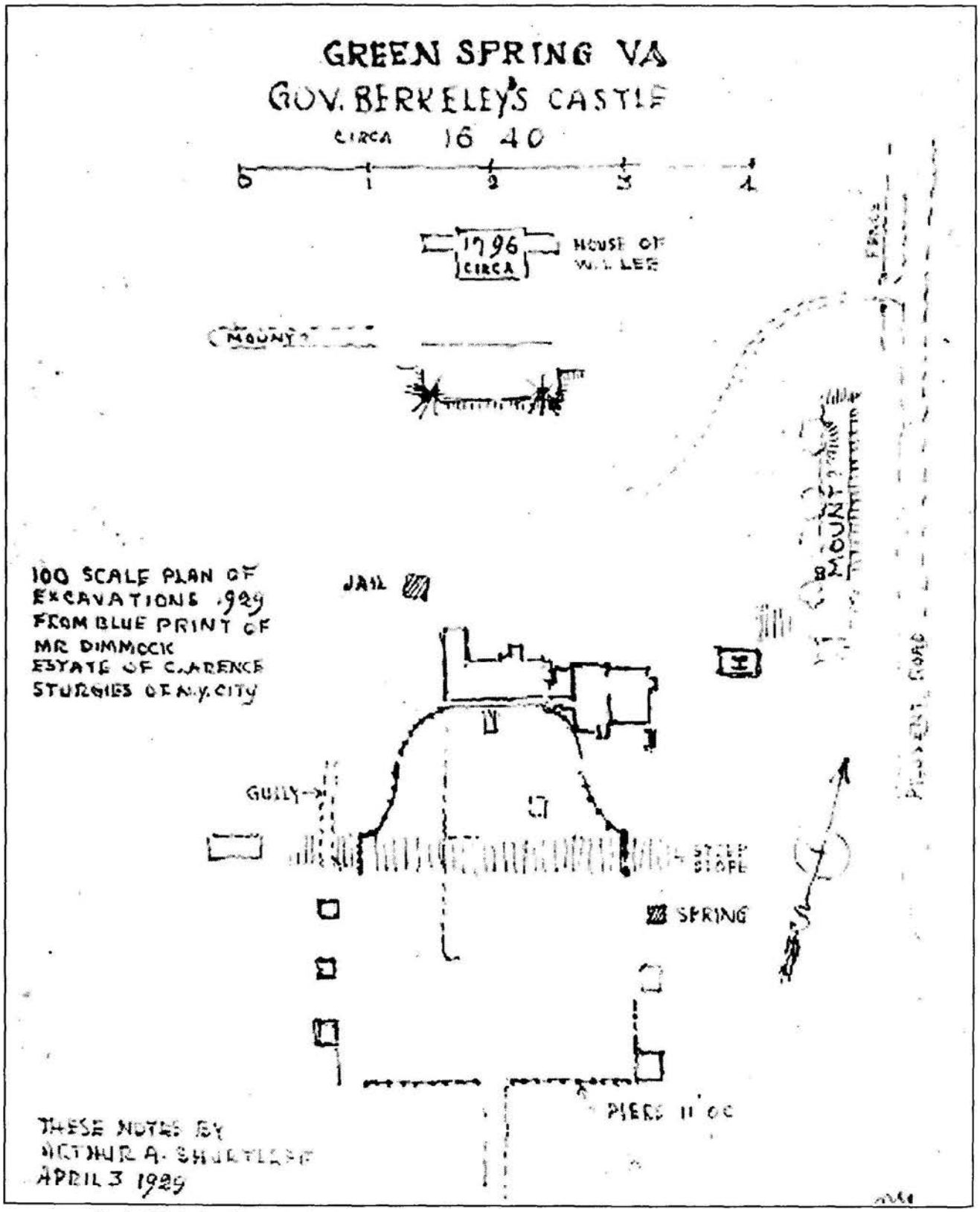


Fig. 3–18 Map hand drawn by Colonial Williamsburg Foundation landscape architect Arthur Shurcliff in April 1929, showing the curious indentation in the earth berm to the northeast of the house site. (This depiction corresponds to the anomaly shown on Caywood's circa 1955 topographic map; see Fig. 3–14). (JDRL)

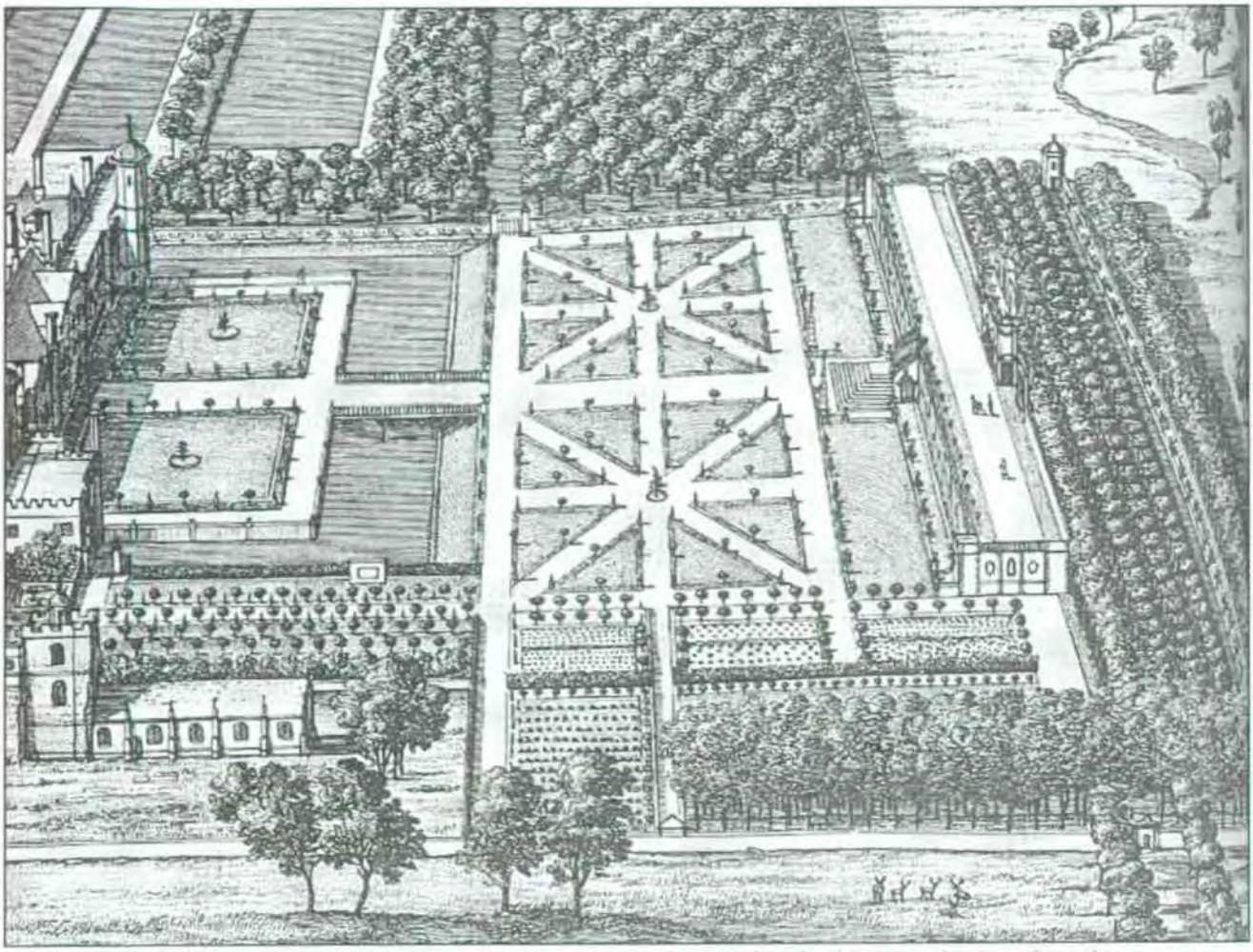
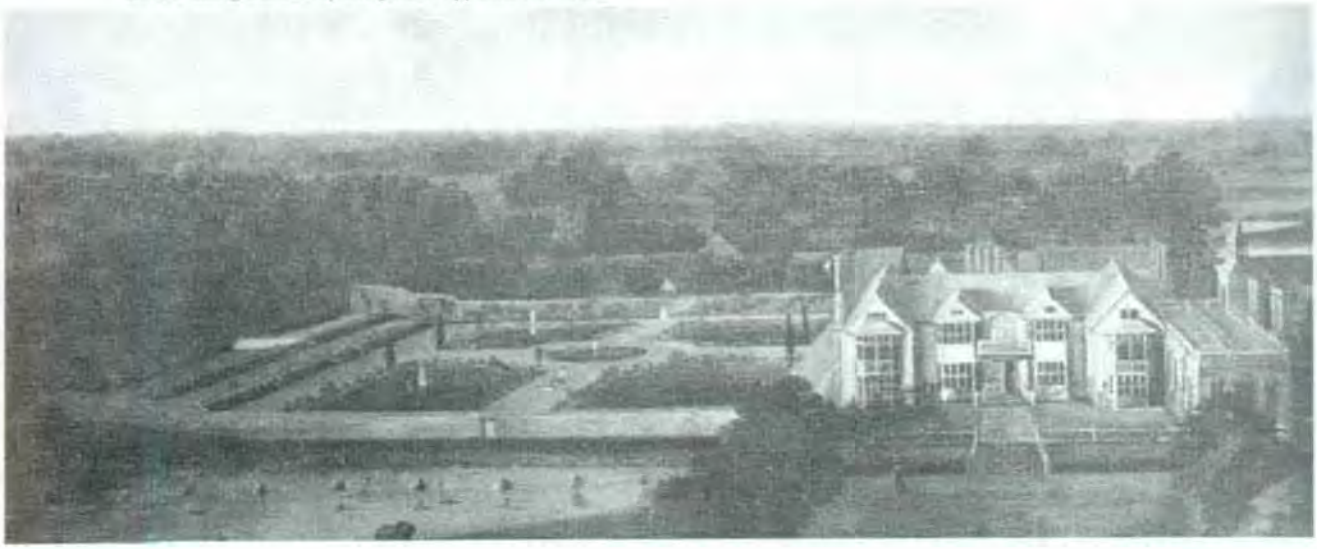


Fig. 3–19 Rycote House in Oxfordshire with a viewing terrace shown at the right of the view, adjacent to the gardens. (From Brittania Illustrata *by Johann Kynff and Jan Kip, circa 1709)*

Fig. 3–20 Durdan's House (circa 1630) showing the adjacent garden at the side of the house and a probable viewing terrace along the side of the garden opposite the house.



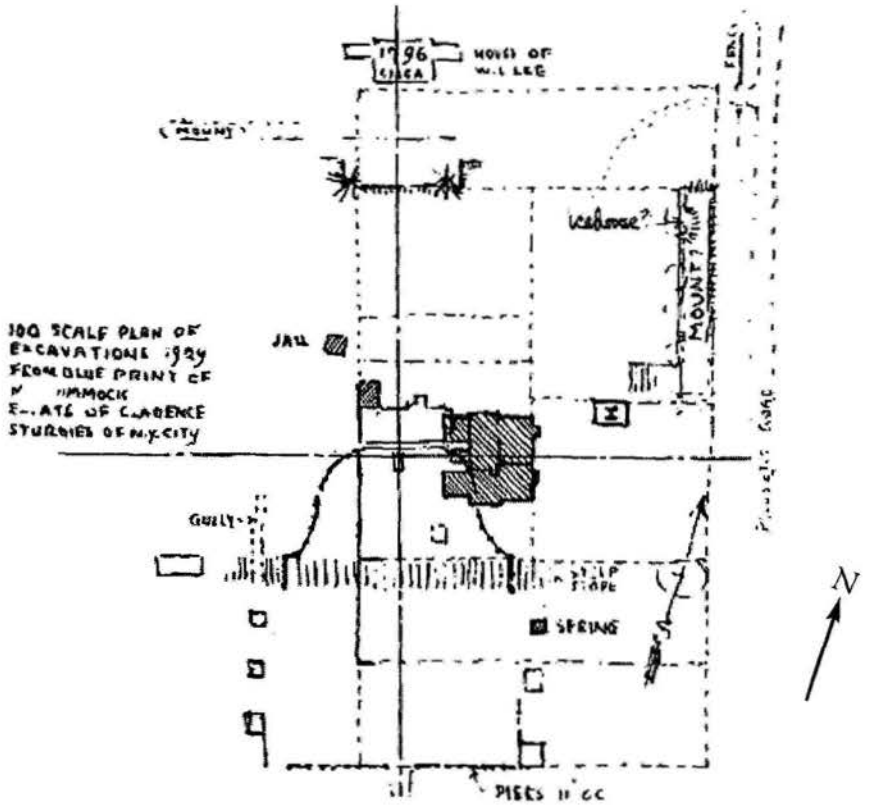


Fig. 3–21 Author's outline study sketched over Shurcliff's circa 1929 map of Green Spring to try to understand early Green Spring's possible spatial organization.

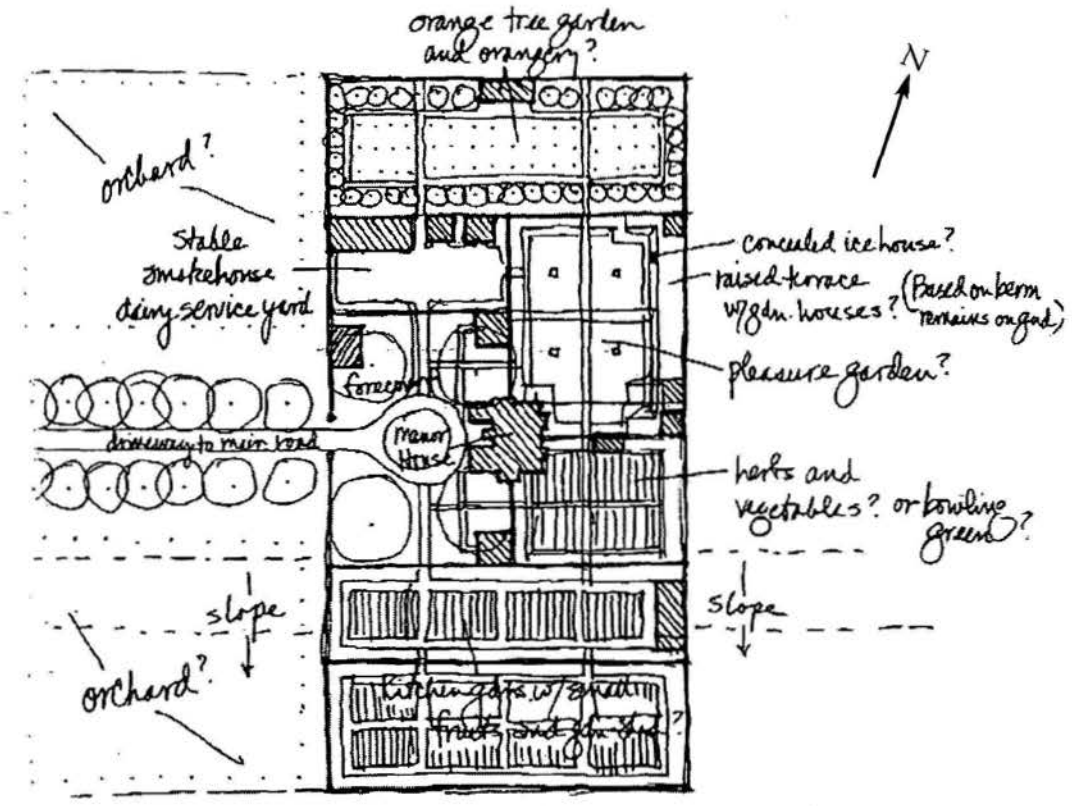


Fig. 3-22 Author's conjectural sketch of a site organization for early Green Spring, with the manor house in the center laid out in a manner roughly as Hartlib suggested.

the terraced hillside, between the level where the old and new manor houses stood and the lower level where the forecourt and other outbuildings once stood by the middle of the eighteenth century.

A visual examination of the northern extreme of the earthen berm shows that the top surface appears to be lower than the surrounding area and appears to be a place where the earth has collapsed at some point, as if where a formerly brick-vaulted structure might have given way, leaving a marked, deep, circular depression in the earth berm's surface. (See Figs. 3–14 and 3–18.)[52] Another area of the same berm looks very similar (but less distinct) to this one, and is located farther to the south, again on the western face. While these observations, made on recent visits to the Green Spring site, are perhaps nothing more than informed speculation on the part of this author, these possibilities have apparently not been considered before, nor have probable locations for such a feature ever been suggested. The possibility that other culturally significant landscape features might remain

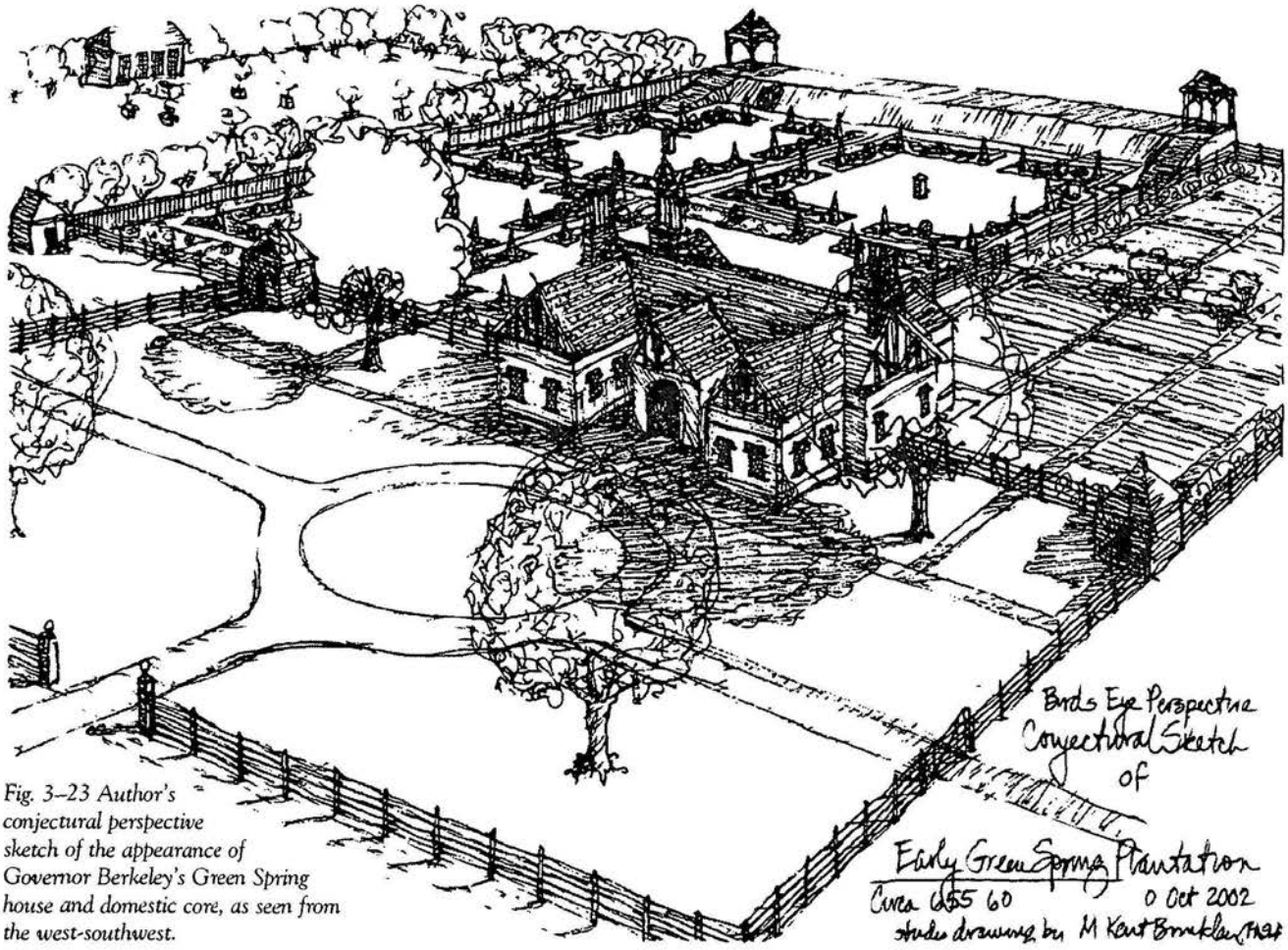


Fig. 3–23 Author's conjectural perspective sketch of the appearance of Governor Berkeley's Green Spring house and domestic core, as seen from the west-southwest.

[52] This depression is also substantiated by a detailed topographic map in Caywood, *Excavations at Green Spring* (Map 2) (see Fig. 3–14). Caywood's map shows 1-foot contour intervals on the domestic core area. Drawn at a scale of 1 inch = 100 feet, the map clearly shows the berm, or mount or supposed viewing terrace, in the upper right corner. It illustrates quite dramatically a circular, anomalous indentation near the northern end on the western face. The author suggests that, given this obvious, at least 10-foot-deep depression's location at or within an apparently manmade landscape feature, it could very well indicate the remains of a collapsed, subterranean, cylindrical brick icehouse. The fact that the berm's contours do not appear to extend as far south as the pottery kiln location (i.e., they appear to go only as far south as due east of the old manor house foundations; see n. 29 above) also strongly suggests that the berm was created as a landscape element separate from the obviously more utilitarian pottery kiln area.

hidden at these locations argues strongly for further archaeological testing and examination of this earth berm to determine if, in fact, one of these proposed locations was formerly an early icehouse, perhaps one built at the direction of Sir William Berkeley himself.

Arguments in Favor of Separate Pleasure and Kitchen Gardens at Green Spring

We know even less about the specific location and layout of Sir William Berkeley's ostensible gardens and orchards than we do about the buildings that stood on the site during his period. Yet, as was implied earlier in this chapter, of all the Virginia plantations of its day, Green Spring and perhaps one or two other exceptions, such as Arlington and Bacon's Castle, were clearly in a separate class, diverging from the normal temporary and disorganized manner of most Virginia plantations of their day. These three plantation dwellings stood out in seventeenth-century Virginia due to their owners' wealth, their construction of more permanent brick materials, and their size compared to most plantation dwellings at that time. These houses served as the focus of daily life on plantations that were among the largest of the time.

Therefore, Berkeley's Green Spring was most likely laid out and organized according to a geometrically arranged plan on the modified Hartlibian model, instead of the more typical, haphazard way that most Virginia plantations of that period are known to have been arranged.[53] With this thought in mind, it is most instructive to look at several English estate design examples from the same period to come up with one or more likely models for how Green Spring's gardens and orchards might have been arranged in relation to the main house (see Figs. 3–12, 3–13, 3–19, 3–20). While English estates of this period showed a number of square and rectangular walled enclosures, Berkeley's Green Spring, while also being subdivided into a number of discrete functional use areas, probably used wooden fences rather than brick walls to partition the landscape. The few known brick garden walls that existed there clearly date from a much later period, probably several decades after Berkeley's death in 1677.

Guides written in England during the early seventeenth century provide some clues as to how Berkeley's Green Spring plantation might have been laid out. In his book *The English Husbandman,* published in 1635, Gervase Markham offered the following directions for the proper way to lay out an estate/plantation: "Gardens and orchards ought to be sited on the south side of your house, because your house will be a defense against the northern coldness, whereby your fruits will much better prosper." He also advised that the kitchen should face west toward the dairy, and north of the house should stand the stables, ox house, cowhouse, and swinehouse. He further directed that hay and corn barns be placed south of the house, near the henhouse and garden.[54]

If Berkeley followed such a guide in establishing the layout of Green Spring's domestic core, then the stable, banqueting house, and other utilitarian houses and sheds would have been placed to the north or northwest of the manor house. A pleasure garden might have been located to the northeast of the manor house, in the quadrant of the site that would place it due west of the earthen berm or supposed viewing terrace. A kitchen and dairy were perhaps located due east of and behind the manor house; with barns and related agricultural buildings, springhouse, one or more privies, and the necessary kitchen/fruit gardens located down the slope of the hillside, to the southeast, due south and southwest of the manor house.

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[53] James Horn, *Adapting to a New World: English Society in the Seventeenth-Century Chesapeake* (Chapel Hill: University of North Carolina Press for the Omohundro Institute of Early American History and Culture, 1994), 302–307.

[54] John R. Stilgoe, *The Common Landscape of America, 1580 to 1845* (New Haven, Conn.: Yale University Press, 1982), 149.

The privy (or privies) probably would have been crude, wooden structures of simple but functional construction. Even in the seventeenth century, husbandmen would have located their privies with care on lower ground away from their main house and water source, since they understood the correlation between polluted drinking water and disease. For this reason, at Green Spring, the privy certainly would have been sited on the lower terrace from the house and no doubt well away from the springhouse, the plantation's primary source of drinking water.[55]

Berkeley's Agricultural Endeavors at Green Spring

Sir William Berkeley became the wealthiest man in Virginia and, with the extensive acreage he either owned or controlled by virtue of his office, also probably was the largest planter of tobacco. Yet this was not his only cash crop. When tobacco prices fell in the wake of overproduction, the governor tried to lead his fellow planters away from tobacco to try to grow other crops. He set an example of what, with industry and determination, could also be grown in Virginia.

During his retirement between his first and second terms as governor (1652–60), Sir William subsequently turned Green Spring almost into an experimental farm by producing lumber, flax, potash, hemp, silk, and rice.[56] However, despite his considerable and sustained efforts to diversify the colony's economy, he was unsuccessful in weaning his fellow planters away from growing tobacco, largely because they did not possess the financial resources or the luxury of experimentation that the governor obviously did.[57] The supremacy of tobacco as the cash crop remained intact.

By a relatively early date (1648), Berkeley was growing rice in the lower swampy ground that that still characterizes much of the area due south of the house site. This swampy ground was ditched and diked to channel the water there, and the governor had a half a bushel of rice planted.[58] The experiment was an apparent success since the yield produced in that year amounted to some fifteen bushels of rice, which was quite an accomplishment given the vagaries of the Virginia climate. Berkeley hoped to sell his rice at two pence per pound within the next few years.[59]

We know that in addition to his extensive agricultural fields, the governor also planted some 1,500 fruit trees at Green Spring, "Apricocks, Peaches, Mellicotons [a peach grafted on a quince], Quinces, Wardens [winter pears], and such like fruits."[60] He was also growing grapevines by the early 1660s and declared in a 1663 letter to a friend in England that he would send him "a Hogshead of Virginia wine." He noted that during the preceding year, he had "drank as good of my own planting as ever came out of Italy."[61] Due to the sheer number and sizes of fruit trees and grapevines that Berkeley was obviously growing by the mid-1660s, the total extent of his orchard and vineyard acreage must have been great. These probably would have virtually surrounded the domestic core

[55] Ibid., 166.

[56] McCartney, "History of Green Spring," 22.

[57] Carson, "Green Spring Plantation," 4–5.

[58] Traces of some of these ditches and related features remain visible today and have been noted in the most recent National Park Service general management plan as cultural landscape features requiring further documentation, more extensive and detailed mapping, and eventual preservation and interpretation. *Final General Management Plan Amendment and Environmental Impact Statement: Green Spring . . .* (Oneida, Tenn.: U.S. National Park Service, March 2003).

[59] Carson, "Green Spring Plantation," 4–5.

[60] Peter Force, ed., *Tracts and other papers relating principally to the origin, settlement, and progress of the colonies in North America . . .* 4 vols. (1844; reprint, Gloucester, Mass.: Peter Smith, 1963), 2: 14, as cited both in Carson, "Green Spring Plantation," 4, and McCartney, "History of Green Spring," 19. The fruits mentioned in the quotation were often termed *small fruits* in contemporary accounts, because they tended to be smaller than other fruit trees and were for that reason typically grown in a fenced kitchen or fruit garden.

[61] Ibid., 5.

area of the plantation, with the other crops being grown in the cultivated fields, enclosed by six-foot-tall worm or zigzag fences, that would have spread farther away both to the north and south from the house's domestic core.[62]

One final interesting reference appears in the documentary record concerning plants grown at Green Spring just after Governor Berkeley's death. In a letter to his friend English chemist Robert Boyle, the Rev. John Clayton, the Jamestown church rector and sometime plant explorer, described several plants and native herbs of Virginia he had found, one being *Flor Cardinalis* or Cardinal Flower (*Lobelia cardinalis*). Clayton acquainted Boyle with how the plant was used by relating that one of his parishioners, Lady Frances Berkeley, widow of the late governor, used it as a dye. Clayton wrote, "Flor Cardinalis with a scarlet flower where with I have been informed my Lady Barkley [dyed] a good scarlet colour, 3 sorts of it, with a purple or blew flour [the blue lobelia]."[63] From this reference, it is clear that flowers from Green Spring's gardens were used for practical purposes as well as for the more obvious aesthetic enjoyment.

Sir William's Green Spring: Still Largely Unknown and Still Lost

From these descriptions of probable outbuildings and other important landscape features that might have once characterized the earliest incarnation of Green Spring plantation, a picture of an extensive, innovative, yet radically different, landscape from what is currently known begins to emerge. However, the relatively small amount of evidence that is available to us, although suggestive, remains incomplete and very sketchy, at best.

Despite this accumulated knowledge coupled with the most recent exciting discoveries, the surfaces of the Green Spring domestic site have, quite literally, only just been scratched. As significant and as important as they are, the known features represent important components of the Green Spring plantation of the eighteenth (but *not* the seventeenth) century. As has been outlined in this chapter, the earlier version of the plantation was obviously vastly different from what was first suspected to be the case and, indeed, was oriented on the landscape in a completely different fashion than what eventually came along decades later, with changes in ownership, subsequent additions to the manor house, and more significantly, a complete reorientation of both the house and entire site to the south, toward Jamestown.

Until efforts are expended on a more extensive archaeological survey and examination of the entire domestic core area of the site, this author must conclude that the specific components of the long-lost Green Spring plantation that Sir William Berkeley once knew and loved will continue to elude modern scholars who would seek to know more about it. Whether or not any of its vestiges are likely to remain after three and a half centuries and, if they do, whether such features are even retrievable or worth the likely expense, are questions that are open to further debate. Such are clearly beyond the author's expertise and fall outside the scope of this study.

The salient point to be made, in conclusion, is that this author firmly believes that (aside from the dwelling house, itself) nearly all of Governor Berkeley's Green Spring plantation outbuildings and other, related (and perhaps more ephemeral) cultural landscape features still lie hidden beneath the ground. Thus, they wait for more extensive and ambitious archaeological efforts specifically intended to finally reveal their exact locations, interrelationships, and individual natures. The true story of this historic site and its many owners is, therefore, woefully incomplete without this information.

[62] Stilgoe, *Common Landscape*, 62.

[63] See Joanne Young, "The Prescient Minister of Jamestown . . . ," *CW Journal* 21, no. 1 (Autumn 1998): 34.

Summary/Conclusions

- During the seventeenth century, two large manor houses were built at Green Spring. Sometime between April 1643 and 1645 Sir William Berkeley built the first, or "old manor house."
- The "new mansion house" was either built about 1670 by Berkeley, when he married for the second time; or was built a decade later, about 1680, when Berkeley's widow, Lady Frances, married Philip Ludwell I. The actual construction date remains a mystery, although good arguments can be made for each of the two owner/time period options.
- Information is also lacking about what other outbuildings might have been standing during Governor Berkeley's period of ownership. A brick kiln is known to have existed from about 1665. Other evidence tells us that a large wooden kitchen and bake house once stood to the east of the house, which could have been built as early as the seventeenth century.
- Other outbuildings that might have been a part of the earliest Green Spring landscape included a springhouse; a still-standing, ruined, brick structure that has long been locally called the "old jail" (but is now thought to have first been an early eighteenth-century banqueting house, and then converted into a storage barn); a dairy; one or more tobacco barns; grain storage barns; a dovecote; a greenhouse; an icehouse; and later in the seventeenth century, perhaps a wooden smokehouse, as well. Locations for any of these outbuildings are conjectural (based on documentary sources), but are not known at this time.
- While many published references mention the existence of a greenhouse during Berkeley's ownership, they are problematical because they clearly are based on an assumption that the ruins of a Green Spring structure, long known as the nursery or orangery, was, in fact, Sir William Berkeley's greenhouse. Recent archaeology has proven that this is not the case, and that the ruins in question could not have been built before circa 1735–40.
- An interesting theory, postulated by Williamsburg-area architectural historian Edward Chappell and retired archaeologist Ivor Noël Hume, offers the intriguing possibility that the northwest wing of the "new Mansion house," labeled in a 1796 floor plan drawn by Benjamin Latrobe as the "Nursery," in fact, predated the adjacent house, but was incorporated into it when that (later) addition was built.
- This report suggests that the nursery reference on the Latrobe plan could be interpreted in two ways: as a *children's* nursery or as a *plant* nursery. Obviously, if the former interpretation can be proven, then the possibility of a separate (but still-unsubstantiated) Berkeley-era greenhouse exists. If the latter interpretation can be proven to have been accurate, then this small structure possibly once served as Sir William's greenhouse.
- Stuart and Caroline-period garden layout and design practices, as well as the philosophical and religious underpinnings for English estate design during the 1630s, are useful in attempting to understand the cultural and court design influences that Sir William Berkeley brought with him to Virginia.
- As an educated and sophisticated gentleman, Berkeley might have also been familiar with the pansophist worldviews and philosophical ideas expressed by English theorists Samuel Hartlib and Gervase Markham, who both published popular, influential books in the 17th century, translating their ideas into concrete form by suggesting an ideal way for individuals to lay out their country estates. Both emphasized an en-

closed, geometric ordering of outdoor spaces, with the manor house located at the very center of the domestic landscape.

- If Sir William Berkeley did not lay out his plantation with the express purpose of following these gentlemen's ideas, he may have been familiar enough with them that they indirectly influenced both his vision and his actual design of Green Spring as idealized plantation landscape.
- These precedents suggest that Sir William's Green Spring plantation, although no doubt lacking in some of the refinements that would have been seen in England, was laid out with far more spatial organization and regular, geometric partitioning of the landscape than was typical for most seventeenth-century Virginia plantations. It is thus reasonable to suggest that Green Spring would have been loosely modeled after then-current English gentry estate and garden design styles.
- With this in mind, the author theorizes that a long linear earthen berm that runs parallel to the present-day Centerville Road (Route #614) is, in all probability, a remnant landscape feature that was once associated with an adjacent garden. It probably served as an elevated viewing terrace that was placed at the eastern perimeter of and overlooking a geometrically arranged pleasure garden.
- The original orientation of the first manor house facing to the west would have placed this garden to the left rear (northeast) of the house, as seen when approaching it from the west, and the drive leading up to the house would have been lined by an avenue of trees, following the prevailing English practice of that period.
- The earth berm/viewing terrace may have also had a practical as well as a decorative purpose, serving as a way of cleverly concealing an underground icehouse, probably located in its northern end, and possibly accessed by one of perhaps two summerhouses that could have been built at either end of the berm, again following common English design practices for such garden features.
- Icehouses were very popular among the upper classes in England; especially so after the Restoration of Charles II in 1660. Icehouses have been archaeologically documented at Virginia sites as early as 1650. These facts, coupled with written documentation that in 1665 the king specifically directed the governor to create icehouses in Virginia, strongly suggests that Berkeley would have built his own prototypical icehouse at Green Spring at about that time period.
- With the current lack of documentation about how the early Green Spring landscape was laid out and arranged, a review of period English garden guides, most notably *The English Husbandman* (1635), written by Gervase Markham, provides helpful clues to one or more ways that Sir William Berkeley may have located his outbuildings, orchards, gardens, and service areas in relation to his manor house. There is little doubt that the house was located in the center of the domestic "core" area of the plantation.
- Existing written documentation also lends insight into the scope of Berkeley's extensive and very ambitious, horticultural and agricultural endeavors at Green Spring. The fact that he tried to be an innovator and an advocate for greater agricultural diversity in the Virginia colony is both clear and well established, suggesting cosmopolitan influences.
- The author contends that, in part, it was the more organized, regularized type of landscape that would have made Green Spring the cultural and typological standout that it was. In addition to its huge acreage, its unusual degree of agricultural diver-

sity, and its undoubted architectural significance as a local landmark of the home of the royal governor, it was built of brick in an era of mostly impermanent wooden buildings. In other words, that the Berkeley-era landscape and the way it was organized and articulated was just as unusual and trend-setting in its own right, as the plantation and house obviously were in other previously identified respects.

- Aside from the earth berm to the northeast of the house sites, the Berkeley-era houses and landscape of Green Spring have long-vanished, being supplanted by later features and improvements. Yet, traces of even more substantial parts of the earliest features of Green Spring, such as Berkeley's outbuildings, garden features, and walls or fence lines could very well remain hidden.
- Given the Green Spring site's long history, the archaeological record still remaining to be found there is surely a multilayered and complex one. The author contends that physical traces of the Berkeley-era landscape may still lie buried beneath layers of the site's many discrete historic periods of occupation.
- To properly access this potentially rich cultural resource will require further extensive use of the latest landscape archaeological techniques/technologies currently available. Besides the two manor houses and a few other physical features, this site's archaeological record has, in truth, only just been scratched.
- The full story of Green Spring, then, will remain incomplete without further exploration of this extensive, largely untapped cultural resource.

Chapter Four

THE LUDWELL-LEE FAMILIES' BUILDING AND HORTICULTURAL PURSUITS AT GREEN SPRING

Despite the obvious historical importance of and interest in Sir William Berkeley and his tenure at Green Spring, it has become apparent that the period of the Ludwell-Lee families' ownership of Green Spring was also quite significant, spanning, as it did, well over a century. Before now, this period of Green Spring's history was seen by most Virginia historians as a mere footnote to the major events that had occurred there throughout the seventeenth century. Yet, what has become increasingly obvious through recent archaeological reassessments of the site is that the various members of the Ludwell and Lee families made significant, sophisticated, physical improvements to the main dwelling house as well as to the surrounding plantation landscape. Many of these improvements were profoundly important, both from a social and economic perspective of the specific periods when they were implemented, but also from an interpretive point of view to us today. As a plantation site, eighteenth-century Green Spring apparently also served as a stage set upon which the symbolic pretensions of the Ludwells and Lees as well as the changes in cultural and social interaction were clearly reflected in the physical makeup and spatial ordering of the site as a unique place.

Thus it was that the placement of the manor house and outbuildings, the use of social spaces, the creation of gardens, and the cultivation of rare and unusual plants such as orange trees were all elements of a nonverbal, iconographic, and highly symbolic discourse that told visitors and passersby of the place and the relationships of the Ludwells and Lees within the established social order.[1]

Placing the Ludwells in Historical Context

Brothers Thomas Ludwell and Philip Ludwell I were typical of their class of young gentlemen who had left England to seek their fortune in the New World. They acquired land, became successful planters, and accumulated important political offices along the way to becoming members of a very select group of men who governed and shaped the Virginia colony of their day. Both men were Royalists and, as such, became important political allies to Sir William Berkeley in his efforts to hold off Parliamentarian rule from stagnating growth in Virginia during the third quarter of the seventeenth century.[2]

After Thomas Ludwell's early death in 1678, Philip Ludwell I's influence in the colony seemed to increase. He had become a member of the powerful Governor's Council in 1675, a small group that was clearly made up of the ruling men of the colony.[3] The main point in relating this background information is merely to show that once Philip Ludwell I acquired Green Spring by his marriage in 1680 to Sir William Berkeley's widow, the ideas that were typically borne by his social class, his ambition to be seen and recognized as a leading man in the colony, and all the economic aspirations that went with it were not much different from those held by the late governor that Ludwell had once served. Thus, his desire to own Green Spring (and all it represented) should not be regarded today as strange or unusual but very predictable.[4]

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[1] Yentsch, *Chesapeake Family*, 82, 130.
[2] McCartney, "History of Green Spring," 47–50.
[3] Ibid., 48.
[4] Wells, "Planter's Prospect," 14.

By coming to own Green Spring through marriage, Ludwell was able, in essence, to gain a large measure of the genteel reputation that ownership of such a well-known and grand estate implied. Ludwell and others of his gentry class were, in some respects, insiders who knew well and understood the visually coded iconography that a large, well-ordered plantation with a large array of outbuildings conveyed to the average Virginian. Aside from what kind of planter one was, and how productive one's farming efforts might be, it was the simple possession of such grand places (that is, grand as defined by the standards of that day, of course) that enhanced one's reputation and standing within the local or regional community.[5]

However, as important as this reason might be for initially wanting to acquire a place like Green Spring, the improvements one eventually made to the house and landscape to put one's stamp of personal ownership upon it were, in some ways, even more important. These became tangible expressions that revealed to the world that you knew what to do with an important plantation once you had acquired it.[6] In the most recent and ongoing archaeological studies of Green Spring, the importance and significance of this idea in trying understand how and why the site evolved over time is a critical key to eventually unlocking the secrets of Green Spring's *entire* historical past, from its beginnings down through at least the American Civil War.

Rethinking How Green Spring Evolved

As stated in the previous chapter, historians have long attributed many known physical improvements made at Green Spring to its creator, Sir William Berkeley. Instead, most of what we know about the place and what it once looked like, as determined from maps and sketches drawn in the eighteenth century, should, instead, be rightly attributed to the aspirations of the Ludwells and the Lees.[7]

Interested local historians and friends who value the historical qualities of the Green Spring site and the importance of Sir William Berkeley may find this revelation to be quite disturbing, if not truly alarming, and for anyone to imply or say otherwise might even be deemed as heresy by some. Some might prefer to think that the governor designed and built *all* of these things (that is, the grand house, outbuildings, and serpentine garden walls as shown by Latrobe in 1796, etc.), ostensibly because it would then further enhance Berkeley's historical importance and, perhaps, also make a stronger case for the site's preservation as a historical and culturally significant resource (which, indeed, it undoubtedly is).

Yet, clinging to such a myopic vision only places the viewer in the perilous position of believing this notion merely because it is what one would like to believe versus acknowledging the reality that others besides Sir William Berkeley (and most notably, in this case, the Ludwells) were also perfectly capable of designing and directing changes to the house and the site to the same degree as the governor himself was able to do. This explanation merely serves as a prelude to the statement that according to recently emerging archaeological evidence, subsequent owners significantly influenced the property's development.

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[5] Ibid., 29. The perception of status and wealth may have been due as much (if not more so) to the quantity of outbuildings on a plantation than to the quality of their construction. Yet there were enough truly grand plantations in tidewater Virginia with elegantly styled, well-crafted houses and outbuildings to provide examples of quality worth emulating. Bacon's Castle, Arlington, Corotoman, Fairfield, and, especially and most importantly, Green Spring, were among the more noteworthy early standouts. Others, such as Shirley, Germanna, Westover, Rosewell, Nomini Hall, Brandon, and Belvoir, would follow in the 18th century.

[6] Ibid.

[7] This idea was inferred—and gained credence in the author's mind—during several conversations with National Park Service archaeologist Dr. Andrew S. Veech concerning the nature and attribution of physical evidence revealed during excavations at Green Spring from 2001 to 2003. The author, however, takes full responsibility for crediting here the Ludwells and Lees for many site features that have long been attributed to Sir William Berkeley.

Embracing this admittedly revisionist view of Green Spring's past does not in any way diminish Berkeley's importance, so much as it rightly increases that of the Ludwell-Lee family members who lived at Green Spring. In fact, a more open-minded view rescues the Ludwell-Lee families' respective contributions to the physical history of the place from undeserved obscurity. Then there are the unknown specifics of the scope and nature of the repairs that Lady Berkeley claimed in a 1678 letter that she was forced to make to the house following Bacon's Rebellion just to make the place habitable again.[8]

The arguments relating to the possibilities over when the so-called new mansion house was actually built (as shown in Latrobe's 1796 watercolor drawing or sketch (see Figs. 1–6 and 4–9), which he attributed to Berkeley) cited in Chapter Three, will not be repeated here. Suffice it to say that while this large additional dwelling could have been built by Berkeley as early as about 1670, it is also just as likely that it was built by Philip Ludwell I shortly after his 1680 marriage to Lady Berkeley. However, in the latter case why, it might reasonably be asked, would he do this when he apparently never intended to, nor ever did, live there? This author would submit that Ludwell I's reasons may have included the fact that expansion would have enabled the house to become an even more attractive and useful residence for rental to several royal governors who did, in fact, live there later during that decade. Less obvious, from a purely economic perspective, are the one or more probable social, cultural, and aesthetic reasons why Ludwell I might have also chosen to expand and alter Green Spring (including demonstrating for his peers the mere fact that he could afford to), which have already been referenced earlier in this chapter.[9]

One other possible reason for physical changes to Green Spring is the general shift throughout Virginia in the late seventeenth century from a labor force made up of mostly white English indentured servants to one made up predominantly of black African slaves. Architectural historian Sallie A. Smith observed that "by the late seventeenth century . . . planters had determined that the most effective means of obtaining privacy was to place the living quarters and work spaces of their servants at some distance from their own dwellings."[10]

While this labor shift probably occurred slowly over the course of several years, nonetheless it had a major effect on the daily social interactions that took place on plantations. In recent years, social historians have come to more fully appreciate the significance and far-reaching social impact of this event, and now architectural and landscape historians are also beginning to better understand how and why this cultural shift also affected and served as a catalyst for changes to the physical layout and design of plantations in response to it. As the eighteenth-century began, the commingling of functions and domestic activities that were so much a part of daily plantation life in the seventeenth century began to diminish. This period marked the beginning of a trend in which outdoor spaces became either distinctively commercial or domestic, were primarily peopled and used by either blacks or whites, and became either explicitly public or private. This gradual shift in how spaces were organized and used continued well into the late

[8] McCartney, "History of Green Spring," 42–43.

[9] No additional documentary evidence shedding further insight into the attribution of the house expansion or the probable motivations of Philip Ludwell I (if he was, in fact, the one who made these changes) has yet come to light. Although these ideas must fall within the realm of supposition at this point, they are, nonetheless, consistent with generally accepted scholarly theories about why absentee gentry landowners in 18th-century Virginia sometimes made major and expensive improvements to their holdings. Aside from the obvious economic benefits, the landowners were apparently mindful of—and sensitive to—how such improvement efforts reflected on their social standing within the surrounding community.

[10] Donald W. Linebaugh, "'All the Annoyances and Inconveniences of the Country': Environmental Factors in the Development of Outbuildings in the Colonial Chesapeake," *Winterthur Portfolio: A Journal of American Material Culture* 29, no. 1 (Spring 1994): 2.

eighteenth century. This reordering of space to respond to social conditions was characterized by building and renovation activities: new construction, alterations, and renovations to manor houses and outbuildings as well as extensive landscape changes. By the eighteenth century, plantations typically had two contingent segments with divergent messages: the carefully contrived landscapes of the white planter and his family and the segregated, detached quarters of the black slaves. The two groups typically mixed on a daily basis within the domestic work areas around the house and particularly around the detached kitchen, stables, gardens, and barns.[11]

The central issue of *when* physical changes that were explicitly driven by shifts in its labor force most likely came to the Green Spring landscape is not known, but the question may be answered by further archaeological examination of the site for clues. In trying to narrow the possibilities, however, we may engage in a little deductive reasoning to identify some probable causes that forced changes.

Potential Catalysts for Changes and Improvements at Green Spring

Governor Berkeley may have started (if he did not also finish) some of the physical changes to the Green Spring landscape in response to labor force shifts. The most obvious timeframe for this would have been at the time of his second marriage in 1670. In 1674, a document confirming Berkeley's Green Spring title noted interestingly that "he hath expended a great summe of mony in building and otherwise upon the said land,"[12] a reference whose meaning might be interpreted in several ways. It could be a vague reference to the fact of his recent expansion of his house at the time of his marriage and changes to the landscape that coincide with both changes to his house and in his labor force, or it could merely be a general reference to the fact that during the thirty years that Berkeley had owned Green Spring up to that date, he had obviously invested a great deal of his resources in making general improvements to develop the place into Virginia's then-largest and, arguably, its grandest plantation.

