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Author(s): Cary Carson, Norman F. Barka, William M. Kelso, Garry Wheeler Stone, Dell Upton

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Impermanent Architecture in the Southern American Colonies

Cary Carson, Norman F. Barka,

William M. Kelso, Garry Wheeler Stone, and Dell Upton

ONCE IN A WHILE someone slows down to read the historical marker that the state put up alongside the county road years before the site was actually found. Now the location is known for certain, but no one bothers to move the sign, because seventeenth-century Middle Plantation—down a side road and halfway across a soybean field in the rolling farm country west of Annapolis, Maryland—is nothing to look at anyway. Even when the excavation was in progress,

Cary Carson is director of research, Colonial Williamsburg, Colonial Williamsburg Foundation. Norman F. Barka is professor of anthropology, College of William and Mary. William M. Kelso is resident archaeologist, Thomas Jefferson Memorial Foundation. Garry Wheeler Stone is archaeologist, St. Mary's City Commission. Dell Upton is National Endowment for the Humanities research fellow, Winterthur Museum.

Five authors incur debts to friends and colleagues five times over. Some were the field supervisors and laboratory conservators who helped excavate and analyze the sites described in Appendix 1. Others excavated other sites or conducted architectural surveys and have generously shared unpublished information about them. A number have helped interpret sites and buildings, have brought useful documents to our attention, or have reviewed the manuscript. Those we must thank by name are N. W. Alcock, Nathan Altshuler, Michael Barber, Guy Beresford, Peter Bergstrom, Michael Bourne, Ronald Brunskill, Paul Buchanan, Lois Carr, Barbara Carson, Edward Chappell, John Cotter, William Deopkins, Walter Diggs, Jr., Andrew Edwards, Mark Edwards, Junius Fishbourne, Jr., H. Chandlee Forman, Patricia Gibbs, Harold B. Gill, Leverette Gregory, J. C. Harrington, David A. Harrison III, David Hazard, Edward F. Heite, John Hemphill II, Charles Hodges, Carter Hudgins, Barbara Hutton, Robert Keeler, Kevin Kelly, Polly Longworth, Nicholas Lucchetti, Edwards McManus, Robert Machin, Bayly Marks, Russell Menard, George Miller, Henry Miller, James Moody, Jr., Alexander Morrison II, Ivor Noël Hume, Alain and Merry Outlaw, Susan Peters, J. Richard Rivoire, Orlando Ridout V, James Shey, J. T. Smith, James Smith, Merry Stinson, Vinson Sutlive, Jr., Jane Townes, Ransom True, Shearon Vaughn, Lorena Walsh, and E. H. D. Williams. Finally, especial thanks go to Fraser D. Neiman, whose help and insights make him virtually a sixth collaborator, and whose published works first raised important questions about impermanent architecture in the Chesapeake.

there was little more to see than small dark stains in the mottled subsoil, the center of each pierced by a tobacco stick. The farmer who plowed the field had used the sticks to mark the stains that piqued his curiosity as they flashed by under the share. His own transformation into an excavator soon afterward followed almost literally the proverbial advice given to aspiring archaeologists: Get a bag of marbles and start collecting artifacts; every time you find one, replace it with a marble; when you have lost all your marbles, an archaeologist you will be. When the Maryland farmer had used up all his tobacco sticks, there were those who said he had to be a little daffy to see in their crazy pattern the houses, quarters, barns, and fence rows of a plantation that once belonged to one of Maryland's wealthiest and most successful merchant-planters.

To be told that the seventeenth-century civilization of England's largest and most populous American dominion, the Chesapeake colonies of Virginia and Maryland, has vanished almost without trace above ground, challenges credulity. Yet, that reality, stranger than fiction, is the inescapable testament of an impressive body of evidence recently accumulated in excavations on sites south from Middle Plantation to southern Maryland, to the northern neck of Virginia, and all along the York and James rivers. Its veracity is further borne out by the work of architectural historians, now in league with dendrochronologists. By careful examination of standing structures in the region they have reduced the probable number of surviving seventeenth-century buildings to fewer than six. So completely has time effaced the physical remains of early Chesapeake society that scholars have not bothered to look for catastrophes. Instead they believe that root causes can only be found in understanding the nature of material life in the New World, the pragmatic choices that faced all seventeenth-century settlers and homesteaders,

and the special circumstances that prevailed in the southern colonies to perpetuate a meager and fragile material culture.

The last ten or twelve years have witnessed an extraordinary renaissance of scholarly interest in seventeenth-century Chesapeake history, an event that has received considerable notice in historical circles.¹ Less publicized, although not less remarkable, are the parallel efforts and comparable achievements of historians' opposite numbers in the fieldworking disciplines of archaeology and architectural history. Until ten years ago, the National Park Service had opened almost the only peephole on the material world of seventeenth-century Virginia by its excavation of Jamestown in the 1950s.² Since then, a few individuals and four major research institutions—St. Mary's City Commission (Maryland), Virginia Research Center for Archaeology (Williamsburg), Colonial Williamsburg, and Department of Anthropology, College of William and Mary (for a time affiliated with Southside Foundation)—have systematically explored over twenty-five sites in tidewater Maryland and Virginia (fig. 1). The structures brought to light have been almost without exception buildings whose framing members were in one manner or another "earthfast," that is, standing or lying directly on the ground or erected in postholes.³ While a few such impermanent structures

¹ Thad W. Tate, "The Seventeenth-Century Chesapeake and Its Modern Historians," in *The Chesapeake in the Seventeenth Century: Essays on Anglo-American Society*, ed. Thad W. Tate and David L. Ammerman (Chapel Hill: University of North Carolina Press, 1979), pp. 3–50; reviewed and the scholarship further commented on by John M. Murrin in *William and Mary Quarterly*, 3d ser. 38, no. 1 (January 1981): 115–21.

² John L. Cotter, *Archaeological Excavations at Jamestown, Virginia* (Washington, D.C.: National Park Service, 1958); John L. Cotter and J. Paul Hudson, *New Discoveries at Jamestown* (Washington, D.C.: National Park Service, 1957). Reports on excavations of three other early sites were published in this period: Louis R. Caywood, *Excavations at Green Spring Plantation* [Virginia] (Yorktown: Colonial National Historical Park, 1955); Ivor Noël Hume, *Excavations at Tutter's Neck in James City County, Virginia, 1960–1961*, (Museum of History and Technology Paper, no. 53 (Washington, D.C.: Smithsonian Institution, 1966); Ivor Noël Hume, "Mathews Manor," *Antiques* 40, no. 6 (December 1966): 832–36. The hole-set buildings discovered on the Mathews Manor site are described here for the first time (Appendix 2:24). The masonry foundations of several presumed seventeenth-century structures encountered in the restoration of Colonial Williamsburg have never been reported on. Sites described in Henry Chandlee Forman, *Jamestown and St. Mary's, Buried Cities of Romance* (Baltimore: Johns Hopkins Press, 1938), have mostly been reexcavated and reinterpreted by National Park Service and St. Mary's City Commission.

³ The general term *earthfast* refers throughout this essay to timbers embedded in the ground any way at all; *hole-set* and the contemporary phrase "posts in the ground" specifically denote uprights erected in postholes; *ground-standing*, *ground-laid*, and *trench-laid* are modern terms for members set directly on the ground surface or embedded in trenches too shallow to give the structure rigidity. Other building terms used in this essay are described in figure 3.

were encountered in the excavations of Jamestown, no one suspected how prevalent they had been or how widely they were used for every sort of building from "manner houses" to hen coops. Earthfast building was overwhelmingly the predominant architectural tradition in the South; yet it escaped the notice of everyone who studied and wrote on the subject.

The first purpose of this article, therefore, is to reintroduce the vernacular architecture of seventeenth-century Virginia and Maryland. We have thought it best to present prime examples of the principal building types in ten brief site reports (Appendix 1) because, frankly, the evidence is open to more than one interpretation, and we think others ought to have a chance to draw their own conclusions. We expound our own in the initial discussion section of this essay. There and in an inventory of archaeological sites presented in Appendix 2 we have also tried to make some account of the more than 150 earthfast buildings about which something is now known. For the first time, American historical archaeologists have in hand a body of evidence sufficiently large to support valid general observations comparable to those that numerous surviving buildings make possible in New England. Yet, comparisons have been slow in coming, partly because most of the new information is hidden away in unpublished reports. Appendix 2 is no substitute for fuller publication, nor are scholars relieved of the obligation to read site reports. But, being comprehensive, the inventory makes possible some preliminary comparative analyses as well as indicating where additional information may be found.

If American readers make their first acquaintance with earthfast buildings in these pages, English archaeologists will study them for another reason. Impermanent buildings are nothing unusual on Anglo-Saxon and medieval sites.⁴ They have been found in regions where peasant houses were built of earth and stone and, now that deserted medieval village sites are being explored in central England, in areas where timber building has an ancient ancestry.⁵ Early results suggest a

⁴ Maurice Beresford and John G. Hurst, eds., *Deserted Medieval Villages* (London: Lutterworth Press, 1971), pp. 78–100; David M. Wilson, ed., *The Archaeology of Anglo-Saxon England* (London: Methuen, 1976), pp. 49–97. The vernacular threshold between permanent and impermanent architecture is discussed in Eric Mercer, *English Vernacular Houses* (London: Her Majesty's Stationery Office, 1975), pp. 1–9, 23–39; and in J. T. Smith, "The Evolution of the English Peasant House to the Late Seventeenth Century: The Evidence of Buildings," *Journal of the British Archaeological Association*, 3d ser. 33 (1970): 122–46.

⁵ Guy Beresford, *The Medieval Clay-Land Village: Excavations at Goltho and Barton Blount* (London: Society for Medieval Ar-

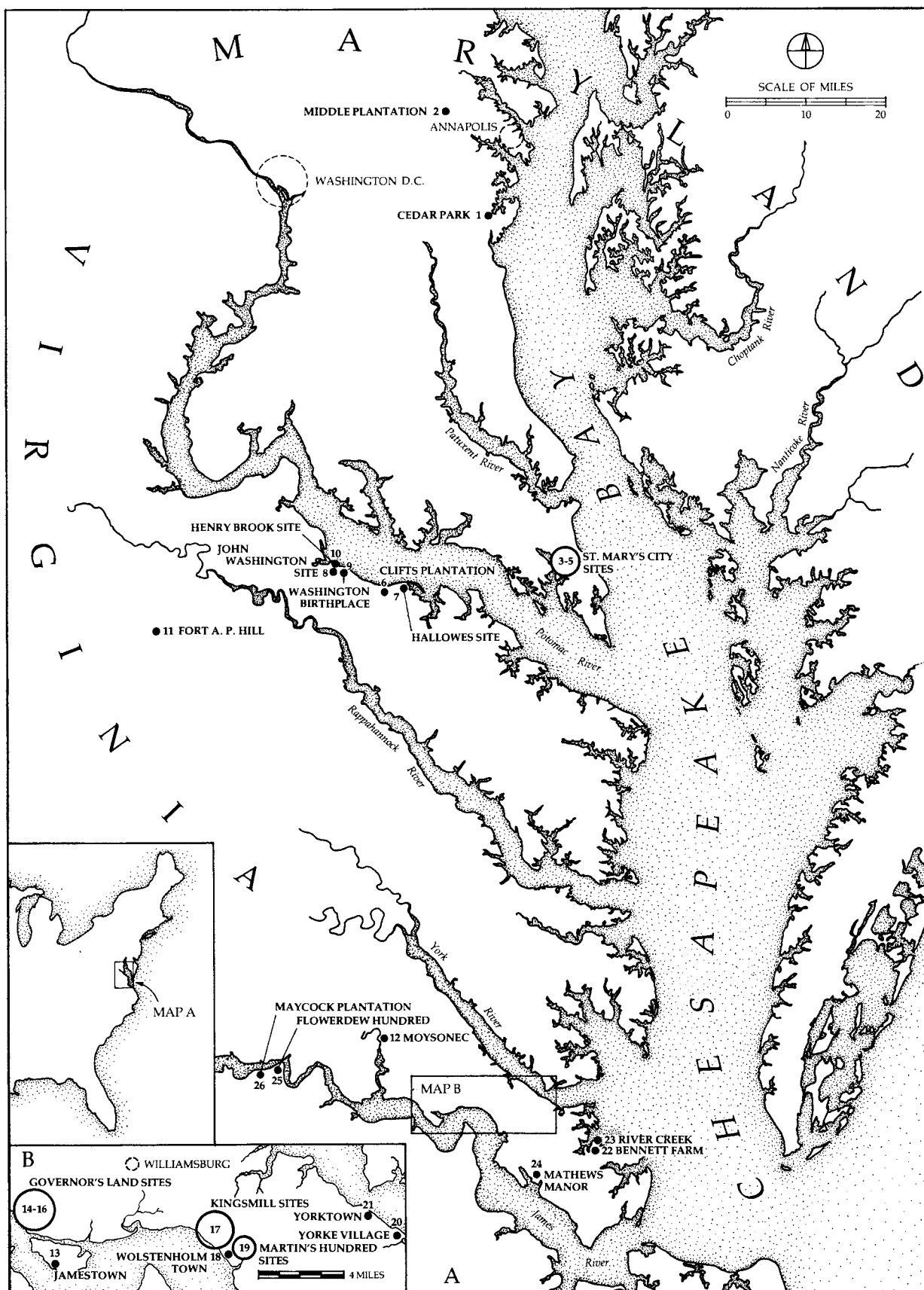


Fig. 1. Tidewater Maryland and Virginia showing locations of earthfast buildings described in Appendix 2. (Drawing, Shearon Vaughn and Cary Carson.)

sequence of structural development that began with primitive, uncarpentered, earthfast buildings, evolved into ground-standing structures, and sometime in the thirteenth century culminated in prefabricated, fully framed buildings raised off the ground on stone pads or low foundation walls.⁶ The archaeological evidence implies that the transformation was complete no later than the fourteenth century. This evolution in technology, English scholars believe, prepared the way for the professionally built, storied structures that survive in numbers from the latter half of that century onward.

But now from England's former American colonies comes complicating evidence to suggest that Englishmen kept alive certain very ancient and primitive building traditions well into the modern age. There is no question that the earthfast structures excavated along the eastern seaboard represent contemporary English practice transplanted to an American setting and are not New World inventions. The construction techniques described in this essay appear full blown on sites occupied as early as 1618–19, scarcely ten years after the settlement of Jamestown. Thereafter they are encountered so consistently and widely throughout the Chesapeake area, and are known (mostly from literary sources) from as far away as New England, that independent invention must be ruled out as a plausible explanation. There has to have been a common source, and that source can only have been the colonists' homeland, England. English scholars, therefore, need to reassess their chronology and look again at fragmentary evidence from central Lincolnshire, south Somerset, Yorkshire, and elsewhere that hints at a coexistence of vigorous permanent and impermanent vernacular building traditions lasting possibly into the early nineteenth century.⁷

chaeology, 1975); "Excavation of a Moated House at Wintringham in Huntingdonshire," *Archaeological Journal* 134 (1977): 194–286; "Excavations at the Deserted Medieval Village of Caldecote, Hertfordshire: An Interim Report," *Hertfordshire's Past* 4 (1978): 3–13. See also interim notes on Faxton, Northamptonshire, in *Medieval Archaeology* 10 (1966): 214; 11 (1967): 307; 12 (1968): 203; 13 (1969): 279; D. G. Hurst and John G. Hurst, "Excavations at the Medieval Village of Wythemail, Northamptonshire," *Medieval Archaeology* 13 (1969): 167–203; P. V. Addyman, *The Work of the York Archaeological Trust, 1976* (York: York Archaeological Trust, 1976) and *The Work of the York Archaeological Trust, 1977* (York: York Archaeological Trust, 1977), which Barbara Hutton brought to our attention.

⁶ Beresford, "Wintringham," pp. 225–29.

⁷ David L. Roberts, "The Persistence of Archaic Framing Techniques in Lincolnshire," *Vernacular Architecture* 5 (1974): 18–20; 6 (1975): 33–38; fieldwork in Somerset by Cary Carson and E. H. D. Williams to be reported on at a future date. As this essay went to press we learned from J. T. Smith that an extant

A variety of simultaneously current construction techniques, not a single evolutionary sequence, best explains the development of architectural traditions in the South. This key concept was first understood not by archaeologists so much as by the architectural historians who, since about 1968, have surveyed much of the Chesapeake Bay country county by county and house by house. Three nonacademic institutions led the way. Maryland Historical Trust and Virginia Historic Landmarks Commission used federal survey grants to compile detailed inventories of historic structures in their respective states. That fieldwork led to the identification of the earliest buildings in the region. Those in Maryland, St. Mary's City Commission and Maryland Historical Trust made the object of a special recording project for the Historic American Buildings Survey.⁸ Recently some of the oldest buildings have been revisited and sampled by the American Institute of Dendrochronology in a successful attempt to date construction and subsequent alterations.⁹ All this research had two important consequences. By isolating the earliest extant structures attention was focused on the building conventions that distinguished what contemporaries in the seventeenth century called the "Virginia house." Once those traits were recognized, connections could be traced back to specific regional traditions in English vernacular architecture.¹⁰ Thus, the links were formed with archaic, timber building practices in England that finally led to the realization that colonists had known a whole range of building types—from the earthfast to the "fayre framed"—from which long experience had already accustomed them to choose whichever best suited the circumstances they encountered.