If Sir William did not make these improvements in about 1670–71, political events in Virginia during the remainder of his life would have given him very little time to focus on such mundane matters as directing major building and landscape changes at his plantation. One could argue convincingly that, as he became increasingly consumed with pressing matters of state and with Bacon's Rebellion, all thoughts or plans for any domestic improvements at his plantation would have been forgotten.[13]

It is also possible, though less likely, that Lady Berkeley could have reordered the landscape in making repairs after Berkeley's death in 1677. While she noted that all the plantation's fences had been pulled down during Bacon's Rebellion when the place had been occupied by Bacon's men and that she had expended a sum of £300 in making repairs to the house to make it habitable again, taken in total, these repairs and improvements seem to have been mostly cosmetic rather than substantive. Even so, because of her stated determination to make the plantation presentable again to be able to rent it to subsequent governors, Lady Frances cannot be completely discounted as an owner for who might have reordered the Green Spring landscape in a major way.[14]

When one considers, however, the timing of the labor force shifts in Virginia, the 1680 to 1694 period of Philip Ludwell I's ownership and use of the property coincides nicely, and suggests the *most* likely period when such changes would have been made to

[11] Yentsch, *Chesapeake Family*, 260, 272–273; Dell Upton, "White and Black Landscapes in Eighteenth-Century Virginia," in *Material Life in America, 1600–1860*, ed. Robert Blair St. George (Boston: Northeastern University Press, 1988), 357.
[12] McCartney, "History of Green Spring," 25.
[13] Ibid., 26.
[14] Ibid., 42–43.

Green Spring. If Ludwell himself had ever occupied the house during this period, it would have lent further weight to the argument in his favor. The reality is, however, that he did not, although he rented the place to several governors, who probably brought one or more white English servants with them to attend to their household and personal needs.[15] With these thoughts in mind, one could then argue that until Philip Ludwell II took up residence in the house in 1694, and especially after his marriage in 1697, and gained full title to the place upon the death of his father sometime after 1712, there might not have been any pressing need for him to consider a major reordering of the Green Spring landscape's spatial organization.[16] Either way, this is an important question that must remain unknown for the time being. However, because of its importance, it certainly bears further investigation and consideration when one tries to reconstruct a probable time line of salient events in the Green Spring site's physical evolution.

Attribution of Lower Terrace Site Improvements to Ludwell III

What has recently become much clearer is that while key questions may still exist about the rightful attribution for the new mansion house's construction and the landscape changes made due to the composition of the plantation's labor force, there is no longer much doubt that the serpentine brick garden walls and the symmetrical complex of brick outbuildings that were built on the lower terrace below the house were constructed by Philip Ludwell III during the years that he owned and lived at Green Spring. This new information is the result of the findings gleaned from extensive archaeological excavation of these sites conducted in the springs and early summers of 2002 and 2003. All of the various features found on the lower terrace appear to date from a period ranging from as early as 1735 to perhaps 1755.[17]

Although we know comparatively little from documentary records (as compared to archaeological findings) about the nature and extent of physical improvements made to Green Spring during the long Ludwell-Lee ownership period (1680–1803), enough clues are provided to shed some light on the probable site layout and a few changes that were made to the plantation.[18] Regardless of whether Berkeley or Ludwell I built the western expansion or "new Mansion house" at Green Spring, the Soane Map of 1683 is the earliest graphic representation of the plantation's nerve center (see Figs. 1–5 and 4–1). It is the only one to confirm and show that the western expansion of the house was certainly standing by that time and that it coexisted with the older dwelling adjacent to it for some period of years before the latter was dismantled. The exact date that the earlier dwelling house was dismantled is not known, but it was certainly done either by Ludwell I between the years 1683 and 1693 or by Ludwell II after he took up residence there in about 1694.[19]

An Examination of Local Roads That Surrounded Green Spring

This author has attempted to put possible physical changes to the Green Spring plantation landscape into an understandable context by tying certain physical changes on the plantation to perceived changes to the network of local roads that surrounded the plan-

[15] Ibid., 44.

[16] Ibid., 51–52.

[17] This information was gleaned from several on-site meetings held to review the findings. The author and Dr. Andrew S. Veech met on April 26, May 15, May 17, May 24, May 31, June 4, and June 12, 2002. Retired Colonial Williamsburg archaeologist Ivor Noël Hume attended the last three meetings, and Colonial Williamsburg architectural historian Edward Chappell was present at the last two. Lively and provocative discussions characterized all of these sessions.

[18] In 1796, Benjamin Latrobe also attributed the then-still-standing "new mansion house" to Governor Berkeley, obviously based on what William Ludwell Lee told him; see Chapter 3, n. 14.

[19] McCartney, "History of Green Spring," 51–52.



Fig. 4–1 John Soane map of Green Spring area (circa 1683).

tation. These roadway changes are perceived rather than known because definitive dates for these changes are not known; therefore, speculation through an examination and comparative analysis of area maps that were drawn over the course of time is required. While this exercise has been somewhat helpful in at least narrowing the date ranges for some of these alterations, it has not pinpointed these changes with any certainty or permitted the attribution of changes to a particular event, date, and Green Spring owner (see Figs. 1–12, 3–9, 3–10, 4–5, and 4–7).

The process of reorienting the site and its primary road access from the former western orientation (facing the so-called Newcastle Road) to one accessed from the south and toward Jamestown would have ostensibly begun when the new mansion house was constructed at a right angle to the older house. This change was probably not implemented immediately. An examination and literal reading of the Soane Map does not indicate that a straightened road centered on the Green Spring house (as is clearly shown on the much later Desandrouins Map of 1781) had yet been constructed, at least in 1683.

On the other hand, the Goodall Map, circa 1770 (see Fig. 1–12), appears to indicate that the road to the south was in existence by that date, although its representation is more schematic than literal. Nonetheless, it seems clear that the straight road leading south to Jamestown (today known as Greensprings Road, Route #614) existed by 1770 (if not long before). However, this comparison, coupled with a more literal reading of these maps, only narrows the probable timeframe for the road's construction to a period of some eighty-seven years, between 1683 and 1770, or sometime during the Ludwell-Lee tenures.



Fig. 4–2 1781 Desandrouins map showing the ground of the southeast of the Green Spring domestic core area that was fought over in the Revolutionary War. Both British and American forces fed their troops into battle via the road (now Rt. 614) that ran between Green Spring and Jamestown.

Concerning the placement of public roads and access into the site, what is particularly curious is an oblique reference to the fact that in late 1676 or early 1677, during Bacon's Rebellion, when Green Spring was occupied and garrisoned by a force of Bacon's men under the leadership of Captain Drew, Drew "caused all the Avenues and approaches to the same to be Baracado'd up, and 3 grate Guns planted to beat of [off] the Assailants."[20] This documentary reference clearly implies that from an early date (that is, 1676) there was more than one point of access by road into the Green Spring plantation domestic core area. While this reference seems to indicate the existence of three separate *"Avenues and approaches"* into the site (due to the placement of three guns ostensibly needed to guard each one), this is only one, admittedly more literal, interpretation or reading of the evidence.[21] Moreover, if these roads/lanes were then significant avenues or points of access into the Green Spring site, it is all the more curious why, in the subsequent property maps of the site and surrounding areas, they did not appear as the important landscape features they obviously would have been.

In any event, by the time Philip Ludwell I became the master of Green Spring, the evidence strongly suggests that certain major changes to the house and the plantation had occurred since Berkeley's ownership. The orientation of the house and, thus, the main approach road and the related visual emphasis (as defined by how the landscape would have been ordered) seems to have shifted from the original orientation to the west to a new one facing south, toward Jamestown. Aside from any initial improvements that Ludwell may have made when he became Green Spring's owner, in order to rent the house to the incoming governor, it seems unlikely that the absentee landlord and his new wife, who continued to live at nearby Rich Neck plantation, near Williamsburg, would have made other major improvements thereafter.[22]

Renting Green Spring

Lady Frances's cousin Thomas, Lord Culpeper, who became Virginia's governor in early 1680 and rented Green Spring from Lady Frances, wrote a letter to his sister in England on October 5, 1680, from Boston, in which he made a very cryptic remark about his near-relation, "My Lady Berkeley is married to Mr. Ludwell and thinks noe more of our world."[23] This curious reference could well be interpreted a couple of ways: it was merely a simple, passing remark that his female cousin was now married and no longer felt a need to visit him or involve herself with daily affairs at Green Spring, or (more surprisingly) it could also be a reflection of his feeling sorry for himself that she had suddenly turned her back on him as a lover to accept a marriage proposal from Philip Ludwell I. (This author thinks that it is highly possible that the latter interpretation may not be too far off the mark.)

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[20] Ibid., 33.

[21] At this point, we can only speculate about *where* these access roads might have been located at the time. This author, however, feels the most likely candidates are: 1. The main entrance lane connecting the house to the Newcastle Road to the west; 2. perhaps a rough, farm road leading to the house from Jamestown to the south (which might have later been straightened or otherwise improved when it was turned into the main driveway access to the house, after the "new Mansion house" was built circa 1680), or the existence of which, in 1676, could, perhaps be interpreted as another persuasive indicator that the "new Mansion house" addition could, in fact, have dated from about 1670, when Governor Berkeley married Lady Frances Culpeper Stevens; and 3. a farm road leading away from the house to Green Spring's northern acreage and quarters; this tract might have been improved much later to serve as a public road, when Newcastle Road was abandoned (sometime after 1818 and before 1863 as indicated by a comparison of the two maps shown in Figs. 3–9 and 3–10), which today serves James City County as Centerville Road, Route 614. This interpretative reading of the documentary reference, although conjectural in nature, appears to account plausibly for all three roads that seem to have been in existence in 1676–77.

[22] McCartney, "History of Green Spring," 50.

[23] This letter was originally published in *Maxwell's Va. Historical Register*, 3: 193, as cited in the Ludwell Genealogy, found in the Ludwell-Lee Papers, microfilm, JDR Jr. Library, CWF.

When Culpeper arrived in Virginia, he immediately took up residence in the same Green Spring house with his reportedly beautiful, vivacious (but high-strung and, at times, formidable) forty-six-year-old cousin.[24] Whether they had a brief affair over the few months that they lived together in the same house before her marriage to Ludwell in October 1680 is not known, but the distinct possibility that they might have is further suggested by another curious mention by a contemporary correspondent that they "live frankly together without any of your European selfishness of politic covetness to disturb them."[25]

It is not too difficult to consider how Lady Berkeley, perhaps lonely after living as a widow in the Green Spring house for three years after her second husband's death, could succumb to the temptation of a romantic affair with her newly arrived male cousin. In an age when first cousins often married, if Lady Frances and her single cousin had, indeed, had a brief, but intense, love affair, then it would be easier to understand the probable context and meaning behind Lord Culpeper's almost pouty remark to his sister about his cousin's marriage before and her apparent sudden detachment from his company. Given the date of the letter, October 5, seemingly only days after Lady Frances married Philip Ludwell I, there appears to be more here than meets the eye!

While Green Spring house and plantation would have certainly been kept in adequate repair during the years it was rented to at least two and possibly more governors, it seems highly unlikely that the Ludwells would have been inclined to spend vast sums of money thereafter on making major changes to the place, aside from Philip's doing some things to put his stamp on the plantation after he had initially acquired it.[26] What these kinds of things might have been and where they might have been located on the landscape are not known.

Aside from serving as the residence of governors, Green Spring continued to be used through the 1680s and early 1690s as an occasional meeting place for the Governor's Council and the House of Burgesses. The last known time such a meeting occurred there was in 1691.[27] Very little about who lived there or how the house was used is known until about 1694–95. During that time period, Lady Frances died and was later buried in the churchyard at Jamestown. Philip Ludwell I departed Virginia in 1694 and spent the remaining years of his life in England, dying there sometime after 1711–12; possibly as late as 1717.

Green Spring During Philip Ludwell II's Ownership

In about 1693–94, Philip Ludwell II reached his majority and left his father's house at Rich Neck. Since no one else was apparently then residing at his father's Green Spring plantation, he decided to live there. He lived alone as a bachelor (no doubt with a small group of personal slaves to attend to his needs) for just three or four years while he courted, and then married, Hannah Harrison in 1697. He then brought his young bride to live at Green Spring.[28] Ludwell II must have made some improvements to the house at

[24] McCartney, "History of Green Spring," 44; Hudson, *Plantation, Refuge, Prison, Statehouse*, 6.

[25] Joanne Young, "The Prescient Minister of Jamestown . . . ," *CW Journal*, 34.

[26] This assumption is based on several factors, including the fact that Ludwell would have been more likely to make major changes to the place sooner, after acquiring it by marriage, than after the passage of several years; the fact that he was an absentee landlord; the probability that changes would not have served his personal needs; and, perhaps, his advancing age. Young men tend to embark on ambitious building programs more so than middle-aged ones, and elderly men are even less likely to do so. Although the exact date of Ludwell's birth is not known, he was certainly in his forties when he married Lady Frances, who was aged 46. Although Ludwell would not be considered "old" by modern standards, he would have been at the time, it being an age of shorter life expectancies. Thus he may not have had been much inclined to invest a lot of money on extensive alterations or improvements at Green Spring.

[27] McCartney, "History of Green Spring," 50–51.

[28] Ibid., 51–52.

that time, and it also appears that he made some physical improvements to the grounds in the years that followed his marriage. Whether he did or not is not definitively known, but he certainly would have felt much freer to make changes to the house and grounds to suit himself after his father's death in the years after 1711–12,[29] when the ownership title to Green Spring formally passed to him.

During the first quarter of the eighteenth century in Virginia, historians have noted a rise in the wealth of a number of prosperous families, due to the growing profitability of tobacco crops. It is during this period that changes and transitions from one generation to the next—massive house renovations, cleanings and alterations—are often recorded in diaries and letters from the period. These modifications are often physically discernable today in the landscapes' remaining archaeological records.

At least one brick garden wall that once ran in a straight north-south fashion off of the southwest corner of the arcaded porch of the new mansion house has recently been attributed to Ludwell II. It is now thought to have been built sometime between 1700 and 1715, or about the time just before or shortly after Ludwell I's death. This wall would have enframed the west side of a forecourt located directly in front and to the south of the house, and it once had a symmetrical parallel wall on the eastern side of the space to complete the enclosure, although archaeologists have found only partial physical evidence for such a wall.[30]

As has already been related in some detail in Chapter One, Philip Ludwell II and Hannah Ludwell entertained extensively in the Virginia tradition, and many notable guests visited and were treated to the hospitality of Green Spring during those years. Included among them was William Byrd II, whose regular visits started in about 1705, only a year after he returned from England to claim his inheritance after his father's death.[31] Byrd and his first wife, Lucy, often enjoyed Green Spring's many diversions, including lawn bowling, cricket, fencing, eating fruit, playing at cards, drinking wine, horse racing, and sampling the Ludwells' asparagus from the garden.[32]

Apparent Importance of Green Spring's Gardens by the Early Eighteenth Century

What is not often stated is that the Ludwells' level of entertaining would have helped spread the knowledge of, and familiarization with, Green Spring's gardens among a wider circle of notable and sophisticated individuals. It is known that Philip Ludwell I had already begun engaging in a transatlantic trade in plants with politically important people in England, including Henry Compton, the bishop of London, who was an avid gardener and plant collector. Other acquaintances in England apparently also pressed his son, Philip Ludwell II, for plant material, and he seems to have continued the practice his father had started.[33] In a March 12, 1708, letter, Nathaniel Blakiston, a former governor of Maryland and then the London agent for both Maryland and Virginia, wrote to

[29] A note in the *William and Mary Quarterly* states that Ludwell I was still alive in 1711 "Ludwell Family," *WMQ*, 1st ser., 19 (1910–11): 211. Yentsch, *Chesapeake Family*, 103–104, 260.

[30] Dimmick and Caywood were both vague about the discovery of any remaining brick foundations of a parallel garden wall on the eastern side of the forecourt area, which fronted the south side of the mansion house complex. The lack of such physical evidence does not mean that a wall was never built there; rather, it indicates that nothing obvious was found in either 1928–29 or in 1954–55. A portion of this eastern wall was discovered in spring 2003, but it extended only part of the way up the hill, to the north from the southernmost building of that range. Finding a builder's trench with brick fragments or brick dust would indicate that the east garden wall was later dismantled and robbed of all of its bricks to be used for other purposes on the property.

[31] See Chapter One 8–9, and Martin, *Pleasure Gardens of Virginia*, 8.

[32] Martin, *Pleasure Gardens of Virginia*, 10.

[33] Ibid., 8.

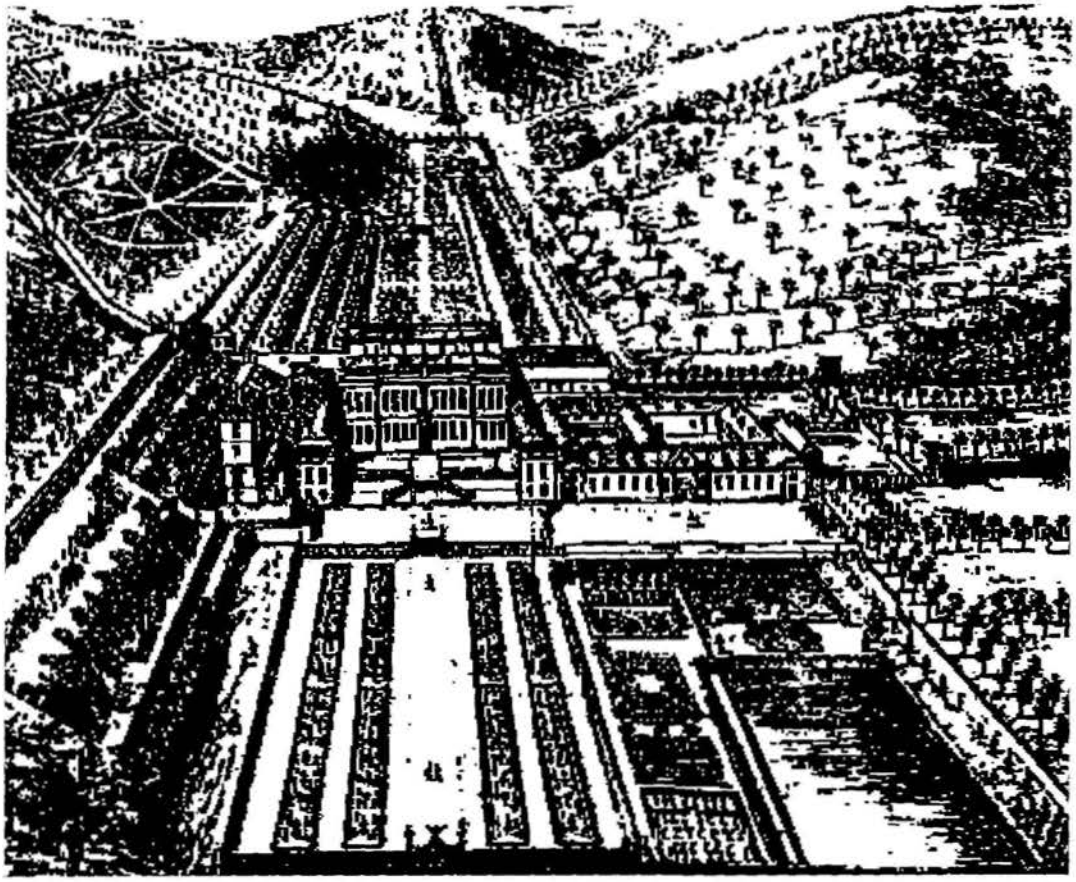


Fig. 4–3 Aerial view of Dyrham Park, Gloucester, home of William Blathwayt, as it appeared around 1700 to 1710. Plants and trees from Green Spring had been sent there to help beautify the estate's extensive geometric gardens.

Ludwell with a request: "I am obliged to you for your kind overture of sending me some trees. I know you sent some over to the Bishop of London and if you will be soe kind as to remember me with a few I can place them where they will be very acceptable. . . . Since you are so Franke to send me a few trees, I am informed amongst the rest the popler tree is very acceptable here."[34]

Another recipient of Green Spring's seeming horticultural bounty was William Blathwayt of Dyrham Park in Gloucestershire. Blathwayt, an influential member of the Board of Plantations and Trade, was then building extensive formal gardens at his estate at Dyrham Park, as depicted in an engraving circa 1708–10 drawn by Johannes Knyff and published in the 1712 book of aerial views by Sir Robert Atkyns titled *The Ancient and Present state of Gloucestershire* (See Fig. 4–3). In a December 10, 1710, letter to Philip Ludwell II in Virginia, Blathwayt told him those Green Spring evergreens that had been sent to him had "given an agreeable Entertainment in my Garden."[35] This reputation for the quality of plants from the Green Spring gardens and nurseries seems to have spread by word of mouth not only abroad, but also in Virginia and the surrounding middle Atlantic colonies. It would give the plantation a new degree of importance as a ready source of plants and seeds and, in a few instances, of trained gardeners for gardens all over Virginia throughout the remainder of the eighteenth century.[36]

[34] Nathaniel Blakiston and Philip Ludwell II correspondence, in "Letters and Other Papers, 1705–1829," *VMHB* 23 (1915): 358.

[35] William Blathwayt Papers, JDR Jr. Library, Special Collections, CWF.

[36] Martin, *Pleasure Gardens of Virginia*, 7–8.

Green Spring During Philip Ludwell III's Ownership

While we do not know specifics about the layout of these Green Spring gardens, including their locations and their physical extent, they must have continued to grow in size and reputation as the decades passed. The next generation owner, Philip Ludwell III (1716–67), was said to have been interested in agriculture and horticulture to an even greater extent than either his father or grandfather had been. Ludwell III later took an active role in running his plantation after he reached his late teens and his majority, but he was only eleven years old when he inherited Green Spring upon the death of his father in 1727.[37]

Although it is known that he attended the College of William and Mary in Williamsburg as a teenager, probably also boarding there during that time, no mention seems to survive in the historical records as to what use Green Spring house was put between the death of Hannah Harrison Ludwell in 1731, and 1737, when Ludwell III married Frances Grymes, and (again) took up permanent residence there, this time as the master. Their union produced three daughters, all of whom were born at Green Spring.[38]

It was most likely during Philip Ludwell III's ownership that many of the remnant landscape features known today at Green Spring were created. Sometime probably in the late 1730s, the landscape treatment of the south front of the Green Spring mansion house underwent some drastic changes in the face of an apparently ambitious building program. The timing of these changes coincides with general trends that have been noted by architectural historian Carter L. Hudgins. Hudgins has observed that a marked shift occurred about 1720 in the building and buying habits of Virginia's wealthiest planters, with the emergence of a more widespread, elite, material culture. Hudgins further notes that about 1740, the architectural repertoire expanded for the wealthiest planters while it remained the same for the middling planters and slaves, who held fast to existing architectural styles and methods of building that had become widely established by the end of the seventeenth century.[39]

Hudgins goes on to state that in the same period, the landscapes that surrounded plantation houses also grew "more and more complicated," stating that a clearly defined "architecture of yards and gardens" emerged that was "ordered and organized according to rules as strict and orderly as those which framed the social discourse of individuals inside their houses."[40] Thus, for historians and archaeologists seeking to understand the spatial relationships that were used in a lost garden's design, the key steps are to establish its boundaries, find its major axis, and locate other passageways through it.[41]

Hudgins also acknowledged that archaeology has confirmed that Virginia plantations became even "more and more segregated during these decades, less fluid, divided and sub-divided into spaces and routines that kept interaction between white planters and black laborers predictable," a social condition that would have eventually been reflected in domestic landscapes that has already been discussed earlier in this chapter in the specific context of Green Spring.[42] The increasing separation of the races, functional uses of outdoor spaces, and the gradual retreat to greater privacy indoors were the means by which the families of both Philip Ludwell II and III (and others like them of their gentry

[37] McCartney, "History of Green Spring," 58–59, 61. This is particularly significant, given what has most recently been learned about the site via archaeological excavations conducted over the years 2000–03.
[38] Ibid., 58–59.
[39] Carter L. Hudgins, "The Archaeology of Plantation Life in 18th-Century Virginia," in *The Archaeology of 18th-Century Virginia*, ed. Theodore R. Reinhart (Richmond, Va.: Spectrum Press for the Archaeological Society of Virginia, 1996), 53.
[40] Ibid.
[41] Anne E. Yentsch and Judson M. Kratzer, "Techniques for Excavating and Analyzing Buried Eighteenth-Century Garden Landscapes," in *Landscape Archaeology: Reading and Interpreting the American Historical Landscape*, ed. Rebecca Yamin and Karen Bescherer Metheny (Knoxville, Tenn.: University of Tennessee Press, 1996): 181.
[42] Ibid.

class) defined their social identity and quietly, but visibly, expressed their power. Privacy increasingly came to be equated with liberty and individualism, and the importance of this freedom is reflected hierarchically in how both the manor house and the surrounding domestic landscapes were subdivided and ordered. Historian Dell Upton, in his studies of eighteenth-century Virginia plantation design, shed more light on the general trend. Upton noted that the plantation landscapes of affluent white planters were both articulated and processional, consisting of a network of linked sequential spaces. He wrote, "The great planter intended that his landscape would be hierarchical, leading to himself at the center. His house was raised above the other buildings and was often set off from the surrounding countryside by a series of barriers or boundaries—fences and terraces. It was tied to the public landscape by carefully conceived roads and drives."[43] Upton went on to say that "elements of movement through the landscape were built into its forms, and architectural details were disposed along it in a carefully planned sequence. Experienced as intended, it could be a powerful and intense ideological statement."[44]

The archaeological dating of several physical remains of walls and outbuildings at Green Spring appears to be consistent with the general time period of social and cultural shifts occurring within the Virginia colony, specifically, the ownership periods of Philip Ludwell II (who resided there from 1694 to 1712 and was owner from 1712 until his death in 1727) and Philip Ludwell III (who resided there as an adult from 1737 to 1760 and was owner from 1727 until his death in 1767).[45] Indeed, the unfolding mystery of how the formalized portion of the landscape to the south of the Green Spring mansion house was structured also seems to contain all of the apparent architectural and landscape elements that would have characterized such a carefully ordered, and intentionally contrived, processional landscape as scholars suggest was the prevailing practice among gentry planters in the decades following the 1720s. The Ludwells (II and III) used their house, gardens, and grounds at Green Spring to display the family's relative rank within colonial society and tell people of it. In the specific case of the gardens and grounds, this goal was accomplished by planting and maintaining extensive orchards of well-tended fruit trees; embellishing the gardens with decorative elements, such as jardinières (perhaps even including statuary); building and maintaining an orangery; and growing a wide array of unusual and exotic plants not commonly seen on local plantations. Through these visible and tangible means, the Ludwells clearly set themselves above, and apart from, their neighbors and presumptive peers. This outcome was not an accident, but was, in fact, a carefully calculated result that assured the Ludwell family a preeminent place in society.[46]

The Changing Landscape

As mentioned before, the road coming from Jamestown that had long followed a twisting, turning course through The Maine was apparently added to, or perhaps straightened out, during this period so that a segment took a more direct route through a marshy area and then up a gently rising slope to the Green Spring mansion house. This would have created a one mile-long approach road with cultivated agricultural fields or pastures on both sides up a low hill to the mansion house, which was sited upon the highest ground in the immediate area. The entrance drive came nearly up to the house itself and established the principal axis for the decorative landscape designed in front of it in what appears to have been a very balanced symmetrical terraced courtyard layout. (See Fig. 4–5.) Because of the clearly intended physical, visual, and highly iconographic statement

[43] Yentsch, *Chesapeake Family*, 128, 272; Upton, "White and Black Landscapes," 362–363.
[44] Ibid., 367.
[45] McCartney, "History of Green Spring," 51–52, 58, 59, 62.
[46] Yentsch, *Chesapeake Family*, 82, 109.

these several improvements were obviously intended to make, this author feels strongly that both the domestic complex's landscape changes and the straightening of a portion of the old Jamestown road were made at roughly the same time.[47] Further explanation on the reasons why the author has embraced this viewpoint follows.

The old straight brick garden walls that had once formed the rectangular upper forecourt near the house were apparently dismantled at about this time, and new solid brick walls (laid in decorative, gently sweeping reverse curves) were subsequently built on both the east and west sides of the upper terrace forecourt to enclose a much larger lawn or upper garden terrace area immediately adjacent to the house. This area was probably maintained as a lawn and must have contained the previously referenced bowling green that William Byrd mentioned in his diaries. Moreover, the decorative, sweeping brick garden walls that defined this lawn area continued down the hill on both sides of the mansion to the lower terrace, where they terminated at driveway gates on either side, and which continued farther from those points to connect to a series of at least five, and possibly six, symmetrically placed outbuildings that framed and formed both the east and west

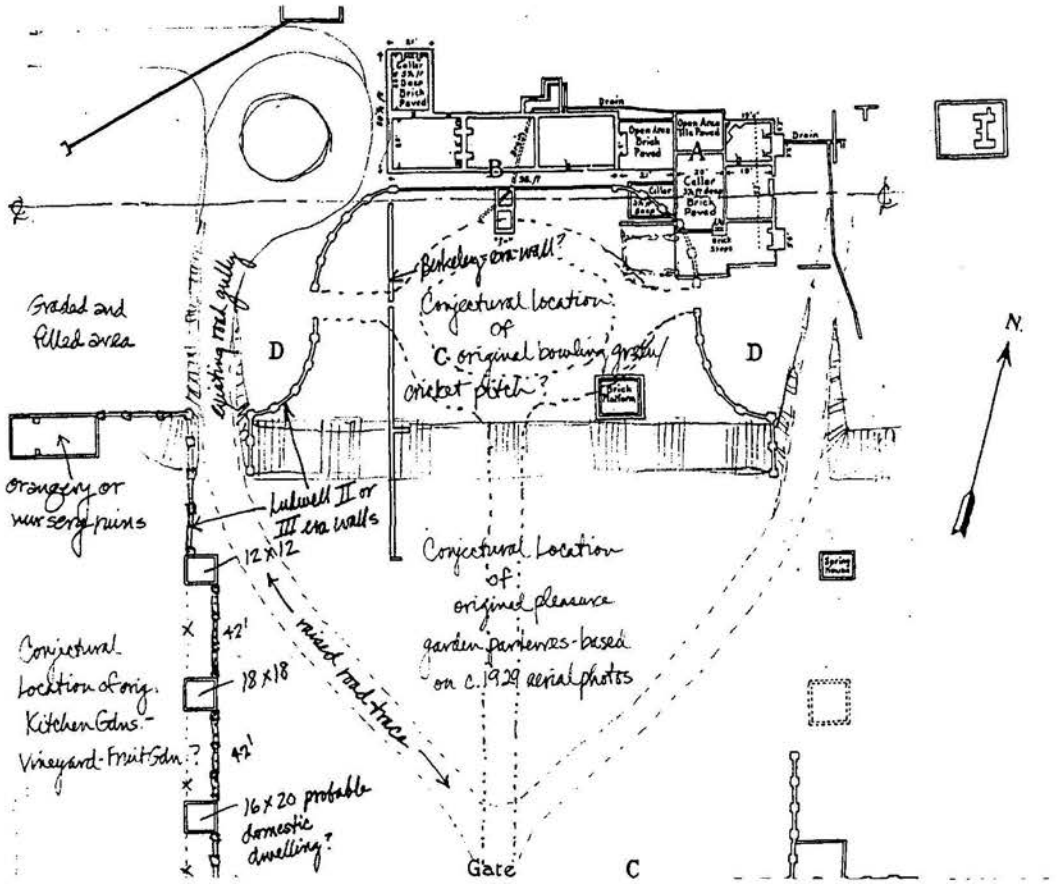


Fig. 4–4 Author's conjectures and annotations on top of Dimmock's circa 1928–29 plan of Green Spring's landscape features.

[47] Martin, *Pleasure Gardens of Virginia*, 8; Price, "Making, Remaking, and Unmaking of Green Spring," 42. Price curiously attributes the straightening of Jamestown Road, which she terms "the Great Road," to Berkeley, citing as her only evidence the fact that such action would have been consistent with Berkeley's aspirations to be seen and regarded as *the* ultimate Virginian (which, in many ways, he was). Yet conclusive evidence for when this road was straightened into its present form does not currently exist. Because the straightened "Great Road" does not appear on Soane's 1683 map, however, this author suspects that the road improvement must have been made decades later and was, in fact, most likely made by Ludwell III as a part of an extensive reordering of the Green Spring landscape. John Soane, "'Salt Map' . . . ," copy, JDR Jr. Library, CWF. (See Fig. 4–1.)

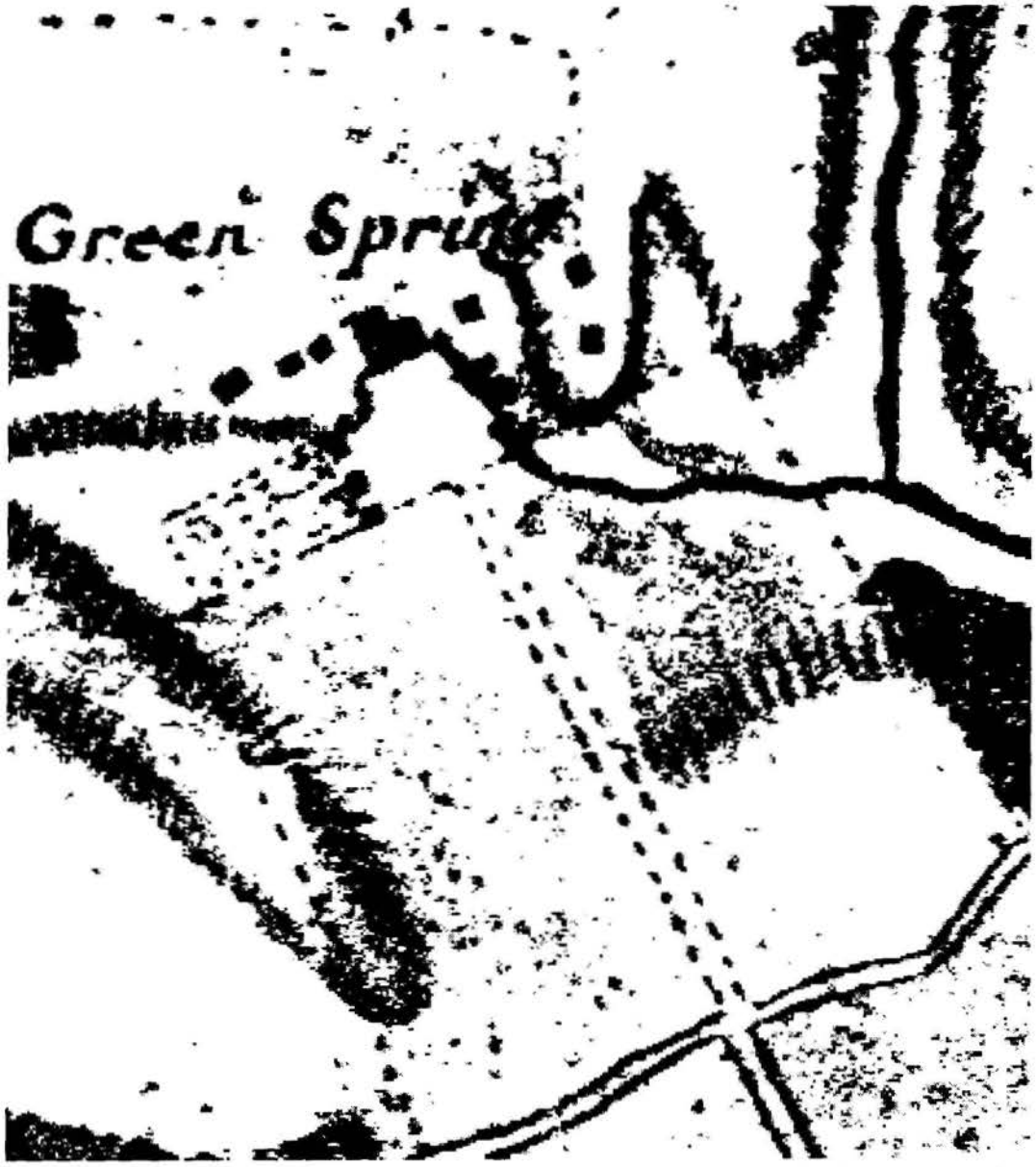


Fig. 4–5 Enlarged detail of Desandrouins's 1781 map of Green Spring area, showing the ordered arrangement of the domestic core area, straightened road, entrance drive, and the adjacent, large, fenced garden.

sides of a much larger lower terrace courtyard.[48] All of these outbuildings (with one possible exception) were well constructed of brick, and their symmetrical placement presumes an order and permanence that was not often seen in Virginia plantations of that day. (See Fig. 4–6 for author's survey plan sketch that shows these several referenced features.)[49]

While the fact that many of these outbuildings at Green Spring seem to have been constructed of brick may not today seem very significant to us, when one considers that most outbuildings on Virginia plantations of that time were typically built of wood and

[48] Martin, *Pleasure Gardens of Virginia*, 8; see also the 1781 Desandrouins map of Green Spring.

[49] Although the original functions of most of these outbuildings are still in question, one is definitely known to have been a springhouse. Another is thought to have been a slave quarter, and another may have been a laundry or perhaps even a later and larger greenhouse with an underfloor heating system. The smaller structures may have served as tool sheds or other forms of secure storage. All of these outbuildings were extremely well built and were obviously intended to impress and to last.

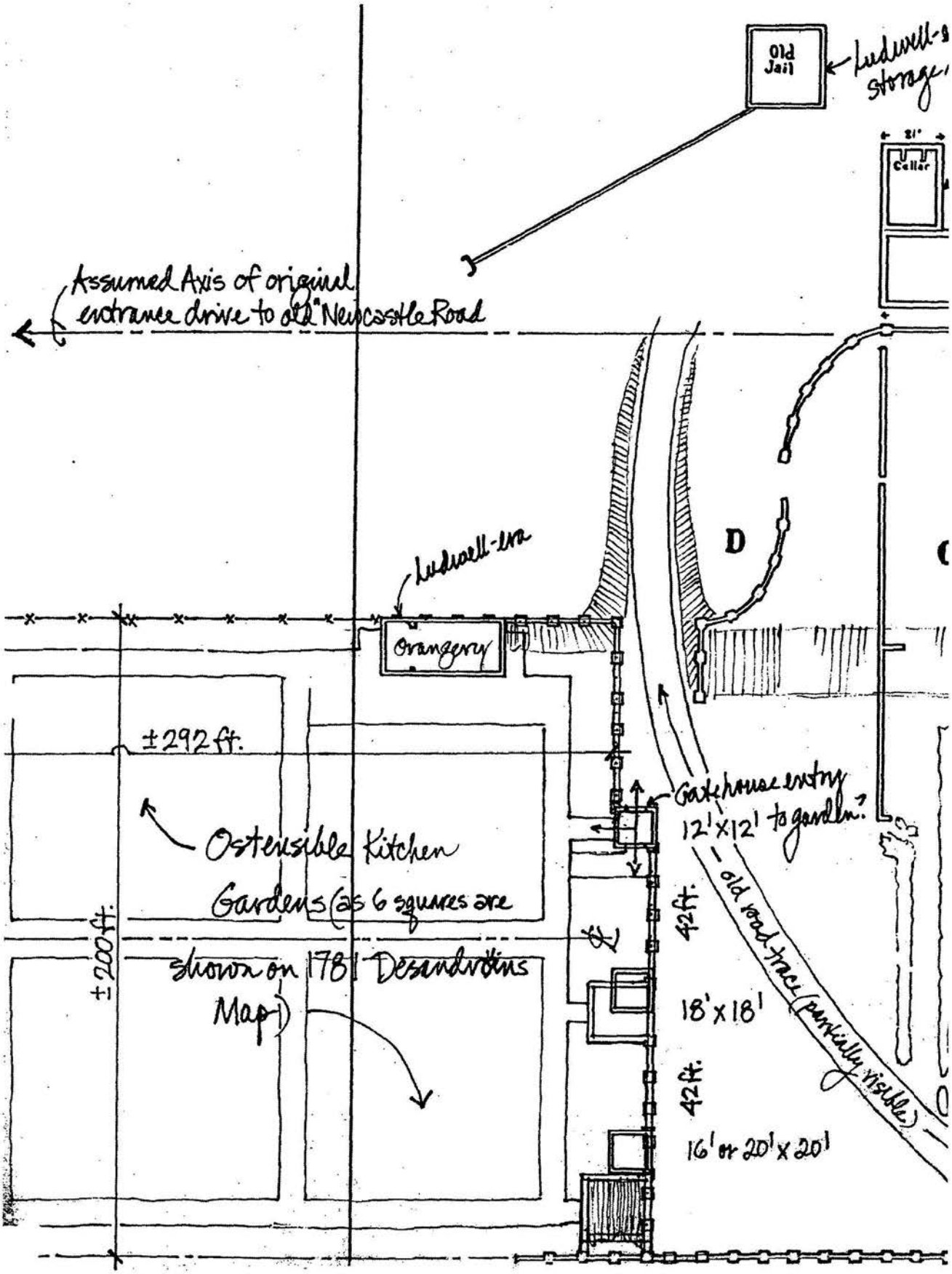
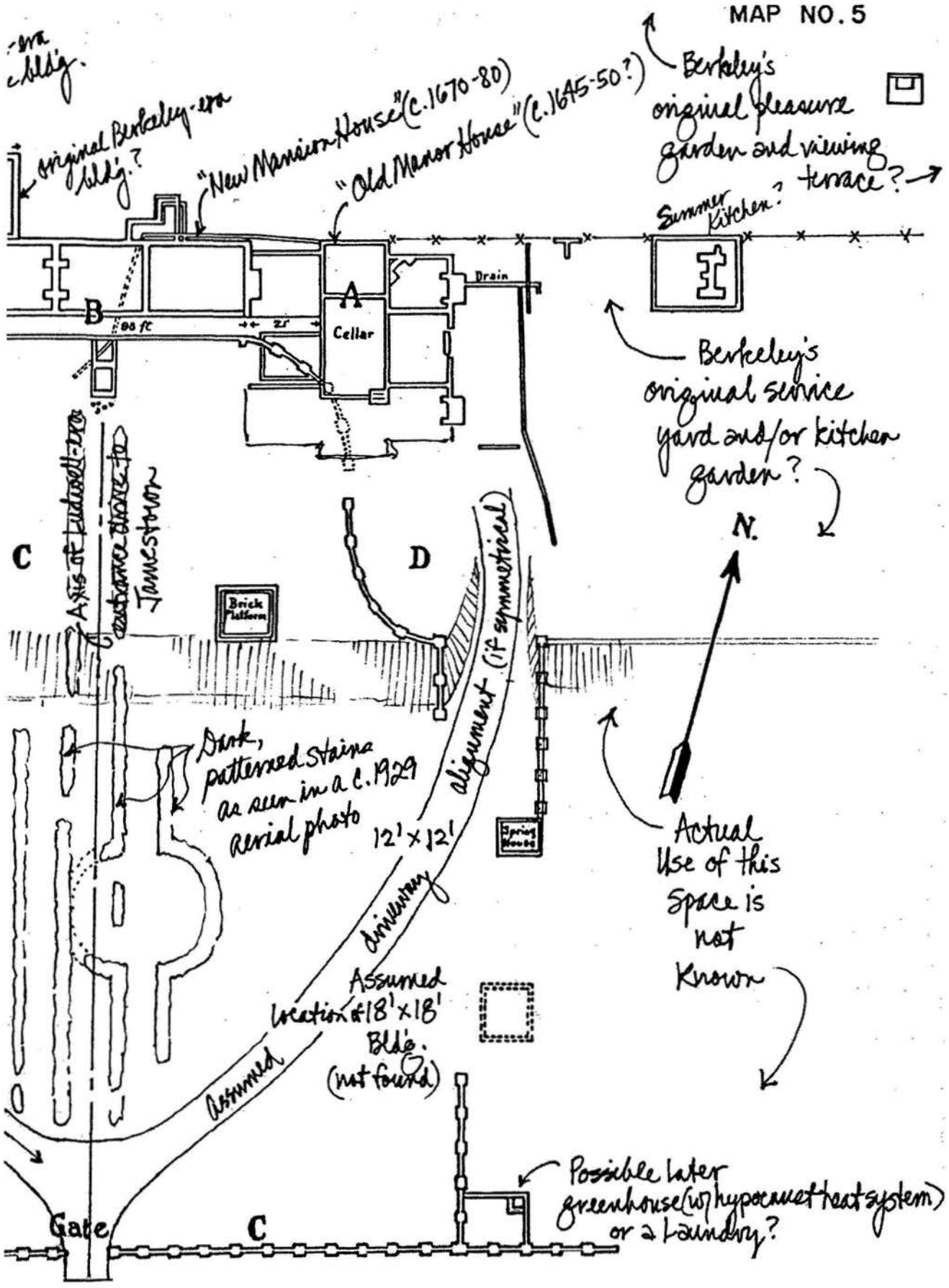


Fig. 4–6 Author's sketch of a possible layout of Green Spring's upper and lower terrace areas, annotated on top of Caywood's circa-1955 map of the site showing the then-known archaeological features.


MAP NO. 5
Berkeley's original pleasure garden and viewing terrace?
Summer kitchen?
"New Mansion House" (c. 1670-80)
"Old Manor House" (c. 1645-50?)
original Berkeley-era bldg.?
Drain
A
Cellar
B
98 ft
25
Berkeley's original service yard and/or kitchen garden?
N.
C
D
Axis of Ludwell-era entrance drive to Jamestown
Brick Platform
Dark, patterned staining as seen in a c. 1929 aerial photo
12' x 12'
Spring House
alignment (if symmetrical)
driveway
Actual Use of this Space is not Known
Assumed location of 18' x 18' Bldg. (not found)
Assumed
Possible later greenhouse (w/ hypocaust heat system) or a Laundry?
Gate
C

were often arranged in clusters on the land in an almost haphazard fashion, this choice of building material puts the obvious importance of this highly permanent, carefully ordered arrangement at Green Spring into its proper perspective.[50] This lower courtyard was clearly an important initial arrival space for visiting guests, and its formal, symmetrical layout/arrangement was obviously cleverly conceived to enhance the importance of the mansion house. It was clearly intended to make a sequential and important visual statement about the sophistication of the master and his family, as well.

This lower courtyard apparently had a dual function: Carriages arriving from the approach road came through a formal gate into this enclosed entry court, so it was the visitor's initial point of arrival to Green Spring. Within the middle, open space that was framed by the splitting of the carriage drive to either side of the east and west outbuilding ranges was apparently some form of decorative, formal, geometrically-arranged garden. This garden was probably intended to symbolically make yet another social/cultural statement about the owner, and to optically serve as a visual focal point and colorful foreground scene to set the stage for movement up to the imposing mansion house that was sited upon the rising, upper terrace located just up the hill, beyond it.[51]

The Arrival Experience to Green Spring

While the resulting landscape composition was certainly elegant, obviously reflecting Ludwell III's wealth and refined taste for all to see, it was also, no doubt, a complex and carefully calculated arrangement of walls, gates, outbuildings, gardens, and roads meant to work together to draw visitors into the plantation and to impress them.[52] Green Spring as redesigned clearly was, in many ways, meant to be a highly sequential, processional landscape, made up of a series of physically connected, three-dimensional spaces arranged to form a series of linear, sequential experiences. These started some two miles from the house, as one approached by horse or carriage down the straightened road from Jamestown, or from a quarter of a mile away when one turned into the final leg of the road, if arriving from either Williamsburg or Charles City via the Williamsburg-Barrett's Ferry Road (today Route 5).[53] It was intended to convey a statement to visitors (but also to locals and casual passersby) of the owner's wealth, power, sophistication, social aspirations, and cultural tastes. The scene was carefully conceived, calculated in its design and articulation; the visual effect was overt and unmistakable.

In a paper published some years ago, garden historian Elizabeth Kryder-Reid wrote that there is a "methodological value" in trying to recover archaeological evidence on how the operation of *sight* or *optics* was originally used in a landscape "by fixing landscape elements within a three-dimensional grid," as opposed to merely considering the two-di-

[50] Wells, "Planter's Prospect," 21.

[51] Caywood found the courses of these garden walls, outbuilding foundations, and the lower entry gate during the excavations he conducted in 1954–55 but did not attribute them to Ludwell III because of the limitations of archaeological science at the time. Recent excavations have helped date these features to sometime between circa 1730 to just prior to 1740. The identification here of the center of the lower forecourt as a garden is not based on any specific archaeological evidence but rather on an exciting and dramatic circa 1929 aerial photograph that clearly shows dark soil stains arranged in what is obviously a gridded, man-made pattern, indicating the location of what appears to have been a geometrically arranged garden, *VMHB* 27 (October 1929): 301 (see Fig. 3–7). This author's contention that the garden was decorative is based solely on its central location, which made it the first formal garden feature visitors came upon after approaching the house via the long driveway from Jamestown (two-thirds of which is paved and still in use by vehicular traffic today as Greensprings Road, Route 614).

[52] In her studies of Virginia plantations, architectural historian Camille Wells has found that "service and agricultural structures helped to make tangible the local hierarchies of wealth and status. The quantity, size, and solidity of attendant outbuildings offered an architectural index to each planter's means—the diversity of his activities and the scope of his influence." See Wells, "Planter's Prospect," 14.

[53] See the 1781 Desandrouins Map (Figs. 4–5, 4–7) for the locations and relationship of these two roads.

mensional plane of site plans and maps. She notes, "the garden's topography, barriers, and visual screens not only directed views, but also regulated visitor's access to the landscape." (This conditional description seems to fit quite accurately with the original Green Spring entry experience as created by Ludwell III.) Thus, trying to reconstruct the original perspectives on a site can provide both evidences of the garden's intended audiences, as well as clues for interpreting messages it was intended to impart.[54]

Green Spring's collective power as a visual composition and power statement would have surely been achieved by a studious attention to the principles of Euclidean geometry, visual optics, and both internally and externally perceived perspectives, all working together in both the horizontal and vertical planes on the land.[55] All of these efforts to manipulate not only *what* was seen, but *how* and even *when* it was seen, were calculated to convey and, indeed, to continually reinforce the intended underlying messages of the owner's lofty place in the local community, in the social and economic hierarchy of the colony, and, indeed, in the world.[56]

The importance of Green Spring's axially directed entrance drive, foreground entrance gates, combined decorative brick walls and fences, symmetrical brick outbuildings placement, graded earthen terraces, and the sweeping, curvilinear brick walls cannot be understated here. They *all* were intended to act together in a composition to frame views of the mansion house, to minimize or hide any views of the adjacent work areas, and to continually draw and fix the visitor's eye on the massive house as the epicenter of Green Spring and as the ultimate destination of arriving gentry visitors. There would have been three vantage points from which to experience the landscape in differing ways: views from outside the garden or domestic core area, looking in (as described here), views within and across the garden and/or domestic core itself, and views of the surrounding landscape in every direction as seen from the house. Kryder-Reid states, "In general, views looking into the garden have been seen as attempts by their owners to enhance their status by displays of wealth, expertise, and taste." On the other hand, she continues, "views looking out of the garden have been regarded as claims to a relationship with the outer world by linking the private landscape with distant landmarks of broad vistas."[57]

For garden and social historians to interpret the social and symbolic significance of how vision specifically operated within the colonial Virginia landscape, they must be able not only to reconstruct *what* was seen and how it was *meant* to be seen, but also understand the *ways* in which it was seen, all admittedly highly subjective processes.

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[54] Kryder-Reid, "Archaeology of Vision," 1–2.

[55] The mathematical layout and grading of terraces, or *falls*, were not casual or haphazard exercises in the colonial Chesapeake; they were carefully considered in order to elevate and enhance the perceived scale and emphasis of the manor house. Terrace design was based on a 3:4:5 proportional grid, almost always measured by a *Gunter's*, or surveyor's chain. The chain was divided by the standard unit of land measurement then in use, variously called a *pole*, *rod*, or *perch* and equalling 16½ feet. By adjusting the horizontal length and the proportions of each terrace level as well as the vertical height of the falls, the perception of distances could be manipulated at will to lengthen or foreshorten them, as a site and circumstances demanded and as the owner thought necessary. Moreover, the combination of terracing and fencing served to privatize a house by separating it visually from adjacent service buildings. For a more in-depth treatment of this subject as seen in a case study of an Annapolis colonial site, see Paca-Steele and Wright, "Mathematics of an Eighteenth-Century Wilderness Garden," 299–320. Two other good sources on this topic are Yentsch and Kratzer, "Techniques," 179–181, 183–184, 195–198, and Leone and Shackel, "Plane and Solid Geometry," 153–167.

[56] This idea of the intended and clever uses of optics/sight and mathematical proportions is part of the known landscape and cultural grammar of the 18th-century Chesapeake. The author submits that the perceived inclusion of these principles in this part of the Green Spring landscape also lends additional weight to his argument for its 18th- (vs. 17th-) century attribution. Although these elements have long been recognized in a general fashion, only in more recent years have garden historians appreciated their complexity, subtlety, intended role, and importance when applied to the landscape. See Barbara Wells Sarudy, *Gardens and Gardening in the Chesapeake, 1700–1805* (Baltimore: Johns Hopkins, 1998): 28, 32, 35, 49; Kryder-Reid, "Archaeology of Vision," 42–44; Paca-Steele and Wright, "Mathematics," 299–320; Wells, "Planter's Prospect," 28, 29, 31.

[57] Kryder-Reid, "Archaeology of Vision," 42, 44, 47.

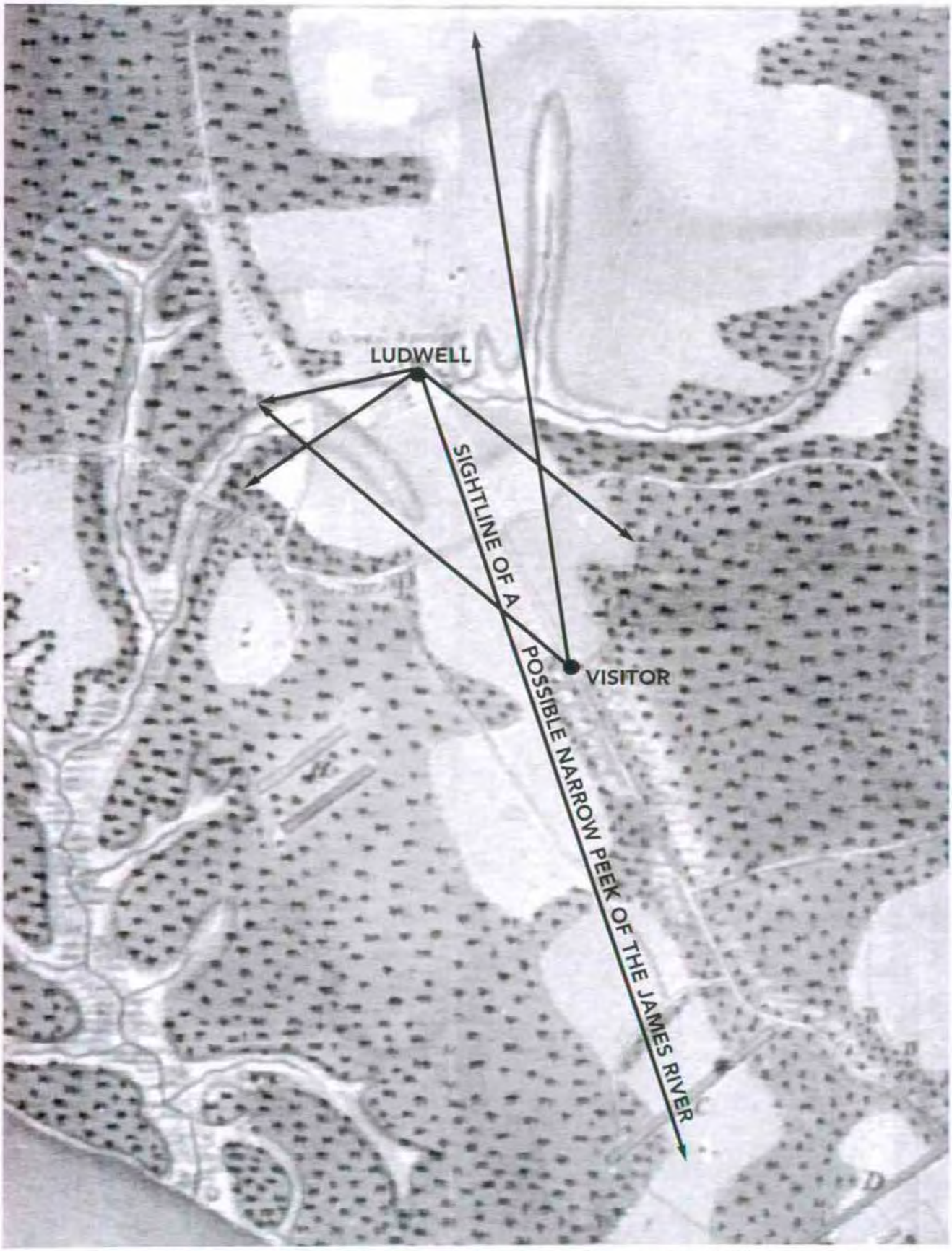


Fig. 4–7 Author's annotations and analysis of views and vistas that may have been available in 1781 when this map was drawn by Desandrouins. Horizontal alignment of trees and open space suggest little to no river vistas were then seen from the house.

The author has attempted the former two, without delving too deeply into the latter, by examining the visual sweeps that would have been available in 1781 at the time the Desandrouins Map was drawn, both looking to and from Green Spring (see Fig. 4–7). Yet, various audiences (neighbors, slaves, laborers, passersby, guests of the owner, etc.) would have attached different meanings to what they saw.[58] Despite these varied interpretations of meaning, the long sight lines both from within and without the site probably would have served to make the Green Spring mansion house and its rural environs an attractive and visually impressive place to see and experience.

While the house itself as an architectural statement was large and imposing, by the 1730s its style was outdated and probably would have then been seen as increasingly old-fashioned. Thus, its power to visually impress the beholder on its own was, ostensibly, diminishing, suggesting one reason Ludwell III might have felt compelled to add these improvements to the landscape that surrounded and led up to it. Another idea worth considering is that many aristocratic families in England have often maintained older houses and outmoded styles over the centuries, even when the style of the house was no longer fashionable, to show off the family's lineage and longevity. While the Green Spring house, no doubt, had a patina of great age by the time of Ludwell III's occupation, the house may have taken on an almost mythic quality by then, given its association with Governor Berkeley and Bacon's Rebellion. This might be one reason why Ludwell III let the house stand unchanged, even though it would certainly have been seen as old fashioned by his lifetime. This does not detract from the argument that Ludwell's own stamp of ownership was probably conveyed by his improving the surrounding gardens and landscape features. It was neither the large house nor the several new landscape features that, by themselves, would have had the ability to impress visitors. Rather, it was *all* of these different elements that were obviously meant to work together, as a *composition,* that gave Green Spring its impressive aura of great age and a distinctive sense of place that was clearly intended to be *the* ultimate power statement.

The Gardens at Green Spring

Unlike the upper brick garden walls, which were solid along their entire length and punctuated with brick pilasters at spaced intervals, the lower and side garden walls do not appear to have been as thick, suggesting that they consisted of a low brick "knee-wall" connecting a series of equally spaced brick pillars, with sections of wooden picket fence between the pillars, allowing filtered views from the lower entry forecourt into what the late eighteenth-century Desandrouins Map (see Fig. 4–5) suggests would have been at least one large fenced garden to the west (and perhaps another smaller garden to east to provide some semblance of balance in the otherwise symmetrical layout). This garden to the west of the lower courtyard was clearly shown on the Desandrouins Map as a large, rectangular space consisting of nine large internal square or rectangular planting beds. It was probably the kitchen garden, or a "potager"-type garden, consisting of a mixture of vegetables and herbs, as well as a decorative assemblage of small-scale, potted fruit and citrus trees, and berries, no doubt arranged in a regular fashion within the space.

Historians and archaeologists Anne Yentsch and Judson Kratzer wrote about how the sizes of such gardens were often determined. "[T]here was an 'ideal' size for an ornamental garden, derived in part by size similarities in Georgian house plans, but also influenced by the available labor base for garden construction and maintenance. Having first decided what width his garden was to be (normally three times the length of the house in the mid-Atlantic) and what length (by taking into consideration topographic attributes

[58] Ibid., 42, 47, 51.

of a site, especially elevation), a gentleman then designed elements to fit within its confines."[59] They go on to say, "One way designers subsumed them [gardens] within the whole [the broader landscape] was by drawing upon the dimensions of a mansion's front and side walls for the core shape. They then cast this unit outwards as part of a network of rectangles in the garden design."[60]

Archaeologists Mark P. Leone and Paul A. Shackel provide additional information on this geometric approach based on work they have done on the Charles Carroll of Carrollton site in Annapolis, Maryland. They determined that the system of plane geometry that was used in laying out the William Paca garden "was also used on other gardens [such as that of Charles Carroll] and that plane geometry was coordinated with principles of solid geometry in order to create landscapes with the properties of volume."[61] Their findings at the Carroll site are based, in part, on Barbara Paca-Steele's earlier analysis of the house and grounds of the William Paca site. She determined that there was a set of geometrical relationships that typically characterized the house and garden dimensions.[62] Leone and Shackel determined that falling gardens of the type that had been laid out at the Paca and Carroll properties were typical of others in the colonial Chesapeake, and that "just as these sites were planned out on paper using plane geometry and were explicit in their use of grids" so, too, were they "thought of as three-dimensional spaces."[63] Much of their work, and that of Paca-Steele, draws on even older scholarship about colonial gardens that was first noted in the 1930s and that articulated the following conventional (not extraordinary) principles of colonial site/garden layout:

> A garden was built using the overall dimensions taken from the house.
>
> The garden was, therefore, a space whose dimensions were precisely proportional to the house.
>
> Using the standard eighteenth-century unit of measurement: the *pole, perch,* or *rod* (all names mean the same thing: a length of 16½ feet), slopes of terraces were determined using the ratio between the terrace widths and depths and the total drop of the garden.
>
> The garden, like the house, was a volume or set of volumes.
>
> The two related harmoniously to each other by being multiples or fractions of the same dimensions.[64]

Design convention of that period also called for gardens placed symmetrically at each side, or directly in front of the house.[65] All of the available evidence for Green Spring indicates a basic mathematical basis for its site design, but only one rectangular garden is specifically shown on the 1781 Desandrouins Map. However, given its placement on the site in relationship to the side of, and on a lower terrace from, the mansion house, its large, overall rectangular shape, and the gridded layout of its internal components, one wonders today if a garden of equal size and proportions had not originally been created on the opposite site of the lower terrace courtyard and outbuildings for balance. In providing a plausible explanation for why one was not shown on the Desandrouins Map, one can speculate that by 1781 this garden was no longer being planted or had been destroyed. Also, was a central, geometric pleasure garden ever planted on the lower terrace courtyard in front of the mansion house, as a 1929 aerial photograph strongly suggests?[66]

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[59] Yentsch and Kratzer, "Techniques," 183.

[60] Ibid., 195. See also Paca-Steele and Wright, "Mathematics of an Eighteenth-Century Wilderness Garden," 299–320.

[61] Leone and Shackel, "Plane and Solid Geometry," 153.

[62] Ibid., 156.

[63] Ibid., 162–163.

[64] Alice B. Lockwood, *Gardens of Colony and State: Gardens and Gardeners of the American Colonies and of the Republic before 1840,* 2 vols. (New York: Scribner, 1934): 5–7, as cited in Leone and Shackel, "Plane and Solid Geometry," 163.

[65] Leone and Shackel, "Plain and Solid Geometry," 162.

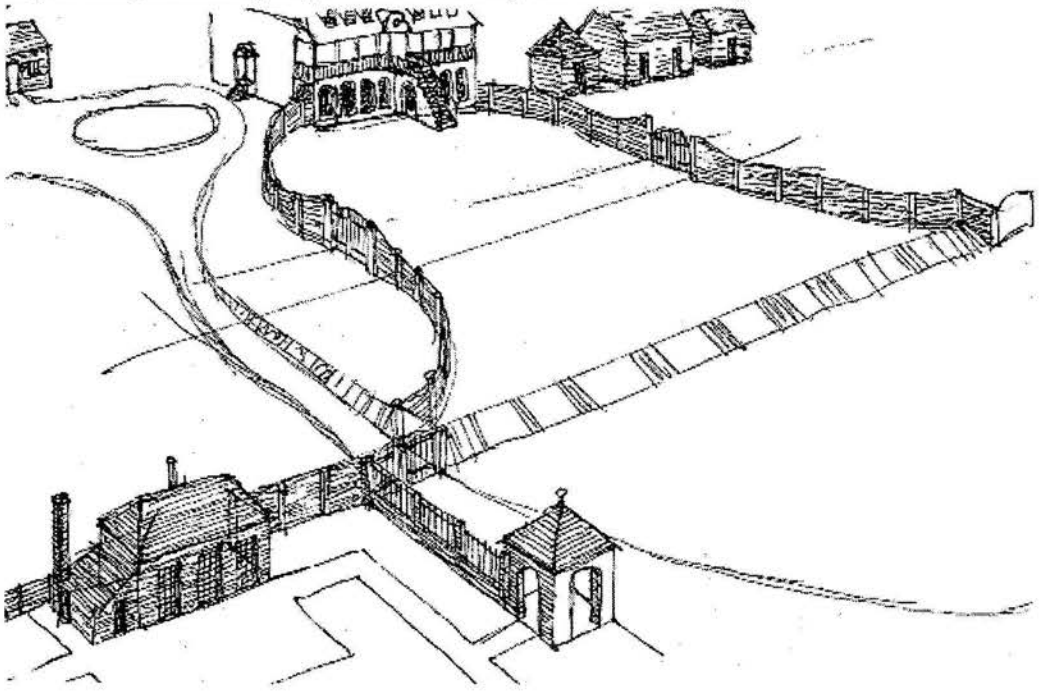
[66] See n. 51 above for the specific details about this reference.

To better understand this complex landscape, these important questions (including determining evolutionary changes to the new mansion house) deserve further study and intensive archaeological investigation.

The author has not attempted to lay out an experimental grid system on a current map of the site to fully test these theories, to discern the inherent mathematical basis for Green Spring's formalized landscape in any detailed fashion. Yet the findings of Yentsch and Kratzer, Leone and Shackel, and Lockwood indicate a few basic overall size determinations for what probably was the Green Spring kitchen garden as shown on the Desandrouins Map. The Green Spring new mansion house was known to have been 97.5 feet long. If these rules were generally followed in the design of the lower garden to the southwest, the enclosed rectangular garden would have been approximately 292.5 feet long and (using a 5:7 ratio, or golden mean that was typically used to determine an ideal proportional width in gardens) roughly 209 feet wide. These outside dimensions would have, thus, made up a large garden consisting of 61,132.5 square feet, or 1.4 acres in total size. These overall sizes and relative proportions are roughly consistent with what is shown on the best period representation we have of this garden, the 1781 Desandrouins Map (see this garden as shown on a detailed enlargement of this map, Fig. 4–5). However, a closer examination of the Desandrouins Map shows the garden to have been roughly twice as long as it is wide, thus making it then even larger: roughly 200 feet wide and 400 feet long or 80,000 square feet. This garden, if it was as large as it appears to be on the map, would have been 1.8 acres in total size. Could there have once been another garden of equal size to the east of this one before 1780? The evidence suggests there certainly could have been. The enlarged map appears to indicate the presence of the remnants of another garden on the east side of the lower courtyard.

Another large brick building that was located to the west-northwest of the lower courtyard and central garden is the so-called "nursery" or greenhouse/orangery. While its physical description, layout, and other salient characteristics will be covered in more detail in Chapter Eight, its physical placement on the landscape adjacent to and within the northeast cor-

Fig. 4–8 Author's sketch of the probable appearance of Green Spring's lower courtyard's garden wall, greenhouse/orangery, and another small outbuilding that was still standing in 1955 and may have been a gatehouse. Only the brick foundations of all of these structures and garden walls remain today.



ner of the large garden strongly suggests that its supposed horticultural use is, in fact, correct (see author's sketch, Fig. 4–8). Aside from their primarily utilitarian function, garden buildings of this type were frequently used as visual focal points, as well as serving as viewing platforms from which to look out at the surrounding landscape from an elevated position.

With its position facing to the south and with the grade of land there gently sloping away to the south and west, the Green Spring greenhouse would have, no doubt, afforded a convenient spot during the warm months from which to sit and view the surrounding expansive landscape to the south and southwest of the domestic core area of the site. (With the forest regrowth that has taken place over two-and-a-half centuries, today it is very difficult to appreciate how visually appealing these former views would have been.)

The decorative exteriors of these types of structures (brick appearing to be the preferred material at Green Spring) often belied the more practical functions they served within the plantation landscape.[67] This seems to have been the case with *all* of the outbuildings built on Green Spring's lower terrace, including the greenhouse/orangery, as well as the springhouse, tool sheds, slave quarters, and overseers' houses. The most substantial of these structures was partially excavated in the spring of 2003 and is located in the southeast corner of the lower courtyard. It was a twenty-foot-by-twenty-foot structure with thicker brick walls, a large and externally accessed brick fire pit, and what appears to have been an elaborate brick drain or heating duct that ran along the inside of its eastern wall under the floor. The author postulates that this structure could have been either a large and elaborate laundry, or perhaps a later greenhouse, dating from the third quarter of the eighteenth century (see Fig. 7–7).[68] While much about this most interesting part of the Green Spring landscape of the Ludwell-Lee period has been recently learned, obviously much more work remains to be done to better understand how all of the various components were intended to work, individually, as well as collectively.

Aside from his active interest in politics and his personal involvement in running his plantation,[69] Philip Ludwell III also had a real passion for horticulture and growing fruits and exotic plant materials. In 1753, Ludwell asked his brother-in-law, Henry Lee of Leesylvania, for some grafts of a number of named varieties of apple trees. Green Spring had long been famous for its three extensive orchards, at a time when orchards on Virginia plantations were quite common. That fact alone should suggest something quite extraordinary to historians about the undoubted vastness of scale, the quantity and variety of fruit selection, and the quality of the fruit found in Green Spring's orchards.

One endorsement of Green Spring's fruit trees comes from no less a famous personage and avid horticulturist than Thomas Jefferson who, in 1778 (long after Ludwell III's death), wrote that the golden wilding apple trees (*Malus pumila)* that he had planted in his gardens at Monticello had come from Green Spring's extensive orchards. The golden wilding originated in North Carolina and was an apple of medium size, yellow color, and a sweet acidic flavor.[70] Ostensibly because of the local or regional reputation of Green Spring's gardens, Jefferson is known to have paid visits there whenever he was in Williamsburg. His *Garden Book* notes that he often bought plants from the Green Spring orchards, kitchen garden, and greenhouse.[71]

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[67] Kryder-Reid, "Archaeology of Vision," 43.

[68] The functions of all of the lower terrace outbuildings are not yet fully known and require further archaeological investigation. Tentative identifications of some of the buildings' functions are based on the preliminary findings of the partial excavations of both the west range of buildings (conducted in 2002) and the east range (conducted in 2003).

[69] Ludwell grew a wide variety of crops at Green Spring. Aside from cultivating the expected large tobacco crop, he was beginning to diversify: he also grew corn, wheat, and a large quantity of indigo. In his gardens, he grew large quantities (10 bushels in 1767) of peas, as well. McCartney, "History of Green Spring," 66.

[70] Ibid., 61; also see Betts, *Jefferson's Garden Book,* 75–77, 82.

[71] Betts, *Jefferson's Garden Book,* 83. As Ludwell III had long been dead by this period and Green Spring was then the property of absentee owners, William and Hannah Ludwell Lee, it is interesting to speculate on whether or not the Green

On May 24, 1778, Thomas Jefferson noted in his *Garden Book* that he visited Green Spring that day and paid the gardener for "two Aegyptian Acacias" (*Mimosa nilotica*) and that these trees grew from seeds that had been planted in March 1777.[72] On February 27, 1779, Jefferson went back to Green Spring to buy another Acacia for £3 6s. 0d. and noted in his *Garden Book* just a couple of weeks later, on March 10, that it was then in bloom.[73]

On March 27, 1780, the Albemarle County lawyer, burgess, author of the Declaration of Independence (and then incumbent governor of Virginia) again returned to Green Spring for what might have been his final visit, noting in his 1780 *Account Book* that he paid the gardener a sum of £39 for an assortment of garden seeds, which, judging from the hefty price, must have been a truly prodigious quantity of seeds! This shipment was subsequently sent to Monticello, so that it may be fairly said that the genesis of Jefferson's soon-to-be famous gardens at Monticello had their origins in, and owed much of their pedigree to, the gardens at Green Spring.[74]

After March 1780, no further entries on Green Spring appear in Jefferson's *Garden Book*, and, indeed, just sixteen months later, the Revolutionary War came suddenly to Green Spring's fertile fields. The famous orchards there apparently sustained some damage from the military operations and the hundreds of troops operating in the area in early July 1781, so that in February 1782, necessity required that at least some of the orchard fruit trees be replaced.[75]

Ludwell III's Culture of Citrus Trees at Green Spring

Philip Ludwell III was also known to have raised citrus trees at Green Spring, although firm documentary proof of this activity hinges on but one known contemporary reference. Significantly, in order to grow and preserve tender citrus trees in the highly variable tidewater Virginia winter climate, Ludwell would have certainly needed to have a functioning, heated orangery. The meager documentary reference that speaks to this effort, taken by itself, would certainly suggest that he did. Ongoing archaeological excavations at the Green Spring site also lend further circumstantial weight to the argument.

The Hon. John Blair of Williamsburg recorded in his diary on March 18, 1751, that on a visit he made to Green Spring that day, he and his host, Philip Ludwell III, had picked oranges. This is a *major* and important reference. These citrus trees, on that date, were probably being grown in tubs, and were still being protected, inside a heated orangery structure, although Blair did not specifically mention the particular location where the fruit was growing or where it was picked.[76] Given the physical impossibility of growing citrus in the tidewater region without proper winter protection, Blair's single reference to picking oranges at Green Spring makes a compelling case for the presence at Green Spring on this date of an enclosed, heated orangery structure.

Whether any citrus trees were still being grown at Green Spring during the post-Ludwell period is not known, but no specific references have yet been found to suggest that

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Spring gardener(s) from whom Jefferson bought plants and seeds were enslaved blacks, a prevailing practice at the time. A letter from Richard Henry Lee to his brother William dated July 7, 1770 (after Ludwell III's death in 1767), lists the occupation of at least three of Lee's 164 slaves as "gardeners"; they obviously were charged with the care of Green Spring's gardens and orchards at that time. See McCartney, "History of Green Spring," 74. Whether this was still the case 7 to 10 years later, when Jefferson visited, is not known. It seems quite likely, however, that the gardener(s) with whom Jefferson interacted probably were enslaved blacks who were still part of the home quarter's labor force between 1777 and 1780, when Green Spring's owners were living in England and the plantation was being cared for by a series of white overseers.

[72] Betts, *Jefferson's Garden Book*, 77.

[73] Ibid., 86, 89.

[74] Ibid., 90.

[75] McCartney, "History of Green Spring," 91.

[76] Ibid., 61; for the text of the exact diary entry, see also "Diary of John Blair," WMQ, 1st ser., 7 (July 1898): 137. It reads only this: "March 18: fair but windy at Green Spring. We gather'd oranges."

they were. While oranges are hardier and easier to grow than one might first think, they are somewhat labor-intensive to keep in a flourishing condition. Oranges (*Citrus sinensis*) or sweet oranges need repotting every year and require frequent and abundant watering during the dry summer months, as well as during the winter months, when typically kept inside the orangery. Their care during the winter, to ensure that the temperature and humidity within the orangery are well regulated, especially during weather extremes, requires particularly knowledgeable and diligent gardeners.

An eighteenth-century period garden reference states that many gardeners then tended to make a mystery out of orange tree cultivation, implying that great skill was necessary to care for trees that required a multitude of preparations, cares, and precautions. The guide suggested to the reader that such was *not* the case, but then went on to rather unconvincingly enumerate nine separate steps that were required to grow and maintain them![77] It may well be that oranges and other citrus trees were grown at Green Spring only for a time, either via the ministrations of Philip Ludwell III himself, or, perhaps, by one or more English- or Scottish-trained professional gardeners who might have been hired by Ludwell III (or perhaps Ludwell II) to run and maintain the extensive orchards and gardens there. Such specific details, and whether or not the three slave gardeners that were working at Green Spring in 1770 would have possessed this kind of specialized knowledge, are simply not known today.

Green Spring's Zenith as a Power/Status Landscape

As a visual symbol of power, wealth, and gentry status, the formalized Green Spring terraced landscape and extensive agricultural fields probably reached their zenith of development during the last stage of the residential tenure of Philip Ludwell III (circa 1750–60). After the death of his wife in 1753, Ludwell threw himself even more into his political and agricultural endeavors. Since it was known that throughout his adult life he had been an owner and planter who remained actively involved in the daily management of his crops and lands, during the 1750s Green Spring obviously must have flourished under his redoubled care and attention in a way and to a degree that it certainly never would again.[78]

In 1760, with his health beginning to fail, Ludwell left for England with his three daughters to seek treatment and to allow his two youngest girls to have a proper English education. The daily management of Green Spring plantation was then left in the care of a trusted overseer, Cary Wilkinson, in whom Ludwell had great confidence. Despite the expert care of English physicians, Ludwell's unknown medical condition continued to deteriorate steadily, forcing him, on February 28, 1767, to make his will. With Philip Ludwell III's death on March 25, 1767, the ownership of Green Spring passed to his eldest daughter, Hannah Philippa Ludwell, who was then twenty-nine years of age and unmarried.[79] At that age, she no doubt would have been considered an "old maid" according to the social and marital practices of her day.

A detailed and comprehensive inventory of Ludwell's estate was subsequently compiled by his executors and proves that he possessed not only unusually rich material wealth for a man of his time, but also a standard and style of living at Green Spring that was well above what most Virginians of the day could even dream of. That he possessed a large library of books illustrates that he was undoubtedly a well-educated and certainly a

[77] Terence M. Russell and Ann-Marie Thornton, *Gardens and Landscapes in the Encyclopedie of Diderot and D'Alembert: The Letterpress Articles and Selected Engravings* (Aldershot, Hants, Eng.: Ashgate Publishing, 1999), 2: 414–433.
[78] McCartney, "History of Green Spring," 61. See also pp. 73–78 of this report as to the reasons for and significance of these improvements.
[79] Ibid., 62–63.

sophisticated man. The plantation's inventory also listed diverse agricultural crops, stored in large quantities, which have already been mentioned earlier in this chapter.[80]

Moreover, another measure of Ludwell's wealth, as well as the probable scope of his agricultural endeavors, was the seventy-three slaves that were listed as then living in Green Spring's manor house quarter. From a horticultural perspective, the inventory mentioned the possession of "a parcel of garden tools," a sun dial, both broad and narrow hoes, a large hand bell, four garden rakes, three hedge bills, two rolling stones (either for rolling turf or gravel walks), and nineteen bell glasses that would have been used in the cultivation of young plants in the kitchen garden.[81]

Green Spring During William and Hannah Ludwell Lee's Ownership

On March 7, 1769, nearly two years after her father's death, thirty-two year old Hannah Philippa Ludwell, then living in London, married her first cousin, the Hon. William Lee. Lee, a diplomat and merchant, was the son of Thomas Lee and Hannah Ludwell Lee of Stratford Hall, in Westmoreland County, Virginia.[82] Green Spring plantation thus passed by marriage into the hands of the famous Lee family of Virginia. Because of Lee's job, the couple continued to reside abroad for some fourteen years, leaving the Green Spring mansion house vacant and the care of the plantation in the hands of a succession of overseers, supervised via letter by William Lee and by occasional visits by William Lee's brother Richard Henry Lee.[83] Many of these letters survive, and lend considerable insight into the general, and slowly deteriorating, condition of the plantation during the twenty-three long years of absentee ownership that spanned the time between Philip Ludwell III's departure for England in 1760 and William Lee's final arrival in September 1783 to take up residence there.

Not long after his acquisition of Green Spring via marriage, Lee received a letter from his brother Richard Henry dated July 7, 1770, informing him that he had recently visited Green Spring and offered the following comments to make about the place:

> *"The gardens and orchards at Green Spring are extensive and furnished with a variety of good fruit. Out of the 164 slaves mentioned above but 59 are crop negroes. I mean exclusive of boys. Twelve are house servants, 4 carpenters, one a wheelwright, two shoemakers, three gardeners and hostlers. . . . the gardens are indeed in tolerable condition. . . . The house at Green Spring wants repair much. I fear the long gallery will fall in spite of the props, having already quitted the house a little. The walls appear good, and I believe the timbers are likewise so. . . . The weeding hoes were good for nothing—much loss is sustained from not having the proper instruments of husbandry."*[84]

It was also during this period that Green Spring was surveyed by William Goodall (circa 1770), and his plat, while not showing any details of the domestic core area of the plantation (being represented only by a general boxed area on the map), did show the network of surrounding roads and the total acreage as then being 4,296.1 acres (see Fig. 1–12).[85]

While William Lee was diligent in his efforts to manage Green Spring from afar and often gave detailed instructions in his letters on what to plant, how to manage the slaves, renting land to tenants, and not allowing any hunters on his land, the several overseers he employed took his frequent, tedious letters as a sign of his lack of trust in them.

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[80] McCartney, "History of Green Spring," 66. See also p. 82, n. 63 of this report.

[81] Ludwell-Lee Family Papers, VHS. Philip Ludwell III's household inventory was also published as "Appraisement of the Estate of Philip Ludwell Esqr Decd.," *VMHB* 21 (1913): 395–416.

[82] "Ludwell Family," *WMQ*, 1st ser., 19 (July 1910): 213.

[83] McCartney, "History of Green Spring," 71–73.

[84] Ibid., 74 (emphasis added).

[85] Copies of this map are in the collections of both the JDR Jr. Library, CWF, and VHS.

Though Lee obviously meant well, he was apparently regarded as an overly demanding master, querulous, hung up on minutiae, and generally very difficult to please.

Despite both Lee brothers' conscientious attempts to mitigate and make the best of these admittedly difficult circumstances, it appears that Green Spring began to slowly decline over the three decades after Ludwell III's death. While the men who served as overseers to Green Spring during these years probably made a reasonable effort to manage the crops an maintain the property, their vested interests and degree of commitment to their job had limits. Indeed, several of them quit or were fired over their disagreements with the long-absent master.[86]

Despite apparent damage to the plantation and crops suffered in a violent hailstorm in mid-May 1775 and crop losses that Lee sustained for three years thereafter, Green Spring seems to have been maintained in at least a semitolerable condition, if Richard Henry Lee's occasional letters to his brother are any indication.[87] As noted earlier in this chapter, it was during the last years of the 1770s that Thomas Jefferson first became interested in Green Spring's orchards and gardens as a source of plants for his gardens that were then being planted at his home, Monticello, near Charlottesville, Virginia. Despite Green Spring's absentee owner and with, ostensibly, only slave gardeners to grow the young plants and trees, the famous gardens and orchards of Green Spring must have still presented some measure of their former refinement and flourishing appearance to have attracted the notice of such an avid, life-long gardener and plantsman as was Thomas Jefferson.[88]

The Revolutionary War eventually brought hundreds of troops to Green Spring's fertile fields, and the orchards, gardens, and the domestic core area of the plantation inevitably sustained extensive damage. What was locally called "The Battle of Green Spring Farm" between American and British forces was fought a short distance away from the house to the south-southeast, toward Jamestown, on July 6 and 7, 1781.[89] First British, then American troops occupied the domestic complex around the house during the day on July 6, and over the night of July 6–7. The next morning, the Americans withdrew, leaving the place to be ransacked by British dragoons under Col. Banastre Tarleton, who burned a large brick barn while there and confiscated sixty head of cattle and between sixty and seventy slaves, before they withdrew to Jamestown. A visitor to the area seventy-one years after the battle stated that the effects of the fighting were still clearly visible in the landscape at that time.[90]

While the war and its effects on Green Spring were obviously detrimental, it was because of the 1781 military operations that we today have the wonderful map drawn by French mapmaker Lt. Col. Jean-Nicholas Desandrouins, who carefully rendered the layout of Green Spring's domestic complex as it existed at that time. As such, the map gives historians accurate insight how the place was laid out in 1781 long before its salient landscape features had disappeared from view.[91]

Aside from a 1782 request by William Lee to his brother Richard Henry "to have the fruit trees replaced" and a note in 1783 letter to his overseer "to keep a nursery well sup-

[86] McCartney, "History of Green Spring," 76–83.
[87] Ibid., 79–80, 83.
[88] Betts, *Jefferson's Gardening Book*, 83.
[89] McCartney, "History of Green Spring," 85–88, 90. This running, open-field engagement was primarily fought over the area that is today the Drummond's Field horse stables and housing subdivision and the Mainland Farm, both located about 1½ miles from the Green Spring mansion house site. Although the fighting and most of the casualties were focused in these areas, skirmishes and rear-guard actions were fought in Green Spring's open, cultivated fields, which ran along both sides of what is today Greensprings Road (Route 614, where the First Colony and Fieldcrest housing subdivisions are now located), and even back almost to the Green Spring house and domestic area itself (see map of this engagement, Figs. 4–2 and 1–14, and aerial photo of the same area as it appears today, Fig. 1–13).
[90] Ibid., 88.
[91] Ibid., 89.

plied with good young graftings of all kinds of fruit trees, particularly of the choicest and best apples both for cider and eating," only one further horticultural reference appears about the eighteenth-century Green Spring landscape.[92]

After many years of living abroad, in 1783, the Lees decided to return to Virginia and establish their residence at Green Spring. For Hannah Ludwell Lee, the return to Green Spring was to be a homecoming to the place of her birth and where she had spent much of her childhood. William Lee, his eight-year-old son, William Ludwell Lee, and a manservant arrived in Virginia on September 20, 1783, in advance of the rest of the family to prepare the long-vacant house for Hannah and the girls who would arrive later.[93]

No doubt looking ahead to spring and the need to replenish and replant the Green Spring kitchen garden, Lee, in a letter to his London merchant, dated January 10, 1784, asked that he be sent garden seeds (including broccoli, cauliflower seed [white, red and green], early peas, windset beans, and other cultivars) that Lee had left at his London business establishment. Also requested was "a slip or two of the largest Dutch artichoke in a little box with some earth."[94]

William Lee spent a full year getting the house repaired and furnished to receive his wife and daughters. On the eve of their setting sail for Virginia, Hannah became ill, and on August 18, 1784, died very suddenly in Ostend, Belgium.[95] She was later buried in the Ludwell family plot in England. Friends cared for the girls, Portia and Cornelia, until their passage to Virginia could be arranged. After their arrival in Virginia on November 29, 1785, they went to live with their aunt at Menokin who (according to Hannah's dying wish) was to serve as a role model and raise them. The boy, William Ludwell, was schooled in Williamsburg by a tutor from Norfolk.[96]

Over the next decade or so, Lee became a fairly prosperous gentleman farmer and a state senator. He augmented his income by acting as a merchant's agent (that is, a middle man) for the shipment of goods for several merchants in the region, much as he had done while he had lived in London. While it is known that he expended considerable sums of money to put the Green Spring house back into a proper state of repair, he once called the house "no better than a barn."[97] It is not known if he made any similar improvements to the gardens and grounds.

Green Spring under William Ludwell Lee's Ownership

William Lee's eyesight eventually failed him, and he later died at Green Spring on June 27, 1795. According to the terms of his 1789 will and a 1790 codicil the plantation was bequeathed to his son, William Ludwell Lee. The elder Lee desired that two female house servants be allowed to take care of the house and that a man and a boy continue to maintain the gardens, stables, and all of the fruit trees.[98]

Although there is no other documentary evidence to substantiate it, from this latter reference one might surmise that the Green Spring gardens and orchards diminished in size from what they had been nearly thirty years before, when Lee's father-in-law, Philip Ludwell III, had needed three males slaves trained as gardeners to take care of all of Green Spring's gardens and well-known orchards. While the evidence cited is admittedly sketchy and not as conclusive as one might wish, this comparison of the labor force that was ostensibly directed to the care of the landscape between 1767 and 1795 is a fair indicator that, by the

[92] Ibid., 91, 92–93.
[93] Ibid., pp. 94–95.
[94] Ibid., 99.
[95] Ibid., 100.
[96] Ibid., 101.
[97] Ibid., 96–98, 99–100.
[98] Ibid., 104.



Fig. 4–9 Benjamin Latrobe's 1796 watercolor drawing of the Green Spring mansion house and surrounding outbuildings and serpentine garden walls. (Note the L-shaped wing to the left of the main portion of the house, indicated by a vertical line from roof to ground, suggesting an earlier building that might have been attached to the house when it was built circa 1670–80. Note also the line of outbuildings to the east of the house.)

late eighteenth century, the best days of Green Spring's once notable orchards and gardens were gone.

No further specific references about the gardens or orchards appear in the documentary record during last stage of the Ludwell-Lee ownership period under William Ludwell Lee. Only twenty-two when his father died, the younger Lee inherited fifty-four slaves, a chariot, a barouche (an enclosed carriage), ten horses and mules, and 8,000 acres in James City County.[99] The younger Lee was destined to live a relatively short adult life, and he spent the bulk of the last years of the 1790s settling his father's estate and working with English architect Benjamin Latrobe on plans to either renovate the old Green Spring mansion house or tear it down and build a new one.

Benjamin Latrobe came to Green Spring in the summer of 1796 to consult with William Ludwell Lee about the condition of the old Green Spring mansion house. Latrobe's detailed notes, plan drawings, and a watercolor sketch he drew that summer reveal a house that, despite the elder Lee's best efforts to make some repairs to it, was then quite old, outmoded, and still in need of considerable investment to return it to anything approaching its former elegance. Despite good arguments by Latrobe in favor of saving the old house due to its great age, Lee, after considering all his options for the better part of a year, ultimately decided to tear the old house down in 1797 and build anew, apparently without any further help from Latrobe. Latrobe's notes also are telling in that in 1796, many years after the British had burned a large brick barn or stable in 1781, the stark ruins of that structure remained standing on the Green Spring landscape, no attempts having ever been made to rebuild it.[100]

[99] Ibid., 106.
[100] Ibid., 107.

From Latrobe's journal notes, a distinct vision emerges of genteel poverty or benign neglect at Green Spring. Making allowances for Latrobe's recent immigration to the United States from England, as well as the probable prejudices that would have colored his opinions and the views he expressed cannot excuse the fact that Green Spring plantation in 1796, with its falling porches and burnt-out barn ruins, must have appeared as a shabby, run-down, sad shadow of the formerly elegant plantation estate of a half-century before.

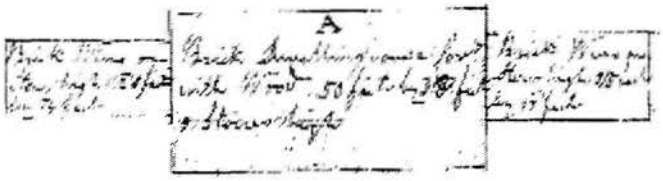


Fig. 4–10 Mutual Assurance Society of Virginia insurance policy for Green Spring, dating to 1800, with a plan drawing of William Ludwell Lee's new house shown at the bottom. (Courtesy of The Library of Virginia)

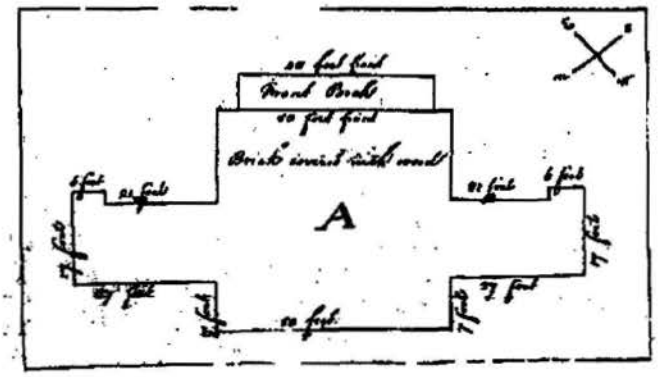


Fig. 4–11 Mutual Assurance Society of Virginia insurance policy for Green Spring, dating to 1810, with another, more detailed plan drawing of William Ludwell Lee's house shown at the bottom. (Courtesy of The Library of Virginia)

While Latrobe may have personally desired to see the old house renovated and devoted considerable effort drawing up plans to persuade Lee to accomplish that end, Lee ultimately decided against it. After having drawn three sets of plans for Lee, and after a disagreement over the construction of the new house, the two parted company. Latrobe cited Lee's "meanness" as being at least part of the reason for the severance of their business relationship.[101] Latrobe did comment somewhat favorably of Lee that he "seems activated by a spirit of improvement, and indeed the Estate wants it in every respect."[102]

Efforts were begun about 1797 to build the new mansion house some 300 feet in the rear and to the north of the site of the old one. What little we know about this house is derived, in part, from two insurance policies that were taken out on this dwelling: one dating to 1800 taken out by William Ludwell Lee (See Fig. 4–10) and another dating to 1810, taken out by his son-in-law (see Fig. 4–11).[103] These documents give the overall dimensions of this large house with two adjacent wings to either side. The other resources we have are of ink wash drawing by John Galt Williamson in about 1840, which showed the house as it then appeared, sitting on its graded terraces, without any trees or other vegetation planted anywhere around it (see Figs. 1–19, 1–20, and 4–12 and a site positional map, Fig. 4–14) and a couple of photographs (taken circa 1900–18) showing a portion of what was then standing of the ruins of this house (it was burned by Union soldiers in 1862 during the Civil War) (see Figs. 1–21 and 4–13).[104]

Significantly, before the house could be built, Lee committed a significant amount of effort to building a sophisticated system of new graded terraces upon which his new "gentleman's house" would be placed. The house was sited on a large, almost square, upper terrace, with a lower, rectangular but almost square terrace placed immediately before it.

[101] Jeffery A. Cohen and Charles E. Brownell, eds., *The Architectural Drawings of Benjamin Henry Latrobe*, vol. 2, pt. 1 (New Haven, Conn.: Yale University Press for the Maryland Historical Society and the American Philosophical Society, 1994), 114.
[102] McCartney, "History of Green Spring," 108.
[103] Insurance Policies 408 and 1247, Mutual Assurance Society of Virginia Records, microfilm, Library of Virginia, Richmond.
[104] Original photos courtesy of the Virginia Chamber of Commerce Collection, Library of Virginia; the one reprinted in this report was obtained from Thomas Tileston Waterman and John A. Barrows, *Domestic Colonial Architecture of Tidewater Virginia* (1932; reprint, New York: Dover, 1969), 15.

The lower terrace was obviously intended to serve as a ceremonial, transitional space to the more elevated one of the house.

Curiously, a lone eastern red cedar seems to have been consciously placed at some point as a marker at the extreme southwest corner of this lower terrace, leading one to speculate if another tree of the same species might have once been planted at the same time in the opposite (southeast) corner to thereby frame the view to the south from the house. If so, these were probably later, antebellum-era additions, since they are not shown in the circa 1840 drawing. The survival of old daffodils that are the apparent remnants of some former landscaping efforts indicate that portions of this lower terrace might have also once been planted with flowers or had planting beds arranged in a decorative fashion at their perimeter. Their linear placement in several scattered places along the outer edges of this lower terrace suggests a conscious planting scheme versus the naturalization of these hardy bulbs. These, too, must have been later additions, since no plantings were shown in the circa 1840 Williamson sketch of the house.



Fig. 4–12 Detail of John Galt Williamson's 1840 drawing showing the last house at Green Spring before it was burned in 1862. (Department of Special Collections, Earl Gregg Swem Library of the College of William and Mary)

This presumably conscious attempt at landscape planting is given further credence by the presence of a number of old deciduous shade trees that were either planted or allowed to grow along the perimeter of what must have once been a fenced rectangular door yard just to the north and rear of the house.

Extending due west from the southwest corner of the upper or house terrace is a very unusual, narrow, elevated spine of a terrace that apparently had a straight path that once led to a former, terminal feature at its west end, deduced from the visual presence of some brick rubble on the surface of the ground there. While the function of the small building that once stood there is unknown, perhaps these are the remains of either a brick summerhouse or (much less decorative and romantic, but far more practical and utilitarian) a brick privy that was placed far enough away from the house and a nearby well to keep unwanted odors and disease away from them both.