It is an easy step from matters such as these, which interest mainly archaeologists and architectural historians, to broader issues that command attention from social and economic historians. Choosing an appropriate building technology was a critical economic decision for anyone who set out to build a farm or a plantation. Thereafter it continued to be an important consideration if the enterprise prospered and earned profits that a farmer could reinvest in improvements and additions to his farmstead or could spend on better housing and a higher standard of living for his

seventeenth-century hole-set structure has been discovered in Lincolnshire.

⁸ Filed at the Library of Congress, Washington, D.C.

⁹ Dates established by tree-ring analysis hereafter indicated as, for example, [1703].

¹⁰ See pp. 158–59 below.

family. On the other hand, as the early history of the Chesapeake gives ample proof, financial reverses and other unforeseen setbacks postponed improvements and stalled farm economies in a perpetual state of incipient development. Such considerations figured so concretely in prospective settlers' perceptions of the opportunities that awaited them in the American colonies that, before setting out, many calculated the costs of different construction techniques down to the last halfpenny. "Tooling up" a plantation is a vital dimension to two questions that have come to dominate recent research in Chesapeake history, that is, to what degree the Tobacco Coast was a land of opportunity for small growers before 1660 and how did those who survived and acquired land and labor manage their resources. The subject leads from there to two other favorite topics, the gradual growth of a stable social order and the rise of a genuine consumer culture after 1700.

For once, written-record historians and their fieldworking brethren share a common plan of work. It is no coincidence. The institution most responsible for reviving interest in Chesapeake studies, St. Mary's City Commission, deliberately set out in 1969 to assemble a staff of archaeologists and social historians, and, that thing most rare, put them all to work on a single historical problem—to explore and to explain the transformation of Chesapeake society in the colonial period.¹¹ Their collaborative example has now spread to other institutions. As the circle of scholars expands and the slow work of archaeology advances, we look forward to a more regular flow of published site reports, architectural monographs, and, every now and then, our highest hope, an interpretive work of history. But for now this essay must serve all. Readers with a specialized interest in the physical evidence of early buildings are advised to start with the abbreviated site reports in Appendix 1 before turning to the discussion of that evidence that follows immediately hereafter. Historians and others whose patience for postholes and potsherds has limits may wish to skim those sections to form only a passing acquaintance with the varieties of earthfast building and concentrate instead on the second half of the essay where we have put impermanent architecture into a historical context and there try to assess its social significance.

¹¹ The collaborative character of the commission's research was the principal feature of two National Endowment for the Humanities grants entitled "Plantation Society in Colonial Maryland: A Research Partnership between History and Historical Archaeology," nos. RO-6228-72-468 (1972-74) and RO-10585-74-267 (1974-76).

Discussion

To interpret correctly the buildings that archaeologists are now bringing to light one must start by making a distinction. These were not the makeshift shelters that sprang up in every new colony in the first days, weeks, and months following an expedition's landfall. Nor were they the improvised dwellings that later arrivals slapped together to huddle in while they cleared land for new farms or plantations. The early chronicles of almost every colony from Massachusetts Bay to the Carolinas clutter the landscape with shantytowns of huts, hovels, tents, cabins, caves, and dugouts.¹² Describing an aboriginal house form that a handful of iron nails transformed into an "English wigwam," one writer explained that such dwellings were the sort built for ten shillings "in the first 15 days whilst the ship at anchor is unloading and bound to diet and lodge the passenger."¹³ Puncheon and hole-set buildings not only do not fit the descriptions of these earliest windbreaks, but archaeologists are now proving that such buildings lasted longer than the usual life span of wigwams and dugouts, which contemporaries reckoned at a few months to three or four years at most.¹⁴ Clearly, impermanence was a matter of degree.

The special fascination that primitive shelters held for an earlier generation of American architectural historians seems disproportionate today to their real importance.¹⁵ For those who built them they were temporary, improvised expedients; for us such improvisations are as remote to a study of regional vernacular building traditions

¹² These are conveniently collected in S. Fiske Kimball, *Domestic Architecture of the American Colonies and of the Early Republic* (New York: Charles Scribner's Sons, 1922), pp. 3-9, and recently for Massachusetts in Abbott Lowell Cummings, *The Framed Houses of Massachusetts Bay, 1625-1725* (Cambridge, Mass., and London: Harvard University Press, Belknap Press, 1979), pp. 18-21.

¹³ Edmund Plowden [Beauchamp Plantagenet], *A Description of the Province of New Albion* (1650). The authors are grateful to Clifford Lewis III for giving them a photostatic copy of the exceptionally rare 1650 edition, the first to include a description of the "six sorts" of American houses. Excerpted in "American Notes," *Journal of the Society of Architectural Historians* 15, no. 3 (October 1956): 2, and discussed in G. Carroll Lindsay, "Plantagenet's Wigwam," *Journal of the Society of Architectural Historians* 17, no. 4 (Winter 1958): 31-34.

¹⁴ Cornelius Van Tienhoven reported that colonists to New Netherland had kept "dry and warm in these [dugout] houses with their entire families for two, three, or four years" ("Information Respecting Land in New Netherland," in *Pennsylvania Archives*, 19 vols., 2d ser. [Harrisburg, 1874-1900], 5:183).

¹⁵ Harold R. Shurtleff, *The Log Cabin Myth: A Study of the Early Dwellings of the English Colonists in North America* (Cambridge, Mass.: Harvard University Press, 1939), pp. 20-35.

in the American colonies as charcoal burners' huts and shepherds' *skali* are to the investigation of vernacular architecture in Great Britain and northern Europe. Much more important—then and now—were the buildings that came immediately afterward, for, although often “very meane and Little,” they were, as one eyewitness observed, “Generally after the manner of . . . farme houses in England.”¹⁶ In other words, these were houses with antecedents. They were an architecture remembered from home. Hence, for us they are the starting place for a study of material life in the New World as it deviated little by little from the customs of the Old.

Whether they came to farm, to trade, or to follow some other occupation, immigrants expected to make an investment in buildings. House construction and barn raising were inescapable first steps in a process of homesteading that was central to the American experience for over 300 years. It required the planter-settler-pioneer-sodbuster to select from his or his carpenter's repertoire of building types and construction methods those best suited to immediate circumstances. A few could afford to gratify at once their ultimate aspiration for the best sort of building they had known at home. Many more could not or recognized the wisdom of choosing an easier, quicker, and cheaper form of building to meet their present need. Such was the advice that experienced colonists gave to newcomers. Cornelius Van Tienhoven recommended that emigrants from the Low Countries time their departure so as to reach New Netherland in March or April.

Boors [farmers] and others who are obliged to work at first in Colonies ought to sail from this country in the fore or latter part of winter in order to arrive with God's help in New Netherland early in the Spring in March, or at latest in April, so as to be able to plant, during that summer, garden vegetables, maize, and beans, and moreover employ the whole summer in clearing land and building cottages [that is, the dugouts that he describes later].

All then who arrive in New Netherland must immediately set about preparing the soil, so as to be able, if possible to plant some winter grain, and to proceed the next winter to cut and clear the timber . . . [including such trees] as are suitable for building, for palisades, posts and rails, which must be prepared during the winter, so as to be set up in the spring on the new made land which is intended to be sown, in order that the cattle may not in any wise injure the crops [in other words, fences first]. . . .

The farmer can get all sorts of cattle in the course of

the second summer, when he will have more leisure to cut and bring home hay, also to build houses and barnes for men and cattle. [Emphases added.]

Van Tienhoven's report starts out seeming to imply that the dugouts or “cottages” were resorted to mainly by “those in New Netherland and especially in New England who have no means to build farm-houses.” But later it explains that nearly everyone built huts the first summer and real “houses and barnes for men and cattle” the next.

[Even] the wealthy and principal men in New England, in the beginning of the Colonies, commenced their first dwelling-houses in this fashion for two reasons; first, in order not to waste time building and not to want food the next season; secondly, in order not to discourage poorer laboring people whom they brought over in numbers from Fatherland. In the course of three or four years, when the country became adapted to agriculture, they built themselves handsome houses, spending on them several thousands.¹⁷

The “poorer laboring people” presumably had to make do with their homestead houses and barns a good deal longer than the wealthy.

For many newcomers a hut was followed, as soon as could be, by a weatherproof but cheaply built house, which was not expected to last longer than it took its owner to accumulate enough capital to build yet another more substantial dwelling. Over and over again homesteaders on each new frontier moved in the same three steps from primitive shelters to temporary, impermanent buildings, to the “fayre houses” that many yeomen and even husbandmen were used to from England. “If any one designs to make a Plantation in this Province,” Thomas Nairne wrote from South Carolina in 1710, “the first thing to be done is, after having cutt down a few Trees, to split Palisades or Clapboards and therewith make small Houses or Huts to shelter the slaves.”¹⁸ In an area where neighbors had already moved on to the second or third stage of homesteading, only blacks needed to endure the worst hardships of getting started. The planter, his overseer, and his white indentured servants could expect to board “without any Charges” at nearby plantations. “And if the Person have any Wife or Children, they are commonly left in some Friend's House till a suitable dwelling Place and Conveniences are provided, fit for them to live decently.” Decency and a modicum

¹⁷ Van Tienhoven, “New Netherland,” pp. 181–83.

¹⁸ Thomas Nairne, *A Letter from South Carolina* (London: A. Baldwin, 1710), pp. 49–50. He too agreed that “the properest Time to begin a settlement is in September or, at farthest, before the first of December.”

¹⁶ *Archives of Maryland*, 65 vols. (Baltimore: Maryland Historical Society, 1883–1919), 5:266.

of convenience—these were all a newcomer should look forward to in the first few years. But Nairne reported that most settlers had hopes for a larger, better house in the future. A family's "small House," he said, "usually serves for a Kitchen afterwards when they are in better Circumstances."¹⁹ One, two, three—hovel, house, home. In settlement after settlement that was the beau ideal, not for everyone, of course, and not invariably even for those so minded. Frontier communities often resembled the description of one in central North Carolina where the first inhabitants "built and lived in log Cabbins, and as they became more wealthy, some of them built framed clapboard houses with clay chimneys." Those were the years before 1800. "At present," said the writer in 1810, "there are many good houses, well constructed with brick chimneys, and glass lights. [Yet] there are no stone or brick walled houses, nor any that can be called edifices. . . . The greatest number of citizens yet build in the old stile." The standard was often easier to imagine than to meet.²⁰

Can we be sure that for temporary houses homesteaders used inferior materials and methods of construction that were significantly cheaper, quicker, and consequently less durable than those employed in later permanent dwellings? Can we justifiably equate the various kinds of perishable structures described in the site reports presented in Appendix 1 with an interim stage in the ideal homesteading process? In several specific cases the answer is unequivocally yes. Applied more generally the correlation still holds true, but with the important caveat that some earthfast building techniques passed into a mainstream tradition among southern housewrights by the close of the seventeenth century. The circumstances that prolonged their use to the point that they became an acceptable alternative to full frame construction are discussed in the concluding section of this paper. For the moment it is enough to show that many colonists, just starting out, regarded earthfast buildings as adequate for their immediate purposes, but inferior to those they expected to construct later.

¹⁹ This was true of a small log cabin that Charles Yates instructed an agent to build on his lot in newly laid out Bath Town, Berkeley County, Virginia, in 1778: the cabin "may in future be turned into a Kitchen [consequently] it should be so placed on the Lott as to be convenient to a Better House which will stand on the best front in the Lott" (Charles Yates Letter Book, 1773–83, folio 200–1, Alderman Library, University of Virginia, Charlottesville).

²⁰ William Dickson to Thomas Henderson, November 24, 1810, Thomas Henderson Letter Book, 1810–11, Division of Archives and History, North Carolina Department of Cultural Resources, Raleigh.

John Lewger, we know positively, built his house, St. John's, at St. Mary's City (fig. 2; Appendix 1:8) four years after Maryland was founded and within half a mile of the original bivouac where the colonists took shelter in abandoned Indian wigwams. Similarly George Yeardley's party was accommodated at the main encampment on Jamestown Island before pushing on upriver to Flowerdew Hundred. Jamestown likewise served as the base camp for the founders of Wolstenholmtown, seven miles downstream. The archaeological evidence makes clear that few structures in any of these early settlements were primitive lean-tos, but neither were they "orderly, fair and well built" houses. The Flowerdew buildings (Appendix 1:5, 6) lasted scarcely twenty-five years, although the town survived into the next century. The dwellings and storehouses destroyed at Wolstenholmtown in 1622 (Appendix 2:18) were followed by farmsteads comprised entirely of hole-set barns and farmhouses, which in their turn lasted only another twenty years or so (Appendix 2:19). Nearby on Littleton Quarter, Kingsmill, two dwellings—a tiny puncheon cabin and its hole-set frame successor—were built, used, and abandoned, all before 1650 (Appendix 1:1). St. John's was longer lived, partly because it was better built to begin with, but mainly because its underpinnings were renewed periodically and its accommodations enlarged and modernized. Like other buildings its dominant trait was its transience.

Written records multiply the small but growing archaeological sample of impermanent buildings associated with immigrants who were just getting settled. They also make explicit the inferences drawn from archaeological evidence. An anonymous pamphlet, published in 1684 to promote the new colony of Pennsylvania, gave "Such Persons as are Inclined to America" a virtual set of blueprints and a bill of particulars for "a mean way of Building," but one that "ordinary beginners" would find "sufficient and safest." It called for a medium-sized house, 30 feet long and 18 feet wide, with one partition near the middle and another to divide one end into two smaller rooms (fig. 3). "These houses," prospective settlers were assured, "usually endure ten years without Repair." It is easy to understand why not longer.

There must be eight Trees of about sixteen Inches square and cut off to *Posts* of about fifteen foot long, which the House must stand upon; and four pieces, two of thirty foot long and two of eighteen foot long, for *Plates*, which must lie upon the top of those *Posts* the whole length and bredth of the House for the *Gists* to

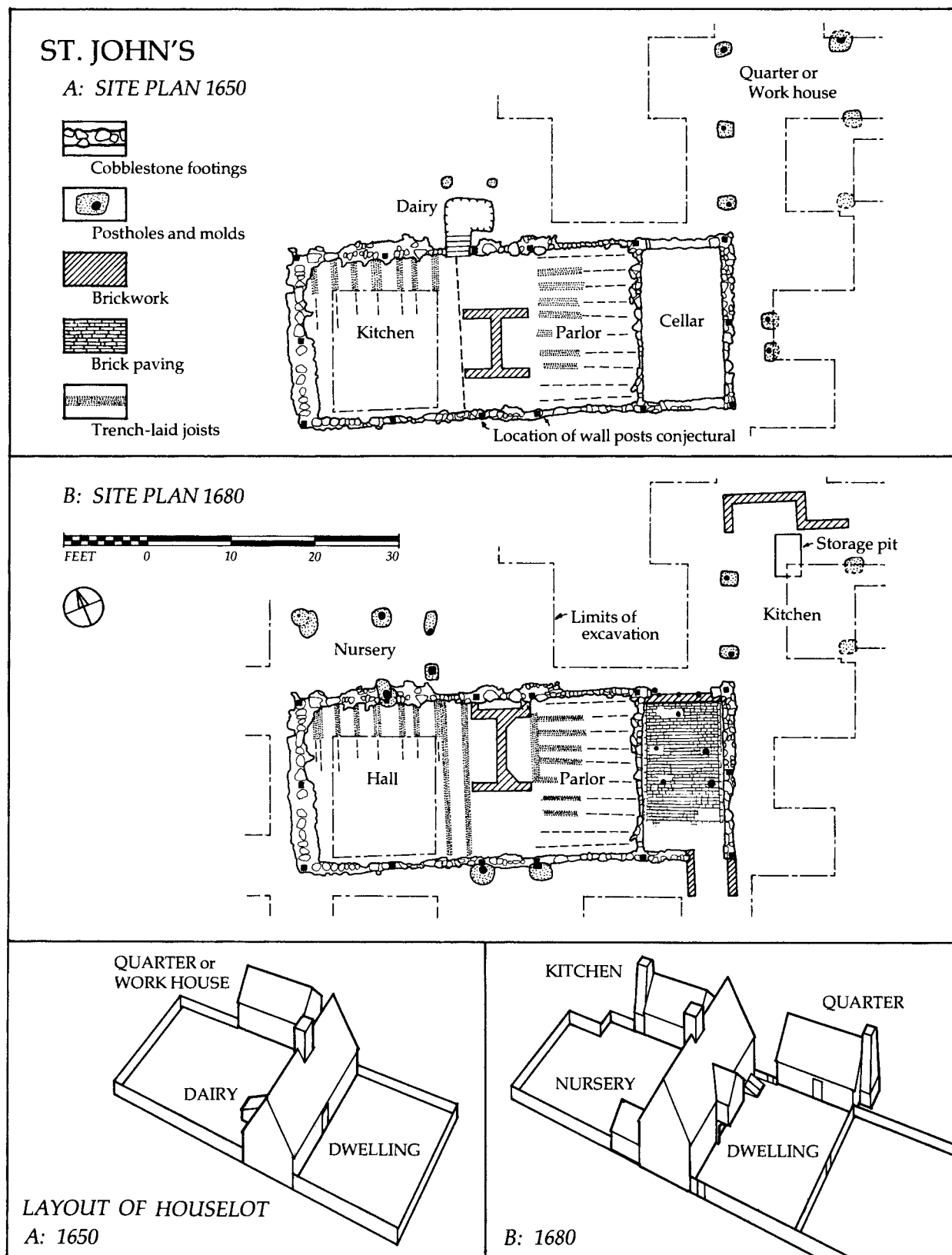


Fig. 2. Development of St. John's, St. Mary's City, Maryland. The house was built in 1638, variously altered thereafter—extensively in 1678—and was finally leased as a tavern until about 1720. (Drawing, Shearon Vaughn and Cary Carson.)