These several landscape features and this more remote placement of the new Lee house on the landscape raises some interesting questions for today's historians. Although the grading that was accomplished raised the platform upon which the house was built by approximately two-and-a-half to three feet above the surrounding site's general grade, giving it some additional elevation, the new terracing does not appear to have been so significant as to help the house take any noted advantage of distant views. Moreover, given the farther distance from the edge of the existing upper terrace where the former mansion houses had once stood, and where, one must assume, the collection of brick outbuildings still stood in their symmetrical arrangement on the lower terrace, the place-



Fig. 4–13 A circa 1900–18 photograph of the partial ruins of William Ludwell Lee's Green Spring house, which had been set to the torch in 1862 during the Civil War. These ruins are no longer standing.

ment of the new house on the more remote site to the north appears to have been a conscious attempt on Lee's part to sever all connections, both physical and visual, with whatever then might have still remained of Green Spring's formal, decorative landscape treatment. The apparent outcome of a disconnection between these two elements becomes much clearer and more obvious now when one looks at a map of the site that shows all of the currently known cultural features.[105]

Additionally (as noted above), the siting of the new house so far back from the edge of the natural rise above all of the lower ground to the south did not seem to be done with any attention to distant views. This observation must lead one to speculate if the formerly open landscape of cultivated fields that had been located to the south of the domestic core area as shown on the 1781 Desandrouins Map was no longer perceived as much of

[105] A sketched site plan of Green Spring, drawn in April 1929 by Colonial Williamsburg landscape architect Arthur A. Shurcliff (Architectural Drawings Collection, JDR Library; see Fig. 4–14), shows a surprisingly comprehensive overview of all of the then-known site features, which Jesse Dimmick had recently uncovered. They include all three house sites (old manor, new mansion, and Lee); the serpentine garden walls; all of the lower terrace outbuildings; a portion of the complex grading and terracing around the Lee house ruins; and the large, linear, earth berm that is located to the east of the three house sites. Shurcliff's plan clearly shows the distances between the new Lee house site, its carefully sculpted terraces, and the older outbuildings and landscape features located more than 300 feet to the south, which would have been at least partially, if not completely, then hidden from sight when viewed from the new house.

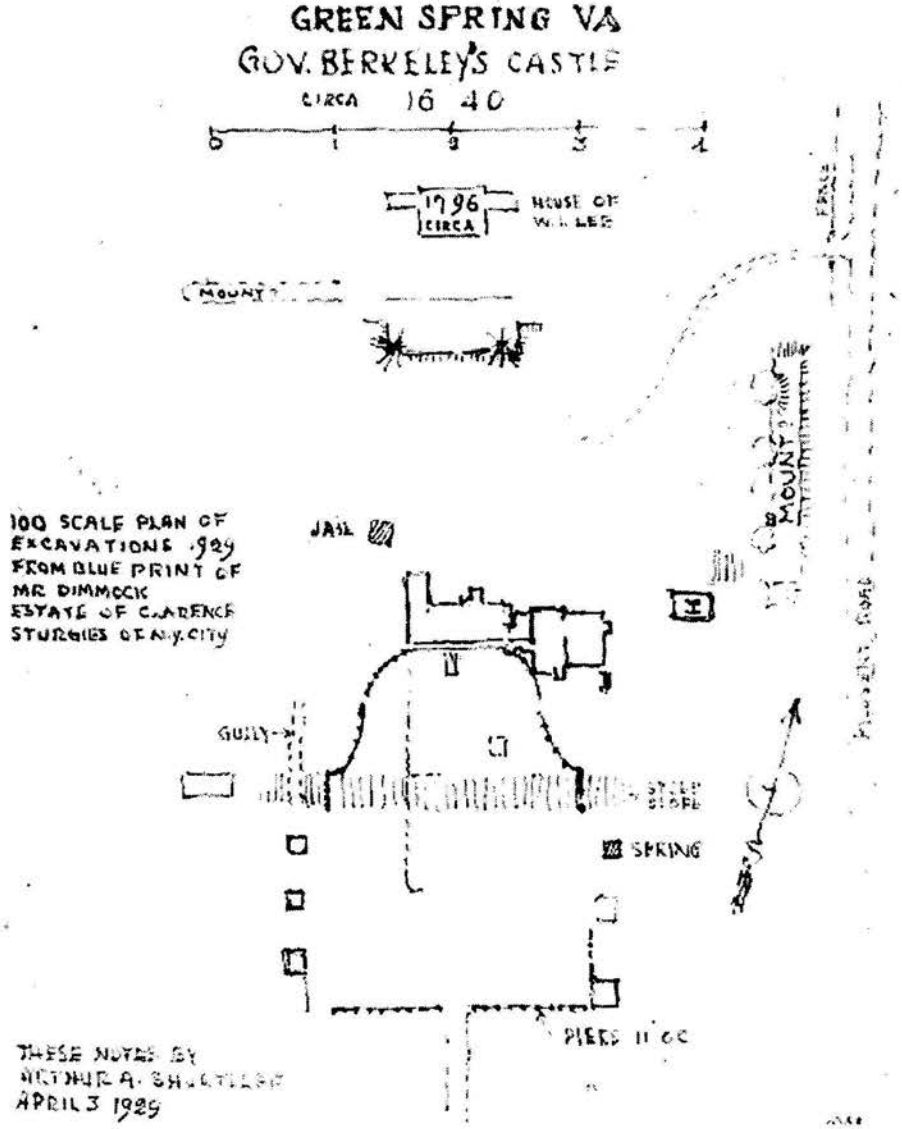


Fig. 4–14 1929 map of Green Spring's known archaeological features and locations of the several houses, showing their relative positions on the site.

an amenity or benefit in 1797, especially if the fields had been taken out of cultivation in the years between, and if trees and other vegetation had been allowed to regenerate there, closing the landscape in to a much greater degree than it had been before.

These questions have apparently not been examined to any degree, but deserve further consideration as archaeological examination of the William Ludwell Lee house site can be undertaken in the future. An aerial photograph of the site taken circa 1928–29 (see Fig. 3–7) shows what was then left standing of the ruins of the Lee house and the surrounding terraces. The photo also reveals that to the east of the house ruins, and on the same level, was a large two-story building with dormer windows on both the north and south sides of its roof. This structure is no longer standing, nor does it appear in any of the early photos of archaeology at the site, but due to its location, must have been an adjacent, detached kitchen or laundry building related to the Lee house. It was probably of a mid-to late-nineteenth-century construction date, since it also does not appear on the 1840 Williamson sketch.

Since none of the William Ludwell Lee period features and sites have been excavated, answers to these and other questions about this last phase of the Ludwell-Lee period of own-

ership must await further research. Also, a comprehensive archaeological examination of this portion of the site for other probable, related features should eventually be made a priority for what additional information it may add to the known history and probable evolution of the Green Spring plantation site. In particular, the graded terraces should be carefully examined to determine what, if anything, might have been covered up from earlier historical periods. Preservation of earlier features might have been enhanced by such filling activities.

As this chapter has attempted to show, the long ownership of the Ludwell-Lee families is as rich in history and in unique and important landscape developments, as the Berkeley ownership has long thought to have been. Moreover, what has been learned about the site as it appears today reflects far more of the former period of the site's development than the latter. Without attempting to ascribe any more or less importance to any one of these chronological periods, by discussing what is known to date, and by analyzing certain key aspects of the Ludwell-Lee period landscapes, the author has tried to place it into a more realistic and proper historical, cultural, and iconographical context, and, thus, to bring it into a much sharper focus than perhaps other scholars have been willing or able to do.

Summary/Conclusions

- Despite the obvious historical importance of Sir William Berkeley and his ownership tenure of Green Spring, the period of the Ludwell-Lee families' ownership is also significant, spanning, as it did, well over a century.
- The five generations of the Ludwells and Lees who owned (and in some cases lived) at Green Spring from 1680 to 1803 were influential and powerful people who played important roles in Virginia's history.
- Several made important and culturally significant physical changes to both the Green Spring mansion house and the landscape, changes that we must attempt to better understand today in the context of their time and place, in order to know specifically *how*, *where*, and *why* the site evolved over time.
- Crediting the Ludwells with making many of the previously supposed Berkeley changes to the house and landscape does not diminish Sir William Berkeley's importance so much as it rightly increases that of the Ludwell-Lee family members who lived at Green Spring. In fact, it retrieves their contributions to the physical history of the place from an underserved and continued obscurity.
- In searching for probable catalysts for physical landscape changes that were made at Green Spring, the author asserts that merely looking at periods of ownership/transitions may not tell the whole story or provide clues to more closely pinpoint when landscape changes might have been made.
- The general shift in the labor force in Virginia in the late seventeenth century from white English indentured servants to black African slaves was an event of enormous cultural and social importance. This event has not been as carefully considered by colonial Chesapeake garden historians as the major driving force for critical landscape changes as, perhaps, it deserves to be.
- This shift in the Green Spring labor force certainly would have had a noticeable impact on the Green Spring landscape and how its discrete, outdoor spaces were subdivided and ordered. The specific ways and places are not yet known. More extensive archaeological excavations of the site may eventually help to shed more light on this key question.

- The central questions tied to important landscape changes at Green Spring remain *when* and *by whom* was the so-called new mansion house built? Because this development represents an obviously critical shift in the orientation of house to site, from the west to the south, it follows that such a radical change in orientation would have also driven significant related changes in outbuilding placement, the location of fences and brick walls, and gardens within the plantation's domestic core landscape.
- Recent archaeological excavations conducted in 2001–03 by Dr. Andrew S. Veech and a corps of dedicated volunteers have revealed that the serpentine brick garden walls and the symmetrical complex of brick outbuildings sited on the lower terrace below the house were probably built by Philip Ludwell III and date from 1735 to 1755.
- Another question that remains is when was the old manor house torn down? Since the Soane Map of 1683 shows a graphic representation of both houses standing together, it must have been done either by Ludwell I between the years 1683 to 1693 or by Ludwell II after he took up residence there after 1694.
- Physical changes to the landscape organization at Green Spring could have also been driven by perceived changes to the external network of local roads surrounding the plantation. Although definitive dates for these changes are not known, they can be identified as having been made in narrowed time periods.
- The major orientation of the house (and perhaps also the primary approach road) appears to have shifted to the south by the time of Philip Ludwell I's ownership (or at least by 1683).
- The author has found conflicting dates as to when Thomas, Lord Culpeper, arrived in Virginia to become governor. If he came in early 1680 as some sources claim, admittedly sketchy evidence exists to suggest the possibility that he and his cousin Lady Frances Berkeley (then a widow) had a brief affair while they were living together for a few months' time at Green Spring. Although this hypothesis is not included here to sensationalize the story or titillate the reader, it does suggest that some aspects of their relationship may not have fully come to light before now.
- Although at least two governors rented Green Spring after 1680 and the General Assembly and Governor's Council occasionally met there until 1691, little is specifically known about who else lived there until about 1694–95.
- It seems that Philip Ludwell II would have been most likely to make improvements to the house and site after taking up residence (1694), marrying (1697), and living and raising his family at Green Spring until his death in 1727. During his lifetime, Green Spring became a noted social center in the region. His relation William Byrd II, a frequent visitor, chronicled the place's many diversions during those years.
- Green Spring's gardens must have been significant even at this relatively early date, since both Ludwell I and II were actively engaged in trading plants with politically important people in England. This trade obviously gave Green Spring a reputation in England as a ready source of trees and plants. It probably also had a regional reputation in Virginia throughout most of the eighteenth century for the same reason..
- That many of the remnant landscape features known today at Green Spring were probably created by Ludwell III sometime in the 1730s is given further weight by the knowledge that he was known to have been extremely interested in horticulture as well as agriculture.

- Significantly, the period when it appears that many of the Green Spring landscape features were created coincides with general colonial Chesapeake area landscape trends toward more organization, complexity, and sophistication at gentry sites, as has recently been noted by scholars.
- These trends point to the conscious effort that Ludwell III apparently made to solidify his social, economic and cultural position in the world by reordering the Green Spring landscape into a symmetrical, processional, hierarchical, and iconographic series of well-defined outdoor spaces, leading up to the house, and himself, at the center of the plantation's domestic core.
- The design of this highly structured, formal landscape would have been achieved using the mathematical principles of Euclidean geometry, as well as proportion, scale, and perspective, all working together in both horizontal and vertical planes to create a powerful cultural statement on the land and about the man who owned and created it all.
- A very important component of this type of landscape was the operation of internally and externally directed visual *sight* or *optics* to focus, direct, and manipulate views to their best advantage in the creation of the total composite landscape.
- Thus, it is important for historians today to not only understand *what* was seen but to also try to understand the *way* it was seen, or how it was meant to be seen. Different audiences who viewed the results would have interpreted these images differently.
- Given that by the 1730s the architectural style of the mansion house, although large and imposing, was probably seen as outmoded and old-fashioned, the structured layout of gardens, walls, gates, and outbuildings probably served in tandem with the house as a landscape *composition* to convey the site's impressive unique "sense of place" as the ultimate power statement.
- According to a review of the 1781 Desandrouins Map and to the established rules or principles of garden design commonly in use during the eighteenth century, the author speculates that Green Spring's kitchen garden could well have been 292.5 feet long by 209 feet wide, consisting of about 61,132.5 square feet of interior space (that was subdivided into six or eight large planted squares or rectangles) or 1.4 acres.
- The brick greenhouse in the northeast corner of this garden probably had a dual function: its utilitarian one and its service as a viewing platform.
- With its elevated position above the surrounding acreage located to the south and southwest of the manor house, the greenhouse would have been a pleasing location to serve as a covered viewing platform to take in the vistas.
- Views to be seen from that vantage point would have consisted of the structured geometric kitchen garden in the foreground (punctuated vertically, in places, by fruit trees and other rare shrubs in tubs and pots), a middle ground of ditched agricultural fields; and a background of random views of the Governor's Land, belts of forest trees at the edges of these fields, and *perhaps* just a narrow glimpse of the James River, in the far distance beyond.
- Philip Ludwell III apparently also had an interest in horticulture and citrus culture. The latter fact argues strongly for the certain presence of a greenhouse or orangery to enable this practice. Green Spring's three extensive orchards were also well known throughout the Virginia colony.

- One clue of the apparent importance (and certainly the fineness) of Green Spring's orchards (despite being then under the care of an overseer for the absentee owner) is the documented fact that Thomas Jefferson purchased trees and seeds in considerable quantities on several personal visits to the plantation.
- That Jefferson bought plants and seeds from the Green Spring orchards, kitchen gardens, and greenhouse indicates a probable appreciation for the quality of Green Spring's horticultural produce and strongly suggests that the genesis of the soon-to-be famous gardens at Monticello owed much to the plants and seeds he obtained from the gardens of Green Spring.
- Green Spring's formal terraced entry area landscape and adjacent gardens (both pleasure and ornamental) probably reached their zenith as a visual power statement in the later stages of Philip Ludwell III's life, between about 1750 and 1760.
- Green Spring's owners from 1760 to 1783 all lived in England. When Philip Ludwell III left for England in 1760 due to failing health, the day-to-day management and care of the place for the next decade was entrusted to an overseer.
- Ludwell III died in England in 1767, and an inventory of the Green Spring property taken shortly after his death reveals a richly furnished house, a large number of slaves, and a well-supplied domestic complex. Included in the inventory was a wide array of tools and implements that were commonly used in horticultural production and the maintenance of the gardens.
- Despite the overseers' honest and best efforts to care for Green Spring during the years that followed, the house and property seemed to deteriorate somewhat. The house, in particular, seems to have declined during that time, mainly because no one lived in it for more than two decades.
- Surviving letters from 1770 indicate that, although the orchards and gardens were then "indeed in tolerable condition," the house then "wants repair much." The writer further expressed his fear that "the long gallery [that is, the porch structure] will fall in spite of the props, having already quitted the house a little."
- William Lee became master of Green Spring via his 1769 marriage to Philip Ludwell III's eldest daughter, Hannah Philippa Ludwell. While he tried to be a diligent absentee landlord, it is clear that he was a difficult man to work for. Wilkinson, and several other overseers after him, either quit or were fired over their disagreements with the demanding, long-absent master.
- The American Revolution brought an undefined amount of damage and destruction to Green Spring plantation. On July 6–7, 1781, a running battle was fought over the agricultural land lying about one-and-one-half miles to the south of the manor house, and before, during, and after this engagement, the Green Spring domestic complex was occupied and ransacked by both American and British military forces. Among other things, a large brick barn was burned, sixty head of cattle stolen, and sixty to seventy slaves were confiscated.
- In 1783, after years of living abroad, William Lee and his son, William Ludwell Lee, took up residence at Green Spring, and thereafter replanted the orchards and kitchen garden.
- Although it is known that Lee tried to renovate and improve the mansion house over the next decade, it is not known if he made any similar improvements to the outbuildings, gardens, and grounds during that time.

- Upon Lee's death in 1795, the property passed to his son, William Ludwell Lee. A comparison of the labor force used to care for the Green Spring orchards and gardens between the years 1767 and 1795 suggests that by the late eighteenth century, the best days of Green Spring's once-notable orchards and gardens were behind them.
- Some evidence on the available labor force that was devoted to care of the gardens and orchards (admittedly sketchy), suggests that by the late eighteenth century it must have diminished somewhat in size.
- No further specific references about the gardens or orchards, or any other landscape references, appear in surviving documentary records during the short ownership tenure of William Ludwell Lee. This is unusual in that it is certain that extensive earthworks and the construction of elaborate terraces preceded the building of Lee's gentleman's house some 300 feet behind the site of the older mansion house complex, which was torn down in 1797.
- English architect Benjamin Henry Latrobe visited Green Spring in 1796 and over the next year drew three sets of plans for renovating the old mansion house or building a new one. His primary efforts seem to have been devoted to convincing Lee to save and renovate the former. From Latrobe's diary, surviving plans, and a watercolor sketch he drew of the old Green Spring mansion house in 1796, we have a clearer idea of what it looked like a year before Lee decided to tear it down and build anew.
- Latrobe's journal notes reveal a distinct image of genteel poverty that pervaded Green Spring when he arrived there, despite the efforts of William Ludwell Lee and his father, William Lee, to make certain repairs. Making certain allowances for Latrobe's English biases in describing what he saw, his notes convey to us a clear picture of run-down shabbiness that the place then had.
- The placement of the William Ludwell Lee house to the north and so far back from the former outbuildings and gardens on the lower terrace below the earlier house site appears to represent a conscious attempt to physically and visually disconnect the new house from the former domestic landscape core.
- Its placement also seems to indicate the diminishing importance by the late 1790s of the views of the agricultural landscape fields to the south of the domestic core, suggesting that those fields might have been taken out of cultivation by that time, and that field grasses and young forest trees (that is, pines, tulip poplars, sweet gums, etc.) had been allowed to regenerate in those areas, closing in the once-expansive views to the south, toward Jamestown. These areas have long been wooded and still are today.
- William Ludwell Lee was only able to enjoy his new house at Green Spring for a very short time since he died young, in 1803. This last Green Spring house stood until it was burned by Federal troops in 1862, during the Civil War. The ruined brick walls of this house appear in a few late nineteenth- and early twentieth-century photos, and stood at least until the late 1920s or early 1930s. No archaeological examination of this site has been performed to date, so little is known about this chapter of the site's evolution, including any new outbuildings that were built to serve the new house.
- The lengthy Ludwell-Lee ownership period of Green Spring is as rich in history and in unique and important architectural and landscape developments as the earlier Berkeley ownership period is thought to have been.
- What has been learned and is currently known about the site's physical features reflects more of the Ludwell-Lee ownership than that of Sir William Berkeley.

- One hopes that future archaeological investigation of the site can fill in the missing information gaps in the site's long, rich, and compelling history, to enable a more complete and inclusive narrative than what is known today.

Chapter Five

OVERVIEW OF ARCHAEOLOGICAL EXCAVATIONS AT GREEN SPRING

1920s to 1950

The first major archaeological excavations of Green Spring occurred in 1928–29, when Mr. Jesse Dimmick, an amateur antiquarian and the site's owner at that time, excavated the former Berkeley-era house site on the property. His extensive work uncovered the tops of foundation walls and three basement areas, revealing the reasonably accurate footprint of the main house and several outbuildings.[1] While Dimmick left these walls exposed to view, he had enough foresight to cover the exposed tops of the brick masonry with a thin layer of lime mortar or cement to protect them from the elements. Yet, by 1954, when the next attempts at excavating the site occurred, much of this protective covering was gone, and the massive brickwork was beginning to deteriorate.[2]

Also in 1929, just as Dimmick's work was coming to its close, Boston landscape architect Arthur A. Shurcliff, Colonial Williamsburg's landscape consultant, visited Green Spring to view what had been revealed at the site. Shurcliff had only a year before been hired to assist with the restoration of Colonial Williamsburg and, as a part of that work, needed to familiarize himself with the design conventions of historic southern landscapes. Part of his research methodology involved conducting field trips to study surviving homes and their landscapes—what he came to call his "Southern Places" study. This involved a comparative analysis of a large number of old plantation sites, initially throughout Virginia, but later extending south into North and South Carolina and Georgia.[3]

Shurcliff visited Green Spring in April of 1929 and made a sketch of the site, noting the foundation walls that Mr. Dimmick had uncovered and documenting several other important topographic site features that Dimmick largely ignored in his explorations. Shurcliff's pencil site plan drawing (see Fig. 4–14) is apparently the first modern attempt to document any of the purely landscape features that are today still visible at the Green Spring site.

To his credit Jesse Dimmick documented and published his findings at Green Spring in at least one important Virginia periodical. His first major article, "Green Spring," appeared in *The William and Mary Quarterly* in 1929.[4] It included a couple of maps showing what had been found at the site. While not very long or exhaustive in detail, it addressed, in general terms, what was known about the history of the site, and included a map showing the extent of the physical house and outbuilding remains that had been discovered through his excavations.

It appears that, almost coincidentally, more articles on Green Spring appeared in scholarly publications at the same time. One of these was published in *The Virginia Magazine of History and Biography* and included a spring 1929 aerial photo of the site taken directly overhead from a height of perhaps 2,000 or 3,000 feet (see Fig. 3–7).[5] Because of the limitations of printing at that time, the quality of the black-and-white photo is somewhat grainy. While all of the architectural features that Dimmick had included on his

[1] Ivor Noël Hume, "Ghosts at Green Spring," in *In Search of This & That: Tales from an Archaeologist's Quest; Selected Essays from the Colonial Williamsburg Journal* (Williamsburg, Va.: Colonial Williamsburg, 1996), 146.
[2] Caywood, *Excavations at Green Spring*, 1–2.
[3] M. Kent Brinkley, "Interpreting Colonial Revival Gardens in Changing Times," in *Breaking Ground: Examining the Vision and Practice of Historic Landscape Restoration* (Winston-Salem, N.C.: Old Salem, 1999), 63–64.
[4] Jesse Dimmick, "Green Spring," *WMQ* 2nd ser., 9 (1929): 129.
[5] "Some Notes on 'Green Spring,'" *VMHB* 37, no. 4 (October 1929): 289–300.

map are clearly visible in this photo, of particular interest are several other buildings that have since disappeared from the site.

Especially interesting from an archaeological point of view are what appear to be several dark soil stains. These are arranged in a discernable pattern in the middle of the lower courtyard that is framed by several small symmetrically arranged outbuildings. Although this same area has since become overgrown with low, weedy vegetation and small trees, this photograph clearly indicates the presence of buried landscape features. These may be the beds to what was a pleasure garden, given placement at a prominent entrance point just inside the front gate to the site on the approach to the house from the Great Road from Jamestown. So far as is known, this specific area has never been archaeologically examined. In some ways, this situation is beneficial because, until recent years, archaeological science had not advanced far enough to be able to retrieve and document buried landscape-related features. Moreover, the subdiscipline of landscape archaeology, with the ability to recover so-called "eco-facts" of organic matter and plant remains did not then exist.

1950 to 1960

The next episode of archaeological work was performed at Green Spring 1954–55, was conducted by National Park Service archaeologist Louis R. Caywood for the Virginia 350th Anniversary Commission. The federal government had acquired access rights to the site in 1936 and purchased the property in 1966.[6] The scope of Caywood's work was extensive, covered a large area around the core of the site, and focused primarily upon the mansion houses. It also extended a short distance to the east and west and into the



Fig. 5–1 View of the northwest portion of the "new Mansion house" (in the foreground) showing its lower floor level, which may predate the rest of the house. It could have been a much older freestanding Berkeley-era building that was incorporated into the "new Mansion House" when it was built circa 1670 to 1680. View is looking to the east-southeast, with large trees on the earthen berm in the background.

[6] *Draft General Management Plan Amendment and Environmental Impact Statement: Green Spring . . .* (Oneida, Tenn.: U.S. National Park Service, 2001), 4.

lower courtyard area to investigate several ruined outbuildings and walls. During this seven-month excavation, Caywood and his associates, assisted by a number of local scholars and consultants, examined and documented a number of important features relating to the main house and its later extensions: a kitchen structure, a brick kiln, the so-called "jail" or banqueting house, a smithy, several brick drains and culverts, garden walls of at least two different time periods, another small structure (perhaps a tool shed or gatehouse), and the ruins of a greenhouse or orangery building.



Fig. 5–2 Caywood-era photo of visitors viewing archaeological excavations at Green Spring, circa 1955. View is looking to the southeast, and the roof of the rebuilt springhouse is visible in the background just to the upper left of the men. What was then open fields in the background on the opposite side of Centerville Road (Rt. 614) is today a dense forest.

Caywood documented all of his findings in a published report. In it, he offered plausible theories about the functions of buildings and time periods for many of the ruined structures on the site, suggesting a very large and very complex plantation site that clearly expanded and evolved over a long time. His excavation project and published report (complete with drawings and black-and-white photographs) remain as the most extensive archaeological documentation of the site.[7] However, his efforts were done nearly fifty years ago. By comparison with the state of today's archaeological science, the methods that Caywood used in the mid-1950s were very crude. More accurate mapping methods (for example, Geographical Information System or GIS), soil micro-sampling techniques, computer-aided drafting (CADD), and diagnostic laboratory testing are modern tools that help inform the process of excavation and analysis. Of course, such technological advances have concurrently made the costs of conducting archaeological excavations more time, labor, and money intensive.

Contemporary Efforts

Although Dr. Andrew S. Veech has, since the fall of 2000, conducted Phase I and Phase II archaeological excavations of limited scope on the supposed greenhouse or orangery building and adjacent areas, the percentage of the overall site that has been systematically examined is miniscule compared with the acreage that surrounds the core

[7] Caywood, *Excavations at Green Spring, Yorktown, VA: CNHP:NPS, 1955.*

area of the house sites. Almost no other archaeology has been conducted with the express purpose of finding and documenting any of Green Spring plantation's discrete landscape and horticultural-related features. Such features might have included pleasure gardens, kitchen gardens, orchards (for which eighteenth-century Green Spring was so well known and appreciated), bowling green or cricket pitches, fence lines that partitioned the site into specific, functional use areas, greenhouse or orangery buildings, garden tool sheds, smokehouses, dairies, lumber houses, stables, storage barns, icehouses, and topographic features that were created for decorative enclosure and landscape enhancement, such as a mount and raised terraces. Moreover, other topographic features located farther away from the house that were clearly related to the site's agricultural activities, such as irrigation and drainage ditches, have been noted in cultural landscape inventories for the site, but have yet to be examined in an attempt to better understand how they might have actually functioned.

Aside from discovering the probable landscape-related features that remain hidden at Green Spring, a greater challenge is to sort out these various elements to develop a chronological evolution for *all* of these site features. Only then can they be tied to specific periods or episodes of building and, in turn, attributed to particular owners.



Fig. 5–3 Photo of excavations conducted in 2002 showing a portion of the brick garden wall foundations on the west side of the lower terrace forecourt area. (Photo by author)



Fig. 5–4 Photo of Dr. Andrew Veech standing beside the brick rubble-filled ruins of the springhouse at Green Spring in the summer of 2002. (Photo by author)



Fig. 5–5 Photo of exposed brick west foundation wall of a large outbuilding that stood at the southeast corner of the lower terrace forecourt, taken in 2002 before it was more fully exposed and excavated in spring 2003. (Photo by author)



Fig. 5–6 Another photo of the same large outbuilding (see Fig. 5–5) looking at the west and north walls, as seen in this spring 2002 view before it was excavated the following year. Note the leaves of vines at the extreme right of the photo, which were growing amidst the ruined north wall. (Photo by author)

Documentary Research as an Important Adjunct to Archaeological Investigation

In recent decades, intensive efforts to document and learn more about Green Spring have been undertaken by several scholars to determine what can be gleaned from maps, state and county land records, personal correspondence in surviving family papers collections, insurance policies, and histories of major events such as Bacon's Rebellion, the American Revolution, and the Civil War. This effort has been led, and the written record has been much enriched, by Dr. Warren M. Billings, who has undertaken to better document the life and career of Sir William Berkeley through his surviving personal and official papers.[8] The late Dr. Jane D. Carson, a former Colonial Williamsburg historian; the late J. Paul Hudson, a former curator for the National Park Service at Jamestown; and the late Audrey Noël Hume, a former Colonial Williamsburg archaeologist and consultant also did much to capture and document factual data concerning what is known about Green Spring.[9]

Within the last decade, retired Colonial Williamsburg Foundation archaeologist Ivor Noël Hume, who has been keenly interested in the seventeenth-century history of tidewater Virginia, has also written about and studied Green Spring and is graciously serving as an advisory consultant to Dr. Veech with the ongoing excavations in the greenhouse/orangery and lower courtyard terrace areas.[10] Martha W. McCartney, a well-known local historian who has done much to document the history of James City County in her recent book *James City County: Keystone of the Commonwealth,*[11] was hired by the National Park Service to write a comprehensive history of the Green Spring site.[12] Within the last three years, architectural historian Elizabeth Barrett Price completed a study as her master's thesis, focusing specifically on the evolution of the Berkeley-Ludwell mansion house at Green Spring.[13]

This writer is merely the most recent individual to add to this considerable body of written knowledge, more specifically geared toward the greenhouse/orangery ruins, but generally on unraveling the mystery of the still-hidden and highly complex Green Spring plantation landscape. No body of documentary evidence can ever be said to be complete, and while the archival sources, written documents, and other records can continue to be mined for new information that might lie hidden to add to the current body of knowledge, it is more likely that comprehensive archaeological excavation and documentation now hold the primary keys to unlocking the remaining secrets of the Green Spring landscape's probable evolution through time.

Therefore, one of the major recommendations made by this report to the Colonial National Historical Park (and to other interested groups such as the Friends of Green Spring) is to emphasize the critical necessity that ongoing archaeological investigative efforts be continued and expanded. Aside from revisiting certain key elements of the house and related archaeological features, only by going further afield from the areas immediately around the house sites can substantive new information be uncovered that would add knowledge to and broaden our understanding of the vanished landscape character of the plantation site. Without the broader, contextual knowledge of the larger, "macro-landscape" that scholarly rigor demands be fully examined and understood, a

[8] Billings, "Imagining Green Spring House," 84–95; Warren M. Billings, *Biography and Papers of Sir William Berkeley,* (forthcoming).

[9] Jane Dennison Carson, "Sir William Berkeley, Governor of Virginia: A Study in Colonial Policy" (Ph.D. diss., University of Virginia, 1951); Carson, "Green Spring Plantation"; Hudson, *Plantation, Refuge, Prison, Statehouse;* Audrey Noël Hume, *Archaeology and the Colonial Gardener,* Colonial Williamsburg Archaeology Series 7 (Williamsburg, Va.: Colonial Williamsburg, 1974), 14, 50, 52, 55, 56–57, 63, 79, 84.

[10] I. Noël Hume, "Ghosts at Green Spring," 138–146.

[11] Martha W. McCartney, *James City County: Keystone of the Commonwealth* (Virginia Beach, Va.: Donning Company for the James City County Board of Supervisors, 1997).

[12] McCartney, "History of Green Spring."

[13] Price, "Making, Remaking, and Unmaking of Green Spring."

compelling argument can be made that what considerable information is already known about the former Green Spring houses and site can only be regarded as tentative and incomplete, at best.

For all of the considerable archaeological efforts by Dimmick, Caywood, and Veech, the inescapable fact remains that only a comparatively small percentage of a very large and expansive domestic complex at Green Spring has been carefully and scientifically examined. To more fully understand *how, when,* and *where* the site was changed by the respective owners of Green Spring, and then to be able to interpret this knowledge confidently to visitors, much more archaeological work needs to be done at the Green Spring site. Indeed, the very process of excavation (as has been done in recent years via the *Jamestown Rediscovery*™ project) can be an important and highly visible component of the initial interpretive program upon opening Green Spring to public visitation. Such efforts could continue and be a part of the plans to highlight the site's interpretation before and even during the upcoming 2007 celebration of the 400th anniversary of the founding of the first permanent English settlement at Jamestown.

Given the undoubted historical importance of the Green Spring site as well as its important historical ties to Jamestown, this writer suggests that the site's future examination and interpretation demands the same level of effort and multiyear commitment that the *Jamestown Rediscovery*™ project has received.

Summary/Conclusions

- The first major archaeological investigation of Green Spring occurred in 1928–1929, when the site's owner and amateur antiquarian, Mr. Jesse Dimmick, excavated the former Berkeley-era house site. His work uncovered the foundation walls of both the older and newer mansion houses and accurately revealed the footprints of both structures.
- Just as Dimmick's work was coming to a close in 1929, Boston landscape architect Arthur A. Shurcliff, Colonial Williamsburg's landscape consultant, visited Green Spring and made a sketch of the house foundations that had been uncovered by Dimmick, along with several other visible landscape/topographic site features that Dimmick had ignored in his explorations. Shurcliff's site plan sketch represents the first modern attempt to document the landscape features of the Green Spring site.
- Dimmick followed up his fieldwork at Green Spring by publishing his findings in *The William and Mary Quarterly.* Coincidently, interest in Green Spring led to another article at about the same time that appeared in *The Virginia Magazine of History and Biography.* The latter article included an important aerial photo of the site, taken directly overhead in the spring of 1929.
- This archaeological and photographic evidence indicates several additional buildings and suggestions of landscape features.
- This obviously sensitive area has not yet been archaeologically examined in any systematic way. This situation has, in fact, been beneficial in preserving this area because, until recent years, archaeological science had not advanced far enough to enable the recovery of more elusive and ephemeral planting beds and similar landscape organic matter and plant remains.
- On a negative note, the continued growth of wild unchecked vegetation in this particular area threatens the integrity of these buried landscape features through the intrusion of thick roots that disturb, and can even destroy, these remains of planting beds if allowed to go unchecked for an indefinite period. In any event, their contin-

ued encroachment in this area will certainly make future archaeological excavation and landscape data recovery there more difficult, suggesting that remedial measures to check further growth and development be taken in the meantime.

- Following acquisition of access to the property, NPS archaeologist by Louis R. Caywood conducted a more extensive examination of the domestic core of the site (1954–55).
- In his 1955 report, Caywood offered plausible theories about the functions of outbuildings and time periods for many of the ruined structures on the site, suggesting a very large, complex plantation site that clearly had expanded over a long period of time. His project remains the most extensive archaeological documentation of the site that has yet been undertaken.
- For all of Caywood's commendable efforts at Green Spring, his work there was done nearly fifty years ago, with nothing having been done since until the years 2000 to 2003, when the latest series of limited Phase I and Phase II excavations were undertaken at the site.
- For nearly 50 years, the site remained untouched. From 2000 to 2003, a series of limited excavations was undertaken. Obviously much more could be done to excavate the as-yet unexplored areas of the site.
- The use of more accurate mapping methods, such as Global Positioning System (GPS) and Geographic Information System (GIS) software, soil micro-sampling techniques, computer aided drafting (CADD), diagnostic laboratory testing and artifact processing, etc., has enabled more comprehensive and accurate ways of analyzing archaeological evidence than Caywood was able to do.
- Given that the available financial resources and excavation methodologies used by the National Park Service will provide limitations on the extent of archaeology likely to be performed at the Green Spring site before 2007, this author recommends that this site, in particular, deserves to receive special status and more focused attention not just because of its size, but because of the perceived richness of its cultural resources and the significance and physical impact of its long history on the site.

Chapter Six

WHAT IS KNOWN AND WHAT IS NOT KNOWN ABOUT THE GREEN SPRING SITE AND HOW IT EVOLVED

The early cultural landscapes of Green Spring were changing and dynamic. Yet, to understand them well enough to even contemplate a partial, or at least a chronological, reconstruction, much less to interpret them for others, we need to learn something of their genesis, cultural grammar, and unique visual character.

Early Landscape Contexts for Green Spring as a Plantation Enterprise

The agricultural landscape of seventeenth-century Virginia grew out of the dying traditions of the English rural medieval landscape, yet it never attempted to replicate its English model except, perhaps, in the most rudimentary ways. The environmental, geographical, and climatological conditions the English settlers found in Virginia ultimately helped to dictate the built forms and growth of the domestic and agricultural landscapes here. Two distinct types of landscapes soon evolved that were driven by different dynamics and influenced by the different classes of people who created and daily interacted with them. What finally emerged was an agricultural landscape that juxtaposed two different social and economic entities: the common people and the ruling elite, or gentry.

The aspiring young men of title and good family connection (usually younger sons who inherited little of their family's wealth) quickly established themselves as a ruling elite via the acquisition of land and political office (for example, the Ludwells, Thomas and Philip I). Upon achieving some measure of this success, and using their newly acquired land resources, they built dwelling houses that befitted their new status to serve as visible expressions of their achievements. Around these dwelling houses were created a political, hegemonic domestic landscape that was designed to reflect order, control, permanence, and stability. These landscapes were created, in varying measures, with an artistic eye to be both impressive and beautiful, and considerable thought, planning, labor, and money were devoted to their creation.

Outside of and usually somewhat apart from these enclaves that reflected the wealth, status, and assertive independence of their creators was another type of landscape. This was the productive or agricultural landscape of the surrounding farm and plantation. While their creation was ordered and managed by the indirect oversight and approval of the ruling masters, these landscapes were largely created and maintained by the poorer, dispossessed, white small farmers and freeholders, white indentured servants, and, by the last quarter of the seventeenth century, predominantly by black African slaves.

With its collection of rude wooden buildings and flimsy lean-to structures, the common Virginia plantation owed its appearance more to its expediency of purpose: productivity and, ultimately, profitability. While depending a great deal on its positional relationship with the plantation's manor house and its surrounding domestic core area, this other agricultural landscape was, at once, functional, impermanent, sometimes messy, changeable, and unpretentious.

Visually, the mutual presence of such contrasting elements in the greater landscape must have been initially quite jarring and seemingly incongruous. Yet, a strange sort of symbiotic relationship apparently existed between the two, which, while it makes sense today from an intellectual point of view, still seems strange to us today when one attempts to visualize how such opposites could coexist comfortably within such close proximity.

For what these two landscape types represented politically, they were unquestionably polar opposites. One was the domain of the elite master, independent and possessed of means, who was intent on reflecting his good taste, his wealth, his stability, and the permanence of his family name in a still somewhat threatening world of uncertainty in a new land. Much time, labor, and expense went into the design, building, and maintenance of these more permanent, sequential, and processional landscapes. The other landscape of the farm and quarter was the place where those who found themselves marginalized by society eked out a meager existence for themselves or for those whom they had to serve, and what they created merely suited their functional needs. Their landscape did not reflect stability but transient labor and impermanence. It was built and maintained so that the land could be exploited for the maximum yield and gain that could be pulled from it. When the land was exhausted after a few years, it could be easily abandoned and allowed to go fallow while the workers moved elsewhere to repeat the process of clearing, building, planting, and harvesting for the few years they could until that land was also worked out.

Because of the depleting nature of the primary cash crop, the elite continually needed to acquire vast tracts of land and to maintain numerous dispersed farms or quarters. After the first few decades of the seventeenth century, most of the production farming took place farther and farther away from the main house as the earliest acquired lands became worked out and their productivity declined. Yet, even the so-called "home" farm or quarter retained much of the rude impermanence that had characterized them in their earlier days. The few really great plantations, such as Green Spring, Bacon's Castle, Fairfield, Arlington, and others, did not seem to follow this trend, but were, in fact, intended to be the first signs of a new wealth and permanence in the Virginia landscape.

Probable Significance and Reasons for Green Spring's Decorative Gardens

One interesting component of the design of such large gentry plantations was the apparent importance of the appearance of *illusion* in the landscape; that is, things were not always what they appeared to be. Through their work in Annapolis, Maryland, archaeologists Mark Leone and Paul Shackel questioned if there was some other less-evident reason for these gardens (aside from an obvious love or need to garden). They had noted that many gardens were laid out with mathematical precision and were executed with great care, in order to create clearly evident visual illusions, as was noted in Chapter Four of this report.[1]

In referencing Rhys Isaac's 1982 scholarship on eighteenth-century Virginia, Leone and Shackel noted that "men and women of agrarian and merchant wealth, isolated from the slave and poorer white classes, as well as from England . . . sought to bolster their eroding social and political positions by ostentation and elaborate etiquette, which they embedded in . . . demonstration of the laws of nature."[2] They went on to elaborate on this point by adding,

> *The houses and landscape of Maryland and Virginia Tidewater featured wealthy individuals who wished for themselves more power than they had. They strove for personal independence as one of the highest attainable characteristics of life. They also were not more independent in any way . . . they attempted to use an older notion, the baroque justification for hierarchy, which was an appeal to the hierarchical order of nature to achieve the same end. The gardens explicitly show off the owner's ability to create illusions by managing natural phenomena and law. The use of nature's order, under control,*

[1] Leone and Shackel, "Plane and Solid Geometry," 164.
[2] Ibid.

produced statements in houses, views, and landscapes that provided seemingly independent evidence as who knew nature well enough to master it.[3]

This author surmises that there was a good reason for the degree of visual tension that existed between the inner, domestic core landscape of power and status and the outer, peripheral landscape of simple (if not crude-looking) function and utility. His theory is that the physical presence of the outer landscape, while visually jarring on the one hand, was reassuring and even served to visually reinforce the obvious importance of the inner landscape of order and control. Obviously, there would have been a clear and distinct physical boundary erected between the two, usually a substantially built fence or, perhaps, by the first quarter of the eighteenth century, a more permanent brick wall.

The degree of permanence at Green Spring that was visually suggested by the presence of brick outbuildings and garden walls was, in itself, making a statement about the sophistication and taste of Ludwell II and III, but they were also making a statement about the stability and endurance of the Ludwell family dynasty in Virginia. Moreover, the extensive and widespread use of brick had a long history at Green Spring that probably went back to the original owner, Sir William Berkeley, implying that using such material was not only an increasing function of cultural and social grammar, but was a tradition with a long history in colonial Virginia. Yet, the use of brick as a building material was, in fact, very uncommon in colonial Virginia; where any brick houses were built, they stood out as being something quite exceptional. Through this means, the builders of such houses increased the social distance that separated themselves from their neighbors. When other improvements to the yards and gardens around the mansion house were added, such distinctions became even more pronounced.[4]

Less overt, perhaps, was the presence of one or more large gardens and a greenhouse/orangery, both of which spoke to a level of horticulture that was practiced by only a select few members of the gentry with the knowledge and skilled labor to do so. Like the use of brick, by themselves the very presence of these horticultural refinements at Green Spring also served in an iconographic way to convey to all who saw them the intended messages of power and status that established the Ludwells' place within the social and political hierarchy of their times.

By these sharp visual contrasts that certainly presented themselves to the eye of even the most casual observers, the presence of the refined type of carefully contrived mansion house and landscape set against the backdrop of a larger, cruder, and largely agricultural one, in fact, played up the degree of refinement and sophistication embodied by the former and gave a more pointed meaning to the sharp distinctions that coexisted between the two. According to historian Carter Hudgins, Virginia's plantation landscapes "came to be that way because the Virginia gentry came to need and rely on the symbolic power of material things to legitimize their social and political positions. Reading the symbolic value of signs on the cultural landscape was a much-practiced skill."[5]

This is one reason why the elite were content and allowed themselves to remain living their lives in the midst of such different sublandscapes that, at first glance to us, seem to make little practical sense. We might wonder today why a man would go to such great expense to create order and beauty next to or near his mansion house, and then allow an impermanent, disheveled collection of wooden agricultural structures to remain so close by and within the view of visitors. The answer, as historians Camille Wells, Donald Linebaugh, Dell Upton, and Carter Hudgins have asserted in their published works, is that

[3] Ibid.

[4] Carter L. Hudgins, "Robert 'King' Carter and the Landscape of Tidewater Virginia in the Eighteenth Century," in Kelso and Most, *Earth Patterns*, 67.

[5] Ibid., 68.

the very number of those agricultural buildings on the landscape served as visual clues or markers to passersby of an owner's place in the world.[6] In other words, such outbuildings, for all of their crudeness and appearance of being out of place were another intrinsic and culturally significant part of the social markers and landscape grammar of their day. (See Latrobe's 1796 watercolor sketch of Green Spring with the collection of wooden outbuildings to the east of, but adjacent to, the main house—Figs. 1–6 and 4–9.)

These contrasting forms, varying permanence of materials, and carefully contrived or casually haphazard spatial arrangements seemingly met the needs of the elite and reinforced their self-image. Moreover, this visual and physical contrast within the agricultural landscapes of that day only visually played up the obvious physical distinctions that already existed between the two and, in fact, amplified the refinements and importance of the one by comparing and measuring how wretched and poor was the other. In other words, a curious but important symbiotic relationship must have existed between the two for their owners to be willing to allow such diametrically opposite sublandscapes of form and purpose to remain within such close proximity to one another.

In seeking more subtle reasons for, and probable meanings behind, the gardens at Green Spring and how they might have evolved throughout the seventeenth and eighteenth centuries, we are in less well-documented territory. Since the kitchen garden had a more practical basis as well as a probable symbolic one, we can be certain that the suspected kitchen garden's large size had much to do with the size of the owner's immediate and extended family living in the mansion house and at the home quarter.

From a practical standpoint, a kitchen garden had to be large enough to grow sufficient crops to feed a large number of the owner's "people."[7] As surmised in Chapter Four (on the basis of mathematical formulas alone), what is taken to be the Green Spring kitchen garden, as illustrated on the 1781 Desandrouins Map (see enlargement of site, Fig. 4–5), was perhaps some 292.5 feet long (or longer) by 209 feet wide, or about 1.4 acres (or perhaps as much as 1.8 acres); either way; this was *not* a very large kitchen garden, if measured by the standards of that time. By comparison, the mid-eighteenth-century kitchen garden that was unearthed at Carter's Grove plantation in the mid-1970s was centered on the mansion and flanking dependencies, being 540 feet long by 242 feet wide, or exactly 3 acres. The garden at another of the Burwell family plantations nearby, Kingsmill, was also quite large, although not nearly as large as that at Carter's Grove; perhaps about 2 to 2½ acres. The gardens at George Washington's Mount Vernon were also about 2 acres. By comparison, the Green Spring garden was small enough to suggest that there must have been one or more other gardens on the property to provide the plantation's total population with sufficient seasonal vegetables and fruits. This question needs further archaeological examination/research.

Understanding the Culture and Evolution of the Green Spring Landscape

The reasons for the presence of opposite and seemingly strange juxtapositions between building and landscape typologies, number and sizes of gardens, and their probable function are just some of the many elements of landscape history that, in this author's mind, have been largely overlooked by scholars until just recently. If we try to learn and understand more about the nature of such seemingly incongruous relationships that were part and parcel of the seventeenth- and eighteenth-century Virginia landscape, we would

[6] See Source Bibliography for the specific citations of these scholars' respective works.

[7] Many slave owners used this all-encompassing, patriarchal term to refer to both their family members *and* their slaves. The term carries the clear connotation that all people, white and black, who lived on the plantation were the master's responsibility. William Byrd II of Westover often referred to his slaves in this way in his diaries, using the term *my people* to denote his extended family as his ultimate responsibility as the master of Westover.

perhaps be more familiar with the social and cultural grammar of that time and, thus, be much better equipped to ask other pertinent questions that might eventually unlock a fuller and much better understanding of that era of Virginia history. In the specific case of Green Spring, such a line of scholarly inquiry would enable us to better understand the complex jumble of historical periods and physical features that represent the multilayered remnant landscape that remains there today.

What follows are two theories (both of which are highly speculative, due mostly to key information gaps) of how the Green Spring houses and landscape developments might have evolved. This information, as presented in this format, perhaps suggests best what *is* known and what still is *not* known about Green Spring. Some historical events *may* have a direct relationship to the timing for certain physical changes in the landscape. Of course, future archaeological excavations in several locations at the Green Spring domestic core site will help to provide answers to some of the several questions that have been raised in this chapter, and will, one hopes, permit the eventual rewriting of this chronological narrative in a less subjective and more definitive way.