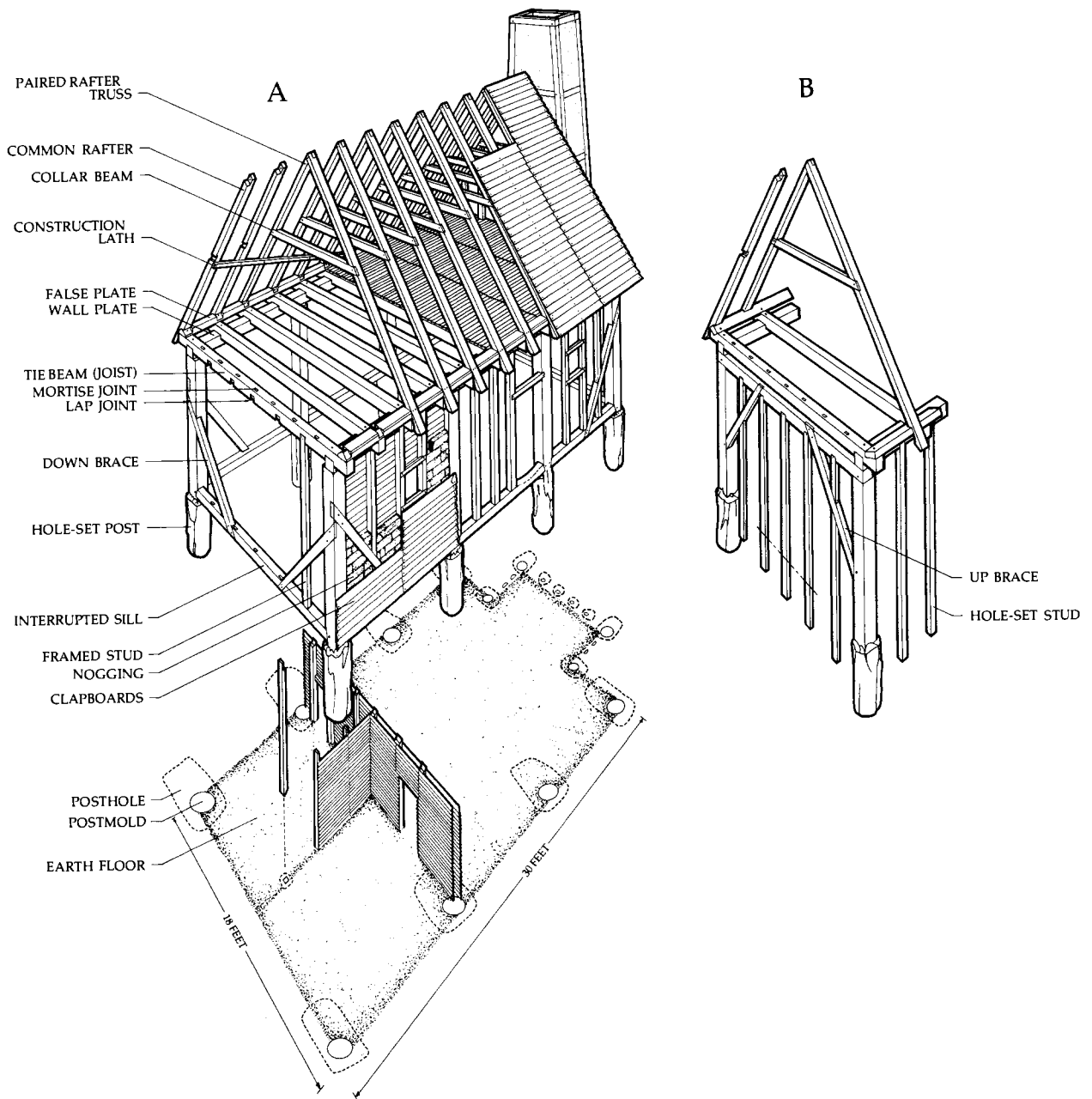


Fig. 3. Reconstruction drawing of the “ordinary beginners” house described in the 1684 pamphlet *Information and Direction to Such Persons as are inclined to America*. (A) Interpreted as a conventional Chesapeake hole-set frame house, with the addition of a timber chimney based on archaeological evidence from River Creek (see Appendix 2:23). (B) Variation without sills showing hole-set studs, up braces, tilted false plates, and a possible interpretation of the two 18-foot spanning plates called for in the specifications that are otherwise difficult to explain. (Drawing, Cary Carson and Chinh Hoang.)

rest upon. There must be ten *Gists* of twenty foot long to bear the Loft, and two false *Plates* of thirty foot long to lie upon the ends of the *Gists* for the *Rafters* to be fixed upon, twelve pair of *Rafters* of about twenty foot to bear the Roof of the House, with several other small pieces as *Wind-Beams*, *Braces*, *Studs*, etc. which are made of the Waste Timber. For Covering the House, Ends, and Sides, and for the Loft we use *Clabboard*, which is Rived feather-edged, of five foot and a half long, that well Drawn lyes close and smooth. The Lodging Room may be lined with the same and filld up between [with nogging], which is very Warm.²¹

The writer obviously spoke from firsthand experience ("we use *Clabboard*"), which he almost certainly learned from Chesapeake settlements immediately to the south. The construction techniques he described, in particular the so-called "false *Plates*" and the common-rafter roof, came straight out of a distinctive regional building tradition in Maryland and Virginia that had already developed away from English prototypes by the third quarter of the seventeenth century.²² Here then, Pennsylvania notwithstanding, are the specifications for a southern planter's house, modest enough, the pamphlet tells us, for a newcomer to build within twelve months after his arrival, yet sufficiently substantial to last ten years. Afterward, if he prospered, the worn-out "first House" could be used, as the Carolina homestead was, for "a good out House till plenty will allow . . . a Better."

As with all promotional literature, the description repays careful reading between the lines. Its list of parts is informative not only for what it includes but also for what is left out, the chief omissions being chimneys and ground sills. Although the writer explained that such houses were to "stand upon" the four pairs of 16-inch posts that comprised the frame, it is only their length—15 feet—that tells us they were set up in postholes 4 or 5 feet deep, thus bringing the standing walls to the customary height of 10 or 11 feet. The studs,

which *are* mentioned, may have been fastened to interrupted sills, which, although *not* referred to, may have been included among the "several other small pieces" that house builders were to salvage from leftover odds and ends. On the other hand, the interrupted sills used at Cedar Park (fig. 4) are heftier than that. It is perhaps more likely that the pamphleteer was remembering houses in which the studs, too, were buried in holes or trenches or were fastened to unframed lengths of sill beam laid in slots in the ground. Examples of both have been excavated at Kingsmill tenements (Appendix 1:2), Flowerdew Hundred (Appendix 1:5), and Wolstenholmtown (Appendix 2:18).

Both techniques draw attention to the further omission of ground-level floor joists from the list. Although the excavation of St. John's has shown that sleepers could be installed independently of any ground sills that a building may or may not have had, here there was no need. "The lower floor," the pamphleteer explained, "is the *Ground*; the upper *Clabbord*."²³ Probably many impermanent buildings had only earthen floors. Floors laid with expensive sawn planks were one feature, along with glazed windows and white-limed walls, that John Hammond associated with the somewhat better built farmhouses he saw in Virginia in 1656.²⁴ Their absence elsewhere no doubt contributed to the "meanness" of poorer homesteaders' houses.

It was hard for anyone to avoid altogether the discomforts of settling in an overseas colony. All, no matter what their circumstances, were beginners. Take, for instance, a man like James Claypoole of Pennsylvania, whose letters describe step by step the process of planning, building, and improving a temporary house.²⁵ Claypoole was a merchant, a stockholder in William Penn's Free Society of Traders, and an owner of some five thousand acres of province lands. Wealthy as he was, he knew better than to lavish precious time and energy on a substantial first residence. He

²¹ *Information and Direction to Such Persons as are Inclined to America, More Especially Those Related to the Province of Pennsylvania* (n.p., n.d.), p. 2. (Copy of the Pennsylvania Historical Society is reproduced by Photostat in the Massachusetts Historical Society Americana Series [Boston, 1919], no. 122). The tract is dated 1684 and attributed to William Penn in John Whiting, *A Catalogue of Friends' Books* . . . (London: J. Sowler, 1708). The date is accurate or nearly so, for the Huntington Library owns a second edition printed in London in 1686, but Penn's authorship, we are kindly informed by Edwin Bronner of Haverford College, is more doubtful.

²² Cary Carson, "The 'Virginia House' in Maryland," *Maryland Historical Magazine* 69, no. 2 (Summer 1974): 185–96. The earliest documented reference to a "false plaite" is 1678, at which time it was old enough to need repair; Charles County Court and Land Records H, no. 1, folio 139, Maryland Hall of Records, Annapolis.

²³ The practice of flooring (and ceiling) attic rooms with riven clapboards continued to the end of the eighteenth century. Examples in Maryland include Cloverfields (QA-2), Enfield (SM-115), and the Raley House (SM-236) (map identifications refer to the inventory by Maryland Historical Trust, Annapolis).

²⁴ John Hammond, "Leah and Rachel or, The Two Fruitful Sisters Virginia and Maryland: The Present Condition . . ." in *Tracts and Other Papers* . . . , ed. Peter Force, 4 vols. (Washington, D.C.: P. Force, 1836–46), 3: tract 14, p. 18.

²⁵ James Claypoole Letter Book, 1681–84, Historical Society of Pennsylvania. A brief biographical sketch of Claypoole appears in Albert Cook Myers, ed., *Narratives of Early Pennsylvania, West Jersey, and Delaware* (New York: Charles Scribner's Sons, 1912), p. 292, n. 33.

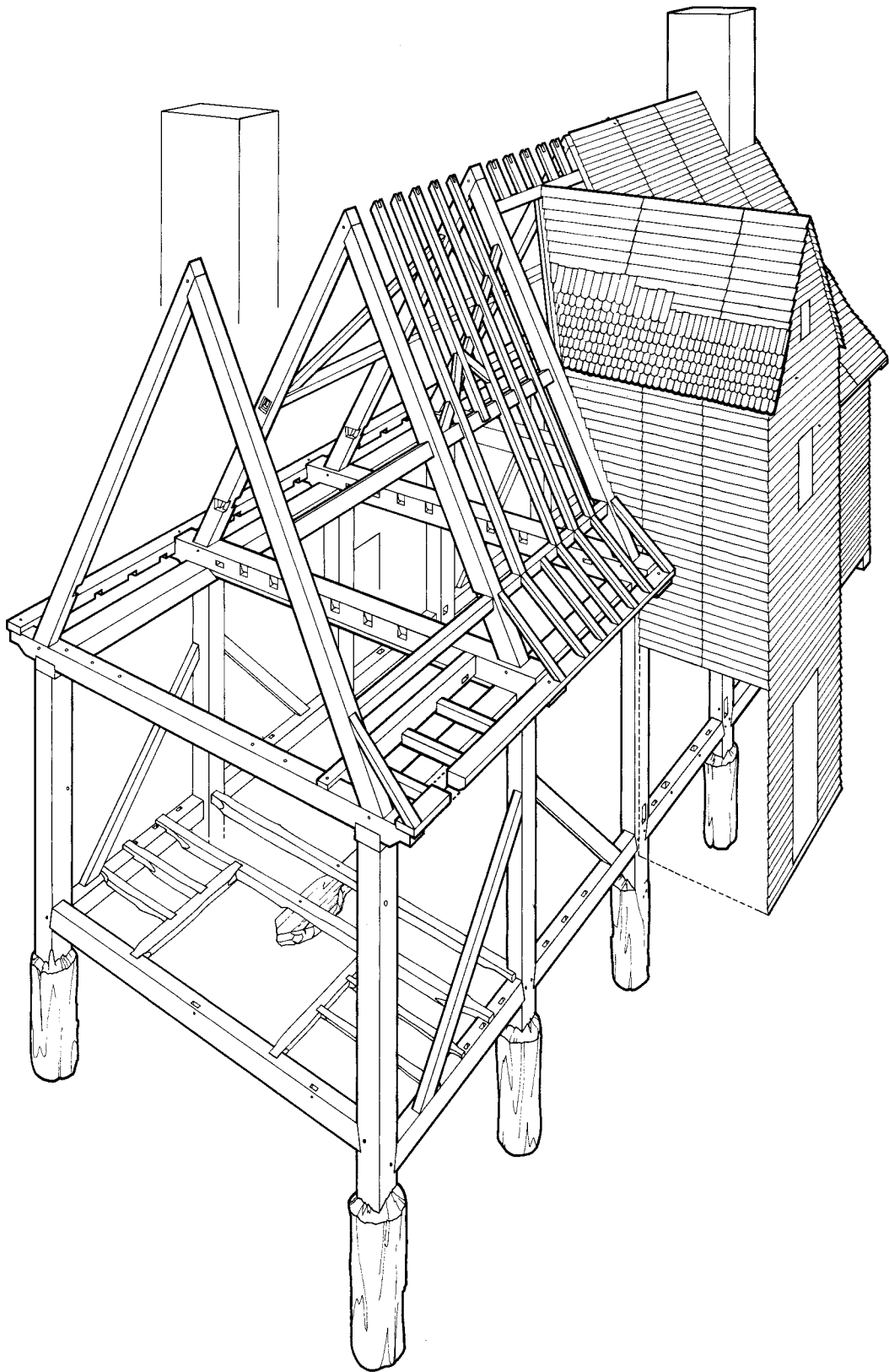


Fig. 4. Perspective view of the frame of Cedar Park, Anne Arundel County, Maryland, as built in 1702. (Drawing, Cary Carson and Chinh Hoang.)

chose to avoid the rigors of hovel dwelling personally by sending indentured craftsmen ahead to Philadelphia to prepare a homestead for himself and his family according to specifications he drew up in London. The house they built early in 1683 following his instructions was "but a slight house like a barn with one floore of two Chambers" measuring overall "40 foot long and 20 broad" with a cellar underneath "to keep some wine and other liquors Cool in that I intend to take with me." Like the "ordinary beginners" houses, it had no chimney, not in August when the family finally arrived and not four months later in December when Claypoole cut short a letter to his brother "for cold, haveing no Chimney."²⁶ A flued cooking fire was more important, so, as the first improvement to his dwelling, Claypoole was building a 20-foot kitchen provided with "a double Chimny." His neighbors, too, were busy bringing their properties up to standard; he wrote that "Wm Framton is on the other side of me building a great brewhouse." As adequate as Claypoole's house was to "hold us and our goods and keep us from the sunn and weather," it was a temporary expedient and nothing more. Even before leaving England he was making plans to build a brick house in the spring. He instructed his indentured bricklayer to find a good clay pit and "prepare as much clay as he can in the most convenient place to work upon come Springe." He himself would bring another carpenter, and he had asked his brother in Barbados to send "one or 2 good stout negroes" to help build the permanent house, which a man of his means could expect to occupy within less than a year after his arrival, although not without camping out in a barnlike stopgap in the meantime.²⁷

Claypoole's letters offer only these few clues from which to guess what was slighted in making his "slight house." Fifty years earlier a New Englander of comparable social standing, Samuel Symonds, left much less to the discretion of the agent who supervised construction of his house in the frontier settlement of Ipswich, Massachusetts.

²⁶ Houses without chimneys figure in accounts of other fledgling colonies. In Massachusetts, for example, a small house "made all of clapboards," one of the first in the settlement of Watertown, burned down in 1632 "by making a fire in it when it had no chimney" (James Savage, ed., *The History of New England from 1630 to 1649*, by John Winthrop, Esq. . . ., 2 vols. [Boston, 1853], 1:104).

²⁷ Two-story frame houses built in 1691 on Front Street in Philadelphia "were founded under ground on a layer of sap clapboards," which were still "hard and sound" when the houses were razed about 1810 (John Fanning Watson, *Annals of Philadelphia* [Philadelphia: E. L. Carey & A. Hart; New York: G. & H. C. Carvill; 1830], p. 290).

"Concerneinge the frame of the howse," Symonds began his copious instructions,

I am indiferent whether it be 30 foote or 35 foote longe; 16 or 18 foote broad. I would have wood chimneys at each end, the frames of the chimnyes to be stronger than ordinary, to beare good heavy load of clay for security against fire. You may let the chimnyes be all the breadth of the howse, if you thinke good; the 2 lower dores to be in the middle of the howse, one opposite to the other. Be sure that all the dorewaies in every place be soe high that any man may goe upright under. The staires I thinke had best be placed close by the dore. It makes noe great matter though there be noe particion upon the first flore; if there be, make one [room] bigger then the other. Fore windowes, let them not be over large in any roome, & as few as conveniently may be; let all have current draw-windowes, haveing respect both to present & future use. I thinke to make it a girt howse will make it more chargeable then neede; however, the side bearers for the second story being to be loaden with corne, &c. must not be pinned on, but rather eyther lett in to the studds or borne up with false studds, & soe tenented in at the ends; I leave it to you & the carpenters. In this story over the first, I would have a particion, whether in the middest or over the particion under, I leave it. In the garrett noe particion, but let there be one or two lucome windowes, if two, both on one side. I desire to have the sparrs reach downe pretty deep at the eves to preserve the walls the better from the wether, I would have it selled all over, & soe the frame of the howse accordingly from the bottom. I would have the howse stronge in timber, though plaine & well brased. I would have it covered with very good oake-hart inch board, *for the present*, to be tacked on onely for the present, as you tould me. Let the frame begin from the bottom of the seller, & soe in the ordinary way upright, for I can hereafter (to save the timber within ground) run up a thin brickwork without. I thinke it best to have the walls without to be all clapboarded besides the clay walls. It were not amisse to leave a dore-way or two within the seller, that soe hereafter one may make comings in from without, & let them be both upon that side which the lucome window or windowes be.²⁸

Four features of the Symonds house are uncommon or unknown among surviving seventeenth-century buildings for precisely the reasons that recommended their use in circumstances where time and costs had to be held to a minimum. The pair of clay-daubed timber chim-

²⁸ Samuel Symonds to John Winthrop, Jr., n.d. [after February 1638], *Boston Collections*, Massachusetts Historical Society Collections, 4th ser., vol. 7 (Cambridge, Mass., 1865), pp. 118–20. The editors note that Symonds, a gentleman, emigrated from Yeldham, Essex. From internal evidence it is clear that the letter in the collections of the Essex Institute, Salem, Massachusetts, was written after Symonds's arrival in Massachusetts.

neys, one on each gable, must have resembled the "double clayed chimney" built in 1638 for the minister at the Agawam trading post (now Springfield, Massachusetts).²⁹ References to posted "Welsh chimneys" occur frequently enough in the seventeenth-century records of Maryland and Virginia to imply that wooden chimneys like Symonds's were used in insubstantial dwellings throughout the colonies.³⁰ Hole-set timber chimneys are regularly encountered on excavated sites (for example, Utopia Leasehold, Appendix 1:4), and one, River Creek in York County, Virginia (Appendix 2:23), has produced unmistakable evidence of a chimney raised on corner posts with hole-set studs in between.

Symonds wanted the frame of his two-story house to be "strong in timber," yet, even so, it was to stand on posts set on or into the cellar floor. As his letter specifies, "Let the frame begin from the bottom of the seller, and soe in the ordinary way upright." It was ordinary for homestead structures perhaps but certainly not ordinary at all for the sorts of seventeenth-century houses that have lasted to the present day in New England. Symonds himself understood the difference, which he explained by saying, "I think to make it a girt house will make it more chargeable then neede." Instead of framing the ground-floor ceiling beams into girts and they in turn into the wall posts in the usual way, he called for "side bearers for the second story," or what we now term *clamps*. These were normally pegged to the inside surface of the posts and studs, in effect providing a shelf on which to rest the ends of the joists.³¹ The technique

required no mortises, which, being time-consuming, were costly. Clamps worked well where the floor above supported ordinary loads. But Symonds planned to store corn and other unusually heavy goods upstairs and, therefore, cautioned that the side bearers "must not be pinned on, but rather eyther lett in to the studds [in notches] or borne up with false studds, and soe tenented in at the ends." What he meant by false studs can only be guessed, perhaps secondary uprights fastened to the backs of the regular studs and snugged up under the clamps to bear their weight. As for tenoning the clamps "in at the ends," possibly he had in mind only a simple lap joint at their juncture with the posts. Otherwise, it is hard to understand how reinforced side bearers saved much over girts.

The final expedient was the roof, covered with oak boards "tacked on onely for the present." Apparently Symonds had plans to put on another kind of roof when time allowed or materials became available. Unlike Claypoole, the thrifty New Englander was building a house now that he could eventually improve to the point of making it more or less permanent without putting himself to the expense of building entirely anew. Not only was there the roof, the chimneys "stronger than ordinary," and the "draw-windowes" suited to "both the present and future use," but, knowing that inevitably the posts would rot, he anticipated that "I can hereafter (to save the timber within ground) run up a thin brickwork without," in other words, brick foundation walls.³² The same measure preserved another hole-set frame at Cedar Park.

Symonds's instructions for a make-do house in Ipswich, Claypoole's for his barnlike contrivance in Philadelphia, and the brochure for prospective builders of ordinary beginners' cottages in Penn's colony all state explicitly that the dwellings were interim structures. They demonstrate that a characteristic second stage in the process of making new settlements was often accompanied by the several sorts of earthfast structures that ar-

²⁹ Samuel Eliot Morison, *Builders of the Bay Colony* (Boston and New York: Houghton Mifflin Co., 1958), p. 346.

³⁰ For example, *Archives of Maryland*, 41:281-82, contains a deposition concerning housing built by one Hugh Bevin (obviously Welsh himself), whose duties included putting up "the Posts of the Welch Chimney." Timber chimneys were sometimes backed with brick. John Mercer, building a frame house in Marlborough, Virginia, in 1730, paid his carpenters for "covering my house and building a Chimney" and "plaistering my House and making 2 brick backs" (Mercer Ledger B [1725-32], Bucks County Historical Society, Doylestown, Pennsylvania). Mercer, an English merchant, took shelter in a small, abandoned house on first moving to Marlborough in 1726, for him the equivalent of a hut or a wigwam. Four years later he built a frame house with wooden chimneys and sixteen years after that a permanent dwelling, a fine brick mansion. See C. Malcolm Watkins, *The Cultural History of Marlborough, Virginia: An Archaeological and Historical Investigation of the Port Town for Stafford County and the Plantation of John Mercer* (Washington, D.C.: Smithsonian Institution Press, 1968), pp. 17-20, 34-39, 85-99.

³¹ Clamps, adopted in the second half of the sixteenth century as a method of inserting first floors into older open halls, "came to be regarded as a cheap alternative, structurally, by both carpenter and customer during the 17th century. The use of these obviated the use of girths, the inclusion of which was

expensive" (Cecil A. Hewett, "Some East Anglican Prototypes for Early Timber Houses in America," *Post-Medieval Archaeology* 3 [1969]: 109). Hewett illustrates two early seventeenth-century Essex (England) houses with original clamps in *Post-Medieval Archaeology* 3 (1969): 102-4; 5 (1971): 79-80.

³² In specifying that the windows were to be smallish and as few as possible Symonds was again saving time and money. An itemized list of repairs carried out on a house at Snow Hill Manor, Maryland, in 1639 shows that "making framed windows" could be extremely time-consuming, at Snow Hill taking more than twice as long as covering the roof (*Archives of Maryland*, 4:110).

chaeologists have discovered in recent excavations. Such buildings plainly came after and were superior to newcomers' shanties. Just as plainly they preceded and were not as well built as the fully framed or brick houses that successful colonists set their sights on.

Between those two extremes the homesteader—the builder for here and now—might choose one of several construction techniques, although, if British, he was likely to build a frame house covered with clapboards. "Such are almost all the English houses in the country," one traveler noted, failing only to observe that many (judging now from archaeological evidence) were raised on earthfast frames.³³

Puncheon buildings. The most primitive were buildings with driven posts and in fact not really framed at all. Two dwellings excavated at the Maine, a 1620–30s plantation site opposite Jamestown (Appendix 2:14), were hardly more than cabins, each nailed together around a rectangular pen of randomly placed uprights.³⁴ Their fragile remains recall a structure of similar size, plan, and date found underneath nearby Littleton Quarter (Appendix 1:1). All were raised on poles and posts whose basal elevations varied so greatly as to rule out prefabricated walls or preassembled parts. Indeed, the absence of separately discernible post-holes and molds suggests that the uprights were individually driven into the ground, making them what contemporaries knew as "punches," or, when set close together, perhaps in prepared trenches, "pallisados."³⁵ Puncheon buildings are mentioned in accounts of several early and widely separated settlements, often in terms that leave no doubt about their inferior and temporary character. It was reported from Virginia in 1623, for instance, that the settlers' houses "are onlie made of wood, few or none of them beeing framed houses but punches sett into the Ground And couered with Boards so as a firebrand is sufficient to consume them all."³⁶ Six years after Scituate, Massachusetts,

was settled by Londoners and "men of Kent," a new arrival found nine dwellings in the village, "all wch," he noted, are "small plaine pallizadoe Houses."³⁷ Others are known to have been built in Connecticut,³⁸ in Plymouth,³⁹ and in Charlestown, which was merely a trading station before Massachusetts Bay was settled in 1630. In that year Capt. Roger Clap put into the Charlestown harbor and later described the village as having a few "wigwams and one House." The house was a "palisadoed and thatched" affair built in 1628, which, against all odds, was repaired, refurbished, and thereby kept standing for 150 years.⁴⁰ Its preservation may have been aided by ground-laid sills which provided a dry seat for the palisade walls. An early house in Yarmouth, Massachusetts, when razed about 1840, revealed wall construction of close-set (6-inch) palisades fitted into auger holes bored in parallel rows in the sills and plates and infilled with a packing of stones and clay.⁴¹

But silled palisade walls were exceptional. Most such buildings were puncheon buildings, which to housewrights then and to archaeologists since have usually meant ephemeral structures raised around a gaggle of earthfast uprights. Their builders may not even have planned them in the "bay" units so

³⁷ Recorded in the diary of the Reverend John Lothrop under the heading "The Houses in ye planta[tion] Scituate Att my Comeing hither, onely these wch was aboute end of Sept. 1634," *New England Historical and Genealogical Register* 10 (1856): 42.

³⁸ Norman Morrison Isham and Albert F. Brown, *Early Connecticut Houses* (Providence: Preston & Rounds Co., 1900), pp. 12–13. Isham collected other references to palisade buildings in an unpublished and untitled history of Massachusetts architecture, now deposited in Society for the Preservation of New England Antiquities, Boston.

³⁹ Harold Shurtleff believes that the phrase "palisadoed house," when found in New England records, meant a house surrounded by a stockade (*Log Cabin Myth*, p. 88n). Sometimes it did (see Samuel Maverick, "A Briefe Description of New England . . . [ca. 1660]," *Proceedings of the Massachusetts Historical Society*, 2d ser. 1 [1885]: 234–36), but not always. For example, a thief broke into a dwelling house in Plymouth, in 1646 "by putting aside some loose pallizadoes" (Nathaniel B. Shurtleff and David Pulsifer, eds., *Records of the Colony of New Plymouth*, 12 vols. [Boston, 1855–59], 2:111).

⁴⁰ Alexander Young, ed., *Chronicles of the First Planters of the Colony of Massachusetts Bay* (Boston: C. C. Little & J. Brown, 1846), pp. 348–49, 374–75.

⁴¹ Amos Otis, *Genealogical Notes of Barnstable Families*, ed. Charles Swift (Barnstable, Mass.: F. B. & F. P. Goss, 1880–82), pp. 202–3. French settlers in Canada and along the Mississippi Valley built walls much the same way (see Fred Kniffen and Henry Glassie, "Building in Wood in the Eastern U.S.: A Time-Place Perspective," *Geographical Review* 56, no. 1 [January 1966]: 50–54, and Kenneth E. Kidd, *The Excavation of Ste Marie I* [Toronto: Toronto University Press, 1949], pp. 37–42, 53–59, 61–64). Whether New World builders were merely following a very old practice still current in seventeenth-century England and France is part of the larger question we hope this essay reopens, that is, how extensively ancient methods of impermanent building may have survived into fairly recent times.

³³ Bartlett B. James and J. Franklin Jameson, eds., *Journal of Jasper Dankaerts, 1679–1680* (New York: Charles Scribner's Sons, 1913), p. 97.

³⁴ To be discussed at length in a forthcoming report by Alain Outlaw, Virginia Research Center for Archaeology.

³⁵ The different terms applied to fence construction too, as the case of Gerret van Sweringen of St. Mary's City demonstrates. In 1684 his cattle broke into a garden by pushing "between the palisadoes" (*Archives of Maryland*, 17:300–301). When excavated, the fence was found to have been constructed of closely spaced, heavy riven posts.

³⁶ Susan Myra Kingsbury, ed., *The Records of the Virginia Company of London*, 4 vols. (Washington, D.C.: Government Printing Office, 1906–35), 4:259.

familiar to frame construction; occasional specifications for houses described as being so many "lengths of [riven clap-] boards" long, "alloweing 5 foote to each length," may betray a way of thinking in which the design of buildings was dimensioned in multiples of standard clap-board sizes rather than units of framing, an approach entirely consistent with the piecemeal manner of erecting puncheon structures.⁴² It is hard to draw a line between houses like those at the Maine and the contraptions that newcomers first took shelter in. Indeed, a distinction (other than the relative longevity of the Maine houses) is probably not worth trying to make. Whether sturdy shacks or ramshackle homesteads, they are chiefly interesting now as the most primitive earthfast structures so far discovered, one end of a continuum that had at its other end elaborately framed, semipermanent, earthfast buildings like Cedar Park.

Hole-set framed buildings. Most houses and barns that archaeologists are finding fall somewhere between the two extremes; usually they were laid out in regular bays formed by paired posts. By paying careful attention to the shape, orientation, and depth of the postholes and the location of the timber molds in those holes, excavators have made a start at telling apart hole-set buildings assembled in several different ways. The least sophisticated were those framed without any ground sills at all, not even interrupted sills. A technical drawing (1705) of buildings inside an English fort on Casco Bay, Maine, illustrates several methods of framing and bracing structures that derived most of their rigidity from their hole-set posts (fig. 5).⁴³ In buildings without sills the studs as well as the posts were embedded in the ground. Excavation of Kingsmill Tenement I (fig. 6; Appendix 1:2) has produced the clearest archaeological evidence of this method, one which also left traces in written records. The Stafford County, Virginia, court, for example, commissioned a small "prison house" in 1691, specifying "Locust posts Twelve Inches Square Studded with Locust Stoods [studs] three foot in the ground."⁴⁴ Houses and farm buildings,

similarly constructed, are described as early as 1650.⁴⁵

There may have been forms of construction that represented a cross between studded hole-set buildings and those with puncheon walls. An early structure at Flowerdew Hundred, thought to be a warehouse, could be one such case (fig. 7; Appendix 1:5). It was erected on a bayed framework of hole-set posts, but the uncommonly wide bays (20 feet), suggest that the smaller, earthfast uprights in between gave structural support to the wall plates in the manner of puncheons rather than of studs.