Green Spring Possible Site Development Chronological Sequence Theory #1

1644–45	The so-called old manor house (original construction) is built by Sir William Berkeley. The house and its entrance road are oriented to the west and to the closest, most accessible road (what was later the Jamestown to Chiswell Ordinary road).
1650	Berkeley marries for the first time and the house is improved or enlarged at that time.
Circa 1654–55	The old manor house is considerably damaged by fire (date unknown) perhaps sometime after Berkeley retires after his first term as governor.
1652–60	The old manor house is further improved or enlarged and the site is further developed by Berkeley because he has more time to focus on improvements at home (or not, due to his partial loss of income). One or more wings are added to the basic core of the house. Earlier wooden fences around the yard immediately surrounding the house are replaced with solid and/or balustraded brick walls. The orientation of the house and the landscape/outbuildings layout are still to the main road to the west.
1669–70	The old manor house is further enlarged and improved around the time of Berkeley's marriage to Lady Frances Culpeper Stephens. At the same time, with funds from the sale of property he owns in Jamestown, Berkeley builds the large and imposing west wing or new mansion house facing Jamestown to the south. This new orientation is prompted by concurrent clearing of the lower acreage to the south for rice and indigo cultivation. This opens up more attractive vistas to the southwest, including perhaps a peek of the James River in the far distance. Straight brick walls surrounding the main house's yard are replaced by more permanent and stately curved brick walls. A new road connection is built to the south on axis with the house, connecting the site with the old Jamestown Road at The Maine. This provides two connections: the former main entry road into the site still facing to the west and the main north-south road located there, and the new, more impressive and formal straight road from Jamestown to the new mansion house.

1676 The old and new manor houses are occupied and both houses and grounds are subsequently damaged by Bacon's followers during Bacon's Rebellion in 1676.

1677 Governor Berkeley is recalled to England and dies there. Lady Frances is forced to spend some £300 to make repairs to the enlarged house and put it back into livable condition.

1679–80 Lady Frances lives for a short time with the new governor, her cousin, Thomas Culpeper, who rents the house from her.

1680 Lady Frances marries Col. Philip Ludwell I and goes to live with him at Rich Neck, leaving Green Spring to be rented to a subsequent governor, Howard Effingham.

1683 A map of the area shows a crude pictorial representation of Green Spring house and indicates the coexistence of both the old and new manor houses. This is also the earliest known drawing of what the house complex probably looked like during the last decades of the seventeenth century.

1680–94 The enlarged Green Spring house complex continues to be used periodically by the Governor's Council and the General Assembly for meetings throughout the 1680s and the 1690s whenever the statehouse at Jamestown is not available.

Green Spring Possible Site Development Chronological Sequence Theory #2

1694 Philip Ludwell II comes of age and comes to live permanently at Green Spring.

1697 Ludwell marries and starts to raise his family there.

Ludwell devotes considerable money and energy in reworking the house and site and making major changes and improvements to the plantation to reflect the house where he was born, Fairfield, in Gloucester County, Virginia.

1705–10 The old manor house and surrounding rectangular brick wall around the yard are torn down. The entire orientation of the site is then changed to work with the new mansion house's existing orientation to the south.

1727 Philip Ludwell III inherits Green Spring (where he had been born) and raises his own family there.

1738 The formal, linear road connection is then made toward the old road to the south that leads to Jamestown.

1739 The curvilinear brick walls enclosing a formal yard or bowling green are built now and extend out to new outbuildings that are built on a lower terraced level around and forming a symmetrically arranged courtyard.

Within the center of this large, lower terraced space formal gardens are planted to serve as a visual feature and focal point and as an impressive foreground for the house. The kitchen gardens are placed on the same level but to the west and to the east of the lower courtyard, partially hidden behind the lines of symmetrical, opposing outbuildings.

This new, classical, and more formalized arrangement is enclosed via a clairvoyee wall/fence combination on the south side, and the entire composition is intended to work with a new approach into the property via a road that is built on a raised causeway to extend across low ground to the south. The new road connects with the existing road to Jamestown at The Maine.

This new road connection heightens and further emphasizes the imposing visual effect that the house, on its raised site, is intended to convey when seen from afar by visitors and passersby who approach the site from the direction of Jamestown. The old connection to the road to Spencer's Ordinary, passing to the west of the house, is still maintained as a secondary entrance and farm road for access to a nearby landing for shipping and receiving goods via the James River.

1740 — The so-called nursery or orangery is built, and orange and/or lemon trees are grown. Another building, similar to it in plan and elevation, is built on the opposite site of the lower courtyard and serves as a garden pavilion or summerhouse for entertaining. It is a restful location since it is located adjacent to the spring house over the fresh water spring that gives the property its name. The lower ranges of brick outbuildings and the serpentine garden walls are also built during this period.

Circa 1760 — The main house with its complex of outbuildings reaches its ultimate stage of organized development during the final years of Philip Ludwell III's tenure.

1767 — Ludwell III dies in England and the ownership of Green Spring passes to his eldest daughter, Hannah Philippa Ludwell Lee, and her husband, William Lee.

Post-1767 — After the death of Philip Ludwell III, the plantation is lived in or operated by a series of overseers.

1778 — Jefferson buys several apple trees and garden seeds from the Green Spring garden.

1781 — The Battle of Green Spring is fought nearby in July, and the site is illustrated on the Desandrouins Map. The house and plantation suffer considerable damage from the battle fought just to the south. The Desandrouins Map does not show the future Centerville Road/Route 614; the old Newcastle road to the west serves as the primary north-south road, connecting Spencer's Ordinary and the Hot Water tract to the north, Barrett's Ferry to the west, and Jamestown to the south.

1794 — William and Hannah Lee's heir, William Ludwell Lee, inherits Green Spring upon the death of his father, and resides at Green Spring in the late 1790s.

Lee grows increasingly disillusioned with the ancient house, which was then about 120–125 years old.

1796 — Architect Benjamin Latrobe visits Green Spring and sketches the old house. He records in his diary that despite his attempts to provide Lee with new designs to remodel the old house, Lee wants to tear it down and build anew. Lee asks Latrobe to provide three designs for a new

house to be built some 300 feet to the north and rear of the existing house. Latrobe does so, but subsequently severs his relationship with an increasingly querulous Lee.

1797 William Ludwell Lee tears down the old manor house and builds a new brick house, with wings to either side of the main part, on two low, raised terraces. Lee lives there until his death.

1803 William Ludwell Lee dies. Several people own Green Spring in the nineteenth century.

1862 Union soldiers burn the house down.

Chapter Seven

A HISTORICAL OVERVIEW OF GREENHOUSES IN THE SEVENTEENTH AND EIGHTEENTH CENTURIES

The central focus of this study has been to firmly identify the nature of the ruin at Green Spring, long known colloquially as the nursery, in the hope of determining, through an examination of its physical features, related archaeological artifacts, its location in relation to the house and other known landscape features, and a comparative analysis with other known, similar greenhouse or orangery structures in the Chesapeake region, if, indeed, this was its actual original function. However, in order to make comprehensible this ruined structure's probable importance from a functional, ethnographic, and symbolic perspective, a context needs to be created in which the presence of such a greenhouse structure in the landscape becomes understandable.

First, we need to examine briefly the origin of the terms *greenhouse* and *orangery* and the distinctions, if any, that existed between them. Next, we need to review the general history of greenhouses/orangeries and how, why, and where they came to be used, first in Europe and in England. We also need to understand why they came to be so important, at least among the gentry class that typically built and used them. Finally, we need to learn where such structures were actually built in England's middle Atlantic North American colonies during the colonial period, more especially within the Chesapeake Bay region. The latter issue, being of critical importance to this study, will be addressed more fully in Chapter Eight of this report.

What Is the Difference Between a Greenhouse and an Orangery?

Structures erected on an estate for the purpose of protecting tender plants were more commonly called *greenhouses* during the seventeenth and eighteenth centuries, although at that time *greenhouse* and *orangery* were sometimes used interchangeably. This issue of proper terminology for these structures deserves closer examination here. Seventeenth-century English author John Evelyn is credited in the *Oxford English Dictionary* with being the first person to use the term *conservatory*, meaning a place for conserving delicate, tender plants in winter. The term *greenhouse*, which he used more frequently and in the same context without differentiation, described a house for keeping evergreens in England's colder climate, or simply *greens*, as they were then more commonly called. An *orangery* at first was the term used to describe a building almost exclusively used to raise orange trees or was the name given to an area in the garden reserved in warmer weather for the display of potted orange trees.[1] Confusion commonly exists today because Evelyn and other writers of that period often borrowed the French word *orangerie*, which for them meant an orange garden, but in the nineteenth century was used more to describe the building itself. Over time, however, other tender flowering plants that had previously been of interest only to botanic gardens (such as myrtles, pomegranates, auriculas, and other so-called florist flowers) also came to be fashionable with gardeners and plant collectors and were cared for indoors within their orangeries. Thus, orangeries needed to be given a newer, more descriptive name, since oranges were not the only species that were being grown in them.

To resolve this problem, such structures soon came to be popularly known as *greenhouses*, a more descriptive name for a building that contained *all* types of tender plants

[1] Olivier de Vleeschouwer, *Greenhouses and Conservatories* (Paris: Flammarion, 2001), 18.

and not just the citrus trees or the evergreens that had given them their English name.[2] The name *greenhouse* seems to have remained in more common usage during the last decades of the seventeenth century and throughout all of the eighteenth century (not changing until the nineteenth century). Confusingly, some even came to call a true orangery a greenhouse simply because they felt that these specialized horticultural outbuildings were intended to keep orange and lemon trees *green*.[3]

This historically random and interchangeable use of terminology only serves to confuse the issue of how to properly refer to such structures today. This author feels that if it is known for a fact that a horticultural building was used *exclusively* for the cultivation of orange trees, it should be correctly referred to as an orangery. If a building was known to have been used to keep a wider variety of plants, it would be more correct to call it a greenhouse. If it is not known specifically how such a building might have been used, and in keeping with contemporary eighteenth-century practice, it would be entirely proper to simply call it a greenhouse. However, in deference to the historical possibility that a structure might have actually been used to grow *both* citrus trees and other plants, the reference to any other sites in this study where these distinguishing facts are not fully known will be *greenhouse/orangery*.

In the specific case of the Green Spring ruin in question, often referred to as the "nursery" or orangery, although we do know from historical documentation that orange trees were being grown at the site in 1751, we do not know if that was the *only* type of plant that was ostensibly grown and kept in this ruined structure; therefore, it will also be referred to as the Green Spring *greenhouse/orangery*.

Citrus Culture in Europe and Britain

The practice of trying to protect plants from the effects of the weather was documented as early as the first century B.C. by Roman historian Columella, with archaeological evidence also found in the ruins of Pompeii. The first modern record (after the Dark Ages) of using a heated room to conserve tender plants appears in a 1635 Italian garden book.[4] The greenhouse or orangery as we know it today, however, developed in the late sixteenth to early seventeenth centuries, mainly by northern European gardeners (and primarily refined in Holland) for the purpose of trying to grow and maintain citrus trees in the cold and freezing winter weather of that region. Of all exotic plants that ultimately came to be grown indoors within these structures, the hands-down favorite, however, was the orange tree.

Unknown in the classical world, oranges were probably introduced to the eastern Mediterranean by the Arabs, who overran that region beginning in the eighth century A.D. In the warm temperate climate of that region of the world, oranges could be grown in the open, and were certainly being grown by Caliph al-Mansur in Cordoba, in southern Spain, by A.D. 976. The first Englishmen to see or taste any citrus fruits were Crusader knights who were stationed at Jaffa in 1191.[5]

The earliest greenhouses of the late sixteenth and early seventeenth centuries tended to be simple wooden or masonry structures, not always completely enclosed, that were intended to protect plants from harsh winds and to capture at least a bit of solar heat in the walls to help mitigate the cold winter temperatures.[6]

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[2] Ibid., 18, 20.

[3] Trostel, "Maryland Orangeries," 1; see also Woods and Warren, *Glass Houses*, 31.

[4] Yentsch, "Calvert Orangery," 175.

[5] Campbell, *Charleston Kedding*, 145.

[6] Vleeschouwer, Greenhouses and Conservatories, 15, 18.

Although simple orangeries existed in the 1500s in Italy and France,[7] the first documented structure of this type built in Renaissance northern Europe dates from 1600, when glazed *wintering galleries* were built at the Leiden botanic garden in Holland.[8] Another similar structure appeared in 1619, when Salomon de Caus built a movable wooden structure glazed with glass in Heidelburg to shelter 400 orange trees belonging to the Palatine Elector.[9] However, in the severe winters of northern Europe, these simple structures were not always as effective as the builders hoped they would be, so further improvements began to be made.[10]

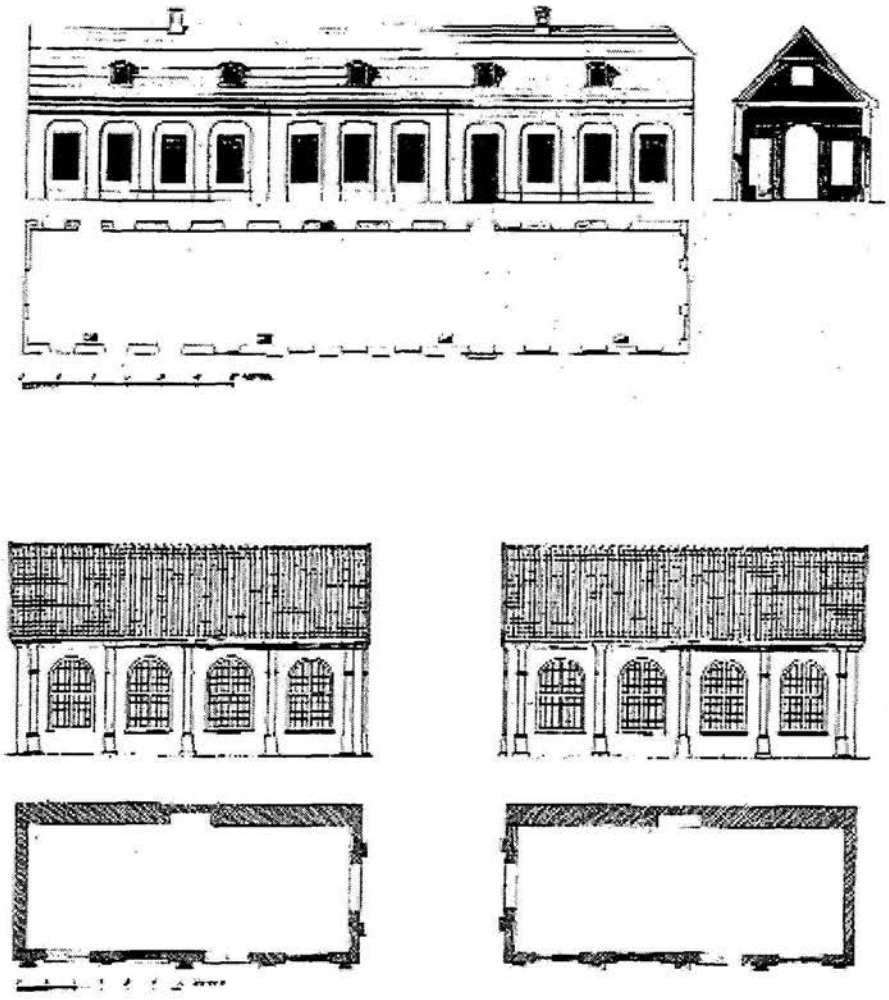


Fig. 7–1 Early examples of simple wooden wintering galleries or orangeries.

As the Renaissance advanced throughout Europe, it became fashionable to express one's botanical knowledge and skill by growing rare or unusual plants and, after being picked up in all of the European countries, the practice of building greenhouses on private estates had eventually spread to England by the second quarter of the seventeenth century.[11] However, the earliest greenhouses in England seem to have first appeared more as a fashionable novelty and are documented there as early as the later decades of the sixteenth century, during the Elizabethan period. Robert Cecil, Lord Burghley, was apparently one of the first gentlemen of Queen Elizabeth I's court to build a shelter for orange trees in England at his home at Burghley Court in Lincolnshire, in 1561.[12] Another of the earliest known greenhouses in England was built at Longleat, Wiltshire, sometime between 1566 and 1580.[13]

[7] Woods and Warren, *Glass Houses*, 6–9.
[8] Campbell, *Charleston Kedding*, 146.
[9] Lemmon, *Covered Garden*, 15.
[10] Britz, "Orangery in England and America," 555.
[11] Yentsch, "Calvert Orangery," 175.
[12] Campbell, *Charleston Kedding*, 146.
[13] H. Chandlee Forman, *The Virginia Eastern Shore and Its British Origins: History, Gardens & Antiquities* (Easton, Md.: Eastern Shore Publishers' Associates, 1975), 116. A greenhouse that still stands today at Longleat is a much later one, built in 1812, and was obviously intended to replace the earlier Elizabethan one (Woods and Warren, *Glass Houses*, 110–111).

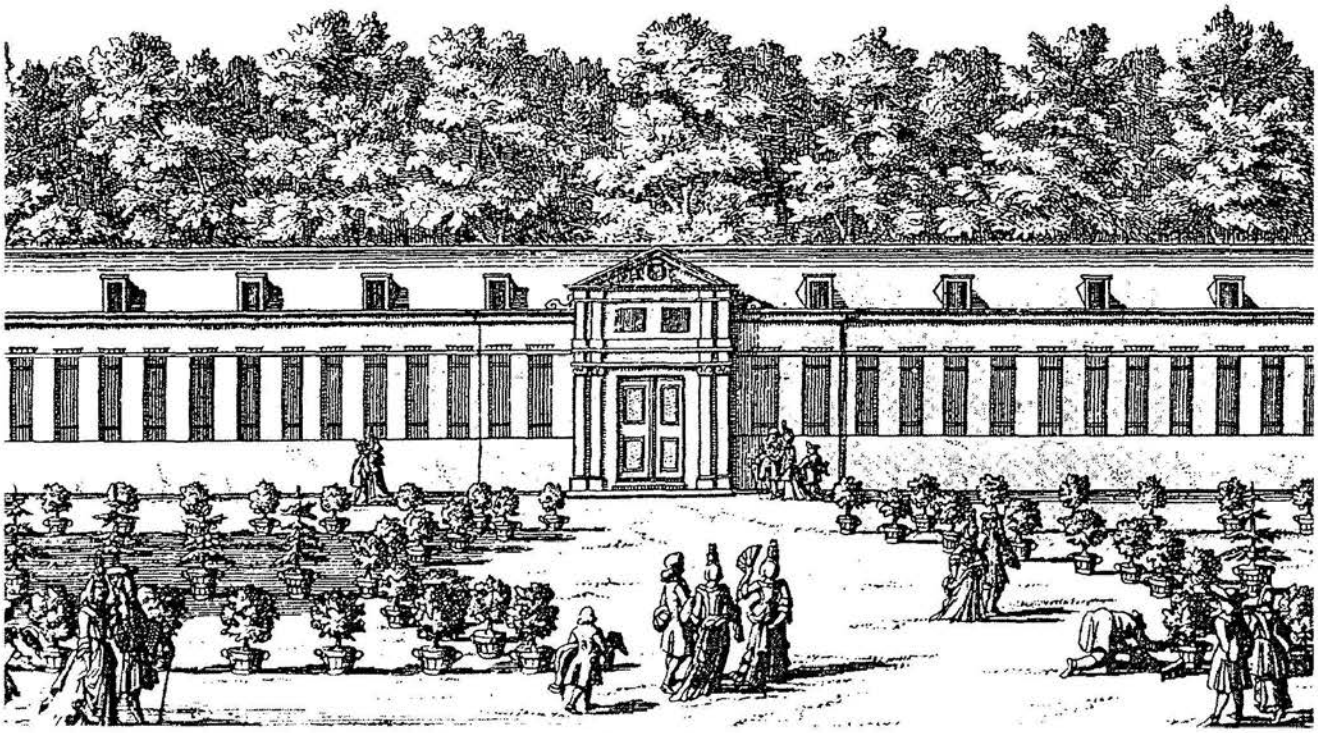


Fig. 7–2 Contemporary seventeenth-century period drawing showing an early Dutch wintering gallery for protecting orange trees. Note the potted trees placed outdoors, as shown in the foreground of this drawing.

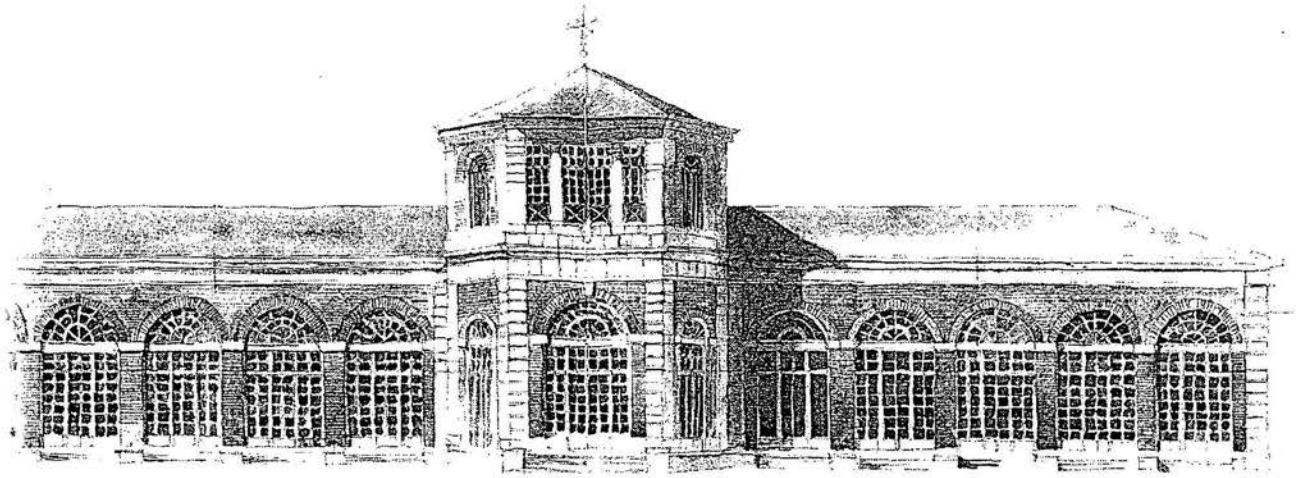


Fig. 7–3 A watercolor-rendered elevation of an elaborate and well-built eigtheenth-century brick greenhouse at Beloeil in Belgium.

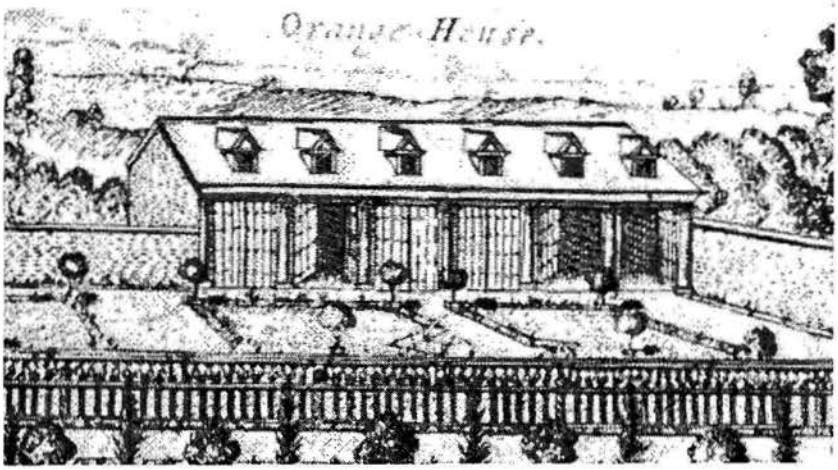


Fig. 7–4 Enlargement of a drawing of Wimbledon House in England showing the detailed view of its orangery within the garden.

The Whole Art of Husbandry by Gervase Markham, published in London in 1631, described a crude form of greenhouse structure for the garden. By the 1640s, King Charles I's consort, Queen Henrietta Maria, had a large greenhouse at her estate at Wimbledon (see Fig. 7–4 above). Landscape gardener Stephen Switzer, in his 1715 book *Noblemen, Gentlemen, & Gardener's Recreation,* stated that Queen Henrietta Maria had enjoyed "measuring, directing or ordering her Buildings: but in Gard'ning, especially Exoticks, she was particularly skilled."[14]

A parliamentary survey of the manor dating from 1649 listed its inventory of forty-two orange trees standing in squared boxes in the garden, valued at £10 each and having the cumulative value of £420, which represented a huge sum of money and a hefty investment for that period.[15] By comparison, her greenhouse building itself, while substantially built of brick and with a ridged roof that was covered with blue slate, was valued at only £55 13s. 4d., and her specimen lemon tree carried a value of £18. At the height of their popularity in the seventeenth and early eighteenth centuries, 169 different species of orange trees were commonly grown in both Europe and England. All of these figures emphasize the point that fruit trees (especially oranges) were regarded as rare, valuable, and uncommonly scarce resources, and that only the wealthiest families with the best foreign trade connections could even hope to afford to buy, keep, and maintain them properly.[16]

In 1656, John Tradescant the Younger, whose father had been gardener to Queen Henrietta Maria, created a list of exotic and unusual plants that would have been grown in greenhouses by wealthy plant collectors during that period. Aside from the ubiquitous citrus trees, the list also included oleander, bay trees, cypress, pomegranate, myrtle, hibiscus, passion flowers, plumbago, canna lilies, mimosas, geraniums, one pelargonium, three kinds of tender jasmine, solanum, asplenium, daturas, and many others. All of these kinds of tender plants would have been grown in decorative pots or wooden boxes and treated in much the same way as the citrus trees, being placed outdoors during the warm seasons, with the pots and trees placed by the gardeners in strategic locations at the intersections of paths in the gardens.[17]

The first royal English greenhouse that has survived is found today at Hampton Court Palace. Sir Christopher Wren built it sometime shortly after 1688 for King William III and Queen Mary II, who had recently ascended to the throne in the Glorious Revolu-

[14] David Bronte Green, *Sarah, Duchess of Marlborough* (New York: Scribner, 1967), 72.
[15] Trostel, "Maryland Orangeries," 1. See also Woods and Warren, *Glass Houses,* 20.
[16] Yentsch, "Calvert Orangery," 179–180; Woods and Warren, *Glass Houses,* 19.
[17] Woods and Warren, *Glass Houses,* 31; also Campbell, *Charleston Kedding,* 147.

tion. They brought with them from Holland their love for gardening, and, since no significant Dutch garden of that period would have been without a proper greenhouse, Hampton Court would certainly have had one as well. Although quite large, as befitted a royal palace, the Hampton Court greenhouse's architectural decoration was plain by comparison to its regal surroundings. It was used to cultivate and maintain orange trees, myrtles, and oleander in winter, which were then taken outdoors to grace the gardens in summer. The structure today is used for the museum display of rare drawings.[18]

Another original, but more socially important, aspect of greenhouses, not commonly recognized today, was how they also came to be increasingly regarded as places for family relaxation and entertaining guests. Thus, these buildings could serve different purposes in different seasons of the year.[19] In 1696, in his book *On Fruit Trees,* author T. Langford described this practice as it had begun to evolve by that time period:

> *Greenhouses are of late built as ornaments to gardens (as summer and banqueting houses were formerly) as well as for a conservatory for tender plants, and when the curiosities in the summer time are dispersed in their proper places in the garden the house (being accommodated for that purpose) may serve for an entertaining room.*[20]

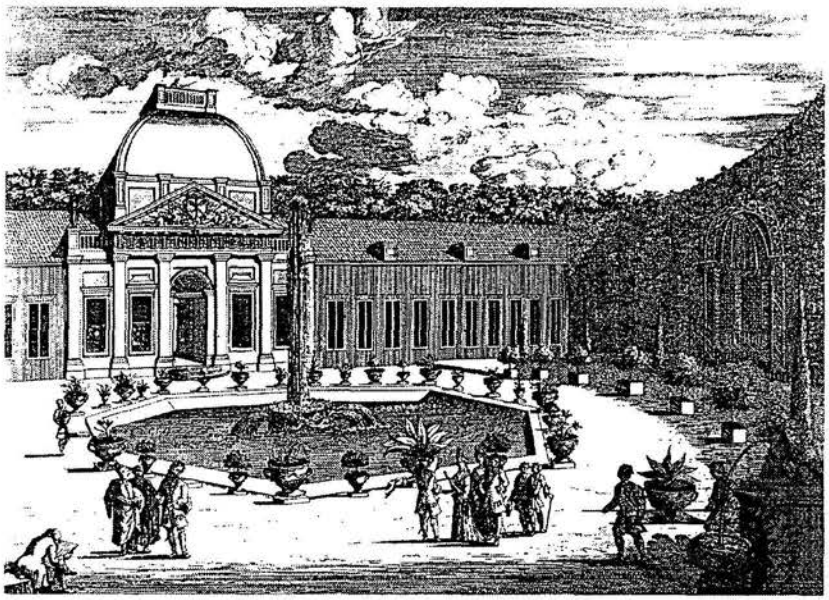


Fig. 7–5 Eighteenth-century engraving of a grand greenhouse or hothouse in a Prussian garden with potted trees and a fountain in front of it to add to its visual appeal.

While greenhouses had certainly been used in this way in France, at Versailles, the greenhouse at Kensington Palace, built in 1704 for Queen Anne by Sir Christopher Wren, Sir John Vanbrugh, and Nicholas Hawksmoor, came to be used by her in much the same way. Although Queen Anne, by nature, tended to be less ostentatious and more pragmatic than many of her royal predecessors, she still apparently indulged in the pleasures of the greenhouse during the summer months. This use is documented by Daniel Defoe who recalled, "The Queen oft was pleased to make the greenhouse, which is very beautiful, her summer supper house."[21] The queen apparently also used her greenhouse as a warm wintertime promenade.[22]

The Fine Points of Greenhouse/Orangery Construction

It took a generous amount of construction skill, horticultural knowledge, and wealth to build a good greenhouse during this period. Since glass was handmade and, thus, very expensive, it was used sparingly in greenhouses during the seventeenth century; this remained true until the price had dropped by the mid-eighteenth century. In England, glass

[18] Woods and Warren, *Glass Houses,* 36.
[19] Campbell, *Charleston Kedding,* 147; see also Woods and Warren, *Glass Houses,* 39.
[20] Lemmon, *Covered Garden,* 126.
[21] Ibid.
[22] Woods and Warren, *Glass Houses,* 39.

was also heavily taxed until 1845, which added even further to its cost there and, by extension, in the English North American colonies. Clear crown glass was the most expensive type of glass that was sometimes used. Cheaper common glass, which typically had a greenish tint, was also comparatively expensive and was used initially in leaded casement windows. Because glass was made by hand, both types typically had wavy lines, air bubbles, and other imperfections in the panes. By the 1730s, glass panes were being fixed into wood sashes with wooden beading or putty. Regardless of the particular glass type and glazing method that was employed, the high cost of any glass used dictated whether a gentleman could afford to have a greenhouse of any size as a part of his gardens.[23]

Despite the limitations that the cost of glass might have imposed in England during the seventeenth and eighteenth centuries, several written sources recommended how to go about constructing a proper greenhouse. In his 1693 work *Compleat Gardener,* Jean de LaQuintinie, gardener to France's Louis XIV, recommended that a southern versus an eastern exposure was most preferred, to admit as much light as possible through large windows up to six feet wide that should extend from floor to ceiling. As to the size of the greenhouse structure, he suggested that the main chamber should be no larger than ten feet deep by forty feet across, to enable light to penetrate fully to the rear or north wall, and that it be built of good brick and mortar.[24]

Henry Van Oosten, another Dutch writer of the period, in his 1703 work *The Dutch Gardener, or the compleat florist . . .* (originally written in Dutch but translated into English), further stated that the better greenhouses had other buildings, a dry hill, or a stand of tall trees placed to the north side of the structure. He went on to give interested readers specific instructions on how greenhouses should be designed:

> *Doors must be so wide that orange trees may be easily carried in and out. Windows must be large and high, reaching quite to the ceiling from the breast work which is commonly three feet high. The breadth of windows must be 5 or 6 feet that when you open them in winter, when the sun shines brightly . . . the sun may shine on them all at once. . . . Walls must be good and without least hollowness. . . . Those are best that have on the north side some other building.*[25]

Once a greenhouse was built, however, maintaining it properly required skilled gardeners. No one without the means to hire, house, and support trained professionals could expect to successfully keep exotic plants and fruit trees alive in a greenhouse for very long. Evidence also survives that suggests that one or two women were involved in the greenhouses on their North American plantations in the mid-Atlantic colonies. In these cases, at least, the wife or mistress seems to have been the one who supervised the greenhouse activities, while the husband or master directed the design and more practical management of the gardens and grounds.[26] Regardless of who maintained or managed the greenhouse, it is clear that they increasingly came to be regarded as status symbols by the gentry.[27]

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[23] Lemmon, *Covered Garden,* 87. Although outside the scope of this study, Lemmon's work also discusses more specifically the glass costs compared to a 17th- or 18th-century gardener's or tradesman's day wages.

[24] Yentsch, "Calvert Orangery," 178.

[25] Henry Van Oosten, *The Dutch Gardener, or the compleat florist* (1703), 253–274 as cited ibid.

[26] Barbara Wells Sarudy, *Gardens and Gardening in the Chesapeake, 1700–1805* (Baltimore: Johns Hopkins, 1998:. The idea that horticultural labor was divided along gender lines within colonial Maryland and Virginia gentry households is also expressed at some length in Carmen A. Weber's ethnographic study of material culture, "The Greenhouse Effect: Gender-Related Traditions in Eighteenth-Century Gardening," in Yamin and Metheny, *Landscape Archaeology, Reading and Interpreting the American Historical Landscape,* 32–51. Although Weber's thesis is intriguing, this author feels it is tenuous because her conclusions are derived from the evidence of only one person, Margaret Tilghman Carroll (1742–1817) of Mount Clare. The important topic of gender roles in gardening and horticulture merits further research to add the weight of more evidence to Weber's as-yet unconvincing and unsubstantiated argument that gender roles shifted during the century so that American women were the keepers of greenhouses and gardens by the last half of the 18th century.

[27] Sarudy, *Gardens and Gardening,* 75.

Greenhouse/Orangery Structures as Status Symbols

How or why did a greenhouse come to be regarded as a status symbol? Anne Yentsch cites some interesting scholarship that sheds further light on the symbolic meaning that greenhouses/orangeries had for seventeenth- and eighteenth-century elites. Her work is based upon Clifford Geertz's statement asserting that the symbolic forms "mark the center as center" and tie those associated with them to the way the world is organized.[28] With this theoretical basis in hand, Yentsch then cogently argues that the technical requirements of regulating heat and light to preserve plants in a greenhouse, which are well understood in today's world, were not fully comprehended in the seventeenth and eighteenth centuries, so that greenhouses were perceived to be rather arcane and mysterious. Hence, if one could establish control over the artificially maintained environment within a greenhouse well enough to grow exotic trees and plants that otherwise would not live outdoors within that region, then one could thereby demonstrate one's control over nature. The natural world also served as a symbol of and as a metaphor for the human world.

Yentsch asserts further that the cultivation of oranges was not without difficulty. It was seen in the seventeenth and eighteenth centuries as a mysterious art practiced by kings, nobles, and influential men, and thereby became a quintessential symbol of prestige and power among the governing elite. These privileged few were the wealthy and powerful men who governed, administered, and directed England and its colonies. Therefore, when a gentleman in England or in one of its North American colonies built a greenhouse and grew oranges successfully, he was symbolically laying claim to regal power and expressing a metaphorical kinship with kings, nobles, scientists, and learned men who were among the privileged few to possess this specialized knowledge and ability.

Such power needs to be visibly displayed, however, and for this and other reasons already assigned, greenhouses/orangeries were comparatively rare outbuildings, especially in England's North American colonies, and were limited to gentry sites. Therefore, the presence of even a small greenhouse on one's plantation became a graphic symbol of horticultural power in the landscape that served the needs of politically powerful men by enabling them to display their mastery over nature; by serving as a tangible marker in the landscape of where the center of power resided; and by providing a visual reminder of the way society was structured and how the hierarchical, class-ridden world of that period was organized.[29]

All of these economic, cultural, ethnographic, and anthropological realities make a very clear statement to scholars about just how socially significant citrus tree culture became during the seventeenth and eighteenth centuries, and the extent to which even having a small greenhouse or orangery in a well-kept garden on one's plantation contributed to the overall intended visual effect of order and control over nature. Such elegant structures spoke volumes to even the most casual observer about the owner's probable power elite status, intellectual sophistication, and economic means.[30]

Because of the reasons previously mentioned, greenhouse structures in England during the early to mid-seventeenth century began to be built as plain, tall, narrow, fully enclosed masonry buildings and were typically situated in the working part of the estate, hidden from the mansion house and the pleasure garden. Until the early decades of the nineteenth century, they commonly had a heavy, opaque roof with an unbroken and generally thick north wall. As the costs of glass slowly began to come down in the early to mid-eighteenth century, more glass doors and windows began to be incorporated into

[28] Clifford Geertz, *Local Knowledge: Further Essays on Interpretive Anthropology* (New York: Basic Books, 1983), 124, as cited in Yentsch, "Calvert Orangery," 180.
[29] Yentsch, "Calvert Orangery," 180–183.
[30] Ibid., 179–180.



Fig. 7–6 The orangery at Hanbury Hall, built in 1745, is a typical English eighteenth-century orangery built of brick with double-hung sash windows and a solid roof.

greenhouses' construction. Tall, wide windows faced to the south, capturing the heat and light of the sun through most of the daylight hours, and their double- or triple-hung sash glass windows could also be raised to allow air to ventilate the interior so that the indoor temperatures did not get too warm. Sometimes these later, more advanced greenhouses also included interior or exterior shutters to trap the heat in the building at night or on windy, sunless days. This more substantial form of masonry greenhouse structure set the standard for all future orangeries for at least the next century and a half.[30]

Heating and Ventilating a Greenhouse/Orangery

The earliest European orangeries were designed mainly for keeping the temperatures inside above freezing and were not intended to be warmed or heated by artificial means. When cold weather extremes demanded it, however, open braziers or pans of burning charcoal or peat were placed in the structure to provide artificial heat. This not only increased the danger of accidental fires, but it also caused sulphurous fumes and other gases to emanate from the burning charcoal, which could be as detrimental to the trees as the cold.[31] In 1718, Richard Bradley, a Fellow of the Royal Society, published *New Improvements of Planting and Gardening Both Philosophical and Practical*, which listed some of the hazards of attempting to heat greenhouses in this way. Bradley wrote that "smoke . . . is a great enemy to plants, especially the smoke of seacole ([sic])," and that because of charcoal fires "several men have been choked by them . . . and sparks from them have set fire to the house, but that depends on the care of the gardener."[32]

[30] Britz, "Orangery in England and America," 556.
[31] Ibid.
[32] Lemmon, *Covered Garden*, 69.

In the 1737 and 1754 editions of his *The Gardener's Dictionary,* landscape gardener and author Philip Miller also cautioned against the use of charcoal fires, stating frankly that

> *there are some People who commonly make use of Pots fill'd with Charcoal to set in their Green-house in very severe Frosts, but this is very dangerous to the Persons who attend these Fires; and I have often known they have almost been suffocated therewith; and at the same time they are very injurious to the Plants: Nor is the Trouble of attending upon these small; and the many Hazards to which the Use of these Fires are liable, have justly brought them into Disuse with all skilful Persons: And as the Contrivance of Flues, and the Charge of the Fires, are but small, so they are much to be preferr'd to any other Method for warming the Air of the House.*[34]

With these hazards becoming increasingly apparent to European and English gardeners, more efficient and improved methods of heating greenhouses were eventually developed.

This led to heating some greenhouses with stoves, which leads us to yet another nickname: *stove-houses.* Stove-houses often referred to any sort of heated greenhouse-type structure, since there were several types of stoves or heating methods that were typically used. However, during the eighteenth century, professional gardeners clearly differentiated between the various types. Miller devoted ten full pages in his *Gardeners Dictionary* to describe the workings of two different types of stoves that were typically used in England: the *dry stove,* which employed flues under the floor or set within hollow masonry walls, and the *bark stove,* which employed the use of tan bark in open pits set in the floor of the house.[35] While construction methods differed slightly for each type of stove-house structure, more often than not, a true stove-house was designed specifically for the forcing of fruits and vegetables out of season; however, the term was sometimes loosely applied to any heated greenhouse.[36]

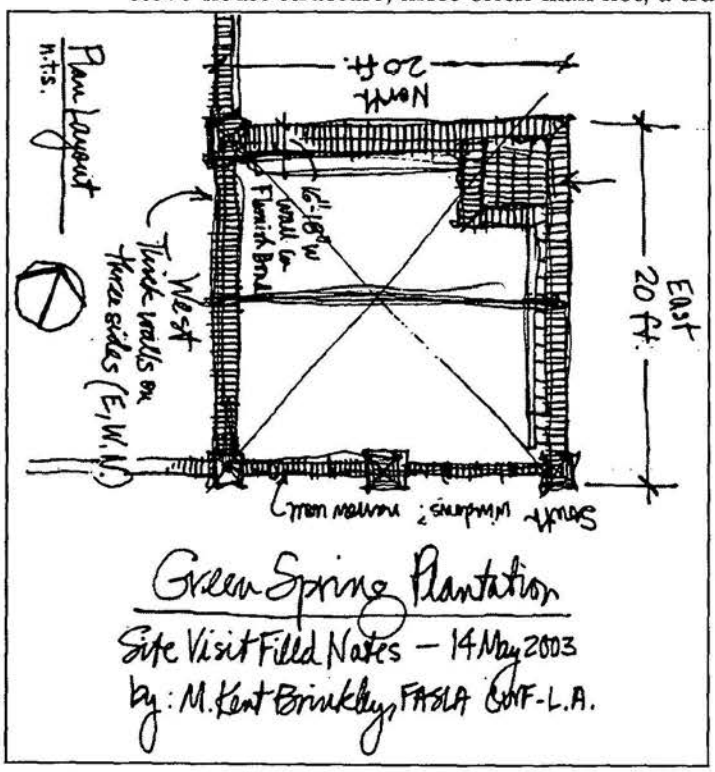


Fig. 7–7 Author's field sketch of the outbuilding at the southeast corner of Green Spring's lower courtyard that may have been a later, Ludwell-era greenhouse structure, due to the presence of an external firebox and possible under floor heating system. Note the thinness of the south wall in comparison to the other three walls (suggesting the possible use of glass on that elevation).

The *dry stove* used warmed dry air, originating from the heat generated from internal or external fireplaces and conveyed through a closed system of hollow walls and under-floor ducts. This system, used by the ancient Romans, was known as a *hypocaust.*[37] It was used in the greenhouse/orangery that was built at the Chelsea Physic Garden in the 1690s.[38] The hypocaust

[34] Miller, *Gardeners Dictionary,* 581.
[35] Ibid., 1330, 1333.
[36] Woods and Warren, *Glass Houses,* 58.
[37] Yentsch, "Calvert Orangery," 169.
[38] Trostel, "Maryland Orangeries," 1.



Fig. 7–8 Period engraving of the interior of a greenhouse showing two floor-mounted, cast-iron Dutch stoves and flues against the rear or north wall.

system came to be used in all of the more elaborate greenhouses, both in England and in the North American colonies, while the smaller, more modest ones continued to use charcoal fires in metal pots or wheelbarrows or, possibly, the slightly more sophisticated, much safer, and slightly more reliable Dutch cast-iron stoves.[39]

The *bark stove* employed the use of tan or tanners bark, which (according to Philip Miller) is

> *the bark of the Oak-tree, chopped or ground into coarse powder, to be used in tanning or dressing of skins; after which it is of great use in gardening: first by its fermentation (when laid in a proper quantity), the heat of which is always moderate, and of long duration, which renders it of great service for hot-beds; and secondly, after it is well rotted, it becomes excellent manure for all sorts of cold stiff land, upon which one load of tan is better than two of rotten dung, and will continue longer in the ground.*[40]

Thus, a bark stove was, by Miller's definition, another name for a type of hot bed used to start new plants and refers, more specifically, to a starting house for young plants, as opposed to a dry stove, which was more of a system to protect mature, but tender, plants and trees.

The first cast iron greenhouse stove was made in Holland in about 1600. The cast-iron or Dutch stove, occasionally still seen on the Continent, really was a freestanding

[39] From archaeological investigations conducted in spring 2003 on a ruined outbuilding in the southeast corner of the lower terrace courtyard at Green Spring, it appears *possible* that this 20-foot-by-20-foot brick structure might have had some sort of external firebox and an underfloor heating system, suggesting it may have been a greenhouse dating from the late 18th century (see Fig. 7–7). Alternatively, this structure also could have been a laundry. More research about the building's remaining fabric is needed to reach a less tentative, preliminary conclusion. The possibility that it was a greenhouse is intriguing, however.

[40] Miller, *Gardeners Dictionary*, 1358.

rectangular metal box-like stove structure that was built up from the floor to stand on short legs (see Fig. 7–8). These stoves gave off considerable heat when lit and could be more efficient for maintaining an ideal temperature indoors of about seventy degrees to protect citrus trees. However, because of the potential for fume problems, charcoal was generally preferred over coal as a fuel, although it was not entirely satisfactory.[41] The stoves were tiled above the firebox where the hollow of the stove and the flue pipe itself formed a reservoir of hot air to radiate into the house. The flue pipe could be made of iron or even of fire-clayed earthenware, and generally passed straight up and out through the building's roof.[42]

While having the ability to provide heat in a greenhouse in cold weather was important, proper ventilation was essential for maintaining plants properly. As early as the 1690s, Englishman John Evelyn had noticed that plants would suffer or die if they were confined within a closed up space with what he called "pent-in air." As horticultural science advanced during the eighteenth century, numerous theories were advanced about the importance of providing proper ventilation in the greenhouse, as well as the detrimental effects that could be wrought due to the lack of it. Early eighteenth-century English scientist Stephen Hales noted in a book he published in 1727 that plants grew moldy in "a close, damp air," because the sap stagnated under those conditions. Gentlemen and their gardeners observed that during daylight hours, temperatures inside sealed, glassed-in greenhouses could rise dramatically without any ventilation. Moreover, proper ventilation helped to release stale air and replace it with fresh air, it afforded greenhouse plants gentle air movement, and it helped to raise or lower inside humidity levels as needed. The aim was to keep the temperature and humidity levels within the stocked greenhouse as constant as possible without wide swings or fluctuations to which some exotic plants were more susceptible than others.[43]

In 1724, Bradley suggested that greenhouses be equipped with an interior partition and door leading from a smaller entry room located to one side of and connecting to the main room housing the potted plants and trees, so that no cool air would enter into the greenhouse directly from the outside.[44] Philip Miller, in his 1737 and 1754 editions of *The Gardeners Dictionary*, also mentioned the necessity of gaining access to the greenhouse from some other room or shed "where the fire is made, because in cold weather the front glasses must not be opened."[45]

In his book, Miller gave detailed recommendations about the proper size, layout, and technical details of greenhouses, which would have been of interest to any readers who might have been contemplating building one of their own. It is of interest to us today because it lends an understanding of just how specialized and sophisticated these structures were intended to be, and why having one was such a status symbol.

Miller advised that the width of the building should be no more than eighteen to twenty feet and that the top of the south-facing windows should be as high as the building is wide. He went on to say that the windows should be triple hung sashes to allow air to freely circulate on warm days, that they should come down to within ten to twelve inches of the interior floor, and that there should be room for dead air space above the windows.

Miller recommended that bricks be well fired and hard, rather than soft or rubbed, for greater durability. All of the interior walls should be plastered and whitewashed to reflect

[41] Wood and Warren, *Glass Houses*, 14, 29.
[42] Lemmon, *Covered Garden*, 98.
[43] Campbell, *Charleston Kedding*, 179–180.
[44] Yentsch, "Calvert Orangery," 177.
[45] Miller, *Gardeners Dictionary*, 1337.[46] Ibid., 581.

as much light as possible, and the floor should be paved with brick over the flues (if they are under the floor), Bremen (stone) squares, Purbeck stone, or broad tiles, according to the fancy of the owner. He noted that "in some Green-houses which have been painted black, or of a dark Colour, the Plants have cast most of their Leaves."[46] Miller went on to expound further upon the need for tool sheds to be built across the back of the greenhouse to further protect it on the cold north side of the building, and, if possible, of even building living quarters above it for the use of servants or the gardeners. The fireboxes of a dry stove should be fed from the servants' quarter or tool shed as well.[47]

"Capability" Brown as a Greenhouse/Orangery Builder in England

Lancelot "Capability" Brown (1716–83), the famous English landscape gardener-turned landscape architect, seems to have combined both those interests by designing more greenhouses in England than any one of his contemporaries during the mid- to late-eighteenth-century period.[48] Although best known for his extensive and ambitious naturalistic landscape designs that literally transformed the face of England, Brown was also a knowledgeable gardener by training and often designed greenhouses as a part of his commissions. While it wouldn't seem that such practical structures would have fit into his more aesthetic style of landscaping, he often designed them in a "Gothick"[49] or classical style so that they, no doubt, served as pieces of sculpture within his idyllic landscape settings. Brown designed greenhouses at the estates of Burghley in Northamptonshire (his first, in 1757), at Kimberly in Norfolk (1762), at Ashburnham Place in Sussex (1767), at Charlton in Wiltshire (1767), and at Broadlands in Hampshire (1767). His later greenhouse commissions were located at Redgrave in Suffolk (now in ruins), Stanstead Park in Sussex; Fisherwick in Staffordshire (which was demolished long ago), and at Gibside in County Durham (now in ruins). Regardless of the nature of the external appearances of these structures to follow the whims of architectural taste and fashion, the internal function was essentially the same: to maintain and protect tender plants or fruit trees from the local winter climate.