Embedded studs were sometimes improved upon when affixed to horizontal timbers laid into shallow trenches, a practice akin to the use of sills to waterproof the footings of palisade walls. Sites on Martin's Hundred along James River, including early Wolstenholmtown, have produced the remains of dwellings, farm buildings, and storehouses whose exterior walls stood on trench-laid sills interrupted at regular bayed intervals by hole-set framing posts (Appendix 2:18). Firmly seated in the subsoil, such sill beams were probably not tenoned to the posts they abutted, thereby saving some costs. But even more important, it was a homesteader's willingness to make do with earthen floors that resulted in choosing this manner of construction in preference to interrupted sills raised entirely off the ground.

Higher was drier, and drier was definitely better. Many builders of hole-set structures must have agreed that a few more mortises and tenons were worth the expense of making interrupted sills an integral part of a framed house, for only the major uprights have left evidence in the ground on most sites. While traces of shallow earthfast studs and sills may since have been plowed to nothing, there are reasons to suppose that many house frames were entirely raised off the ground on hole-set posts. Several excavated sites preserve original grades, among them the kitchen yards at Gerret van Sweringen's tavern (Appendix 2:4), at River Creek (Appendix 2:23), and at Yorke Village (Appendix 2:20). All yielded evidence of hole-set posts but not earthfast studs. Another indication is the growing preference among late seventeenth-century builders for silled buildings supported on wooden blocks (discussed below, p. 153). Such

⁴² Surry County, Deeds and Wills, book 1, folios 55 (1651), 96 (1657), Virginia State Library, Richmond; these and other State Library references are courtesy of the Association for Preservation of Virginia Antiquities Virginia Settlers Research Project.

⁴³ Archer Butler Hulbert, ed., *The Crown Collection of Photographs of American Maps*, ser. 3 (London: Colonial Office Library, n.d.): pl. 167, cat. no. 11.

⁴⁴ "Notes from the Records of Stafford County, Virginia, Order Books," *Virginia Magazine of History and Biography* 46, no. 1 (January 1938): 20.

⁴⁵ They were recommended for building silkworm houses by E. W. Gent[leman], "Virginia: More especially the South part thereof, Richly and truly valued" (1650) in Force, *Tracts*, 3: tract 11, 36-37; a dwelling built this way in 1658 may be the correct interpretation of the description of a house in *Archives of Maryland*, 41:281-82.

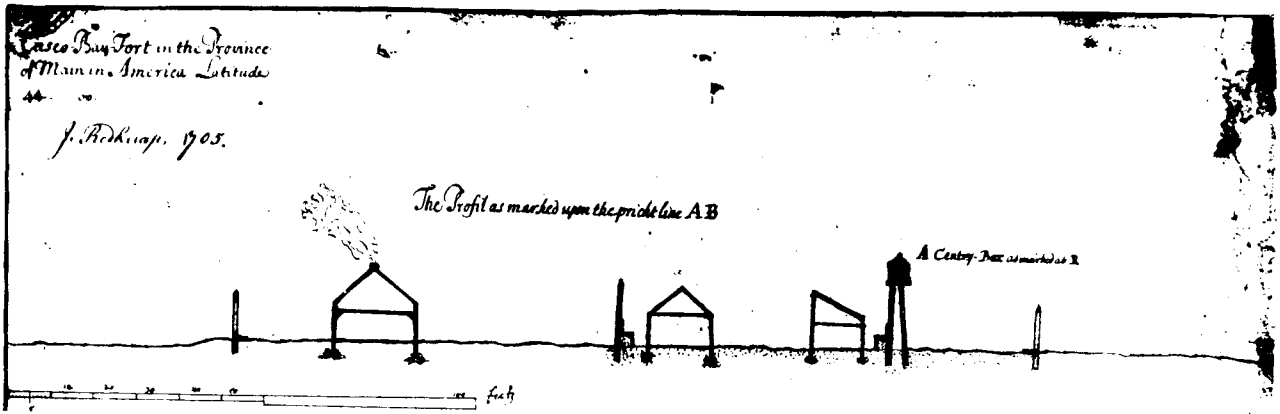


Fig. 5. Detail from a plat of "Casco Bay Fort in the Province of Main[e] in America" showing a cross-section through three hole-set buildings—a guard house and two store houses—inside the fortifications. The posts (upbraced in the largest structure) appear to be seated on rocks placed in the postholes. The drawing is signed and dated "J. Redknapp. 1705." (Colonial Office Library, London: Photo, Yale University Library.)

construction appears to be a more logical outgrowth of silled frames standing on hole-set posts than frames with earthfast studs.

One of the clearest cases of a house with elevated sills is also one of the earliest structures excavated in Virginia. Built about 1620 in the clustered settlement on Flowerdew Hundred, its four-bay frame was erected on pairs of uprights set up in shallow construction trenches, not in separate holes (see fig. 7; Appendix 1:6). Blocks of dressed siltstone (evidently reused ballast) were placed in the trenches between the uprights to make low foundation walls, the masons taking care to create a level surface. A topping of brickwork brought the plinth up evenly underneath what were surely interrupted sills; horizontal timbers mortised and tenoned to the uprights seated the studs and gave rigidity to the ground-standing frame.

Fully carpentered interrupted sills imply a fair degree of precision building. That confirms the impression that archaeologists have taken away from many excavations: post-in-the-ground buildings were often carefully planned, their parts prefabricated, and whole units preassembled. Raising preassembled frames, whether as walls or as tie-beam pairs, required postholes dug to a uniform depth to ensure that all horizontal members would come out level. At the John Hallows site (Appendix 2:7) small stone shims were placed at the bottoms of some holes to raise the posts slightly, while other holes first were excavated to the approximate depth desired and then carefully scooped out to a measured bottom. Elsewhere it has been observed that loose dirt was sometimes thrown back into a freshly dug pit and tamped down to the correct level.

Irregular postholes or those with unusually small diameters hint that some hole-set buildings may have been set up one post at a time, a technique described conjecturally in the detailed account of Cedar Park (Appendix 1:10). Where frames were assembled in parts on the ground, as seems more often to have been the case, and once postholes were prepared, prefabricated units were tipped up in sections and lowered into place. These assembled modules were sometimes the plated side walls (resulting in what is known as "normal assembly") and sometimes post-and-tie-beam pairs ("reverse" or "bent assembly"). Each left its own telltale marks in the ground, which archaeologists are learning to distinguish. Normal assembly of side-wall frames was usually aided by positioning the rectangular postholes with the long axes at right angles to the length of the building (Appendix 2:6). Their bottoms sometimes were sloped or stepped in the direction in which the wall was raised, each post coming to rest near the middle or far side of the pit at its deepest point. Similarly, it stands to reason that house frames raised on pairs of posts connected by tie beams were easiest to erect where the holes had their long axes parallel to the building's length. Kingsmill Tenement II (see fig. 6; Appendix 1:2) and the first period dwelling at the Clifts (Appendix 2:6) suggest construction by reverse assembly. The two methods may have differed in another subtle respect. Very careful measurement of the distances between post *molds* at St. John's Quarter (Appendix 1:8) has revealed that its bay intervals were calculated originally not post to post, but from one outside corner to the *center* of the adjacent post, to the *center* of the one next to it, and so on to the opposite end. The

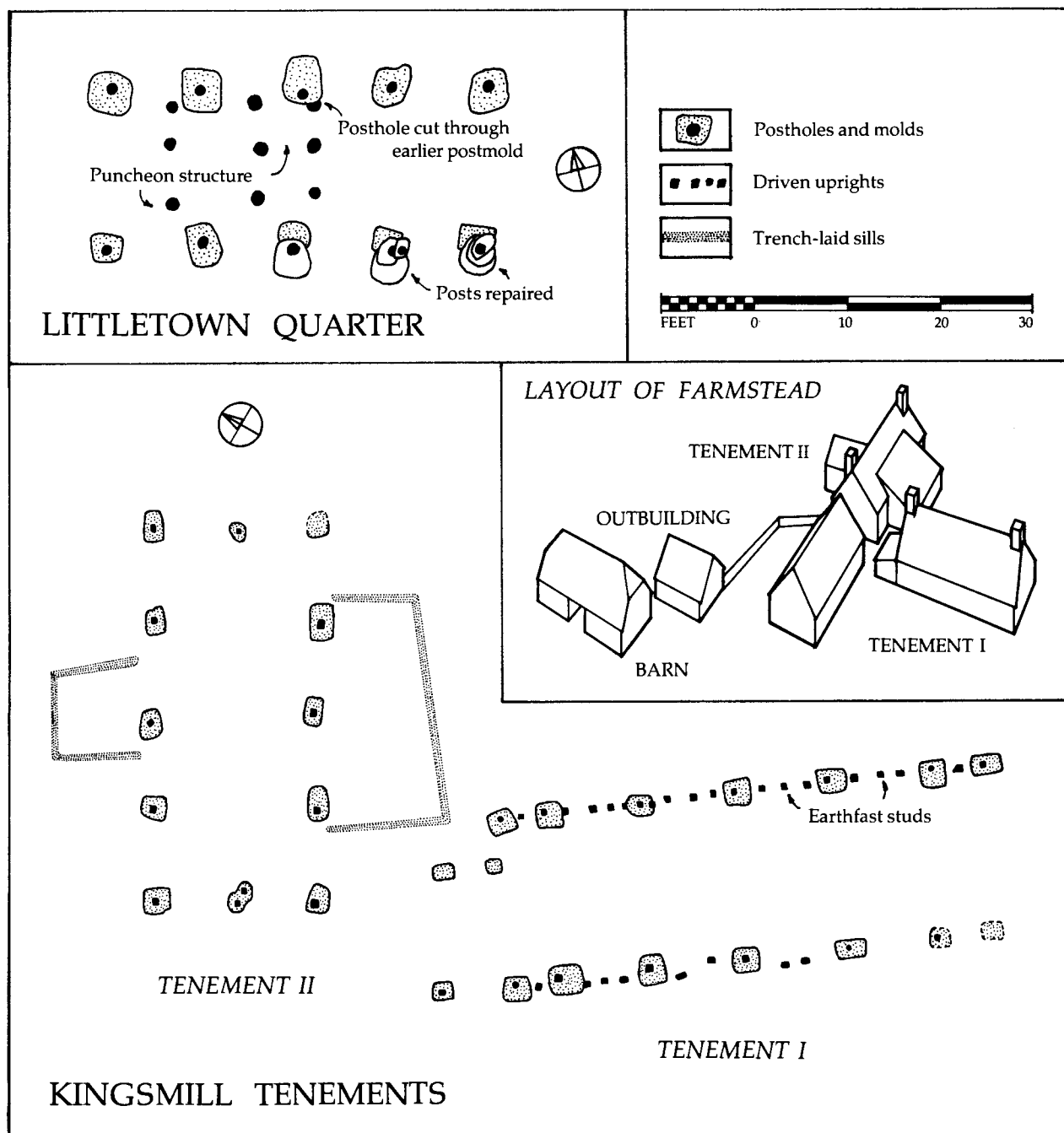


Fig. 6. Early structures at Kingsmill, James City County, Virginia. All were occupied ca. 1625-50. (Drawing, Shearon Vaughn and Cary Carson.)

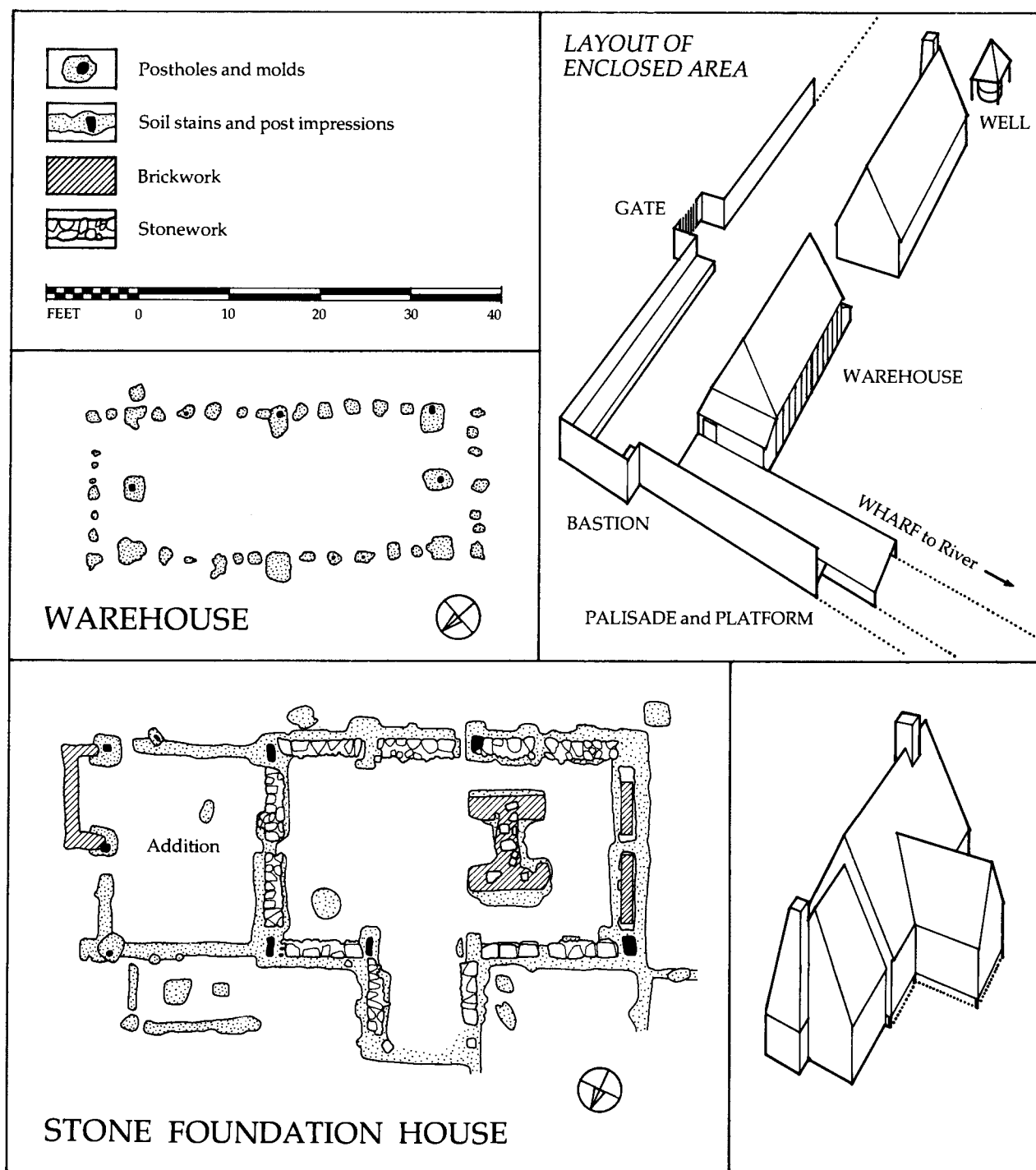


Fig. 7. Structures at Flowerdew Hundred, Prince George County, Virginia. Both date from the earliest settlement of Sir George Yeardley's particular plantation, ca. 1619-30. (Drawing, Shearon Vaughn and Cary Carson.)

carpenter dealt with the entire wall as a single design problem, the basic concept underlying all normal assembly. Conceivably—and this supposition still awaits testing in the field—builders who practiced reverse assembly took a bay interval to be the space between pairs of posts, that is, the distance from the *side* of one tie-beam pair to the *nearest side* of the next one. That somewhat different way of dimensioning a building may sometimes be discernible on archaeological sites and hence another important indication of structures raised in bent frames.

Whatever future excavations reveal, the point is already well established that post-in-the-ground buildings were sometimes so methodically planned and precisely dimensioned that their archaeological remains can validate conclusions that turn on fractions of an inch. To be sure, such exactitude was lacking in many earthfast structures where, presumably, costs outweighed advantages. But in the hands of master builders post-in-the-ground houses could be and sometimes were built as finely as the most professionally carpentered box-framed structures.

Framed buildings on hole-set blocks. Some structures were fully framed, yet “blocked up under the sills,” a construction technique especially common toward the end of the seventeenth century and thereafter. Earthfast blocks left the kind of archaeological evidence observed in the excavation of an outbuilding on the van Sweringen property in St. Mary’s City (fig. 8; Appendix 1:9).⁴⁶ Like hole-set frames, blocks reduced construction costs by compromising a building’s durability, yet they offered a kind of limited liability. Always replaceable, they alone were subject to the decay that elsewhere put entire post-in-the-ground buildings at risk. A silled frame standing on structurally unrelated blocks was as impervious to damp as a framed building raised on brick foundations. What evidently began as a method of repairing older hole-set structures and rescuing frames built on ground-laid sills⁴⁷ gradually caught on in the eighteenth century as a technique equally suitable

for new building.⁴⁸ Eventually it prevailed among clients too poor to afford brick, thus relegating hole-set posts to expendable “pole barns” and sheds. Its triumph signals the complete absorption of impermanent building practices into the dominant timber-frame tradition in the South, a matter that will receive fuller discussion later.