Greenhouses built in England in the late seventeenth and early eighteenth centuries varied widely in size, shape, and materials, depending upon the amenities that were provided for them. Some, like the greenhouse built at Dyrham Park in Gloucestershire or one at Powis Castle in Wales, were made a part of the house itself and formed or were located in a wing to one side of the main house. The majority, however, were detached, freestanding structures that were located adjacent to the garden, but farther away from the house especially if other, more utilitarian, horticultural functions were also located in or adjacent to the structure, such as a tool shed, the gardeners' "bothy" or workrooms, their living quarters, the head gardener's office, etc.[50] Sometimes, though, because of its size or distinct architectural styling, the greenhouse became a unique focal point and, perhaps the most dominant architectural and visual feature within its garden or landscape, such as the surviving example at Hanbury Hall (see Fig. 7–4).

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[46] Ibid., 576–584

[47] Woods and Warren, *Glass Houses*, 74–75.

[48] The term *Gothick* refers to the unauthentic architectural creations inspired by the revival of gothic taste that had swept over England by the second quarter of the 18th century. Characterized by ogee arches and toy battlements, these eclectic structures gave the landscapes in which they were built an almost fantasylike, if not iconographic, quality. See Mowl, *Gentlemen & Players*, ix, 101, 119, and Tom Williamson, *Polite Landscapes: Gardens and Society in Eighteenth-Century England* (Baltimore: Johns Hopkins, 1995), 75, 78.

[49] Woods and Warren, *Glass Houses*, 75.

[50] In the case of Calke Abbey in Derbyshire, the surviving (and recently restored) circa 1837 orangery was actually built on the south or back side of the surviving circa 1777 gardeners' bothy. It flanked the greenhouses, living quarters, and head gardener's office, all of which face to the north and are located within one of two large, walled kitchen gardens. These structures thus share a common brick wall between them.

Final Thoughts

From an early period, the cultivation of citrus fruits was regarded as a genteel occupation, requiring specials skills and knowledge that clearly set the practitioners of this art apart from their peers. Hence, it appealed to both the European and English gentry. Following the colonization of North America by the English in the seventeenth century, English horticultural practices eventually found their way to Virginia. For a select few, greenhouses or orangeries eventually came to be seen as an important element in the building of an appropriate plantation for a landed gentleman. For many, both in England and in the southern colonies of English North America, such structures were perhaps regarded as the ultimate status symbol in the landscape, both for functional utility and architectural value in enhancing and complementing the carefully constructed landscape setting.

Summary/Conclusions

- Structures erected to protect tender plants were more commonly called *greenhouses* in the seventeenth and eighteenth centuries, although *greenhouse* and *orangery* were terms that were often used interchangeably. An orangery, however, generally was devoted to the cultivation of citrus trees.
- The practice of protecting tender plants from the effects of the weather is an old one, having been documented by the Roman historian Columella in the first century B.C.E.
- What is now known as a greenhouse or orangery was developed in northern Europe in the late sixteenth to early seventeenth centuries. The Dutch are credited with making refinements for growing and maintaining citrus trees in their cold winter climate.
- Although many types of exotic and tender plants were grown in early greenhouses, the obvious favorite in Europe, England, and the North American colonies was the orange tree.
- The earliest greenhouses built in the late sixteenth and early seventeenth centuries were simple wooden or masonry structures that were intended to protect plants from harsh, cold winds. Thus, many of these structures were not always completely enclosed.
- Glazed greenhouses first appeared in Europe in 1600 at the Leiden botanic garden in Holland and slightly later at the palaces of royalty. They first appeared in England in the 1560s, during the Elizabethan period.
- Greenhouses found royal favor in England by the 1640s, when Charles I's consort, Queen Henrietta Maria, had a large greenhouse built for her at her estate at Wimbledon.
- At the height of their popularity in the seventeenth and early eighteenth centuries, 169 different species of oranges were commonly grown in Europe and England, a fact that attests to the valuable and popular resources that fruit and citrus trees had become by that time. Yet, only the wealthiest families with the best foreign trade connections could afford to buy, keep, and maintain them properly.
- In 1656, John Tradescant the Younger documented a wide variety of tender exotic plants that were then being grown in greenhouses by plant collectors. The list included oleander, bay trees, cypress, pomegranate, myrtle, hibiscus, passion flower, plumbago, canna lily, mimosas, geraniums, pelargonium, tender jasmines, solanum,

asplenium, and daturas, in addition to the typically ubiquitous citrus trees. These plants would have been grown in decorative pots or wooden boxes, being placed out in the garden during the warm weather months.

- The oldest surviving royal English greenhouse is located at Hampton Court Palace, having been built by Sir Christopher Wren for William and Mary shortly after 1688. It was used to cultivate and maintain orange trees, myrtles, and oleander during the winter months, which then graced the intersections of paths in the garden during the summer.
- In the warmer months, when plants were placed out in the garden, greenhouses also functioned as places for family relaxation and for entertaining guests. Queen Anne of England used her greenhouse at Kensington Palace as a summer supper house.
- Building a greenhouse during this period took a considerable amount of wealth, construction skill, and horticultural knowledge. The expense of handmade glass in the seventeenth century somewhat limited its use in greenhouses until the price dropped by the mid-eighteenth century. By the 1730s, glass panes were being fixed into wooden sashes with wood beading or putty.
- The high cost of *any* glass used during this period largely dictated whether a gentleman could afford to build a greenhouse of any size in his gardens.
- There was no lack of written sources during the late seventeenth and early eighteenth centuries that recommended how to go about constructing a proper greenhouse for those who had the means to do so.
- Books recommended that such structures be built no larger than ten feet deep by forty feet across to enable sunlight to fully penetrate to the rear north wall, and that the best greenhouses had other buildings, a dry hill, or a stand of tall trees placed to the north side of the structure. Doors should be wide enough to admit the passage of orange trees in tubs and the windows should be wide and high, extending from the floor nearly to the ceiling to admit sufficient light into the structure.
- Once greenhouses were built, the services of skilled, professionally trained gardeners were necessary to ensure success in raising and keeping exotic plants and citrus trees.
- Although not conclusive, some evidence does suggest that gender roles were clearly drawn where the landscape was concerned. In at least a few known cases, women were clearly in charge of supervising the kitchen garden and the operation of greenhouse activities on their plantations, leaving to their husbands the direction of the design and more practical management of the pleasure gardens, orchards, and agricultural/farming activities. Whether this division of roles along gender lines was common in the colonial Chesapeake after 1750 needs further research, but preliminary evidence suggests that such was the case.
- Greenhouses came to be popularly regarded as status symbols in eighteenth-century English society, in part, not only because of the cost to build such structures, but also because its physical presence in the landscape pointed out that the owner had the ability to manage the somewhat arcane art of regulating heat and light to preserve tender plants there. By inference, such a skill bespoke of one's ability to also control nature.
- The cultivation of citrus trees, a difficult proposition under any conditions, and long associated with kings, nobles, and other influential men, became the quintessential symbol of prestige, leadership ability, and power among the elites of that day. Thus,

possessing this capability on one's plantation also metaphorically demonstrated ones ability to lead and govern others.

- The presence of even a small greenhouse on one's plantation became a graphic symbol of horticultural power in the landscape that enabled politically powerful men to display their mastery over nature and to serve as a tangible marker of where the center of power resided.

Chapter Eight

A COMPARATIVE STUDY OF GREENHOUSES IN EIGHTEENTH- AND EARLY NINETEENTH-CENTURY ENGLISH NORTH AMERICA WITH THE RUINED GREEN SPRING STRUCTURE

Introduction

While never as numerous, as ornate, or as large as those in Britain, greenhouses and orangeries were built at a number of gentry plantations in England's North American colonies. In fact, such specialized horticultural buildings were a comparative rarity in America, and only a very few colonial American plantations had a greenhouse or orangery. They clearly were affordable only to the wealthiest landowners, and (as has been previously noted) their presence in rural plantation landscapes also served as visible markers of the owner's status and sophistication.[1] The majority of these few examples appear to have been clustered in the more temperate middle Atlantic colonies, with the highest concentration found in the colonial Chesapeake region, that is, in the colonies of Virginia, Maryland, and southeastern Pennsylvania.[2]

The passage of time, exposure to the elements, and the decline and steady disappearance of agriculture from the middle Atlantic states have not been kind to these structures and, unfortunately, most of the greenhouses that were built during the colonial period have not survived. Only a handful of notable examples are still standing, and many of those are either in ruins or are not being used for their original purpose.[3] Although some documentation exists to suggest that a number of sites in the middle Atlantic region once had greenhouses or orangeries, many of these have since disappeared, and written evidence about them is not specific enough to reveal much about their original construction and how they might have been used. Therefore, the number of structures available for comparative analysis with the probable greenhouse/orangery ruins at the Green Spring plantation site is pitifully small.

The Westover Greenhouse/Orangery

The earliest *known* date that greenhouses made their appearance anywhere in the colonial Chesapeake is 1730. This supposition is based on the fact that in the 1730s William Byrd II had a small greenhouse (no longer existing; the site was later covered by an icehouse, which still stands) at his plantation, Westover, in Charles City County, Virginia. This structure was referred to in a letter sent to Peter Collinson in London by American naturalist John Bartram, who had visited Byrd at Westover in 1738. Bartram wrote that with "a little greenhouse with two or three orange trees with fruit on them," Westover was "the finest seat in Virginia."[4] Indeed, it was Collinson who had first suggested to Bartram that he visit Westover, telling him in an earlier letter that "I am told Colonel Byrd has the best garden in Virginia, and a pretty green-house, well furnished with orange trees. I knew him well when in England; and he was reckoned a very polite,

[1] Yentsch, "Calvert Orangery," 183.

[2] See "Sites with Known Eighteenth-Century or Early Nineteenth-Century Greenhouses/Orangeries in the Eastern United States (Middle Atlantic Region)" at the end of this chapter.

[3] Ibid.

[4] Pierre Marambaud, *William Byrd of Westover, 1674–1744* (Charlottesville: University Press of Virginia, 1971), 158. The original reference is in the Bartram Papers, Historical Society of Pennsylvania.

ingenious man."[5] It is not known specifically when the Westover greenhouse was constructed or what its original size may have been since all physical traces of it have long disappeared.

The Governor's Palace Greenhouse/Orangery

Another early greenhouse apparently existed at the Governor's Palace in nearby Williamsburg, Virginia (see sketches of what this building is thought to have looked like, Figs. 8–1 and 8–2). The archaeological remains of this building, and the many glass fragments found adjacent to it in the early 1930s, seem to substantiate the conclusion that such a structure did once exist there. However, the remains of the brick foundations from four distinct construction periods were then in moderate to poor condition, making the determination of probable dates for when each building phase was completed difficult, if not impossible. Due to the somewhat fragmented nature of the remaining brick foundations that were discovered, it is difficult to be certain about the central structure's original size, although it appears to have been roughly thirteen feet wide (deep) by twenty feet long, overall. To either side of the oldest central portion of the building were two other, later but seemingly related, structures that probably also had a horticultural purpose. The brick remains of one structure, located to the west of the central block, appears to have been a starter house, bark stove, or hotbed, since it had a low brick trough running down the length of the roughly thirteen-foot-wide-by-sixty-eight-foot-long building. The trough probably would have been filled with dung or tanbark and used during the winter months to provide the necessary heat to germinate young plants from seed. At other times, young plants growing in small pots could have been placed there to harden off and mature before being transplanted into planting beds within the adjacent gardens.

The brick remains of the other structure, located to the east of the central block and of roughly the same size as its mate on the opposite side, were different. They formed separate, internal brick platforms of graduated heights. While obviously used for some horticultural activity, this building clearly had a different function from its twin. Such long brick platforms would have allowed potted plants or trees in tubs to be placed side-by-side on different levels in a manner to enable the foliage of each plant to get a maximum amount of sunlight without shading the plant behind it. While both buildings had narrower brick foundations than the walls of the probably more traditional, central greenhouse block and appear to have been later additions as the site evolved through the eighteenth century, the superstructures of both wings were probably a combination of wooden frames enclosing a series of glass panes.[6]

Documentary evidence indicates that Gov. Alexander Spotswood presented William Byrd II with a gift of several orange trees. This gift suggests not only an early dating (that is, 1710–22) for the central portion of the Governor's Palace greenhouse/orangery, but also a much earlier date than the 1730s for Byrd's greenhouse.[7] Also, a household inventory taken at the time of the death of Governor Botetourt in late 1770, lists several tubs and orange trees, strongly suggesting the presence of one or more proper structures in the garden to house and protect them. It is not reasonable to assume that one could either grow or keep citrus trees alive throughout Virginia's winters without having a proper

[5] Ibid., 159.

[6] These descriptions are based on James M. Knight's large, scaled archaeological plan drawing and section drawings, "Archaeological Survey of Foundations of Colonial Governor's Palace," Dec, 31 1932, revised Mar. 23, 1933. See also Figs. 8–1, 8–2, 8–3, and 8–4 for conjectural perspective sketches of these structures, drawn by Walter Campbell in October 1932 for landscape architect Arthur A. Shurcliff, Special Collections, Architectural Drawings Collection, JDR Jr. Library, CWF.

[7] Marambaud, *William Byrd*, 158.

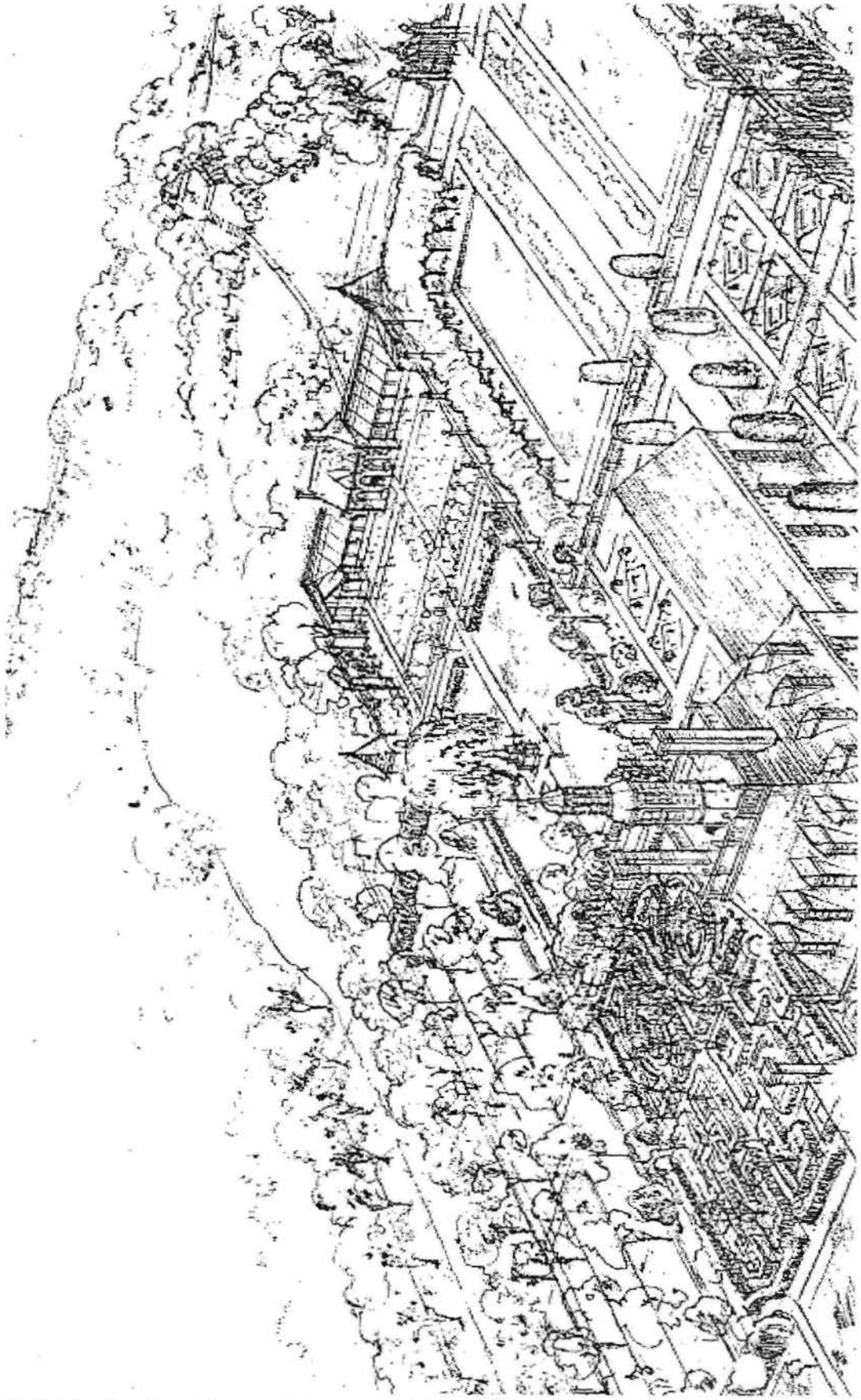


Fig. 8–1 Artist's conjectural drawing of the Governor's Palace greenhouse range located at the rear of the gardens in the northwest corner. (JDRL)

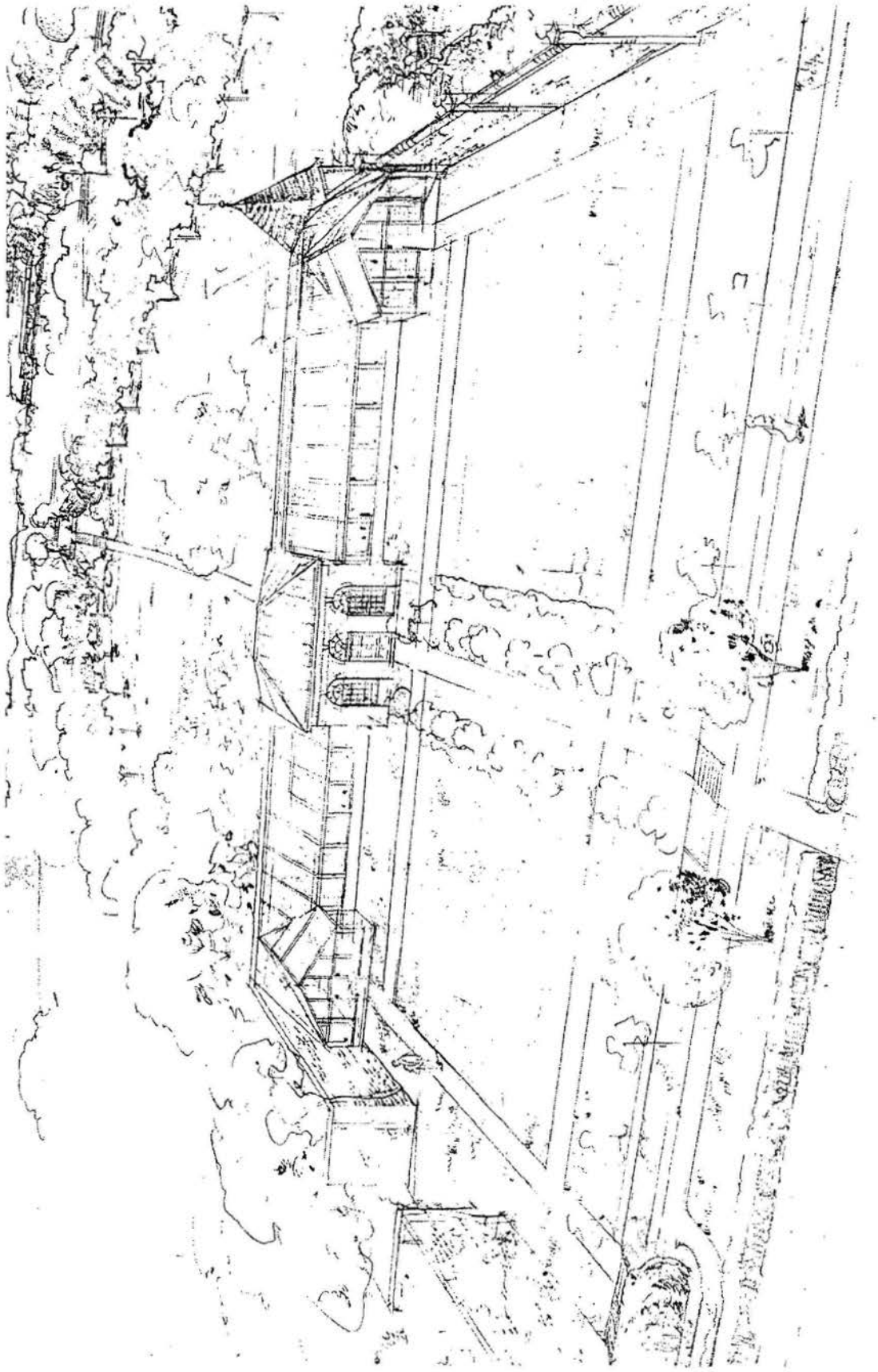


Fig. 8–2 Artist's conjectural drawing of Palace greenhouse and adjacent hotbeds and plant display houses (to either side of it under glass) as seen from another angle. (JDRL)

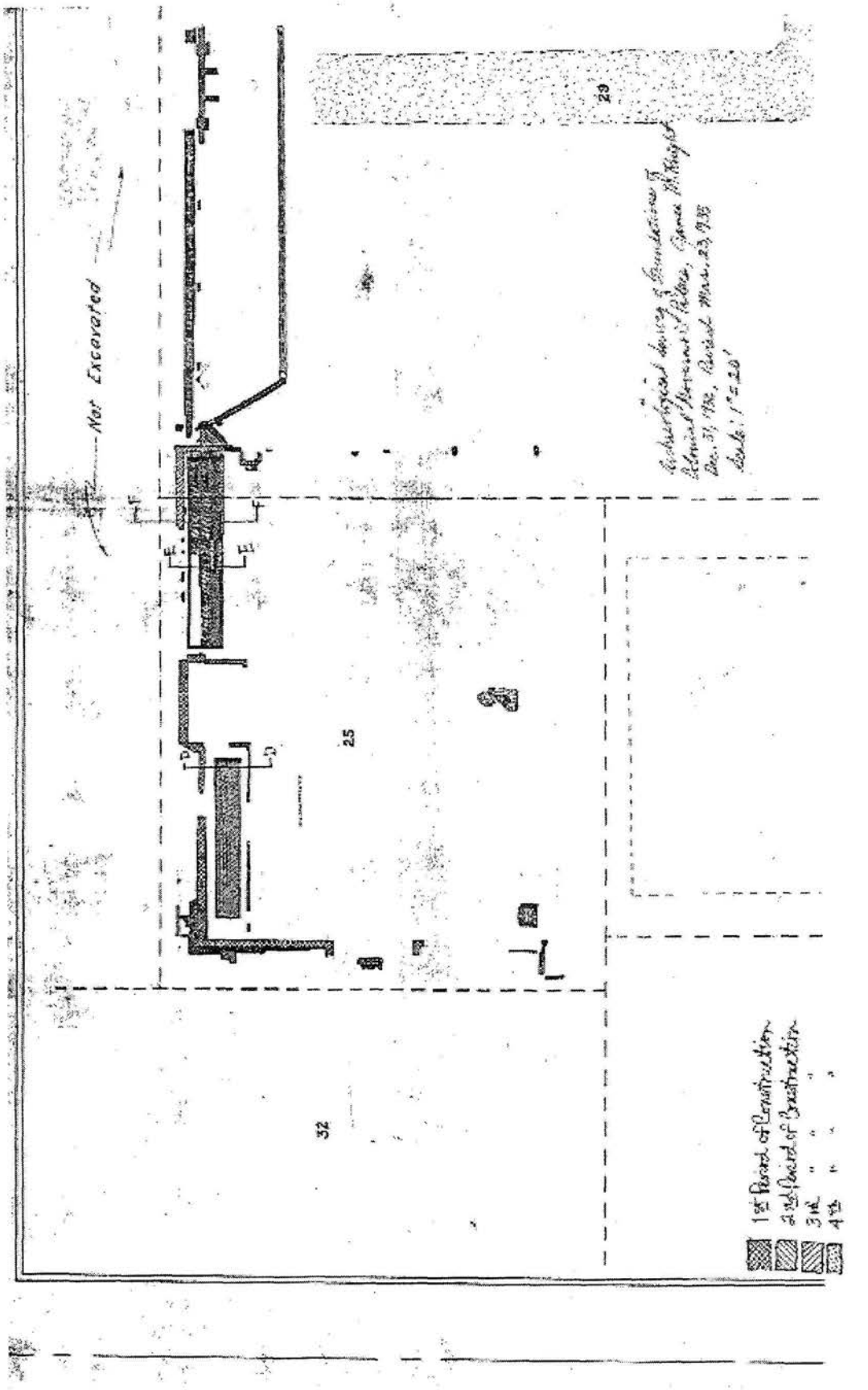
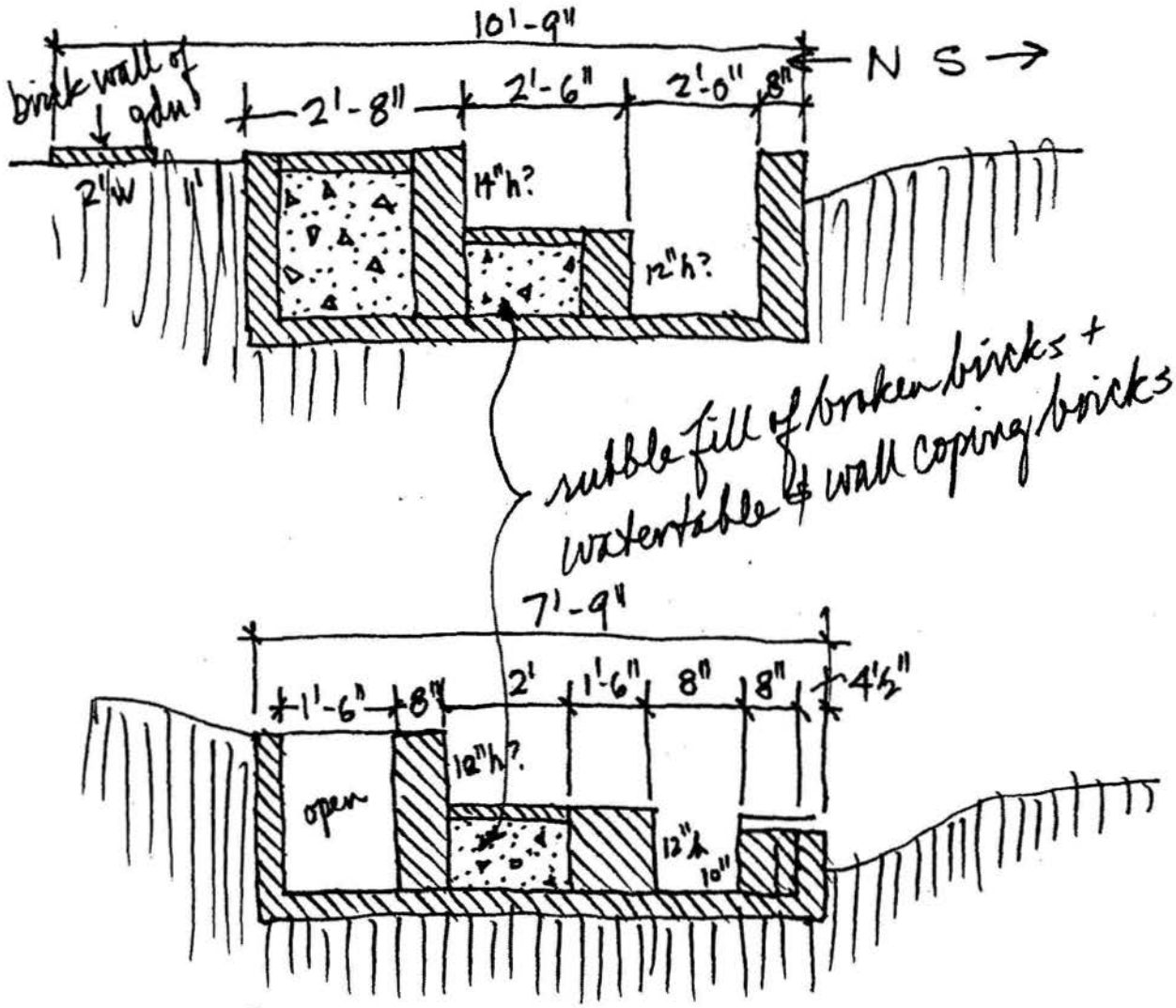
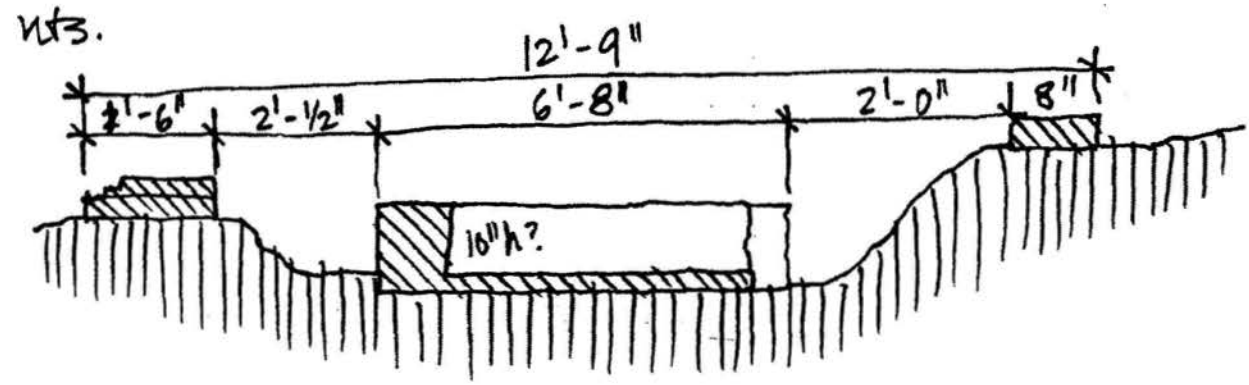


Fig. 8–3 Plan of the archaeological remains of the Governor's Palace greenhouse and adjacent probable hotbed and display houses, located to either side of it. (JDRL)



Section E-E

nts.



Section D-D

nts.

Fig. 8–4 Plan section sketches of plant display house to the east of main Palace greenhouse (as copied by the author from archaeologists' notes and field sketches by Singleton P. Morehead made at the time of the 1933 excavation).

greenhouse or orangery.[8] Therefore, these several references, taken together, point to the possibility that the Governor's Palace and Westover greenhouses were among the earliest *known* greenhouses to have been built in Virginia, if not the other colonies. Moreover, it seems that the one at the Governor's Palace may have been expanded over time, as it must have remained in continual use throughout much of the eighteenth century.

The onset of the American Revolution brought the end of the Palace's use by a succession of royal governors, and the Palace gardens were no longer cared for by full-time, professionally trained English gardeners. The Palace greenhouses probably saw a diminishing level of use during the Revolutionary War and throughout the governorships of Patrick Henry and Thomas Jefferson. These structures likely became derelict and were scavenged for their building materials in the years following 1781, when the Palace building burned down.

Greenhouse/Orangery at Green Spring

Information appearing to substantiate the existence of an early greenhouse at Green Spring during Sir William Berkeley's lifetime (the mid-1600s) means that it is quite possible that the seventeenth-century Virginia governor could have built the earliest greenhouse in English North America.[9] If this attribution and supposition are indeed correct, then the site of this apparently long-lost, Berkeley-era greenhouse at Green Spring has yet to be found and archaeologically explored. Since Berkeley had once been a member of the court of King Charles I and Queen Henrietta Maria in the 1630s[10] and had probably seen greenhouses at Wilton and at Wimbledon Houses during the court's progresses during that period, it is not unreasonable to assume that, upon taking up the governorship of Virginia, he might have also built one at Green Spring sometime during the late 1640s or 1650s.

If true, the earlier Green Spring greenhouse/orangery was probably a fairly small, simple structure. Until archaeological excavations can be made at the Green Spring site to discover if an early, Berkeley-era greenhouse actually did exist, nothing more can be said about where the earliest greenhouse might have been built in English North America.

The ruins of the probable greenhouse/orangery at Green Spring currently under examination (which is the primary object of this study) have long been supposed to be Governor Berkeley's greenhouse/orangery. However, recent partial excavations have determined they were built sometime during the second quarter of the eighteenth century, sometime during the later ownership of either Philip Ludwell II or Philip Ludwell III, more probably the latter.[11] This is very significant, since it proves rather conclusively that the structure in question was not built or ever used by Governor Berkeley, dating as it does from several decades after his death.

This all-brick structure measured overall about forty-five feet long and about fifteen feet wide, not large by some standards, but certainly adequate and consistent with Philip Miller's recommendations and with other similar publications of the eighteenth century. If its design originally followed the guidance of the period, its exterior walls stood about fifteen feet tall, with a series of triple-hung sash windows on the south elevation that perhaps were as tall as twelve feet. The fact that glassed windows faced to the south is given further credence by the recent archaeological discovery of numerous small glass fragments

[8] This compelling inventory lists "Tubbs & orange Tree & Roller for the Tubbs" and is strong documentary evidence that supports archaeological indications that an orangery once existed within the Palace gardens. See Graham Hood, *The Governor's Palace in Williamsburg: A Cultural Study* (Williamsburg, Va.: Colonial Williamsburg, 1991), 254, 292, 330 n. 37.

[9] McCartney, "History of Green Spring,"17 n. 8. Although McCartney notes that several references mention the existence of a greenhouse at Green Spring during Berkeley's lifetime, she does not specifically name or give further information about the nature of those references.

[10] Ibid., 12.

[11] Information gathered in spring 2002 during several on-site visits and interviews with Dr. Andrew S. Veech, National Park Service archaeologist for the Green Spring project.

in the ground, immediately adjacent to the south wall of this structure. Further, the location of this structure in the northeast corner of what was clearly a garden, as revealed on the 1781 area map by French military officer Jean-Nicholas Desandrouins suggests the greater probability that the structure in question most likely was an orangery. The original roof of this structure was probably solid and covered with wooden shingles over a simple hip design, a notion held by the author of this report, which is based solely on comparison with similar designs from the period.

The Green Spring greenhouse/orangery structure was built of decoratively laid brick with its glassed front facing to the south and its northern wall abutting a preexisting decorative brick garden wall that had been laid in Flemish bond. This made the north (composite) wall of this structure a double or triple thickness of brick some two feet thick, which was actually needed later to also serve as a retaining wall when earth was backfilled against the structure's north wall along its entire length in the late eighteenth or early nineteenth century (see Figs. 8–6A, B, C below). Just to the northeast of this point, a driveway went up the hill (see Fig. 8-7).



Fig. 8–5 Photo of the brick garden wall and pilaster that formerly abutted the Green Spring greenhouse/orangery (as it appeared from its north side when being excavated in the spring of 2002. This wall was already leaning and later collapsed after this photo was taken). (Photo by author)





Figs. 8–6A, B, C. Photos of the Green Spring greenhouse/orangery ruins, showing composition of the combined north wall. (CWF photos)





Fig. 8–7 Photo of old road trace as it ascends the hill just a short distance to the northeast of the greenhouse/orangery ruins. (Photo by author)

Curiously, the east and south walls are also quite substantial and thick, being about one-and-one-half bricks wide, while the structure's west wall is less so, being only one brick wide. (See Figs. 8–8, 8–9, and 8–10 below). This anomaly could indicate two separate building periods, that is, one or two rooms enclosed within what might have been a shed-roofed structure that was added later to the original building. This appendage could have been used mainly for storage for flowerpots and garden tools, but it could also have included the addition of an internal brick fireplace or firebox for heating the original portion of the structure, perhaps augmenting or replacing an earlier freestanding iron Dutch stove.[11] (See Fig. 8–11.)



Fig. 8–8 Photo showing the ruins of the greenhouse/orangery walls at the northeast corner of the building as they were photographed during excavations in the spring of 2002. (Photo by author)



Fig. 8–9 Photo of the excavated southeast corner of the greenhouse/orangery wall, showing how substantial the walls were on the east and south elevations of the former structure. (Photo by author)



Fig. 8–10 Photo of the excavated southeast corner of the Green Spring greenhouse wall, as seen from another angle. (Photo by author)

[11] See Figs. 8–14A and B for the author's conjectural elevations of the possible original appearances of the front (south) elevation of the Green Spring structure and Fig. 8–15 for a rough plan sketch of this feature.



Fig. 8–11 Photo showing the northwest corner of the greenhouse/orangery with the remains of the narrow west wall at the lower left of the photo and a good view of the brick pavers on the floor of the apparently added room on the western side of the structure.



Fig. 8–12 Photo showing the southwest corner and thinner walls of the Green Spring greenhouse/orangery with the square, hewn sandstone paver laid over an earlier brick floor beneath. Why this was done has not yet been determined. (Photo by author)

At present, the flooring of the structure is not fully understood and deserves further study. Nevertheless, it is now clear that the flooring consisted of a composite of materials, perhaps indicating successive building phases. Part of the floor is composed of brick and part is composed of hewn sandstone pavers similar to those documented by Dr. Louis Caywood in Area H of the old manor house.

Caywood, who first conducted archaeological excavations of this ruined structure in 1954–55 (when more of the structure's brick masonry walls were still standing), stated in the report of his excavation's findings that the structure appeared to have once had an interior wall with pointed mortar joints that subdivided the interior of the structure into at least one long room and a smaller one at the building's western end. The latter room was apparently accessed by a doorway opening located at the structure's extreme west end elevation. As noted before, this room could have served as a storage room for garden tools and flowerpots, and there might have also once been some sort of stove or firebox in the northwestern corner. Archaeological excavations have revealed that the interior



Fig. 8–13A May 1897 photograph of the then-standing portions of the probable Green Spring greenhouse/orangery built by one of the Ludwells. Note the remains of the original plaster surface treatment on the brick wall to the left of the doorway: another visual indicator of this structure's probable original use as a greenhouse/orangery.



Fig. 8–13B Photo taken circa 1996–7 showing what then remained of the leaning Green Spring greenhouse/orangery ruins. This brickwork has since fallen and is no longer intact. (CWF photo)

walls of the entire structure were plastered over the brick masonry. Fragments of this plaster also appear in an old photograph taken in May 1897 (see Fig. 8–13A), which showed what was then still-standing of the ruins of this brick masonry structure. Compare this photo to what was left standing just one hundred years later, in 1997 (Fig. 8–13B). This one remaining wall, sadly, finally collapsed under its own weight in 2002. Moreover, Caywood indicated that he had unearthed a nearly square (twenty-seven-and-one-half inches wide by thirty-one inches long by three inches thick) cast-iron plate on the floor of the ruined structure (it was not noted specifically *where* within the structure's ruins this feature was found), ostensibly where a freestanding, cast-iron Dutch stove for heating the interior might have once been located. This plate was apparently quite substantial, weighing approximately 350 pounds! From its size, Caywood speculated that the furnace or stove that stood on this plate must have been fairly large, but he erroneously assumed the building to have been Sir William Berkeley's greenhouse, which has now been proven not to have been built that early.[1]

Based on a review of all of the available evidence: 1. geographical site placement with proximity to what was clearly a large fenced garden; 2. the overall size and internal arrangement of the structure; 3. the physical evidence still remaining there on the site as a ruin; 4. the archaeological findings of two separate excavations conducted forty-five years apart; and 5. a comparative analysis with the available historical documentation as well as the few other surviving greenhouses in the Chesapeake region, **this author believes that the Green Spring structure was built as and, indeed, did function as a greenhouse and/or orangery.**

Calvert House Greenhouse/Orangery

Another early but small greenhouse/orangery was built about 1730 at Calvert House, located on a small town lot in Annapolis, Maryland. This structure was significant because of its early date, coupled with the fact that it had an earthen floor. It was also fairly sophisticated because it employed a hypocaust heating system. This structure was not large, being only about ten feet square. Its south wall was one-and-one-half feet thick,

[1] Caywood, *Excavations at Green Spring*, 14.

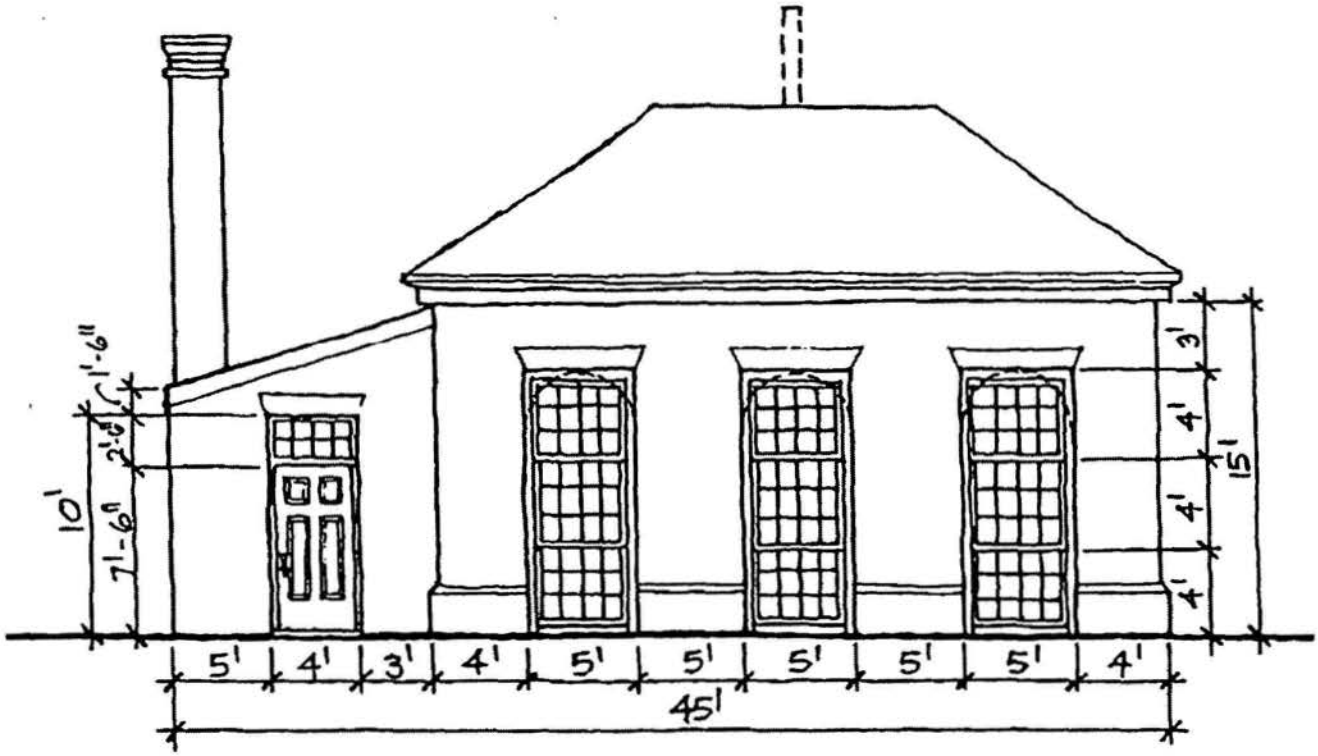


Fig. 8–14A Author's conjectural sketch of the front elevation of the Ludwell-era greenhouse/orangery at Green Spring.

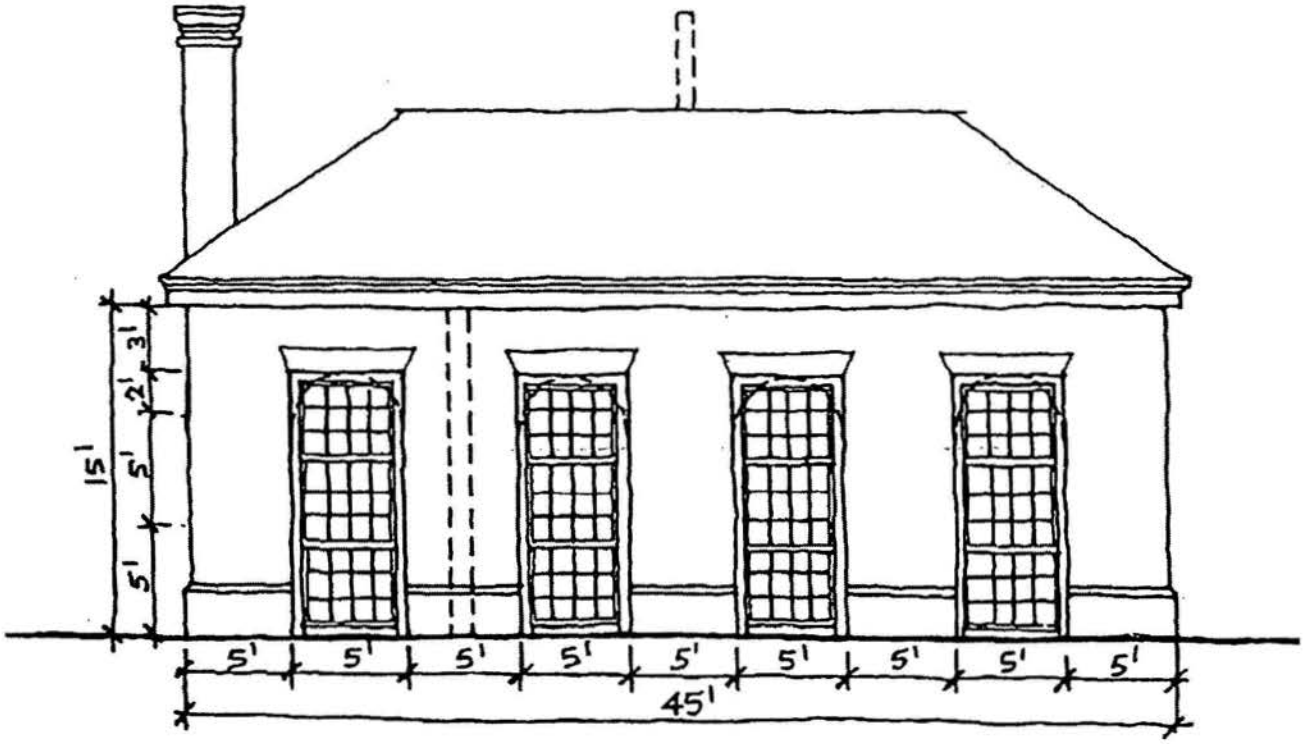


Fig. 8–14B Author's alternative idea of the front elevation of the Ludwell-era greenhouse/orangery at Green Spring.

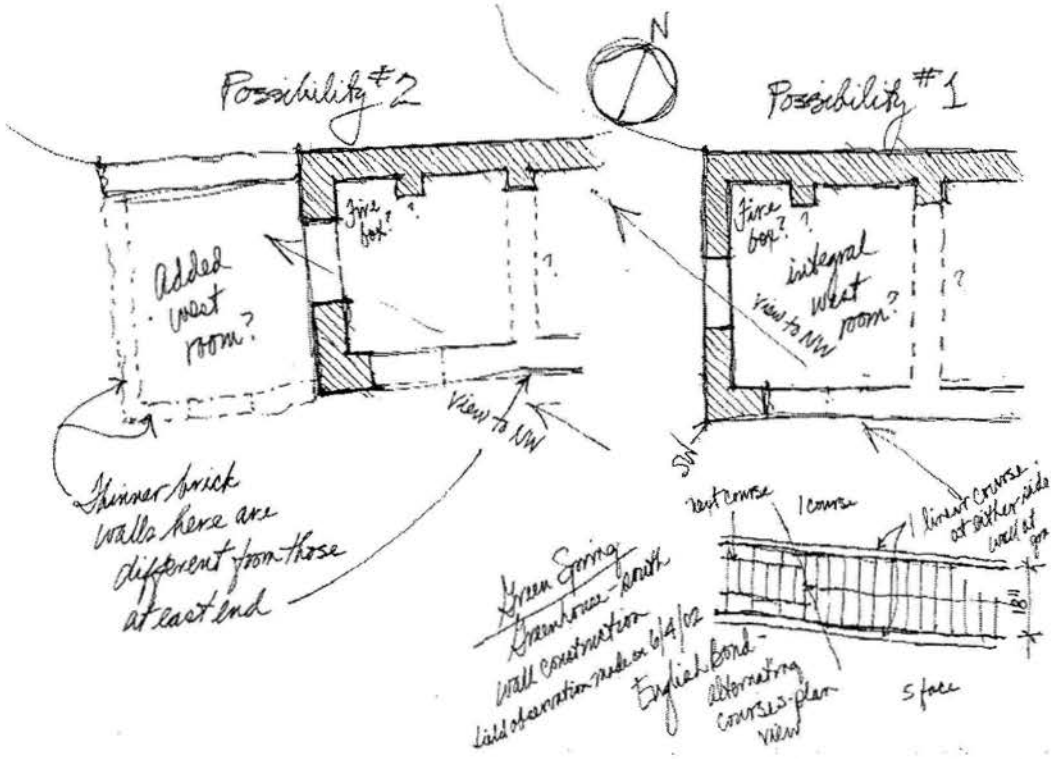


Fig. 8–15 Author's plan sketch of the probable Green Spring greenhouse/orangery ruins showing two possibilities for its original construction (based on a partial reading of the existing archaeological features and based upon the camera angle of the 1897 photo shown in Fig. 8–13A).

large enough to have supported a large superstructure of some type. The other walls varied from eight to fourteen inches thick.[14] However, very little else is known about this structure or what it actually looked like because it was apparently dismantled circa 1765 when a south addition was built onto the house. Further damage was apparently done to the remains of the structure when a cellar was dug in the early twentieth century or when a foundation pit was dug in the 1970s that caused a partial collapse of the building. Despite the loss of original architectural fabric, the archaeologists concluded that the Calvert greenhouse structure must have been far simpler and less visually impressive than later greenhouses with their extensive facades of glass.[15]

The hypocaust, or dry stove, of the Calvert greenhouse/orangery is quite similar to an illustration in Philip Miller's *The Gardener's Dictionary* of 1731, which shows a small shed appendage against a wall containing the furnace or stove firebox that was placed in the ground. In comparison to the period descriptions of English greenhouses, the Calvert greenhouse/orangery is thought to have been a small building of wood and brick, perhaps twelve feet tall with three-foot high and five-foot wide arched windows facing on its south side, which is where the thickest wall was located. Two small postholes and a rotted sill beam were the remains of the wooden elements, and the wall placement was well in accordance with Miller's recommendations for the location of the flue.[16] While the Calvert greenhouse/orangery was certainly not very large, its mere presence in the mid-eighteenth century as an appendage to the town house and its garden made a very clear statement to passersby about the owner's pretensions, just as it was intended to.[17]

[14] Yentsch, "Calvert Orangery," 173.
[15] Ibid., 177.
[16] Ibid., 178.
[17] Ibid., 183.

The Drayton Hall Greenhouse/Orangery in South Carolina

Another fairly early reference to greenhouses appeared in the *South Carolina Gazette* in 1748, and, more interestingly, it specifically mentions two greenhouses on a Charleston property then being offered for sale. The advertisement described "a large garden, with *two* neat Green Houses for sheltering exotic Fruit-Trees, and Grape-Vines."[18] Another greenhouse from approximately the same geographical area and time period was built at Drayton Hall, located about ten miles from Charleston, South Carolina, along the Ashley River.

Today, the Drayton Hall greenhouse/orangery is an archaeological ruin, but through excavations conducted in 1989, as well as a surviving 1840s sketch of the building that shows a plaque that was formerly mounted on the front wall, it was determined that this structure was built either in 1741 or in 1747 by John Drayton (who built the mansion house in 1738),[19] making it an early example. Also revealed was the fact that this structure was thirty-two-and-one-half feet long by seventeen-and-one-half feet wide, built of brick, with an earthen floor.

From the evidence of the surviving sketch and proportional measurements, it was determined that the tops of the windows were about fourteen-and-one-half feet from the interior floor, which was sunken about two feet below the exterior finished grade. The windows on the south wall had a large quantity of hand-blown or crown glass in them, judging from the numerous glass fragments found in the vicinity, agreeing with the assumed function of the structure as a greenhouse.[20]

No evidence, however, of any type of permanent heating system was found. Given its more temperate, southerly location compared to the middle Atlantic colonies, greenhouses located in South Carolina probably would not have needed such features, although smudge pots or charcoal braziers might have occasionally been used to raise the temperature of the interior of the structure during infrequent cold weather or deep frosts. The roofing slate found outside the structure indicated what the roof material had been. That none was found inside the structure clearly indicates that the roof did not collapse into the building through neglect, but was almost certainly dismantled and used elsewhere on the plantation.[21] More research needs to be conducted to determine specific information about this original structure and its uses, but the historical information that has been collected and the archaeological examinations that have been completed on the site, thus far, were comprehensive and impressive.

Mount Airy Greenhouse/Orangery

Another apparently once-grand greenhouse was erected at Mount Airy, in Richmond County, on Virginia's Northern Neck. Some confusion has existed over exactly when this structure might have been built. A couple of documentary sources state that it was constructed sometime between 1748 and 1758 by Col. John Tayloe II. Other, more reliable resources indicate that his son, John Tayloe III, built this structure between 1798 and 1800.[22] John Tayloe II had inherited this large Rappahannock River plantation in 1744 from his father. In the years immediately thereafter, he decided to move from a small manor house near the river and build a larger and far grander stone Palladian mansion

[18] Carl R. Lounsbury, ed., with Vanessa E. Patrick, *An Illustrated Glossary of Early Southern Architecture and Landscape* (New York: Oxford University Press, 1994), 167. (Author's emphasis.)

[19] Barbara Orsolits, "Drayton Hall and the Michaux Connection," *Magnolia: Bulletin of the Southern Garden History Society*, 18, no. 2 (Spring 2003): 1; see p. 5 for a circa 1840s sketch of the orangery.

[20] Thomas R. Wheaton Jr., *Drayton Hall: Archaeological Testing of the Orangerie*, New South Technical Report 11 (Stone Mountain, Ga.: New South Associates for the National Trust for Historic Preservation, 1989), 30–31.

[21] Ibid.

[22] See n. 62 below for specific documentary references regarding the probable building date for this structure.

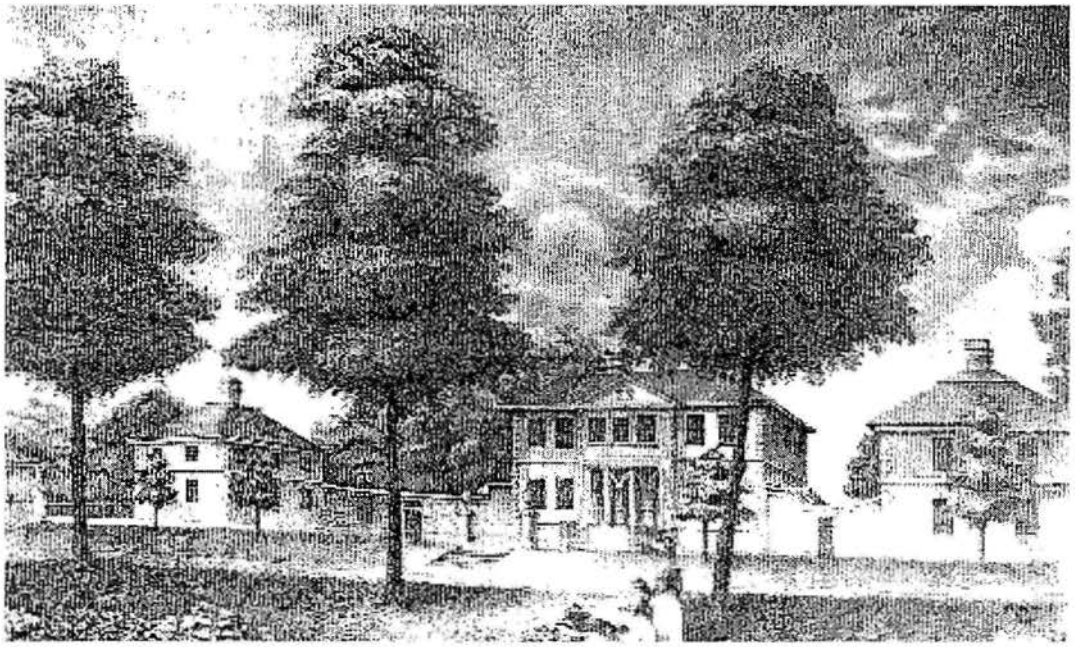


Fig. 8–16 This nineteenth-century engraving shows the grand and imposing facade that has long greeted visitors to Mount Airy on Virginia's Northern Neck.

house on a higher bluff or ridge that was located much farther back from the river (see Fig. 8–16). The imposing house took a full decade to complete and included an assemblage of equally fine adjacent stone outbuildings, along with a very large ornate garden, complete with such refinements as earthen terraces and decorative statuary mounted on elegant stone pedestals.

On the right edge of the garden, and in line with the central bay on the northwestern side of the house, was eventually built the very large and impressive thirty-foot deep/wide by fifty-foot long greenhouse (see Figs. 8–17 through 8–24). With walls built of brick laid in English bond and standing some eighteen feet high, Tayloe's sophisticated and elaborate greenhouse had five large arched windows on its front facade, flanked on either side by two smaller doors that were also capped with fanlight-type windows. These two doorways entered into two smaller "Hot-houses," one described as "pt [part] top covered with glass" and the other as having one wall of glass and the other of brick (see Figs. 8–16A and B). The central portion or greenhouse had "walls of brick covered with wood," and included hypocaust heating under the floor.[23] The ruins indicate that at least one of the smaller side rooms of this structure had whitewashed plaster covering its walls as well (see Figs. 8–20 and 8–21).

The two ancillary so-called hot-house rooms in the Mount Airy greenhouse probably functioned as dry or bark stoves, since they seem to conceptually follow Philip Miller's advice to lay out a greenhouse with rooms or wings to either side of the main greenhouse (similar, in fact, to the Governor's Palace greenhouse/orangery) that would enable an owner to provide three different protected indoor environments. If this was also the case here, it would help explain the reason for the larger size of this building, as well as giving us more of an insight as to how sophisticated this greenhouse building must have been in its early nineteenth-century heyday.[24]

[23] Mutual Assurance Society of Virginia Insurance Policy for Mount Airy, 1803, microfilm, Library of Virginia, Richmond, as cited in Woods and Warren, *Glass Houses*, 82.

[24] Family papers list the building's original cost in 1798 as £150. Tayloe Family Papers, VHS.

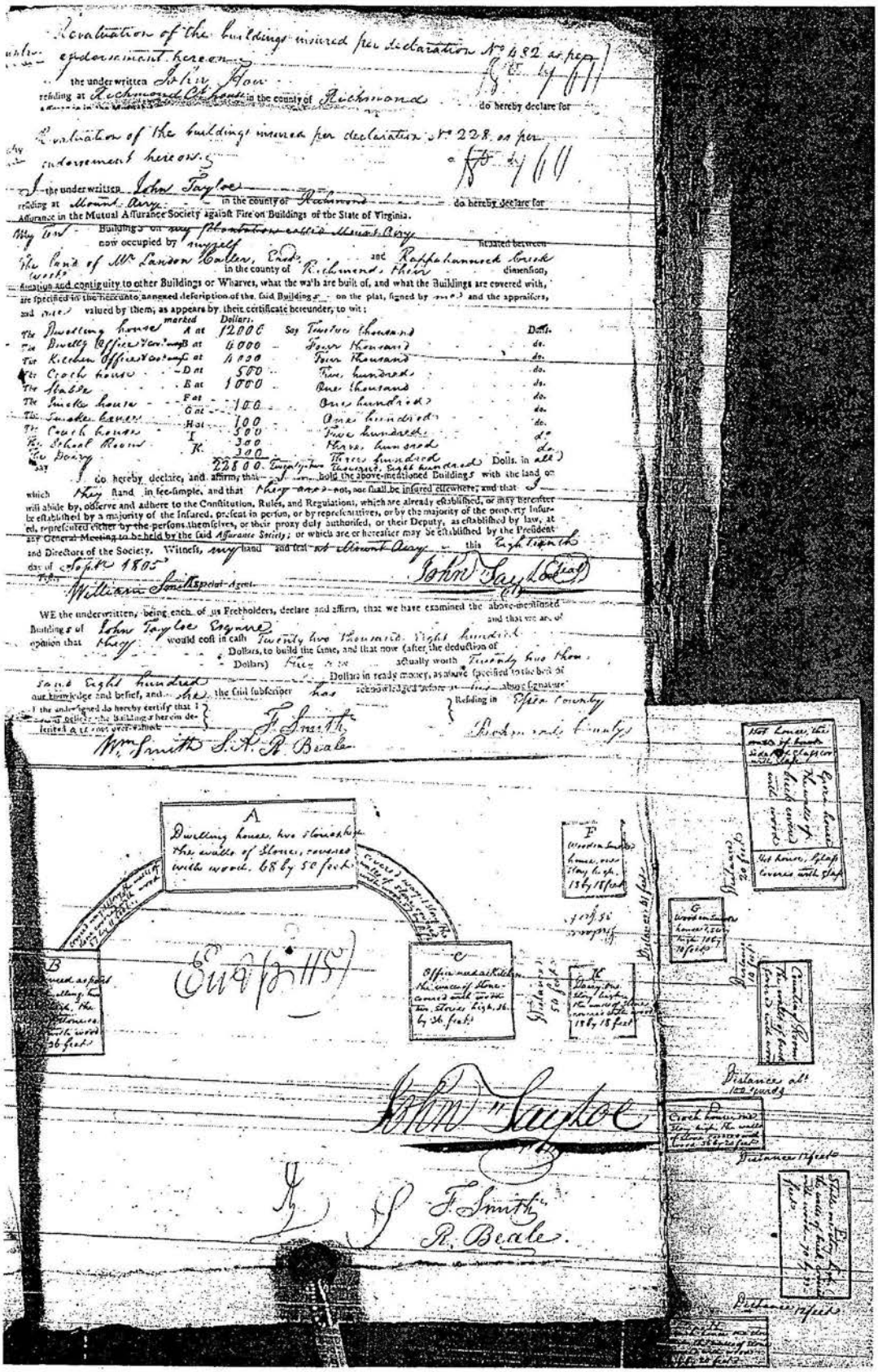


Fig. 8–16A The 1805 Mutual Assurance Society of Virginia insurance policy for Mount Airy has an unusually complete drawing showing the placement of the outbuildings adjacent to the main house. The greenhouse appears at the top right corner of the paper fold showing the layout of outbuildings.



Fig. 8–16B Enlargement of 1805 Mutual Assurance Society insurance policy showing the details of the greenhouse.



Fig. 8–17 April 2002 photo taken by author of Mt. Airy greenhouse ruins (front view), now virtually covered by vines and overgrown boxwood in the foreground.



Fig. 8–18 April 2002 photo taken by author of Mt. Airy greenhouse ruins (rear view).



Fig. 8–19 April 2002 photo taken by author of Mt. Airy greenhouse ruins (window casing fragments still remaining).



Fig. 8–20 April 2002 photo taken by author of Mt. Airy greenhouse ruins (doorsill and brickwork detail). Note that plaster remains on the wall to the right.

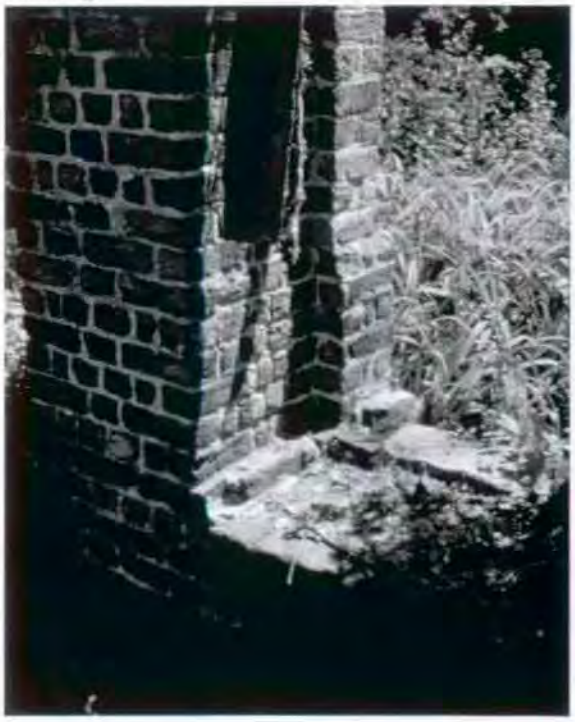


Fig. 8–21 April 2002 photo taken by author of Mt. Airy greenhouse ruins (view of former interior showing remains of plaster on brick walls).



Fig. 8–22 The one remaining brick wall of the Mount Airy greenhouse lies only partially hidden in this 1931 photo by Arthur Shurcliff. (CWF photo)

Fig. 8–23 April 2002 photo taken by author of Mt. Airy greenhouse ruins (showing doorsill and casing fragments still remaining).



While no eighteenth-century references or descriptions seem to have survived about this grand structure, two mentions of it that were made during the nineteenth century are worth repeating here. English diplomat Nicholas St. John Baker visited Mount Airy in 1827 and noted its "very large conservatory with orange and lemon trees put out upon the grass." An 1824 reference, found in the biography of Thomas Dabney of nearby Gloucester County, mentions "a small dish of Antwerp raspberries sent by Mrs. Tayloe of Mount Airy in February. They came from her hot house and were set before General Lafayette."[23]

Surviving records indicate that, during antebellum days, pineapples, grapefruits, and tropical berries were also grown in the Mount Airy greenhouse. The greenhouse building stood until sometime after the Civil War, when it was either dismantled or destroyed, and most of its bricks

[23] Woods and Warren, *Glass Houses*, 82. The references quoted were also cited by Edith Tunis Sale in James River Garden Club, *Historic Gardens of Virginia* (1923; revised edition, Richmond, Va.: William Byrd Press, 1930), 182–183.

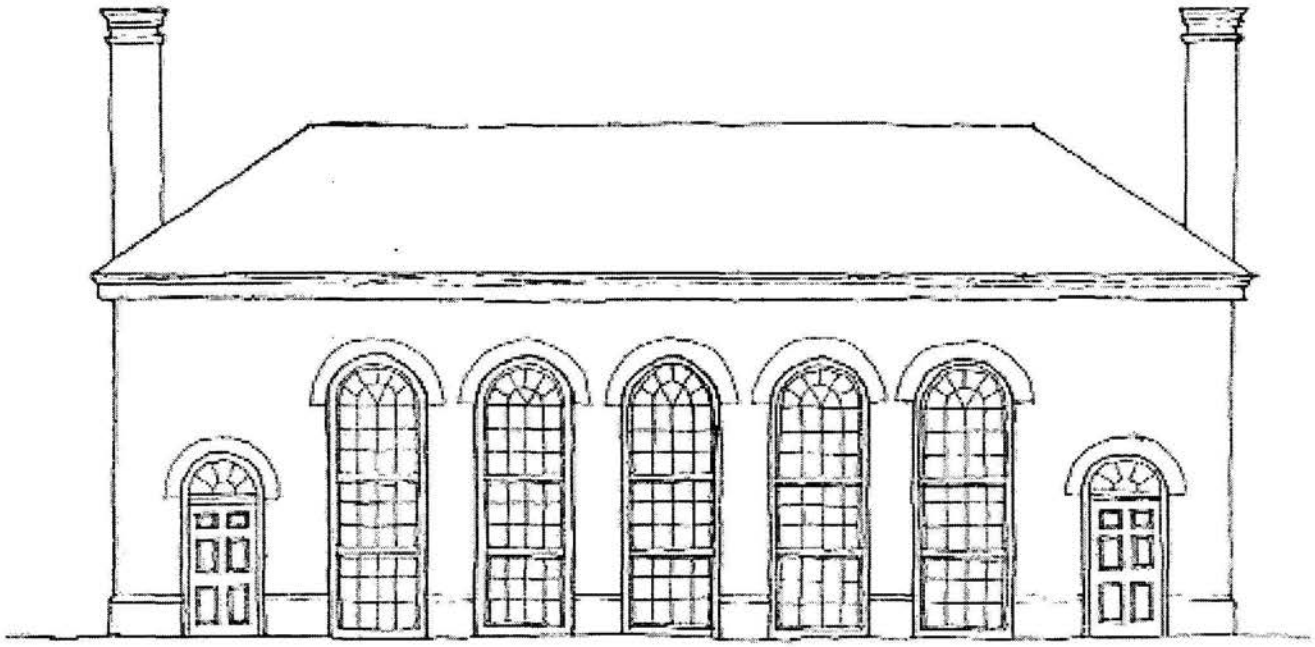


Fig. 8–24 Author's conjectural sketch of Mount Airy greenhouse front elevation.

were used to build tenant houses on the surrounding farms.[26] Today, the slowly crumbling southeast-facing front wall remains as the only standing portion of the ruins of what had once been among the colonial Chesapeake region's most beautiful, elaborate, and quite technically sophisticated orangeries. No archaeological investigation of this structure has ever been done, and the building's footprint is fully covered over.

Mount Clare Orangery and Greenhouse

Another site with important and influential horticultural buildings was Mount Clare, where a separate greenhouse *and* orangery were built by Charles Carroll the Barrister (1723–83).[27] Mount Clare, Carroll's summer residence on Maryland's Patapsco River, was a carefully balanced and well-designed plantation that was completed about 1760, and its terraced gardens of four "falls" and most of the outbuildings are thought to have dated from around the same time. Mount Clare's grounds were among the finest in the colonial Chesapeake, with mathematically precise terraces falling away from the house, with the kitchen or vegetable gardens and orchards balancing each other to each side of the terraced lawns, and with bowling green and flower gardens on each of the terrace levels.[28] This, indeed, was a site where gardening was elevated to its highest form as an art.

The orangery structure built about that time was some twenty-eight feet square, and was placed to one side of the mansion house on the top terrace. It consisted of the orangery room itself on the south side and a workroom and gardener's quarters on the northern side of the building. The orangery had heating flues in the center wall and floors all fed by a central fireplace that vented up through the center of the pyramidally hipped roof.[29] On the opposite side of the house was a twenty-eight-foot-square laundry

[26] Ibid.
[27] Trostel, *Mount Clare*, 53.
[28] Ibid., 58, 77.
[29] Ibid., 77. See also Trostel, "Maryland Orangeries," 5.

to serve as a visual balance to the orangery. All of these buildings were linked together by a series of brick walls stretching some 360 feet to screen views of the more utilitarian areas behind them, forming what must have been a very impressive, unified whole.[30]

Beyond the orangery, and located farther from the house to one side of the terraced gardens, was the greenhouse, which was probably built a few years later, between 1775 and 1790. That structure measured twenty-four feet wide/deep and was thirty-nine feet long. While the orangery was no doubt used exclusively for the keeping of citrus trees, the greenhouse must have been used for the propagation and care of other tender plants.[31] From a social history standpoint, one interesting feature about the Mount Carroll orangery is that surviving documentation suggests that Margaret Tilghman Carroll (1742–1817) was directly and personally involved in raising citrus trees in her orangery and was apparently noted among her social class for her horticultural skills.[32] In fact, while sitting for her portrait, painted by Charles Willson Peale in 1771, she held a spray of leaves from an orange tree in her right hand.[33] It is also noteworthy that a 1770 visitor to Mount Clare mentioned that the owner, Charles Carroll, "is now building a Pinery where the Gardr expects to raise about 100 Pine Apples a Year. He expect to Ripen some next Sumer."[34] That same visitor also took apparent pleasure in viewing and commenting on the "Green House with a good many Orange & Lemon Trees just ready to bear."[35]

Mrs. Carroll's apparently considerable talents in gardening, and especially in raising citrus trees, was also recognized by no less famous an American than George Washington who, in 1784, sought her advice and expertise in building his own greenhouse/orangery, which was just then in its planning stage.

Mount Vernon Greenhouse/Orangery

As a plantation owner and statesman, George Washington was not only conscious of his station in society, but apparently also desired to project a positive image of himself as a gentleman planter and sophisticate by building and maintaining his own greenhouse at Mount Vernon, his plantation in Fairfax County, Virginia. A surviving memorandum written in his own hand illustrates that his initial idea for such a structure was for a square greenhouse with long narrow slave quarters attached at either side. Two more undated sketches by Washington indicate that he must have changed his mind about the proposed building's form, the latter designs being more rectangular in their configuration.[36] Washington had apparently only just started the initial work on the structure when, in August 1784, Col. Tench Tilghman, a former military secretary and aide-de-camp to General Washington, and the brother of Margaret Tilghman Carroll of Mount Clare, received the following letter from his former commander-in-chief:

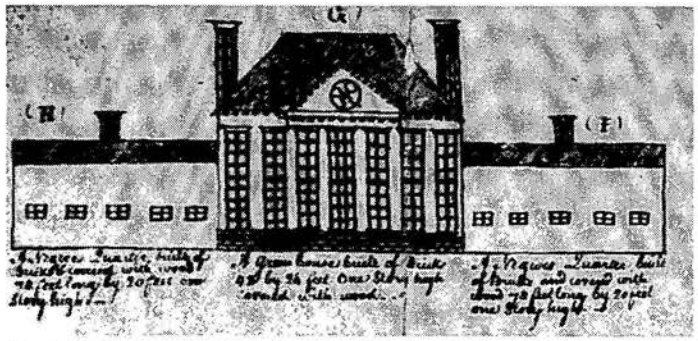


Fig. 8–25 Original sketched elevation of Washington's greenhouse/orangery.

[30] Trostel, "Maryland Orangeries," 3.
[31] Ibid.
[32] Ibid., 3–4; Barbara Wells Sarudy, *Gardens and Gardening in the Chesapeake, 1700–1805* (Baltimore: Johns Hopkins, 1998), 48.
[33] Trostel, *Mount Clare*, 52.
[34] Lounsbury, *Illustrated Glossary*, 275. A Pinery was a heated stove house specifically used for growing pineapples. Given Mrs. Carroll's keen gardening interests, it is not surprising that she had one.
[35] Ibid., 167; see also Woods and Warren, *Glass Houses*, 83. The original reference was taken from *VMHB*, Vol. 45.
[36] Woods and Warren, *Glass Houses*, 84.

Mount Vernon, August 11, 1784

Dear Sir: I shall essay the finishing of my green house this fall, but find that neither myself, nor any person about me is so well skilled in the internal construction as to proceed without a probability at least of running into errors.

Shall I for this reason, ask the favor of you to give me a short description of the Green-House at Mrs. Carrolls? I am persuaded, now that I planned mine upon too contracted a scale. My house is (of Brick) 40 feet by 24, in the outer dimensions, and half the width disposed of for two rooms, back of the part designed for the green house; leaving the latter in the clear not more than about 37 by 10. As there is no cover on the walls yet, I can raise them to any height, the information I wish to obtain is,

The dimensions of Mrs. Carroll's Green-house. what kind of floor is to it. how high from that floor to the bottom of the window frame, what height the windows are bottom to top, how high from the top to the ceiling of the house, whether the ceiling is flat, or of what kind. whether the heat is conveyed by flues, and a grate. whether those flues run all around the House, the size of them without, and in the clear. Whether they join the wall, or are separate and distinct from it, if the latter, how far they are apart, with any suggestions you may conceive necessary. I should be glad to hear from you soon on this subject, as I shall leave home on or before the first of next month, and wish to give particular directions to the workmen before I go. I am, etc.[37]

The letter from Tench Tilghman sent in reply to George Washington's letter was dated August 18, 1784, and included the following written description as well as a sketch that was sent on Mrs. Carroll's behalf:

Inclosed you will find answers to your Several Queries respecting the Green House including the order in which they were put, and that you may better understand the Construction of Mrs Carroll's, I have made a rough Plan of the Manner of conducting the Flues—Your Floor being 40 feet long Mrs Carroll recommends two Flues to run up the Back Wall, because you may then increase the number of Flues which run under the Floor, and which she looks upon as essential—The trees are by that means kept warm at the Roots—She does not seem to think there is any occasion for the Heat to be conveyed all around the Walls by means of small Vacancies left in them She has always found the Flues mark'd in the plan sufficient for her House—

She recommends it to you to have the upper parts of your Window sashes to pull down, as well as the lower ones to rise—you then Give Air to the tops of your Trees—

Your Ceiling she thinks ought to be Arched and at least 15 feet high—She has found the lowness of hers which is but 12 very inconvenient—

Smooth Stucco she thinks preferable to common Plaster because drier—

The Door of the House to be as large as you can conveniently make it—otherwise when the Trees come to any size, the limbs are broken and the Fruit torn off by moving in and out. It is the Custom in many Green Houses to set the Boxes upon Benches—But Mrs Carroll says they do better upon the Floor, because they then receive the Heat from the Flues below to more advantage—I recollect nothing more—I hope your Excellency will understand this imperfect description of a matter which I do not know much about myself.[38]

[37] Trostel, *Mount Clare*, 77.
[38] Ibid.

These two letters and the accompanying sketch are critically important documents of two very famous early greenhouses/orangeries in America, and they provide historians with insight about just how important such structures could be and often were to their owners and to the plantations where they were built. Moreover, this correspondence links two important eighteenth-century Chesapeake greenhouses/orangeries. Neither survived, but the one at Mount Vernon was reconstructed in 1952 on the original foundations, using Washington's original plans, notes, and this correspondence.

Washington altered his construction plans for the greenhouse at Mount Vernon to follow the Carroll/Tilghman recommendations, but work did not begin in earnest on the project until the winter of 1787.[39] (See Fig. 8–25.) He subsequently hired a European-trained professional gardener to work at Mount Vernon and to complete the outfitting of his greenhouse to receive some trees sent as a gift of friendship and respect from Mrs. Carroll.[40] The work of building the greenhouse at Mount Vernon took much longer than was first expected. When it was finally completed in September or October 1789, Mrs. Carroll sent the president "five boxes and twenty small pots of trees, and young plants; among which were two Shaddocks—one Lemon and one Orange, of from three to five feet in length; Nine small orange trees; Nine Lemon; One fine balm sented [*sic*] Shrub; two Potts [*sic*] of Alloes [*sic*], and some tufts of knotted Marjoram" from the Mount Clare orangery.[41] The Mount Vernon greenhouse survived Washington's lifetime and, in 1803, the building was valued for insurance purposes at $800 (compared to $15,000 for the main house). In 1805, that greenhouse's value had apparently risen to $1,200. The structure remained in use until it accidentally burned down in a fire that probably started in a fireplace or firebox on an extremely cold December morning in 1835.

In 1951–52, early archaeologists and historic preservation professionals, using both a considerable amount of archaeological evidence and unusually complete documentary sources, completed enough research to reconstruct Washington's greenhouse on the foundations of the original structure (see Figs. 8–26 through 8–32). It has been used for, and has been interpreted as, Washington's greenhouse/orangery at the Mount Vernon historic site for more than a half-century.[42]



Fig. 8–26 Circa 1951–52 photo of Washington's reconstructed greenhouse/orangery while it was still under construction. (Courtesy of Dean Norton, Mt. Vernon horticulturalist)

[39] Woods and Warren, *Glass Houses*, 84.
[40] Trostel, *Mount Clare*, 78.
[41] Trostel, "Maryland Orangeries," 4.
[42] Woods and Warren, *Glass Houses*, 84.



Fig. 8–27 View of the south facade of Washington's reconstructed greenhouse/orangery. (Courtesy of Dean Norton, Mt. Vernon horticulturalist)



Fig. 8–28 Detail of the triple-sash windows—Mt. Vernon greenhouse/orangery. (Courtesy of Dean Norton, Mt. Vernon horticulturalist)



Fig. 8–29 Interior view of reconstructed Mt. Vernon greenhouse/orangery. (Courtesy of Dean Norton, Mt. Vernon horticulturalist)



Fig. 8–30 Detail view of the central window of the Mt. Vernon greenhouse/orangery. (Courtesy of Dean Norton, Mt. Vernon horticulturalist)



Fig. 8–32 Mt. Vernon's reconstructed greenhouse/orangery as seen today looking down a boxwood-lined garden path. (Courtesy of Dean Norton, Mt. Vernon horticulturalist)



Fig. 8–31 Aerial view of Mt. Vernon's reconstructed greenhouse/orangery. (Courtesy of Dean Norton, Mt. Vernon horticulturalist)



Fig. 8–33 Wye House greenhouse/orangery—front elevation. (Compare this photo with the elevation drawing shown in Fig. 8–42.)



Fig. 8–35 Wye House greenhouse/orangery—double-hung sash window detail.



Fig. 8–34 Wye House greenhouse/orangery—detail of wing and rustication finish of lower walls.



Fig. 8–36 Wye House greenhouse/orangery—interior view.

Wye House Greenhouse/Orangery

Among all of the known greenhouses/orangeries that once stood in the eighteenth century (and the only original example that remains standing today), the one at Wye House in Talbot County, Maryland, had few equals in terms of its size, sophistication, and architectural elegance (see Figs. 8–33 through 8–42). Standing on an axis with, but at some distance from, the surviving manor house that was built between 1785 and 1792, this structure was sited in what were an elegant bowling green and geometric gardens that graced the property

Fig. 8–37 Wye House greenhouse/orangery—angled view of the front facade.



during the colonial and antebellum periods. The original Wye house is gone, but its office wing still stands just beyond the garden.

Built by the wealthy and influential Lloyd family, the original central portion of the orangery structure was built sometime between 1750 and 1770 and measured twenty feet wide/deep by thirty-three feet long. This portion of the structure is two stories tall and once had a large billiard table placed in the game room (now vacant and unused) that is located above the orangery.[43] The central portion of the orangery below has four thirteen-foot tall by slightly over five-foot wide rectangular glass windows that face south and stretch from floor to ceiling (see Fig. 8–36). This portion of the structure had two fireboxes and chimneys, and a hypocaust-type heating system (see Figs. 8–39 and 8–41). This portion of the building's exterior is articulated with white stucco over the brick face, with faux-stone rustication and quoins at the corners and around the lower windows (see Fig. 8–34).[44]



Fig. 8–38 Wye House greenhouse/orangery—oblique rear view showing shed additions on the back of the structure.



Fig. 8–39 Wye House greenhouse/orangery—interior photo of one of the large fireplaces used to heat the central room and to provide heat to the underfloor heating (hypocaust) system.



Fig. 8–40 Wye House greenhouse/orangery interior view looking from the central portion of the structure into one of the adjacent, later wing additions, with its gardener's access doorway.



Fig. 8–41 Wye House greenhouse/orangery photo showing the detail of one of the several heating duct openings in the floor, with a tile cover that was apparently used to regulate the air flow.

[43] Trostel, "Maryland Orangeries," 3.

[44] See Kenneth Clark's 1930 scaled plan and elevation drawing of the Wye orangery in H. Chandlee Foreman, *Old Buildings, Gardens, and Furniture in Tidewater Maryland* (Cambridge, Md.: Tidewater Publishers, 1967).

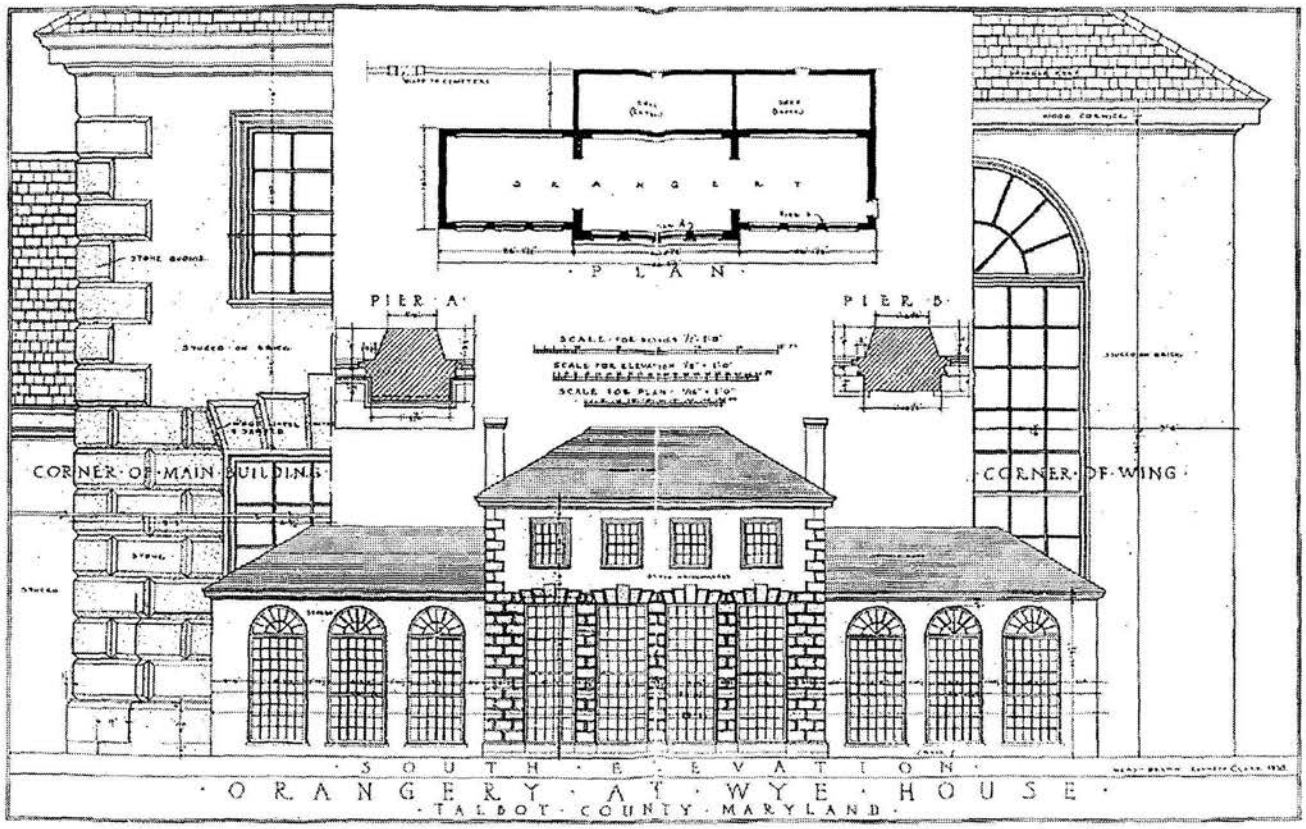


Fig. 8–42 Wye House greenhouse/orangery—architectural drawing showing the front elevation and floor plan, along with a selection of details. (Drawing taken from the 1930s White Pine series of architectural drawings that are now in the Library of Congress collections.)

In 1779, two one-story wing extensions were added to either end of the structure, each measuring about nine feet wide/deep by nineteen feet long, and the heating ducts were extended into both of the new wings to provide heat to each. Each wing included three tall windows with fanlight tops, each being five feet, seven inches wide and thirteen feet tall (see Figs. 8–35, 8–37, and 8–40). The exterior of the wings was articulated in plain white stucco over brick. The 1779 expansion also included a workroom and the gardener's quarters, which were also added on the back or north wall, making the entire structure slightly over eighty-five feet in total length across its south front (see Fig. 8–38).[45]

Eyre Hall Greenhouse/Orangery

In Northampton County on Virginia's Eastern Shore stands Eyre Hall, a very old plantation/farm that has remained in the same family for many generations. Among the significant collection of old outbuildings that surround the rambling, often-expanded mansion house are the ruins of what was once a very substantial, freestanding greenhouse/orangery and what were two separate gardeners' rooms, all under the same roof (see Figs. 8–43, 8–44, and 8–45). From its overall form and the construction details that can still be seen, this substantially built structure differs slightly from the others that are known or are to be seen in the Chesapeake today. It was probably built after the colonial

[45] Trostel, "Maryland Orangeries," 3.

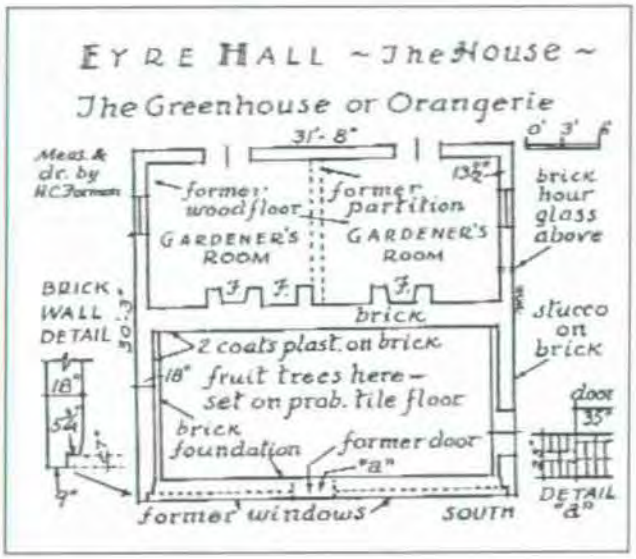


Fig. 8–43 Eyre Hall greenhouse/orangery floor plan drawing by H. C. Forman, showing original layout of rooms.

period, in about 1810–15.* The Eyre Hall greenhouse/orangery is also noteworthy in that it had a rather elaborate three-firebox heating system. The fireplaces were located in and fed from the two gardener's rooms (that were once separated by a seven-inch-thick frame partition wall that is now gone), and the heat was transmitted via flues in the eighteen-inch-thick, hollow walls to the north, west, and east portion of the building containing the greenhouse/orangery (see Figs. 8–46, 8–47, and 8–48). While the sturdy and well-built (thirteen-and-one-half inches thick on the northern half of the building) masonry walls of this large (thirty-foot, three inch deep by thirty-one foot, eight inch long) structure are still standing, the wooden roof, floors, doors, glass windows, and most of the surrounding door and window frames are all gone and apparently have been for some generations (see Figs. 8–52, 8–54, and 8–55).

Fig. 8–44 Eyre Hall house and orangery ruins looking east. (Photo by author)



* This assumed construction date is based on its relatively sophisticated construction as well as the fact that a site drawing on an 1805 Mutual Assurance Society of Virginia insurance policy for the property does not show this structure. (Library of Virginia microfilm collection).



Fig. 8–45 South elevation of the Eyre Hall orangery ruins (south wall glass and roof are missing). (All photos for this property were taken by the author)

Fig. 8–46 Eyre Hall orangery firebox chimney (one of two) used to heat the building.



Fig. 8–47 Eyre Hall orangery showing double firebox openings and single chimney in ruins of former northwest corner gardener's room.





Fig. 8–48 Eyre Hall orangery ruins showing door and window openings in walls of former northeast corner gardener's room.

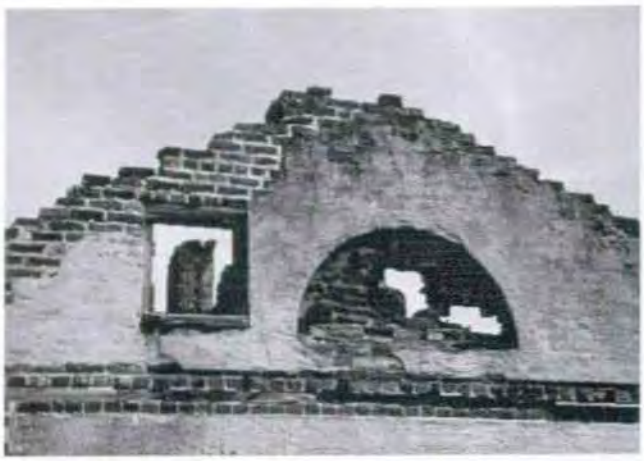


Fig. 8–49 Eyre Hall orangery—upper portion of west elevation showing pedimented gable with half-round, blind (false) lunette window.



Fig. 8–50 Eyre Hall greenhouse/orangery—west elevation showing brick masonry walls with scored stucco finish treatment.



Fig. 8–51 Eyre Hall orangery ruins double firebox opening to heat hollow walls. These fireboxes in the former northwest gardener's room were vented via the single chimney shown in Fig. 8–47.



Fig. 8–52 Eyre Hall orangery—detail of southwest building corner showing the thickness of the hollow walls for providing heat to the conservatory portion of the structure. Note thick brick sill, as well.



Fig. 8–53 Eyre Hall orangery—closer, detailed view of the lower southwest corner of the structure with vertical slot indicating where wooden window casings had once fit into the wall.

The Eyre Hall greenhouse is also unusual for its exterior architectural features. It has pedimented gables on the east and west elevations of the building, with a solid, sloping roof on the north side, and probably a wood and glass frame roof on its south end, over the greenhouse/orangery. Each pedimented gable held a half-round, blind (false) lunette window (see Figs. 8–49 and 8–50). The exterior walls of the building are masonry, finished with stucco on brick with regular scoring to imitate dressed stones, adding an additional level of detailing and refinement to the structure (Figs. 8–50 and 8–51). It is probable that this structure has not been used for its intended purpose for a century or more.[47] No archaeology has ever been performed at this site, so far as this author could determine.



Fig. 8–54 Eyre Hall garden—east bivalve gate and cross path looking west down the path lined with very old boxwood plants.

[47] H. Chandlee Forman, *The Virginia Eastern Shore and Its British Origins: History, Gardens & Antiquities* (Easton, Md.: Eastern Shore Publishers' Associates, 1975), 115–116, 117, 126, 127, 128, 129.



Fig. 8–55 Eyre Hall orangery—view of southeast corner of the structure showing a doorway through the thickened hollow wall, which narrows as it rises towards where the roof was once located.



Fig. 8–56 Eyre Hall garden—detail of one of the east gates mounted on the adjacent brick piers of the enclosing garden wall. This obviously old gate (of possible nineteenth-century vintage) is mounted via strap hinges and iron pintles.



Fig. 8–57 Eyre Hall garden—elevation photo of a very old, surviving combination brick walls and columns and wooden pickets used to enclose the geometrically arranged garden made up of numerous squares and very old boxwood plants. (Note: The brick columns here are not articulated.)

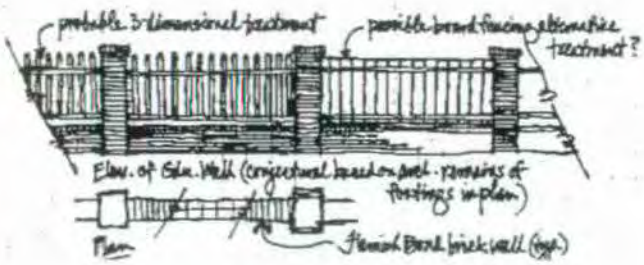


Fig. 8–58 Green Spring. Based on a review of the archaeological evidence revealed in recent excavations, this elevation and plan sketch by the author represent one idea of how the lower forecourt walls were treated (very similar, in fact, to the appearance of the garden wall at Eyre Hall as seen in Fig. 8–57.) The brick columns here were clearly articulated, as is evident from the plan of the wall.