Buildings raised on “cratchets.” Settlers in the Chesapeake colonies and the Leeward Islands knew how to build another kind of inexpensive, post-supported structure, one whose roof was raised on forked poles variously called “cratches,” “cratchets,” “crochets,” “crotches,” or “crutches.” John Smith’s account of Jamestown in 1608 includes a good description of such buildings and attests to their second place in the familiar, three-step homesteading sequence. The Jamestowners’ first church, he explained, was “an old rotten tent, for we had few better . . . till we built a homely thing like a barne, set upon Cratchets,” which the colonists roofed and walled with “rafts, sedge, and earth.” He added that “the best part of our houses [was] of the like curiosity, but the most part farre much worse workmanship, that could neither well defend wind nor raine.”⁴⁹ Smith’s word *cratchets* has been taken by some to mean *crucks*, but he clearly meant slender, forked poles, for elsewhere in the same account he described some “poore [foot] bridges, onely made of a few cratches thrust in the o[o]se, and three or foure poles laid on them.”⁵⁰ His earlier choice of the phrase “like a barne” (the same analogy that Claypoole later used to describe his own temporary dwelling in Philadelphia) is suggestive, for poles with naturally forked tops were used in England throughout the seventeenth century to build seasonal farm

Book, 1676–1746, Third Haven Friends Meeting, folios 158, 170, Maryland Hall of Records, Annapolis.

⁴⁶ The suggestion has been made that English builders may have set sill beams on temporary blocks while raising a frame, later replacing them with low plinth walls; Richard Harris, *Discovering Timber-Framed Buildings* (Princes Risborough, Aylesbury, Bucks, U.K.: Shire Publications, 1978), pp. 16–17. So far no evidence of that practice has been observed on early American sites or in American buildings. Here blocks were hole set to prevent easy dislocation. Earthfast blocks cannot have been wholly unfamiliar to English housewrights, for Richard Neve’s *Builder’s Dictionary* (London: B. Sprint, 1736) recommends that “the Stem or Stump of a Tree,” if charred “to a Coal” before it was set in the ground, would “continue a long Time without rotting.” The virtue of charring or tarring earthfast posts was still appreciated at the end of the eighteenth century (see *Encyclopedia; or a Dictionary of Arts, Sciences, and Miscellaneous Literature* . . . [Philadelphia, 1798], s.v. “posts”).

⁴⁹ Edward Arber and Arthur G. Bradley, eds., *Travels and Works of Captain John Smith*, 2 vols. (Edinburgh: G. Grant, 1910), 2:957.

⁵⁰ Arber and Bradley, *John Smith*, 2:405.

⁴⁶ A typical reference: When the vestrymen of Truro parish, Virginia, undertook to build a new vestry house in 1750, they specified a building 16 feet square, including an inside wooden chimney, all of “framed work” (that is, box framed), clapboard covered, floored with plank, and lofted with more clapboards, the entire structure to be “raised on Blocks” (*Minutes of the Vestry, Truro Parish, Virginia, 1732–1785* [Lorton, Va.: Pohock Church, 1974], p. 58). Blocked barns and granaries in Maryland are described in Queen Anne’s County Deed Book RT, no. F, folios 145, 173, Hall of Records, Annapolis.

⁴⁷ The ground-laid sills under the Third Haven Meeting House (1682), Talbot County, Maryland (T-46), were raised on cedar blocks in 1698 and the building new floored; Minute

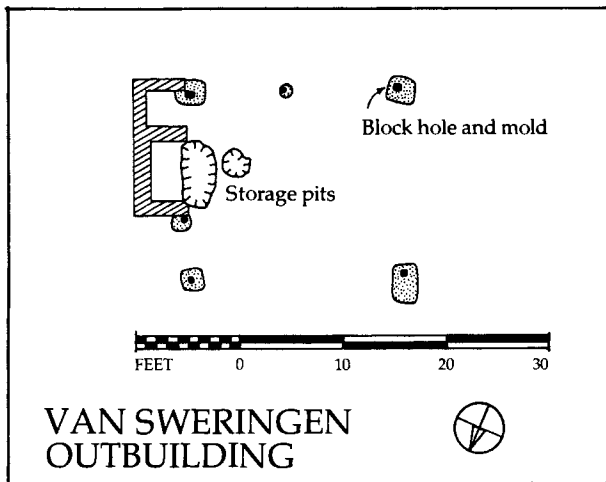


Fig. 8. An outbuilding, possibly a bakehouse and quarter, built by Gerret van Sweringen at St. Mary's City, Maryland. The silled frame was raised on hole-set blocks. (Drawing, Shearon Vaughn.)

buildings—pigsties, cart sheds, hop mangers, hayricks, and similar hovels “set upon crotches [defined as “forked Posts”] covered with poles and [a roof of sticks or] straw.”⁵¹ When fur traders from Virginia established a year-round camp on Kent Island in the upper Chesapeake Bay in 1631, they built “several thatch-roofed huts set on crotches and rafted with a covering of brush.”⁵² Occasionally the word *cratches* may have been used to describe hefty timbers—the “good and substantial cratches . . . erected [in 1668] for the making of a good, substantial, and firm cratched-house” on the island of Montserrat were apparently not mere poles.⁵³ But in most English and American contexts the term implies wall posts whose distinguishing characteristics, whenever described, are their slight size and forked tops.⁵⁴ Notwithstanding occasional claims to the contrary,

⁵¹ Thomas Tusser, *Five Hundred Points of Good Husbandry* (1580), ed. Dorothy Hartley (London: Country Life, 1931), pp. 111, 127. It includes *Tusser Redivivus* (1710), which not only attests to the longevity of the farming practices Tusser describes but enlarges on them.

⁵² Nathaniel C. Hale, *Virginia Venturer: A Historical Biography of William Claiborne, 1600–1677* (Richmond: Dietz Press, 1951), p. 152. Roofs of heaped-up brush were excellently suited to structures framed no higher than the ceiling joists; see J. E. C. Peters, “The Solid Thatch Roof,” *Vernacular Architecture* 8 (1977): 825.

⁵³ Richard S. Dunn, *Sugar and Slaves: The Rise of the Planter Class in the English West Indies 1624–1713* (New York and London: W. W. Norton, 1972), p. 289.

⁵⁴ Significantly, the dialect word *crotch* occurs in English sources outside the region where cruck building was still current in the sixteenth century; see R. de Z. Hall and N. W. Alcock, “A Note on the Word Cruck,” *Vernacular Architecture* 7 (1976): 11–14. The 1783 tax assessment for Charles County,

no literary or archaeological evidence has yet come to light that proves or even strongly suggests that English settlers raised houses or barns on full-cruck trusses. Upper crucks, yes,⁵⁵ but not on timbers that reached from the footings to the ridge piece.

Rafted houses. An ancient European building type brought to the Chesapeake was the house without walls, the primitive, ground-standing A-frame that Charles F. Innocent called a “roof hut.”⁵⁶ A 1658 Virginia will mentions a 60-foot tobacco house “with rafters upon the ground.”⁵⁷ Another tentlike tobacco house answering that description appears on a plat of Jamestown Island drawn in 1664.⁵⁸ The sketch shows an open gable with a central pole—conceivably a hole-set cratchet—supporting the ridge. The sloping sides are depicted as a grid of crisscrossed vertical and horizontal lines apparently representing rafters and thatching poles. Other roof huts may be inferred where records make a deliberate distinction between “wall plate tobacco houses” and “rafted” structures.⁵⁹ In the Chesapeake the technique seems to have been restricted to tobacco shelters.

Turf-, earth-, and log-walled houses. Com-

Maryland, records several dwellings and tobacco barns “supported by [or “with”] crutches” (Alphabetical List of Lands, District 6, 1783 tax assessment, Maryland Historical Society). Various meanings can be guessed at—upper crucks possibly, or maybe shores or braces, considering that the structures in question almost always are further described as “old,” “very old,” or “like old age.” Other evidence strongly favors an interpretation that makes the term an archaic dialect word for hole-set posts (with or without forked tops). Farmers in southern Maryland were still calling the hole-set posts they used to build pole barns “crutches” as late as the 1870s (see Edwin W. Beitzell, ed., “Diary of Dr. Joseph L. McWilliams, 1868–1875,” *Chronicles of St. Mary's* 25, no. 10 (October 1977): 8. Meriwether Lewis and William Clark, both of Virginia, were still sufficiently acquainted with cratchet buildings to employ hole-set forked poles in framing the temporary shelters they built on their western expedition in 1806 if we can believe a description and illustration in Patrick Gass, *A Journal of the Voyages and Travels . . . of Capt. Lewis and Capt. Clarke* (Philadelphia: Matthew Carey, 1810), pp. 60–61.

⁵⁵ Upper crucks support the roof of Ocean Hall [1703], Bushwood, Maryland (SM-111); see measured drawings, Historical American Buildings Survey, Library of Congress.

⁵⁶ Charles Frederick Innocent, *The Development of English Building Construction* (Cambridge: Cambridge University Press, 1916), pp. 7–25. The house type endured into modern times; see Gwyn I. Meirion-Jones, “Some Early and Primitive Building Forms in Brittany,” *Folk Life* 14 (1976): 46–64.

⁵⁷ York County Deeds, Orders, and Wills, book 3, folio 35, State Library, Richmond.

⁵⁸ Forman, *Jamestown and St. Mary's*, front endpaper and p. 129.

⁵⁹ Surry County Deeds and Wills, book 1, folios 368–69, State Library, Richmond; *Archives of Maryland*, 54:54. *Rafted houses* continued to be mentioned in early eighteenth-century records in contexts that suggest roof huts unless the term had other meanings too.

monplace as post-in-the-ground structures seem to have been in English settlements up and down the eastern seaboard, not all British colonists traded up from a wigwam or a dugout to a clapboard-covered frame house.⁶⁰ The author of a 1650 pamphlet promoting New Albion described "six sorts" of dwellings in America, the first being the new-comer's wigwam and the second "a clove board house nailed to posts," obviously the sort we have been looking at.⁶¹ The third, fourth, and fifth were altogether different: "an Irish house of posts walled and divided with close wattle hedges, and thin turfed above, and thick turfs without below" (akin perhaps to the "sedge & earth" walled church and dwellings in Smith's description of Jamestown); "a log house of young trees 30. feet square notched in at corners"; and "a mud-wall house thatched or tiled." The sixth and last was the only unquestionably durable house type, "a brick house or square tower 3. stories high." Whether the author had seen all six in English settlements he does not say. Conceivably he had, for even log cabins had spread to Maryland and Virginia by 1655.⁶²

Plank-framed houses. There was still another short-order construction technique in the British immigrant's repertoire. "The poor sort" who settled in East Jersey, according to an observer in 1684, "set up a house of two or three rooms themselves, after this manner: the walls are of cloven timber about eight or ten inches broad like planks, set one end to the ground and the other nailed to the raising [plate], which they plaster within" (emphasis added).⁶³ Cloven-timber planks recall the tradition

of plank-frame building common in southeastern Massachusetts. Although there the planks are fastened to sills in the earliest surviving structures of this type (houses built in the third quarter of the seventeenth century), the use of planks for walling goes back another forty or fifty years in the Plymouth region, perhaps to sill-less impermanent buildings where curtain walls stood directly in the ground.⁶⁴ If so, here is another case where the practice of embedding uprights directly into the ground was improved upon by the addition of ground-laid sills. Recalling similar refinements in puncheon and stud-frame construction, silled plank-frame buildings demonstrate again that impermanence was a matter of degree, which is only another way of saying a matter of choice.

Newcomers to virtually all the American colonies frequently exercised that choice in favor of building expediently for the present so as to husband their labor and capital for the future. He who said, "An ordinary House and a good Stock is the Planter's Wisdom," spoke for prudent homesteaders everywhere.⁶⁵ Such people had a selection of earthfast building types to choose from. Immigrants from the British Isles had probably known and built most of them back home, if not always as dwellings, then as farm buildings. Those origins are more than a little suggested by the oft-repeated analogy between Old World barns and New World first houses. It has been necessary to review the evidence for impermanent building throughout all the colonies in order to establish the overall validity of the homesteading process, for, as our attention turns now to the Chesapeake settlements in Maryland and Virginia, it will be their divergence from this general pattern that begs historical explanation.

Housewrights in the South used all but a few of the earthfast technologies known in seventeenth-century America. Their skills included puncheon, palisade, and cratchet building (most prevalent in the earliest Virginia settlements), log houses and frame buildings on blocks (increasingly common during the second half of the seventeenth century), and hole-set structures with and without inter-

⁶⁰ The prevalence of hole-set framed buildings is demonstrated best in the southern colonies where many more sites have been excavated than elsewhere. There are, however, shreds of evidence to suggest that Samuel Symonds was not alone among New Englanders in his preference for buildings erected on "posts . . . standing in the ground," a phrase William Bradford used to describe a clapboarded trading post built before 1627 at Aptuxcet (Samuel Eliot Morison, ed., *Of Plimoth Plantation, 1620-1647* [New York: Alfred A. Knopf, 1952], p. 280). The 1630 Isaac Allerton house of Kingston, Massachusetts, the first hole-set structure excavated in New England, is described in James Deetz, "Plymouth Colony Architecture: Archaeological Evidence from the Seventeenth Century," in *Architecture in Colonial Massachusetts* (Boston: Colonial Society of Massachusetts, 1979), pp. 49-53.

⁶¹ Plowden, *Description of New Albion*.

⁶² York County Deeds, Orders, and Wills, book 1, folio 101, State Library, Richmond; *Archives of Maryland*, 53:357. John Nevill's "logged house" had already served some time as his homestead dwelling; he was building a new and better house in 1662 (*Archives of Maryland*, 53:232).

⁶³ Samuel Smith, *The History of the Colony of Nova-Caesaria, or New-Jersey* (Philadelphia: David Hall, 1765), p. 180 (punctuation added). The account was written by another Welshman, Gawen Lawrie. "Raised piece" meant false plate in Virginia (according to Paul Buchanan, Colonial Williamsburg Foundation); Joseph Moxon's *Mechanick Exercises* (London, 1678) uses "raising piece" as a synonym for wall plate.

⁶⁴ Richard M. Candee, "A Documentary History of Plymouth Colony Architecture, 1620-1700," *Old Time New England* 59, no. 3 (Winter 1969): 59-71, and 60, no. 2 (Fall 1969): 37-53. Ernest A. Connally, "The Cape Cod House: An Introductory Study," *Journal of the Society of Architectural Historians* 19, no. 2 (May 1960): 47-56. The oldest standing structure in the Plymouth Colony region seems to be the Harlow House (circa 1667) in the town of Plymouth.

⁶⁵ *Information and Direction*, p. 2.

rupted sills (predominant throughout the seventeenth century and well into the next). Beyond that it is hard to generalize. While the most primitive structures tend to be among the earliest—Kingsmill Tenement I and cabins at the Maine for example—they have their equally early opposites in the ground-standing, silled house at Flowerdew Hundred and Col. Thomas Pettus's commodious and orderly farmstead at Littleton Plantation (fig. 9; Appendix 1:3). Likewise it is tempting to interpret Cedar Park as representing the sophistication that some hole-set buildings had attained by the end of the seventeenth century. But that ignores the fact that many others still resembled the merchant's dwelling in Stafford County which was described as a "Shell of a house without Chimneys or partition and not one tittle of workmanship about it more than a Tobacco house work" (again, that allusion to barns).⁶⁶ Men's individual preferences and their personal wherewithal figured more in their choice of impermanent building techniques, it appears, than in advances in the state of the art.

What all earthfast structures had in common were certain features that set them as "ordinary Virginia houses" apart from those "substantial good" dwellings that contemporaries referred to as "great houses," not necessarily brick, but, at a minimum, "English framed." Clearly they perceived and understood a difference, one that left prospective builders with a choice to make. Before exploring why planters in Maryland and Virginia made do for so long with second-best buildings in preference to those they regarded as affording more "comfortable [and] commodious accommodations," we first need to know in what respects the Virginia house was inferior.⁶⁷

To speak merely of posts buried in holes in the ground can leave the wrong impression. Earthfast building was perishable building, no doubt about it, but not all hole-set posts and blocks were equally vulnerable. It was not necessarily a contradiction in terms to talk of a "good Strong Substantial Virginia Built house."⁶⁸ Seventeenth-century carpenters

gave careful attention to the preservation qualities of various woods, as had the Indians, whose lore in this matter Europeans heeded.⁶⁹ Both cultures chose those woods that experience showed were longest lasting. Sassafras, black locust, red cedar, and chestnut were known to be "very durable and lasting" and so were preferred, as one writer said of sassafras, "for Bowls, Timbers, Posts for Houses, and other Things that require standing in the Ground."⁷⁰ Black locust proved to be the favorite.⁷¹ It was plentiful, and, if one can believe William Fitzhugh, who described a locust fence around an orchard on his Potomac River plantation, it was "as durable as most brick walls." Indeed by his reckoning, some heavier "locust Punchens," which "pallizado'd in" his yard, were actually "more lasting than any of our bricks."⁷² Whether this was literally true or not, his and his contemporaries' savvy about the best woods for earthfast building has been borne out by modern experimentation. Cedar and black-locust fence posts tested by the Forestry Department at the University of Missouri were still going strong after eighteen years (the conclusion of the test period). Sassafras was serviceable for fourteen. The oaks, normally as much a staple in America as in England, fared poorly, white oak failing after 12½ years and red and black oak lasting scarcely three.⁷³ Charring the butts beforehand extended their serviceable life only marginally (four months on average), belying the benefits of a treatment prescribed in builders' handbooks and practiced by housewrights and barn builders in the Chesapeake colonies (Appendix 1:7). The hardest woods used for hole-set posts may sometimes have endured a great deal longer. The builder of Cedar Park felled the cedar trees nearby for his earthfast posts and interrupted sills and selected black locust for the sleepers, otherwise the frame is mostly oak. The sleepers are still in use after nearly 300 years; the posts and sills resisted decay for maybe fifty years until the house was encased and underpinned with

⁶⁶ William Fitzhugh to Nicholas Hayward, January 30, 1686/87, in Richard Beale Davis, ed., *William Fitzhugh and His Chesapeake World, 1676–1701: The Fitzhugh Letters and Other Documents* (Chapel Hill: University of North Carolina Press, 1963), p. 203.

⁶⁷ William Fitzhugh to Nicholas Hayward, January 30, 1686/87, in Davis, *Fitzhugh*, p. 202.

⁶⁸ Middlesex County Deeds [1], 1687–1750, folio 10, State Library, Richmond. The description occurs in articles of agreement for the building of a courthouse in 1692, the county having failed in an attempt several years earlier to erect a "good Strong Brick House" the equal to the "Brick Courte house lately Built in Gloucester County" (Middlesex County Order Book no. 2, 1686–94, folio 201, State Library, Richmond).

⁶⁹ Colonel Norwood, shipwrecked on the eastern shore of Virginia in 1649, was taken to a local Indian chief's lodge, which he observed was raised on "locust posts sunk in the ground at corners and partitions" ("A Voyage to Virginia," n.d., in Force, *Tracts*, 3:tract 10, p. 35).

⁷⁰ John Lawson, *A New Voyage to Carolina* (London: W. Taylor & F. Baker, 1709), pp. 94–100.

⁷¹ Specified in many orphans court valuations, for example, Queen Anne's County Deed Book RT, no. E, folio 62 (Hall of Records, Annapolis).

⁷² William Fitzhugh to Dr. Ralph Smith, April 22, 1686, in Davis, *Fitzhugh*, p. 175.

⁷³ J. C. Wooley, *The Durability of Fence Posts*, Missouri Agricultural Experiment Station Bulletin, no. 312 (Columbia, Mo., 1932), pp. 2–3.

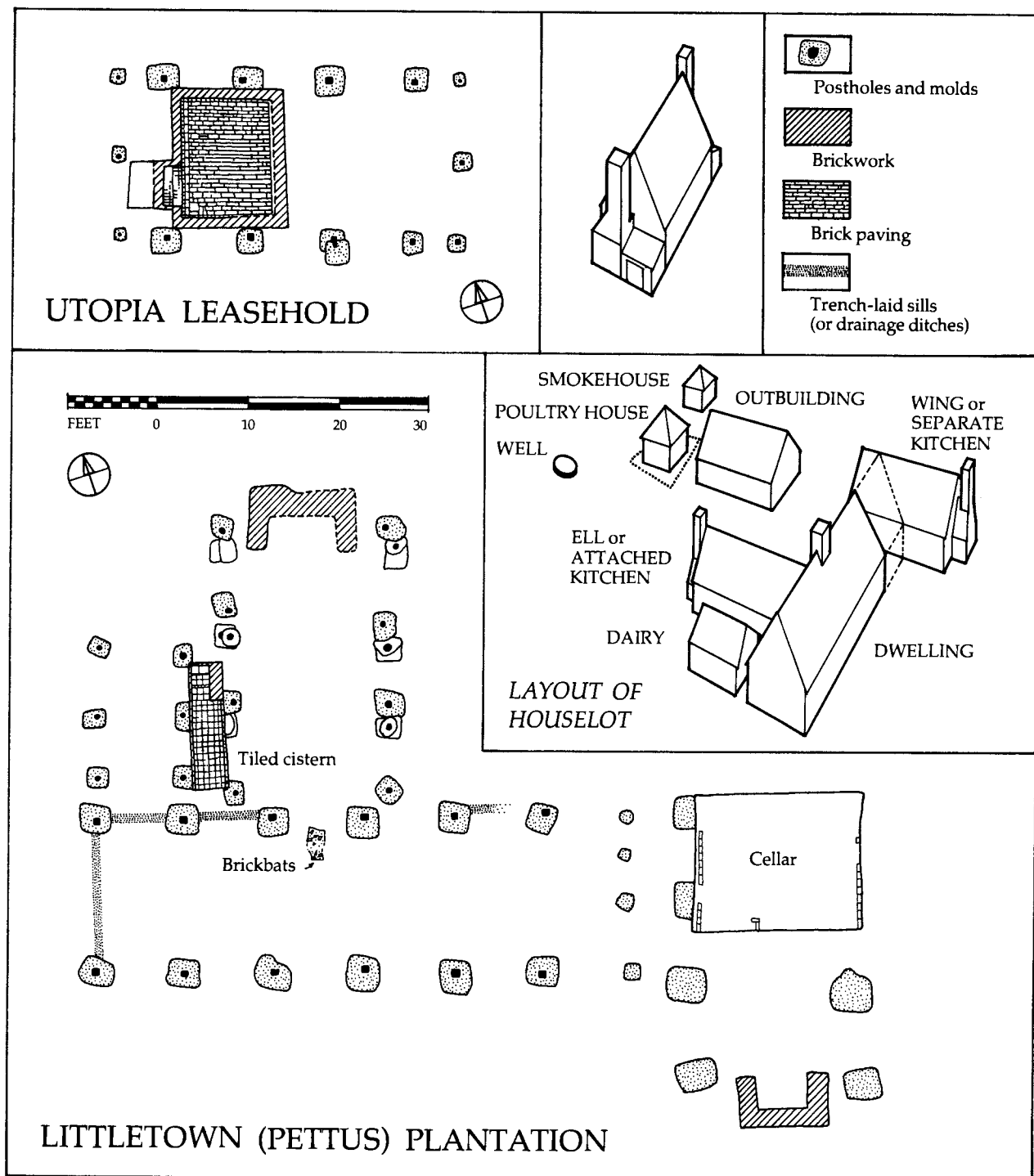


Fig. 9. Later structures at Kingsmill, James City County, Virginia. Col. Thomas Pettus's plantation house complex was built and occupied ca. 1640-90; the outlying farmstead, Utopia, ca. 1660-1710. (Drawing, Shearon Vaughn and Cary Carson.)

brickwork (inside of which some posts are perfectly sound today, including the butts).

Most hole-set structures were not so massively built, and force of habit may have disposed many builders to use oak regardless. Certainly archaeologists find over and over again that hole-set uprights had to be repaired and replaced periodically if they were to outlast their expected life span of a decade or so.⁷⁴ In the long run these buildings proved to be less durable—more impermanent if you will—than houses fully framed and set up on waterproof foundations. Many homesteaders expected no more; they had in mind to build better eventually anyway. But we must also entertain the possibility that others may have questioned that assumption, perhaps increasingly so as the seventeenth century wore on. The long run, after all, is something we are able to appreciate and even gain a sense of only in retrospect. The virtues we see in buildings able to last three centuries may have counted for nothing among many prospective builders in the seventeenth century for whom the short run was plenty long enough, either because they planned to replace their make-do houses regardless or because they planned not to, having learned to choose decay-resistant materials and make minimal repairs that could keep them standing in tolerable condition for thirty, forty, fifty years or more. To those of either persuasion, impermanence may have been a largely irrelevant consideration, and some may have come to regard posts in the ground as an acceptable, and less expensive, alternative to brick foundations no matter how everlasting.

Good enough, however, did not make such buildings “fair framed English houses.” Nor were hole-set posts the only concession to economy. Those built with earthfast sills (or none at all) and earthen floors lowered costs by requiring less carpentry. Wooden chimneys⁷⁵ saved labor by eliminating any need to make brick. But the Virginia house was not merely a conventional building reduced to basics, not a standard box frame from which all frills had been stripped to provide affordable low-income housing for the poorer sort. Rather this primitive or archaic or impermanent

vernacular architecture had traditions of its own, doubtless intermingled at many points in its development with the more familiar permanent building traditions in England and America, but in no oversimple sense a poor man’s imitation of superior vernacular architecture. Throughout the colonial period and beyond impermanent buildings could be found alongside the more durable kind and, moreover, were probably built by poor and not so poor alike wherever special needs or circumstances dictated.⁷⁶

The Virginia house is a case in point. Its origins can be traced to a little-known, archaic (but not earthfast), timber-frame tradition still practiced in southwestern England in the seventeenth century.⁷⁷ One among several primitive building types brought presumably from various parts of England to the Chesapeake region, it proved unusually adaptable to planters’ requirements for a simplified, economical system of framing that minimized joinery and took full advantage of the structural quality of riven clapboards. The English prototype was essentially a reverse-assembled frame. Although standard wall plates occurred in modified versions, the salient feature was tie beams that extended beyond the wall lines and supported the principal rafters entirely independent of the posts. By thus effectively disjoining the wall frame from the frame of the roof, it avoided the complicated joinery necessary in buildings of normal assembly where plates, beams, and rafters all came together on each post. A carpenter had to know only two joints to build this more primitive structure, a straightforward mortise-and-tenon and variations on a lap joint. Chesapeake builders simplified it further (see fig. 3). By the third quarter of the seventeenth century, and maybe earlier, they

⁷⁴ The estimate of the anonymous writer of the *Information and Direction* that hole-set houses for “ordinary beginners” “usually endure ten years without Repair” is corroborated by a growing body of archaeological evidence.

⁷⁵ Such houses were still commonplace in rural Maryland when the federal tax assessment was made in 1798 (Maryland Historical Society, Baltimore).

⁷⁶ Impermanent structures persisted in England too. Their use as seasonal farm buildings has already been noted. Some laborers’ cottages also employed primitive timber framing. Robert Machin believes that as late as the late eighteenth century estate owners still provided such housing (Machin to Cary Carson, July 12, 1979); see also entry for Thomas Gale in a 1604 survey of Thurleigh published by N. W. Alcock in *Bedfordshire Archaeological Journal* 4 (1969): 62. Large earthfast buildings with carpentered roofs still made acceptable barns for some gentry farmers in the seventeenth century (one built in 1607 is described and illustrated in C. B. Robinson, ed., *Rural Economy in Yorkshire in 1641, Being the Farming and Account Books of Henry Best of Elmswell in the East Riding*, vol. 33, Publications of the Surtees Society [Durham, England, 1857], pp. 47, 170–71).

⁷⁷ Specifically, south-central Somerset, although the area in which surviving structures have been recorded is likely to be smaller than their original extent. It is too complex a topic to deal with adequately in this paper and is the subject of another in preparation by Cary Carson.

had rediscovered the trussed-rafter roof, a roof composed entirely of collared common rafters. Their use of it appears to be a case of independent invention prompted by the discovery that short riven-oak or riven-chestnut clapboards nailed directly to the rafters lent an entire roof frame most of the longitudinal rigidity it needed. Wind-braces sometimes helped stiffen it; but with or without them, a light, tight covering of clapboards replaced the need for a heavily framed roof of principal rafters and purlins.⁷⁸ A lighter roof also simplified the problem of marrying it to the walls below. Unlike principal rafters, which concentrated the weight of a roof directly on the posts, common-rafter roofs distributed the burden evenly. Builders of Virginia houses capitalized on that inherent mechanical advantage by providing a tie beam for every pair of rafters (thereby also eliminating the many-jointed summer beams and common joists). Tie beams spaced uniformly every 20 to 30 inches along the whole length of a building were easily notched over (occasionally with a lap dovetail) and pinned down into the wall plates without regard to post positions. Each rafter couple was either mortised and tenoned to its tie beam or, simpler still, lapped over and nailed to a secondary plate. This member, called a "false plate" or "raising piece" by the Chesapeake builders who made it a virtual hallmark of their work, was borrowed from the same parent English prototype. In buildings of reverse assembly, it ran along the upper ends of the tie beams and acted as the wall plate until the introduction of post-connected plates made it redundant. American builders retained it and eventually had the bright idea to tilt it forty-five degrees so that the common rafters could be hitched over its upper edge with barely a hatchet-made notch and a nail or two to hold them in place. Scantling for the rafters, collars, and false plates was sometimes split to size (like fence rails), other times hewn from small stock, but seldom sawn, for that was time-consuming and to be avoided where economy was the aim.⁷⁹

The whole concoction was truly a made dish of things borrowed and things invented. We recognize some of its ingredients owing to the fortunate survival of a few archaic buildings in England. There must have been other influences that we can

only guess at. Was, for instance, the technique of using clapboards as structural sheathing employed first in very primitive puncheon buildings (whose frames may have needed additional stiffening) and only afterward appropriated to "ordinary beginners" houses? Were multiple tie beams adopted from cratchet building? What does seem clear is that archaeologists and architectural historians must search among such recondite folkways as these for the real origins of vernacular architecture in the southern colonies. The Virginia house, however outlandish it appears to modern English eyes, had ancestors and even living relations back home to no less extent than those vernacular buildings whose genealogies are readily traced through generations of standing structures. Impermanent buildings merely descended from a different lineage, although ultimately, back beyond the "vernacular threshold," English archaeologists are beginning to find some common progenitors.

Americans must be content to affirm that seventeenth-century builders still practiced a variety of permanent and impermanent building techniques and chose whichever best suited their particular needs. Southerners built some structures in simple imitation of those left behind in England. Others they tinkered and dabbled with until, finally, they had custom made an impermanent structure that was the perfect accompaniment to a planter's special circumstances and way of life. They acknowledged its continuing utility by building and rebuilding it until it became almost second nature. But their acceptance of it was grudging. Needing it did not mean they had to like it. Its rotting posts and gray, unpainted clapboard walls and roofs were nagging reminders to many that their fondest aspirations remained unfulfilled.⁸⁰ We know because their own words betray their discontent. "The poverty of the countrey and want of necessities here will not admitt a possibility to erect other then such houses as wee frequently inhabit," said their laws in 1647; or again

⁷⁸ Carson, "The 'Virginia House' in Maryland," pp. 188–90; Dell Upton, "Board Roofing in Tidewater Virginia," *APT Bulletin* 8, no. 4 (1976): 22–43.

⁷⁹ Garry Wheeler Stone, "Sarum, Charles County, Maryland: Notes on the Woods and Carpentry of the Period I Structure," memorandum, July 5, 1979, St. Mary's City Commission.

⁸⁰ Builders often esteem well-built structures not because they guarantee a longer future, but because they reflect favorably on their owners in the present: "We tend to take it for granted that buildings are solidly constructed so that they may last for a long time. But permanence is not likely to be the most elementary consideration. Any concern with the future or the past is less immediate than a concern with the present. Firmness and solidity are, first of all, a property of the present state of things and serve as the perceptual equivalent of what has value. If I make something of durable material, I express my conviction that the thing is good, often without the rationalization, and therefore I want it to last" (Rudolph Arnheim, "Thoughts on Durability: Architecture as an Affirmation of Confidence," *AIA Journal* 66, no. 7 [June 1977]: 48–50).

in 1662, "our ability [is] not extending to build stronger" than "a house after the forme of a Virginia house."⁸¹ A century later apologists were still complaining that, as run-of-the-mill farmhouses went, it was "impossible to devise things more ugly, uncomfortable, and happily more perishable."⁸²

Historians ought to find it reassuring to hear southerners express the familiar hopes of homesteaders elsewhere for pretty, comfortable, and imperishable houses even though in practice they had good reasons to build otherwise. It helps narrow down the range of explanations for their choice by discounting the suggestion that some basic flaw in the southern character accounted for the region's long delay in achieving the degree of settledness that other colonists reached after only a generation or two. It directs attention instead to external circumstances that thwarted the ambition of ordinary Virginia and Maryland planters to build farmsteads that were a credit to themselves and an asset to their children. As we turn now to inquire into the nature of the considerations that weighed in a planter's decision to repair an old post-in-the-ground building or replace it with another no better, we have an opportunity rare for historians and archaeologists to peer inside the minds of people whose circumstances had brought them to that cultural divide we call the vernacular threshold. Those who crossed it and built an enduring architecture have understandably received more scholarly attention than those who are the subject of this essay, the men and women who took stock of their needs and deemed them better served by an older, more rudimentary tradition of material culture.