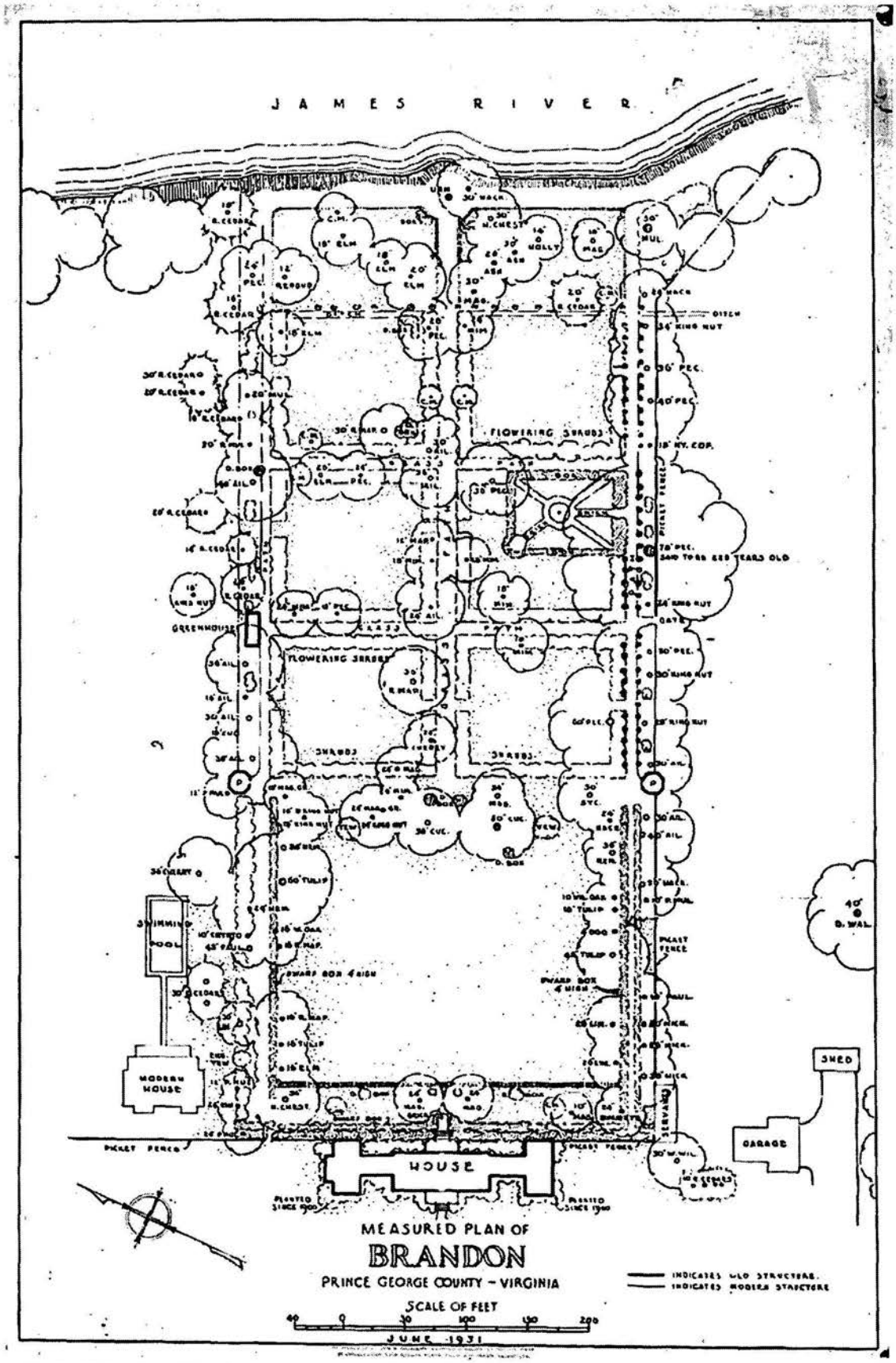


Fig. 8–59 Site plan of Brandon house and garden done by former CWF landscape architect Arthur A. Shurcliff in the 1930s as a part of his "Southern Places" studies. Greenhouse is shown at the left edge of the garden, along its northern border. (JDRL)

Dumbarton Oaks Greenhouse/Orangery

Attached to the house with which it was built in about 1805, the greenhouse/orangery at Dumbarton Oaks is still standing, although its roof has been slightly altered over time. Jane Tayloe, the sister of Elizabeth Tayloe Lloyd of Wye House in Maryland, married Robert Beverly, and together they built Dumbarton Oaks and its greenhouse/orangery. The large, even bay structure was clearly influenced by those at Wye House and at Mount Airy, and it is used today as a conservatory to house tender plants for the museum and libraries that the mansion houses. Four decades ago the property was deeded to Harvard University by it last owners.[48]

Hampton Greenhouse/Orangery

Hampton was a grand mansion house built in the early nineteenth century, and its orangery also dated from that period. This structure was somewhat unusual in that it was known to have been built entirely of wood instead of masonry. It had a wooden floor instead of the more typical brick, tile, or compacted earth and was built up over the heating flues to better transmit the warmth to the plants inside. Its superstructure was also built primarily of wood. Large wooden window frames with wood muntins enclosed the glass panes that stretched from the ground to the top of the structure. The structure burned in a fire and was reconstructed in 1976. It has been used since that time as a meeting facility.

Brandon Greenhouse

In Prince George County, Virginia, on the James River, sits Brandon Plantation, one of this nation's oldest farms, having been in continuous cultivation since 1616.[49] Built by members of the Harrison family and reaching its current form after 1765, Brandon has strong ties to Westover, the owners having intermarried with the Byrds.[50] Like Westover, Brandon today retains its venerable old garden, located between the mansion house and the river's edge, although like the latter site, the early Brandon garden was largely destroyed during the Civil War.

The current garden was replanted in the early twentieth century with a largely nineteenth-century plant palette, but overlaid over the six-square geometrical plan of what had probably been symmetrically arranged kitchen and flower gardens that were first developed in the latter half of the eighteenth century. This marriage of the older design with what are now deemed to be "old Virginia" garden plant favorites provides today's visitors with a very evocative and romantic visual experience throughout the seasons of the year.[51] Located along the northwestern perimeter of the garden and at approximately half the distance from the house to the river, stands the Brandon greenhouse (see site plan drawing Fig. 8–59). It is approximately fifteen feet wide by thirty feet long, constructed of brick and partially depressed below the level of the surrounding grounds, with a sloped, glass-framed roof overhead. The actual age of this Brandon greenhouse is not known. However, given the nature of its construction and the modernity of the materials used in its construction, especially the bricks, the structure appears to date from about the time the garden was replanted, that is, between 1895 and 1930. Even if this assumption is correct, the Brandon greenhouse still retains the older feature of the sloped glass roof facing to the south.

[48] Woods and Warren, *Glass Houses*, 206.

[49] David King Gleason, *Virginia Plantation Homes* (Baton Rouge: Louisiana State University Press, 1989), 8, 9.

[50] Thomas Tileston Waterman, *The Mansions of Virginia, 1706–1776* (New York: Bonanza Books, 1945), 368.

[51] General information about Brandon was gleaned from a self-guided-tour brochure obtained at the site.

This building, however, illustrates yet another type of greenhouse structure that has not been seen in any of the older examples in this chapter, one where at least half the structure and, indeed, the entire brick floor, is at least two to three feet below the surrounding grade. The structure can only be entered from a set of steps and a doorway in its western end. While it is today used for garden tool storage and as a potting shed,[52] the greenhouse obviously was formerly used for growing and protecting tender plants. Whether this building ever had a heating source is not known. No fireboxes were built, so if it was heated, some type of portable source such as a freestanding stove or, perhaps, even an electric heater must have been used.

Summary/Conclusions

This topical review of a number of known greenhouses and orangeries that once existed in the middle Atlantic colonies, more particularly in the colonial Chesapeake region, has served to reinforce the point that greenhouses and orangeries were not common buildings on colonial plantation landscapes. Moreover, we know relatively little about many of those few that once did exist, and only a very few have survived even as ruins. Several more sites that are known to have originally had either a greenhouse or an orangery are listed in the tables that follow with what few facts are known about some of these long-lost horticultural buildings. (Note: The sites mentioned on the charts are not meant to be an all-inclusive list).

A meaningful comparative analysis of these few known structures with the Green Spring ruin, which is the primary interest of this report, is difficult with so few surviving examples to work from, especially those from the same, relatively early period in greenhouse evolution and technological development. Some important comparisons and conclusions, however, may still be drawn from the few noteworthy examples that have been cited.

- While smaller compared to some of the other greenhouse buildings that have been examined, the Green Spring structure's overall size and proportions are very similar to several of the other known greenhouses/orangeries.
- The placement of the Green Spring ruin next to and within what the Desandrouins Map indicated had been a large garden is fully consistent with the other sites examined for the probable and, indeed, the most proper placement of a greenhouse/orangery in the landscape.
- The choice of brick for building the Green Spring structure is also consistent with the other examples cited. Brick was the preferred material for such buildings, giving them an architectural permanence and a visual distinction in the landscape that set them apart; it was quite often lacking in many other plantation outbuildings from the same period. This fact implies that such buildings were obviously most important to their respective settings both for their aesthetic and sociocultural, as well as practical, reasons.
- While most of the greenhouses examined appear to have had fireboxes and wall or floor flues to serve as their primary heating sources (in those few examples where the original heating method is specifically known), these choices also appear to reflect a later period and technological refinements typical of when they were built. Most of them were constructed fairly late in the eighteenth or even in the early nineteenth centuries.

[52] Based on the author's conversation with the owner, Linda Daniel (Mrs. Robert W. Daniel Jr.).

- Because the Green Spring greenhouse dates from a much earlier period (pre-1740) than those examined and because the supposed original heating source for that structure was mostly likely some type of cast-iron or Dutch stove (perhaps later augmented or replaced by an internal brick firebox), no other available greenhouse/orangery examples of that age survive with which to compare and analyze its probable heating sources. This issue of whether one or more heating sources were, in fact, used within this structure needs further archaeological examination and research.
- Another unanswered question in this study is what was grown or kept in the Green Spring greenhouse? A survey of collected "eco-fact" remains (that is, pollen, phytoliths, etc.) might help to resolve this question.
- A final question is what was the probable function and chronological sequence of the small room that was apparently built later onto the western end of the Green Spring structure? Further archaeological excavation and architectural examination should help to determine the answer.
- However, based upon *all* information available about the few sites that have been examined, and excepting the few key questions about the Green Spring ruin that remain to be resolved, it seems reasonable to conclude that the Green Spring ruin was, indeed, once a greenhouse/orangery, just as local lore has long suggested.

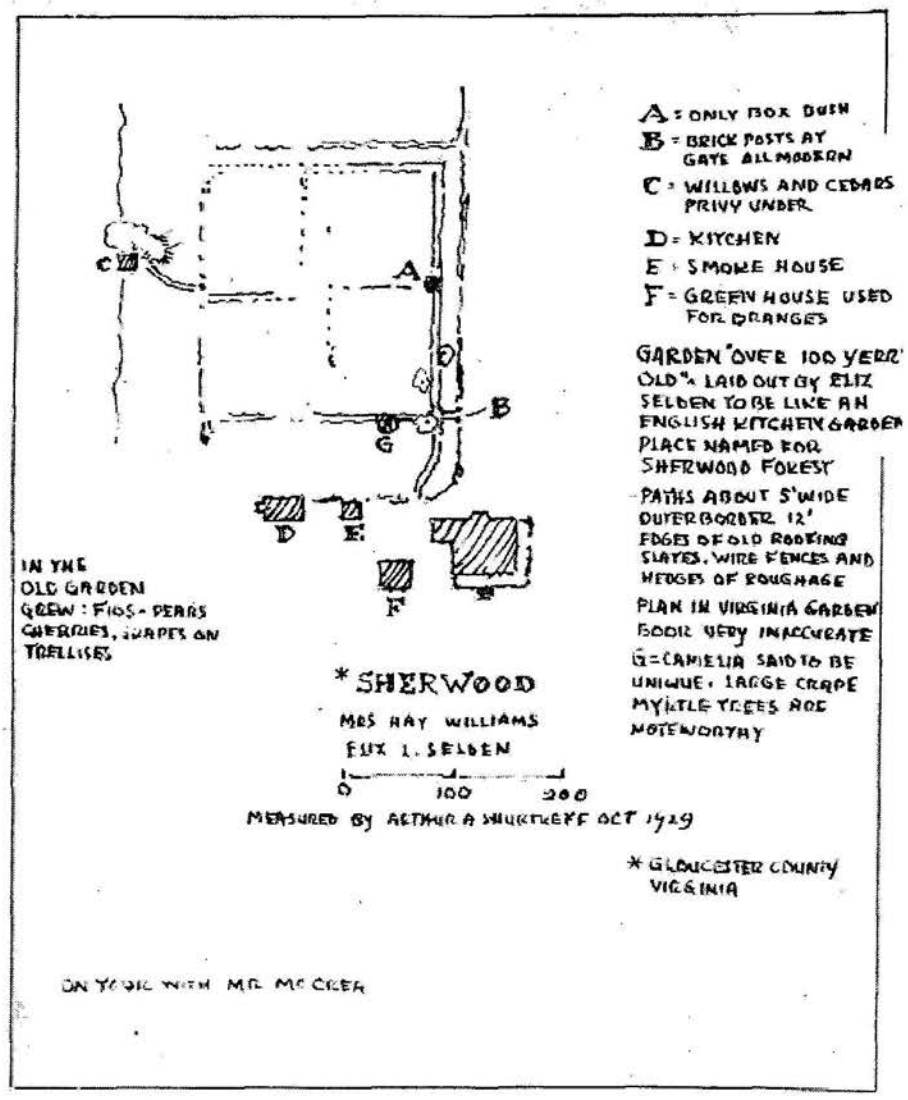


Fig. 8–60 This 1929 sketch of the site plan for Sherwood house and garden was used by former Colonial Williamsburg landscape architect Arthur A. Shurcliff as a part of his "Southern Places" studies. Greenhouse site is indicated on the plan as item F. (JDRL)

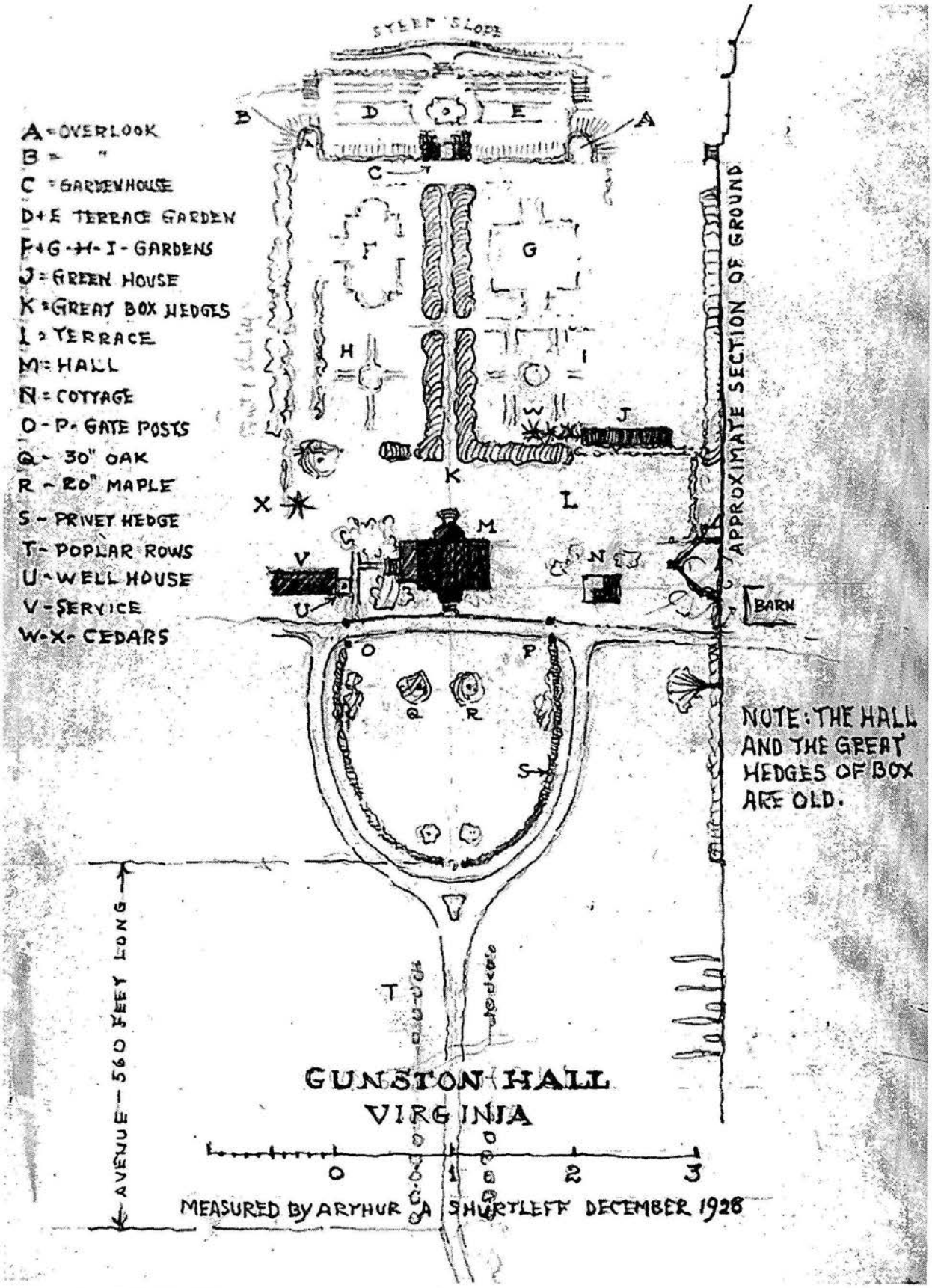


Figure 8-61 This 1928 sketch site plan of Gunston Hall house and garden was used by former Colonial Williamsburg landscape architect Arthur A. Shurcliff as a part of his "Southern Places" studies. The greenhouse is shown to the top and right of the main house as item J. (JDRL)

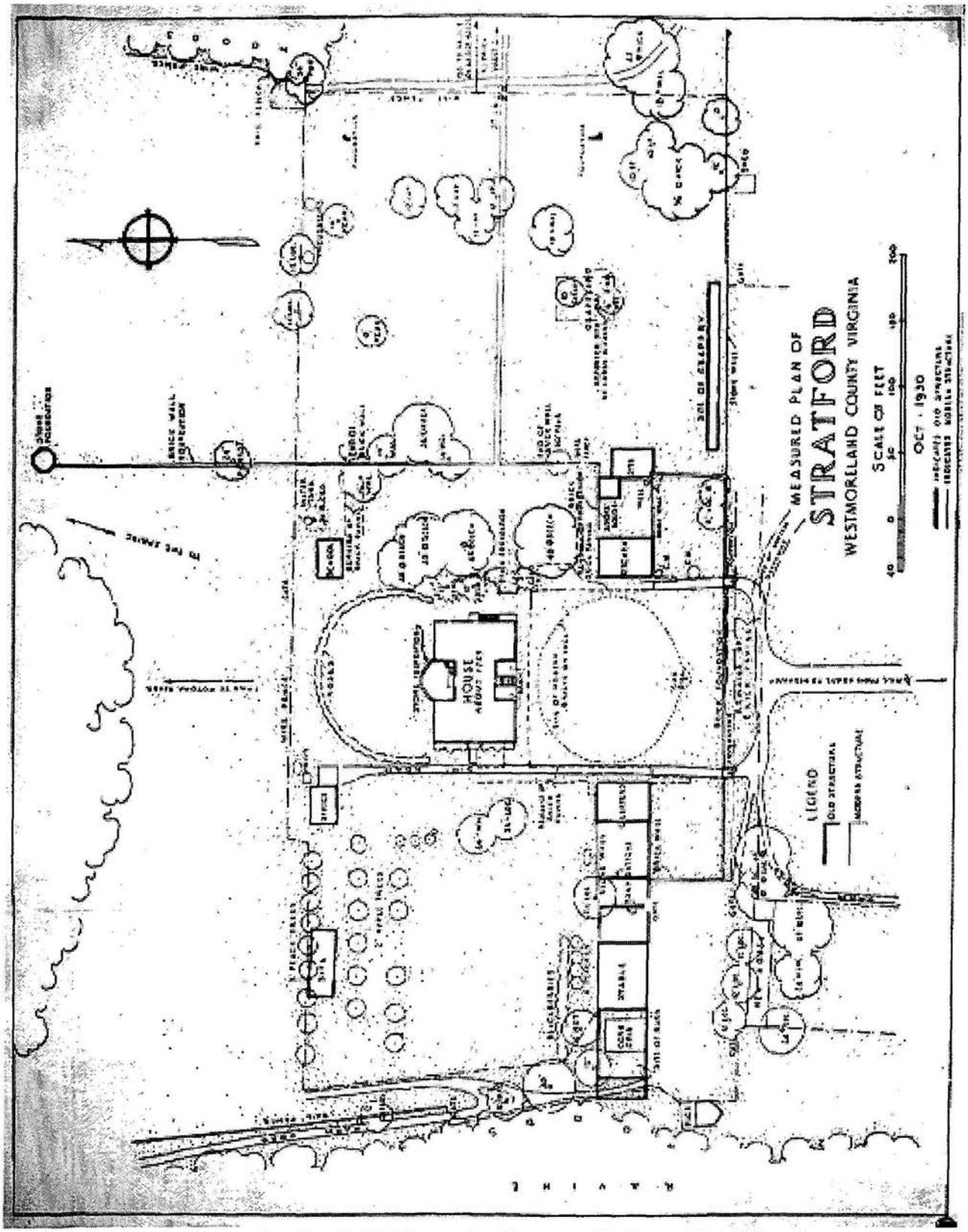


Fig. 8–62 This 1930 site plan of Stratford Hall house and gardens was used by former Colonial Williamsburg landscape architect Arthur A. Shurcliff as a part of his "Southern Places" studies. The long, rectangular building on the northern edge of the western garden, while not specifically identified, was probably a later greenhouse, given its shape and placement relative to what were probably a kitchen and/or a fruit garden. The earliest greenhouse/orangery was built by Thomas Lee and was located to the southwest of the main house on the forecourt, opposite the kitchen. Its location is marked "Quarters" on this map. (JDRL)

Sites with Known Eighteenth-Century or Early Nineteenth-Century Greenhouses/Orangeries in the Eastern United States (Middle Atlantic Region)

Notes: No information is given on the original heating sources for these greenhouses/orangeries because, with one or two exceptions, most of them are not known today. For additional information on greenhouses in the Philadelphia area, see Britz, "Orangery in England and America," 593–601 and n. 74 below.

Site Name	Site Location	Date Built	Building Size	Condition Today	Remarks
The Governor's Palace	*Williamsburg, Virginia*	Eighteenth century, exact date unknown	Main block was 13' W x 20' L; two wings were each—13' W x 68' L	No longer standing	Archaeological evidence found substantiated its former location and probable function[53]
Westover	*Charles City County, Virginia*	1730–35	Unknown	No longer standing	An icehouse was built later on the early greenhouse site
Green Spring	*James City County, Virginia*	Between 1730 and 1740	15' W x 45' L including a small room on the west end[54]	In fragmented ruins, no longer standing	Probably a Ludwell-era structure
Mt. Vernon	*Fairfax County, Virginia*	Between 1787 and 1789, burned in Dec. 1835	Greenhouse portion 10' W x 37' L[55]	Reconstructed in 1951–52, now in use	Two rooms on the building's north side made the total size of the structure 24' x 40'
Mount Clare	*Baltimore, Maryland*	About 1760	28' square-orangery, side 12' W x 28' L[56]	No longer standing	Two rooms on the building's north side made the total size of the structure 28' x 28'[57]
Hampton	*Baltimore County, Towson, Maryland*	About 1824–31, burned in 1928	Unknown[58]	Reconstructed on its original foundations in 1976	Structure is used today as a meeting room
Stratford Hall	*Westmoreland County, Virginia*	Unknown	20' W x 50' L[59]	No longer standing	Stood adjacent to the forecourt and, later, to the garden on west side of house

[53] Hood, *Governor's Palace*, 254, 292, 330 n. 37.
[54] Dating and size determinations based on archaeological excavations.
[55] Dating and dimensions obtained from notes made by George Washington in a letter printed in Trostel, *Mount Clare*, 77.
[56] Ibid. See p. 76 for a scaled plan drawing of this structure.
[57] Dating and dimensions obtained from Trostel, "Maryland Orangeries," 3.
[58] Date information ibid., 600–601. This orangery also originally had a wooden (vs. brick) floor.
[59] Dimensions taken from a measured site plan Shurcliff drew in October 1930. Architectural Drawings Collection, Special Collections, JDR Jr. Library, CWF.

Site Name	Site Location	Date Built	Building Size	Condition Today	Remarks
Calvert House	*Annapolis, Maryland*	About 1730, was dismantled in 1765 alteration[60]	Unknown	No longer standing	Later additions to house destroyed orangery footprints
Wye House	*Talbot County, Maryland*	Oldest portion circa 1755, was enlarged in 1779 by adding two wings	85' L overall; original block is 20' W x 33' L, with two added wings, each 9' W x 19' L[61]	Still standing, and has been preserved, although it is not in active use. Once had a billiard table in a gaming room upstairs!	Is oldest and best-preserved, original colonial-era greenhouse still standing in the U.S., and it is the only orangery Maryland to have survived intact.
Mt. Airy	*Richmond County, Virginia*	Sometime between 1798 and 1800[62]	33' W x 50' L[63]	Only one (south) wall of this ruined building remains standing	Originally had two smaller glass-enclosed hothouses on each side of the building's main block. All were built at a cost of £150.
Oatlands	*Loudon County, Virginia*	1810, altered in 1904. It was not used after 1970, and soon became derelict[64]	Unknown	Restored 1999–2002, now in use	
Eyre Hall	*Northampton County, Virginia*	Built about 1810	Greenhouse portion 12' W x 27' L[65]	Still standing but now is in ruins	Two rooms on the building's north side made the size of the structure 30' 3" W x 31' 8" L
Dr. Upton Scott's House	*Annapolis, Maryland*	Built about 1762	14' W x 35' L[66]	No longer standing	Dr. Scott was one of the foremost gardeners in Annapolis

[60] All information obtained from Yentsch, "Calvert Orangery," 169–187.

[61] Data on date built and building size obtained from Trostel, "Maryland Orangeries," 3.

[62] Some confusion has existed as to the actual construction date of this structure. Woods and Warren attribute the building to John Tayloe II and state that it was built between 1748 and 1758. (Woods and Warren, *Glass Houses*, 82) Billie Sherrill Britz also gives this 1750s date ("Orangery in England and America," in *The Magazine Antiques* [April 1996]: 600. Other sources, however, including the Tayloe Family papers at VHS and a 1981 unpublished Colonial Williamsburg Architectural Research Department report by Donna Hole attribute the building to John Tayloe III and give its date as circa 1798–1800. Feeling that the latter are more reliable resources, the author of this report lists 1798–1800 as the most accurate estimate of when the building was built.

[63] Information on the original size of this structure gleaned from field notes taken by Shurcliff, who visited the site and interviewed the owners in May–June 1931. Architectural Drawings Collection, Special Collections, JDR Jr. Library, CWF.

[64] Dates obtained from Karen Mazza, "Rebirth of the Oatlands Greenhouse," *Magnolia: Bulletin of the Southern Garden History Society* 16, no. 3 (Spring 2001): 11–13. No building sizes were given.

[65] Information gleaned from field survey notes the author made during a site visit in April 2002 and from Forman, *Virginia Eastern Shore*, 116, 117, 126, 127, 128, 129.

[66] Trostel, "Maryland Orangeries," 5.

Site Name	Site Location	Date Built	Building Size	Condition Today	Remarks
Belair	*Prince George's County, Maryland*	Built in the 1760s	15' W x 28' L	No longer standing	Belair was the home of the Ogle family, and the orangery was attached to the house, as a wing[67]
Blenheim	*Charles County, Maryland*	Built in the late 1750s or early 1760s[68]	Unknown	No longer standing	Was home of Richard Lee family
Drayton Hall	*Ashley River, South Carolina*	Built between 1741 and 1747	17' 6" W x 32" 6" L[69]	No longer standing	Measurements and other details confirmed by recent archaeology
Dumbarton Oaks	*Washington, D.C.*	Built between 1805 and 1812[70]	Exact dimensions not known	Still standing and attached on the east range of house	Structure has seven large windows on each side and three windows on east end
Brandon	*Prince George County, Virginia*	Unknown, but probably late 19th century	15' W x 30' L[71] in use on N side	Still standing and in use on the north side of the old garden	Brick portions of structure are partially built above and below the finish garden grade
Gunston Hall	*Fairfax County, Virginia*	Unknown, but probably late 18th or early 19th century	15' W x 70' L	No longer standing	Brick foundations recently revealed via archaeology
Sherwood	*Gloucester County, Virginia*	Unknown but probably early 19th century	About 18' W x 25' L[72]	Was still standing in 1929–30; it is not known if it survives	Antebellum dating of the house and garden derived from Edith Tunis Sale, *Historic Gardens in Virginia* (1923, rev. 1930), 127–131.

[67] Wheaton, *Drayton Hall Orangerie*, 36, 38.
[68] Trostel, "Maryland Orangeries," 5.
[69] Data on date built and building size obtained from Wheaton, *Drayton Hall Orangerie*, 40.
[70] Britz, "Orangery in England and America," 19–20, 50.
[71] Measurements gleaned from a scaled site plan drawing by Shurcliff, who visited the site and completed the plan in June 1931. Architectural Drawings Collection, JDR Jr. Library, CWF.
[72] Approximate dimensions gleaned from a scaled but crude field-drawn site plan that Shurcliff measured and drew in October 1929. Architectural Drawings Collection, Special Collections, JDR Jr. Library, CWF.

Site Name	Site Location	Date Built	Building Size	Condition Today	Remarks
Governor Horatio Sharp's Residence	*Annapolis, Maryland*	Before 1753	18' x 18' w/ a hip roof and central chimney[73]	No longer standing	Like Mount Clare, structure probably also had two rooms on the building's north side.
Stenton*	*Near Philadelphia, Pennsylvania*	Unknown	Unknown	No longer standing	
Fairhill*	*Near Philadelphia, Pennsylvania*	Unknown	Unknown	No longer standing	Based on surviving drawings, this greenhouse is said to have resembled the one at Mount Clare[74]
Sprigettsbury*	*Near Philadelphia, Pennsylvania*	Built sometime before 1745[75]	Unknown	No longer standing	Said to have been the oldest Pennsylvania greenhouse
Gray's Ferry (Public Garden)*	Near *Philadelphia, Pennsylvania*	Unknown	Unknown	No longer standing	
Norris House*	*Philadelphia, Pennsylvania*	Unknown	Unknown	No longer standing	Said to have been the next oldest Pennsylvania greenhouse
Logan House*	*Philadelphia, Pennsylvania*	Unknown	Unknown	No longer standing	
Evergreen or "The Plantation"*	*Near Philadelphia, Pennsylvania*	Unknown	Unknown	No longer standing	Sometimes called Pemberton House
Bush Hill*	*Near Philadelphia, Pennsylvania*	Sometime before 1793	Unknown	No longer standing	Based on a surviving 1793 drawing, this greenhouse is said to have resembled the one at Wye House[76]

* For further information on this site and all other greenhouses in the Philadelphia area, see Billie Sherrill Britz, "The Orangery in England and America," *The Magazine Antiques* (April 1996): 593–601. Also see the reference cited in n. 74 above.

[73] Trostel, "Maryland Orangeries," 4–5.
[74] Carmen A. Weber, "The Greenhouse Effect: Gender-Related Traditions in Eighteenth-Century Gardening," in Yamin and Metheny, *Landscape Archaeology*, 46.
[75] Ibid., 46–47.
[76] Ibid., 46.

Site Name	Site Location	Date Built	Building Size	Condition Today	Remarks
Faneuil House	*Boston, Massachusetts*	Between 1710 and 1738[77]	Unknown	No longer standing	Said to have been the first greenhouse built in the colonies
Haskett House	*Salem, Massachusetts*	Before 1799[78]	18' W x 61' L overall size	No longer standing	Plans and elevations for this structure, drawn by Samuel McIntire, survive[79]
Landsdowne*	*Near Philadelphia, Pennsylvania*	Unknown	Unknown	No longer standing	
Mount Pleasant	*On the East River near New York,* New York	About 1764[80]	Unknown	No longer standing	Was painted in 1852 by Benson Lossing before the house and its greenhouse were demolished. Painting published in 1887[81]
Mount Pleasant*	*Near Philadelphia, Pennsylvania*	Unknown	Unknown	No longer standing	
The Grange*	Near *Philadelphia, Pennsylvania*	Unknown	Unknown	No longer standing	

* For further information on this site and all other greenhouses in the Philadelphia area, see Billie Sherrill Britz, "The Orangery in England and America," *The Magazine Antiques* (April 1996): 593–601. Also see the reference cited in n. 74 above.

[77] Woods and Warren, *Glass Houses*, 84.
[78] Ibid., 84.
[79] Ibid., 85.
[80] Ibid., 86.
[81] Ibid., 87.

Chapter Nine

OVERALL SUMMARY OF RESEARCH FINDINGS/CONCLUSIONS

- The Green Spring plantation site has seen and embraces many episodes of cultural and historical significance stretching from pre-European contact down to the burning of the plantation's last manor house in 1862.
- Accordingly, the Green Spring site served as a metaphorical stage set for many events in early Virginia and United States history.
- Many famous individuals and well-known historical figures visited or participated in specific events that occurred at Green Spring over its long history.
- More specifically, several important figures that owned the site are inextricably linked with each historical period of Green Spring's development, giving each period a separate identity and importance.
- Concerning the physical development and improvements to the plantation site, two significant periods emerged for the purposes of this study. The first was the ownership of Sir William Berkeley (1643–77), and the next was the ownership over five generations of the Ludwell-Lee families (1680–1803).
- Although previous emphasis has been placed on the historical, political, social, and architectural importance of Sir William Berkeley's ownership of Green Spring, in fact, his *and* the Ludwell-Lee periods were of equal importance to the evolution and ultimate reputation of this culturally important plantation site.
- After the outbreak of Bacon's Rebellion in Virginia, Nathaniel Bacon and Berkeley clashed in a number of memorable incidents that pitted one strong will against another. In the process, Green Spring plantation was occupied by Bacon's men and sacked on several occasions, apparently largely ruining the agricultural, if also not the domestic, landscape.
- With Bacon's death, the popular rebellion fell apart by January 1677. Green Spring then became a temporary jail as Bacon's primary lieutenants were rounded up and subjected to military tribunals; most were condemned to death by hanging. At least three or four men were hanged on the site.
- After Berkeley's subsequent death in England in July 1677, Green Spring was repaired by his widow and rented as a residence to at least two of Virginia's succeeding governors.
- Until the statehouse was rebuilt at Jamestown, Green Spring house also served as a meeting place for both the Governor's Council and House of Burgesses as the de facto capitol of the Virginia colony.
- During the seventeenth century, at least two (and possibly a third) manor houses were built at Green Spring. The first or old manor house was built by Sir William Berkeley between April 1643 and 1645. (It *may* have replaced a smaller and earlier temporary house erected there shortly after he acquired the land.) When and by whom the second or new mansion house was built is still not known and is a critical piece of evidence that remains elusive.

- The two most plausible theories on the attribution for the second house's construction are that it was built either by Berkeley sometime after 1670 or by Berkeley's widow, Lady Frances, and her third husband, Philip Ludwell I, a decade later. The latter expanded the house as a rental property to serve as a suitable residence for Virginia's royal governors.
- Definitive information is still lacking about what other outbuildings were standing during Governor Berkeley's ownership. Many of the outbuildings long attributed to the Berkeley period are now known to have been built much later, dating from the time of one or more of the Ludwells.
- A brick kiln is known to have existed on the site in about 1665. Other outbuildings that might have been a part of the earliest Green Spring plantation landscape included a springhouse, a banqueting house, a dairy, one or more tobacco barns, a house used for silk culture, a dovecote, possibly a greenhouse, an icehouse, and perhaps a smokehouse.
- Many published references to the existence of a greenhouse during Berkeley's ownership are problematical because they are clearly based on the supposition that the existing ruins of a Green Spring structure, long known as the so-called nursery or orangery, was Sir William's greenhouse. However, archaeological findings have recently proven that these ruins could not have been built before 1735–40. So, if Berkeley did have a greenhouse, it was *not* this one.
- An interesting theory, recently postulated by two local experts, offers the possibility that the northwest wing of the new mansion house, labeled in a 1796 Benjamin Latrobe floor plan as the nursery, in fact, predated the adjacent house, but was incorporated into it when the latter was built. If this theory is true, could this structure have been Berkeley's supposed greenhouse?
- The nursery reference on Latrobe's plan could be interpreted two ways: 1. as a *children's* nursery or 2. as a *plant* nursery. If the former can be proven, then the possibility of a separate Berkeley-era greenhouse structure still exists. Alternatively, if the latter can be proven, then this small structure *possibly* could have once served as Berkeley's greenhouse, although its rather small size strongly suggests that it did not.
- Scholars have also noticed in recent years that early Virginia plantations often employed either a linear or an L-shaped layout in the placement of detached kitchen structures and other outbuildings on a site in relation to the main house. Whether or not one of these two methods was used in the siting of outbuildings around the earliest Green Spring manor house is not known, but may be determined by future archaeological excavation around the main house sites.
- Examining the philosophical and religious underpinnings for English Stuart and Caroline-period garden layout and estate design practices in the 1630s is also useful in identifying and understanding probable cultural design influences that William Berkeley may have brought with him to Virginia and Green Spring.
- In particular, English theorists Samuel Hartlib and Gervase Markham published popular books from the 1630s to the 1650s that translated their pansophist worldviews and philosophical ideas into built form by suggesting an ideal layout for country estates. Both men emphasized an enclosed, geometric ordering of outdoor spaces, with the manor house located at the very center of the domestic landscape, which expressed the English view of order and control.

- As an educated and sophisticated English gentleman, Berkeley was probably at least familiar with, if not directly influenced by, the ideas of Hartlib and Markham in his vision for the design of Green Spring as the ideal English plantation landscape in Virginia.
- A review of English garden guides from the period, most notably Gervase Markham's *The English Husbandman* (1635), provides helpful clues to one or more ways that Sir William Berkeley originally laid out his plantation. There is little doubt that the Green Spring manor house would have been physically located at the center of the plantation's main domestic complex.
- This possibility suggests, then, that Sir William Berkeley's Green Spring plantation, while it may have lacked certain refinements and decorative features commonly seen in English estates of that period, could have been laid out with far more spatial organization and regular geometric partitioning of the landscape than was typical for most Virginia plantations from the 1640s to the 1670s.
- It is plausible to further suggest, then, that Green Spring not only was intended to serve as a working model of agricultural diversity, but also as a visual organizational model for how a proper English plantation should be laid out for maximum order and beauty as well as efficiency.
- With this thought in mind, this author theorizes that the long linear earthen berm that runs parallel to, and to the west of, present-day Centerville Road (Route #614) is a remnant of a man-made landscape feature that once served as an elevated viewing platform or terrace that perhaps once overlooked a pleasure garden, located just to the west of it.
- With the original manor house having been oriented to face to the west and the main entry drive from the old Newcastle Road, this supposed pleasure garden would have thus been situated to the left rear (or northeast) of the house, as it would have been seen upon approaching the house from the drive's western direction.
- The driveway leading up to the house probably would have also been lined by an avenue of trees, following the prevailing English practice of the period.
- The linear earth berm/viewing terrace along the pleasure garden's eastern perimeter may have had a practical as well as a decorative purpose. It may have served to cleverly conceal the presence of an underground icehouse.
- Icehouses were popular among the English upper classes, especially after the Restoration of King Charles II in 1660. However, such structures have been archaeologically documented as existing on Virginia sites as early as 1650. These facts, coupled with the king's 1665 directions to Berkeley to create icehouses in the Virginia colony, raise the very strong probability that Berkeley would have maintained an icehouse at Green Spring by that time period, if not before.
- The reality of Berkeley's horticultural and agricultural endeavors at Green Spring, clearly done to be innovative and to encourage greater agricultural diversity in the Virginia colony, is well established by the surviving documentary records.
- Aside from its great size, its unusual degree of agricultural diversity, and its architectural significance as a local landmark (that is, one of the very few brick houses in Virginia as well as the home of the governor), Green Spring was just as unusual and as trend-setting for its regular, organized domestic landscape as it obviously was for those many other cultural and economic aspects.

- Aside from the house foundations themselves and perhaps the large earth berm to the east-northeast of them, it is evident that the Berkeley-era landscape of Green Spring has long vanished, being supplanted by later site features and improvements.
- Given the site's long history, the archaeological record that is quite likely to have been preserved intact there is a *very* complex one, with the Berkeley period features being at or near the bottom of that stratigraphy.
- Other than the manor houses and a few other physical features (dating mostly from the late seventeenth to mid-eighteenth centuries), this domestic site's archaeological record has, in truth, only been tentatively explored and mined for specific cultural information about how the site physically evolved over several generations of early owners.
- It is apparent that the full historical record of Green Spring plantation and how it developed and was altered by its various early owners is woefully incomplete at this time.
- Because of this fact, although this study's primary focus has been on the supposed greenhouse/orangery ruins, to better understand this structure's place and importance, establishing a landscape context for it has been necessary. At this time, only a partial or highly subjective and fragmented view has been possible.
- To establish a proper analytical site context, a better understanding of how the site changed and evolved over time is vitally important and can only be obtained by comprehensive archaeology of a much larger area of the site. An expanded material culture collection could also provide needed information.
- Despite the interest in, and obvious historical importance of, Sir William Berkeley and his ownership of Green Spring, the Ludwell-Lee families' ownership period is also known to have been quite significant in its own right, encompassing, as it did, a period of well over a century.
- Crediting the Ludwells and Lees with making many of the previously supposed Berkeley changes to the house and landscape does not diminish Sir William's importance so much as rescues the Ludwells and Lees from undeserved obscurity regarding the contributions they made to the ultimate development of the property as one of Virginia's best-known plantations.
- Examining individual periods of ownership, while helpful, may not tell the whole story or provide other clues about likely catalysts for change. External trends and social and economic influences also need to be re-examined for clues.
- One enormously important cultural and social event and driving force for landscape changes that has been largely overlooked by colonial Chesapeake garden historians was the late-seventeenth-century shift in Virginia of the agricultural labor force from white indentured servants to black African slaves.
- This shift in the Green Spring labor force, whenever it actually occurred, must have caused profound changes in the social organization of the plantation's domestic landscape, particularly in how its discrete spaces were subdivided and ordered into public versus private areas. However, these changes would have occurred in specific ways and in specific places on the plantation that are not fully known or fully understood today. This issue deserves further study.

- Greenhouses, both as specialty horticultural buildings and as distinctive architectural elements in the landscape, came to be regarded in the colonial Chesapeake region as indicators of wealth, status, and cultural taste.
- Greenhouses were long used in Europe and England before they started to appear in the colonies in the early decades of the eighteenth century.
- Comparing the Green Spring ruin with the few known greenhouses/orangeries that once existed in the middle Atlantic region, the archaeological evidence recovered concerning its size, architectural features, and location lead this author to conclude that the structure in question *was* built and used as a greenhouse/orangery.
- This Green Spring structure dates, however, from the early/mid-eighteenth century so, clearly, it was *not* built or ever used by Sir William Berkeley. If Berkeley also had such a structure, its location is unknown. Moreover, if he, in fact, did have a greenhouse/orangery, it would certainly be a prime candidate for being the earliest greenhouse built in English North America. For this reason alone, establishing or refuting its existence could be of great scholarly importance to architectural and landscape historians.
- Since it is known that Berkeley's early manor house was oriented to face west, instead of to the south (as the new mansion house later was), a potential location for such a feature might be to the west-northwest of the house, or (and more plausibly based on what little information is currently available) to the north-northeast of the house site (near the supposed pleasure garden and the adjacent large berm/terrace).

Chapter Ten

RECOMMENDATIONS FOR FURTHER ARCHAEOLOGICAL INVESTIGATIONS AND SITE ANALYSIS

The National Park Service and the Friends of the National Park Service for Green Spring are both to be commended for their concern and diligence in trying to better understand this infinitely important site in our nation's early history. Their partnership over the past few years has resulted in funding for the most recent archaeological investigations of the Green Spring site. However, this author asserts that a broader, more comprehensive scope of archaeological work is needed to more fully understand the nature and evolution of this entire site over its long and significant history.

While the NPS typically engages, by policy, in what it terms *Phase I* (shovel testing) and *Phase II* (a more ambitious excavation technique, using grids and balks between open units) archaeological investigations (both for reasons of preservational ethics as well as limited budgets available for such work), the critical historical significance of this large site provides a compelling argument for the more comprehensive and systematic archaeological approach of a Phase II effort rather than the more exploratory methodology that a Phase I effort can yield. Yet available funding for such an increased effort is severely limited. The resolution of such questions of policy and sources of future funding is not within the scope or purview of this study.

Purely on the basis of this author's professional opinion and perceived needs, the following comments and recommendations are offered for future study and consideration:

- The greenhouse/orangery structure should be excavated in its entirety to resolve questions about the two different widths of the south wall and their relationship with the west end of the structure, as compared to a surviving May 1897 photo.
- The ability to see the separate west-end room of the structure in its entirety (including the supposed firebox niche in the corner) would also be helpful for determining its probable use and its date of construction.
- The spring 2002 excavations of the adjacent west range outbuildings and the spring 2003 excavations on the east range have been extremely valuable not only in pinpointing the date of these features (to either Ludwell II's or III's period) but also in documenting the fact that the three outbuildings on the both sides of the lower courtyard were of three different sizes (a fact that was not specifically noted by either Dimmick or Caywood in their respective 1929 and 1955 excavations but was graphically indicated on maps they drew of their work).
- The 2003 excavations revealed that the three outbuildings on the east range of the lower courtyard were proportionally the same size and were laid out symmetrically as on the west. The spring 2003 excavations attempted to examine this question.
- This theory can easily be further tested (and, one hopes, established as fact) in any future excavations with the more complete examination of these east range outbuildings to verify their sizes and the location of a supposed middle structure (which, so far, has not been found).
- The discovery of different, graduated sizes of these outbuildings in the lower courtyard establishes that they were clearly laid out according to mathematical principles and that three-dimensional proportions and optics were being purposefully manipu-

lated to make or reinforce a powerful visual statement about the house and site when seen from without, and possibly also to frame or enhance views from the house when looking out into the adjacent agricultural landscape.

- More research on this optical aspect would be desirable to attempt to recapture some sense of the original visual character of the site in the mid-eighteenth century.
- This one example alone illustrates the value of looking again at previous work, both to verify its accuracy and to learn new information that was perhaps missed in earlier excavations of a more limited scope. We now have other techniques, more diagnostic tools, and new technologies to help better inform our efforts.
- Thus, a complete, thorough reexamination of the previously excavated Green Spring house foundations should be given serious consideration and the highest future priority.
- While all of Dr. Andrew Veech's efforts from 2001 to 2003 have been of inestimable value in learning more about the site, the methodology that has been employed thus far (due, in large part, to funding limitations) might be characterized as being more of a pinpoint, micro-archaeological approach (that is, a Phase I and II survey).
- While this approach has been helpful for learning certain specific aspects of the site's evolution, it is arguable whether such an approach can fully address or provide answers to many of the larger, critical questions about the relative dates of the two houses' construction, and helping establish other benchmark-type documentation on the ground about specific site construction/transition periods. Clearly, more extensive and widespread Phase II testing is needed.
- Given the enormous scale of what we might think of as the domestic core area of the site, what, in fact, is needed is a macro-archaeological approach, using multiple crews working simultaneously on different parts of the site.
- This global approach is needed to examine a larger amount of area, to look for as-yet missing outbuildings that are known to have existed, and to search for still-missing evidence of features identifiable to Gov. Berkeley's tenure.
- Due to Green Spring's larger historical importance, what is needed, and is hereby recommended, is a more comprehensive, multiyear, wide-ranging archaeological effort, similar to the "Jamestown Archaeological Assessment" project, to examine a larger percentage of the site's oldest domestic core area.
- This effort should also examine the domestic core area of the William Ludwell Lee house. A real need exists to unravel *all* of Green Spring's complex "layers," in order to tell a more complete story of the site's history and significance.
- For all the benefits that have been derived from the most recent excavations, the reality that must be faced is that most of the landscape features that have been documented and discovered on the site thus far, in fact, date from the Ludwell II & III (*not* Berkeley) ownership periods (that is, primarily the eighteenth century).
- This could mean that Berkeley-era landscape features either remain buried in soil layers beneath what has already been found, or that, because of the choice of materials originally used and their comparatively more impermanent character, very little physical evidence from the Berkeley ownership period remains.

- The important point to be made here is that (aside from the brick kiln, a possibly early garden wall, a fence line, an earthen berm, and the house foundations themselves) no other features of Berkeley's ownership have yet been discovered.
- Therefore, specific archaeological features to further examine or to look for in the future might include:
    - the west room of the Ludwell III-era greenhouse/orangery
    - the known Berkeley-era brick stable
    - a possible Berkeley-era greenhouse/orangery
    - possible Berkeley- or Ludwell-era brick barns
    - one or more sectional profiles of the large earth berm along Route 614
    - an icehouse located in and/or as a part of the earth berm feature
- In summary, this author strongly feels that only by taking a broader, more holistic Phase II archaeological approach to examining these incredibly rich and complex core cultural areas of the site can a better understanding be gained of the chronological evolution of this entire plantation landscape.
- The final recommendation is that by first undertaking these levels of domestic area site examination, a broader, agricultural landscape contextual study of the plantation's other, outlying notable features can be more effectively completed at some future time.

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