Interpretation

Timing is critical to understanding the impetus to intensive rebuilding. Dates were the starting point for W. G. Hoskins when he formulated his "great rebuilding" thesis, and dates have been the matter most debated in reassessments of his work.⁸³ Timing also has a corollary in another consideration

that deserves serious attention, the duration of the rebuilding process. The shorter or longer period of years it takes for a people to cross the vernacular threshold can have much to do with the manner of building that they eventually adopt. To put it another way, the longer that traditions of impermanent and permanent vernacular building coexist the more the former is likely to bequeath an inheritance directly to the latter.

New England's great rebuilding—its first one—was accomplished in the space of the five or six decades immediately following the settlement of Massachusetts in 1630. As early as midcentury settlers there could wonder that "the Lord hath been pleased to turn all the wigwams, huts, and hovels the English dwelt in at their first coming into orderly, fair, and well-built houses, well furnished many of them, together with Orchards filled with goodly fruit trees and gardens with variety of flowers."⁸⁴ Timber-framed houses were so much the rule by the turn of the century that a Boston woman traveling through the Narragansett country in 1704 could be surprised on coming upon a windowless, floorless cottage "supported with shores [meaning stakes, probably puncheons] enclosed with Clapboards laid on Lengthways." In all her experience, she confessed, that "little Hutt was one of the wretchedest I ever saw a habitation for human creatures."⁸⁵

Modern scholarship confirms the implication of her remarks; primitively framed dwellings had been steadily replaced throughout the seventeenth century in New England to such an extent that those few that lasted past 1700 were oddities exciting curiosity. A recent study of vernacular buildings in Massachusetts has identified fully 10 extant houses built before 1660, another 61 before 1700, and over 100 in the period 1701–25, for a total of 257 known First Period houses in that one former colony alone (including 83 undocumented structures assigned to the period on stylistic grounds).⁸⁶ Others from northern New England, Rhode Island, and Connecticut add to their numbers. Most are timber framed, a few brick or stone,

⁸¹ William Waller Hening, ed., *Statutes at Large; Being a Collection of All the Laws of Virginia . . .*, 13 vols. (Richmond, 1809–23), 1:340; 2:76.

⁸² Thomas Jefferson, *Notes on the State of Virginia* [1787], ed. William Peden (Chapel Hill: University of North Carolina Press, 1955), p. 152.

⁸³ William G. Hoskins, "The Rebuilding of Rural England, 1570–1640," *Past and Present*, no. 4 (November 1953), pp. 44–59; Robert Machin, "The Great Rebuilding: A Reassessment," *Past and Present*, no. 77 (November 1977), pp. 33–56.

⁸⁴ John Franklin Jameson, ed., [Edward] Johnson's *Wonder-Working Providence, 1628–1651* (New York: Charles Scribner's Sons, 1910), p. 211; Timothy H. Breen, "Transfer of Culture: Chance and Design in Shaping Massachusetts Bay, 1630–1660," *New England Historical and Genealogical Register* 132, no. 1 (January 1978): 3–17.

⁸⁵ Malcolm Freiberg, ed., *The Journal of Madam Knight* (Brookline, Mass.: David R. Godine, 1972), p. 13.

⁸⁶ Abbott Lowell Cummings, "Massachusetts and Its First Period Houses: A Statistical Survey," in *Architecture in Colonial Massachusetts*, pp. 113–21.

but all without exception would qualify as “orderly, fair, and well-built.” As the promotional literature promised, homestead housing was punctually replaced in New England by people who not only were accustomed to higher standards in the English villages they came from but also whose circumstances in America were such that it made good sense to build soundly as soon as they were able. The process was a simple one of substitution.⁸⁷ The primitive, barnlike, but thoroughly English structures that immigrant builders resorted to for the purpose of launching their American plantations were replaced by thoroughly English houses of a very different kind—fully carpentered, timber-framed houses in keeping with New Englanders’ view of their prospects for the future. Used for dwellings for so short a time, the technology of primitive building had almost no opportunity to modify the traditions of permanent vernacular architecture.⁸⁸ Consequently, surviving vernacular buildings in New England closely resemble their English counterparts.⁸⁹

The experience of planters in Maryland and Virginia was very different. If the same two indicators—timing and duration—are applied, the late commencement of a general rebuilding throughout the region and its extreme prolongation stand in marked contrast to New England. In the South there are no surviving buildings whatsoever from the first half of the seventeenth century despite the region’s greater age, size, population, and prosperity. That is not to deny that no one built well. Excavations at Mathews Manor and Jamestown in Virginia and at St. John’s in St. Mary’s City, Maryland, have brought to light the foundations of some fairly substantial brick- and timber-framed dwellings, usually built (where the owners are known) by officials and other prominent citizens.⁹⁰ One of their kind, writing to Lord Baltimore in 1638, explained one reason for a colony’s leaders to build well. He had under construction a house “of sawn Timber framed A story a half hygh, with a seller and Chimnies of brick,” he said, “toe Encourage others toe follow my

Example, for hithertoe wee Liue in Cottages.”⁹¹ Most ordinary planters were literally cottagers, but not everyone. Here and there a few lesser men managed to build “good and sufficient framed” houses too; none still stand but they are occasionally described in building contracts. The terms almost always make specific mention of the major feature—groundsills “underpinned with bricks”—that set “framed worke” apart from the commonality of earthfast cottages.⁹²

Were data available to draw a graph that showed the replacement rate for impermanent buildings in the southern colonies, the line would inch upward almost imperceptibly before 1700. A few buildings have survived from the period after 1660, but only a handful, a total of five or six from the entire region and most of those from the very end of the century or the first few years after 1700. They are far too few to tell us much of anything about the frequency of better-built houses, even among the small group of successful merchants and well-to-do planters to whom they belonged. Their significance is all the more obscured by offsetting archaeological evidence that indicates that other, equally wealthy, well-connected men were content to go on building and repairing earthfast farmsteads for decades. William Drummond, who lived on the Governor’s Land near Jamestown (Appendix 2:16), was one. Another was Col. Thomas Pettus (originally from Essex), a vestryman, councillor, land speculator, and builder of one of the largest post-in-the-ground domestic structures so far discovered (see fig. 9; Appendix 1:3). Yet despite contradictions in the evidence, our imaginary replacement curve probably ought to show a blip or two near the close of the century when a Frenchman traveling through Virginia in 1687 noted in his journal that “they have started making bricks in quantities, and I have seen several houses where the walls were entirely made of them.”⁹³ This flurry of new construction continued, warranting by 1705 Robert Beverley’s observation that “private buildings are of late very much improved,” notably, he had to add in qualification, those of “several Gentlemen” who

⁸⁷ Notwithstanding cases like Samuel Symonds’s where an impermanent house was later substantially improved, the more likely practice is spelled out in a building contract of 1679 between John Williams of Boston and a housewright who was engaged to raze an older house before building Williams a new one (Cummings, “Massachusetts and Its First Period Houses,” p. 204).

⁸⁸ Possible exceptions are plank-framed houses.

⁸⁹ Hewett, “East Anglican Prototypes,” pp. 110–21; Cummings, *Framed Houses*, esp. chaps. 1 and 6.

⁹⁰ Noël Hume, “Mathews Manor,” p. 834; Cotter, *Excavations at Jamestown*, pp. 11–159.

⁹¹ *Calvert Papers, Number One*, Maryland Historical Society Fund Publication, no. 28 (Baltimore: Maryland Historical Society, 1889), p. 174.

⁹² Surry County, Deeds and Wills, book 1, folios 176–77 (1643), 10–11 (1652), State Library, Richmond; *Archives of Maryland*, 41:367 (1659); “Westmoreland County Records,” *William and Mary Quarterly*, 1st ser. 15, no. 3 (January 1907): 181–82 (1661).

⁹³ Durand de Dauphiné, *A Huguenot Exile in Virginia*, ed. Gilbert Chinard (New York: Press of the Pioneers, 1934), pp. 119–20.

had recently "built themselves large Brick Houses."⁹⁴ Fifty years after rebuilding had transformed New England, the Chesapeake grandees were only getting started.

Less affluent neighbors had longer to wait. One effect of the recent archaeological excavations in the region has been to open historians' eyes to the fact that most plantation houses were small, poorly built, frequently repaired, and often rebuilt no better than before throughout the seventeenth century and much of the next. Typical was the complaint of planters living in the neighborhood of Charles City, Virginia, who reported that they were rebuilding "such houses as [they had] before and in them lived with continual repairs, and buildinge new where the old failed."⁹⁵ In rural localities housewrights could work for months and never set hand to a single "framed or English built" house as late as the 1690s, although, starting about then, impermanent buildings raised on blocks began competing with hole-set framed houses.⁹⁶

Small, fully framed dwellings, the kind that can last 250 years, only began to appear with some frequency in the seventeen teens, twenties, and thirties, the first period from which perhaps 100 or more buildings survive. They include large houses in disproportionate number, as would be expected, but also a smattering of one-room dwellings. Consequently, our replacement curve should ascend more steeply after about 1720, but its rise should show only a steady, gradual improvement, no precipitous climb, for in fact primitive, impermanent, even earthfast building continued in strength for years to come. Not until the 1740s, for example, were "post in the ground" and "bastard frame" buildings so uncommon on the upper eastern shore of Maryland that they were singled out for special mention in orphans court valuations where they were sometimes further denigrated by the term *old-fashioned*.⁹⁷ Even twenty-five years later there were still houses in that neighborhood with open halls, some with chimneys, but others no doubt as rudimentary as the one that had "a little

hole in ye roof to let out ye smoak."⁹⁸ Across the bay in Anne Arundel County the excavation of Middle Plantation (figs. 10, 11, 12; Appendix 1:7) has dramatically demonstrated that whole farmsteads—houses, barns, kitchens, quarters, dairies, coolers, meat houses, root cellars, hen coops, everything—were continuously built and rebuilt through the middle of the century in a fashion that left behind archaeological evidence no more substantial than the site's fence-post holes and grave pits. Intensive rebuilding was delayed until after 1800 in the region's poorest districts—backwaters such as St. Mary's County, Maryland, parts of southside Virginia, and Albemarle Sound, North Carolina.⁹⁹ At the head of the bay in nearby Delaware "mud houses" lingered on to be recorded by tax assessors until the eighteen teens.¹⁰⁰ In short, throughout the Chesapeake region the replacement of homestead housing was slow to start and then was attenuated and prolonged for more than a century until finally it was subsumed in the first truly nationwide rebuilding of the early nineteenth century. Only at that point, say, the period 1820–50, would trend lines for New England and the Old South finally converge.

Where hardy strains of impermanent architecture persevered for the better part of two centuries in the South, they had ample opportunity to exert a formative influence on the growth of the region's lasting vernacular building traditions. True, there were cases where homestead structures were replaced in good time by strictly English-framed buildings. Such cases of simple substitution would more likely have occurred, we expect, earlier rather than later in the seventeenth century, that is to say, before southern house-

⁹⁸ Orlando Ridout V, who kindly brought this remarkable reference to our attention, will publish the full text in a forthcoming study of vernacular buildings in Queen Anne's County. It will include references to other open halls.

⁹⁹ Cary Carson and Merry Stinson, unpublished survey of all historic structures in St. Mary's County built before circa 1860; Dell Upton, "Early Vernacular Architecture in Southeastern Virginia," (Ph.D. diss., Brown University, 1979); Carl Lounsbury, "The Development of Domestic Architecture in the Albemarle Region," in *Carolina Dwelling: Towards Preservation of Place*, ed. Doug Swaim (Raleigh: North Carolina State University, 1978), pp. 46–61. In *Poverty in a Land of Plenty: Tenancy in Eighteenth-Century Maryland* (Baltimore and London: Johns Hopkins University Press, 1977), pp. 56–84, Gregory A. Stiverson includes an excellent discussion of tenant housing in the late 1760s, buildings that a traveler in St. Mary's County described thus: "Some have their foundations in the Ground, others are built on Puncheons or Logs, a Foot or two from the Earth [what we have been calling blocks], which is more airy, and a Defence against the Vermin" (Edward Kimber, "Observations in Several Voyages and Travels in America," *William and Mary Quarterly*, 1st ser. 15, no. 3 [January 1907]: 153).

¹⁰⁰ Bernard Herman to Cary Carson, October 24, 1978.

⁹⁴ Robert Beverley, *The History and Present State of Virginia*, ed. Louis B. Wright (Chapel Hill: University of North Carolina Press, 1947), p. 289.

⁹⁵ H. R. McIlwaine, ed., *Journals of the House of Burgesses of Virginia, 1619–1658/9*, 13 vols. (Richmond: Colonial Press, 1915), 1:33.

⁹⁶ The workload of two carpenters between August and November 1691 is described in Charles County Court and Land Records R, no. 1, folio 513, Hall of Records, Annapolis.

⁹⁷ This is based on analysis of Queen Anne's County Deed Book RT, nos. D, E, and F, as interpreted in a letter from Garry Wheeler Stone to Cary Carson, December 7, 1977.

wrights began improvising on impermanent building types from England to create the indigenous impermanent Virginia house previously described. Certainly every one of the few surviving houses from the late seventeenth and early eighteenth centuries, whether brick built or framed on sills, incorporates one or more features taken over from the Virginia house: its common-rafter roof frame, its system of tie beams and false plates, its clapboards used as structural elements, and so on. Indeed the magnitude of the southern builder's debt to the region's impermanent architectural tradition is only fully appreciated by looking ahead at the timber-framed house type that became absolutely standard and universal in the eighteenth century throughout Maryland, Virginia, the Carolinas, and eventually all those trans-Appalachian states settled by migrants from the tidewater South.¹⁰¹ Virtually every member of its frame, save the continuous groundsills, can be traced back a hundred years or more to origins in the Virginia house.

The practice of repairing this and replacing that, when multiplied innumerable times over many years, in fact became the process by which southern architecture was transformed. The set of accounts that records the repeated renovations to a courthouse built in 1674 in Charles County, Maryland (Appendix 3), reveals not only how specific buildings could be coaxed across the vernacular threshold, but how thoroughly by the end of the seventeenth century an archaic building technology had become mainstream tradition. Eventually its vulnerable earthfast features—hole-set posts and studs and ground-laid sills—were winnowed out and eliminated in preference to wooden blocks, brick piers, and, finally, full foundations. But, for a considerable time, posts in the ground were acceptable to many builders of houses otherwise as strongly constructed as Cedar Park, because the two traditions had so thoroughly intermingled and because the process of rebuilding was so thoroughly an evolutionary one.

Archaeological evidence that forms such an unusual pattern of cultural development raises two important historical questions. Why were immigrants to the Chesapeake colonies so much slower than settlers elsewhere to establish an enduring material culture, and, when once a few began, what circumstances retarded its acceptance generally?

¹⁰¹ Paul E. Buchanan, "The Eighteenth-Century Frame Houses of Tidewater Virginia," in *Building Early America: Contributions toward the History of a Great Industry*, ed. Charles E. Peterson (Radnor, Pa.: Chilton Book Co., 1976), pp. 54–73.

Were there chronic disabilities that plagued southern society, or, despite their protests to the contrary, were southerners really content to live from hand to mouth?

Indifference—a kind of cultural malaise—is an appealing explanation for some men's circumstances. Edmund Morgan has described Virginia in the 1620s as a boom country, a time and a place when the extraordinarily high price of tobacco produced a mining-camp mentality.¹⁰² Planters were prospectors who came to strike it rich and looked on Virginia "not as a place of Habitation but onely of a short sojourninge."¹⁰³ He finds the governing council of the Virginia Company complaining in 1626 that fortune seekers cared only for "a present Cropp, and their hastie retourne."¹⁰⁴ Easy come, easy go was the prevailing mood. Often as not planters gambled or drank away the profits from their yearly crop or squandered them on frippery like the "fresh flaming silkes" reportedly worn by the cow keeper at Jamestown or a collier's wife's "rough beaver hatt with a faire hattband, and a silken suite therto correspondent."¹⁰⁵ Such people, the argument goes, had little use for well-built houses and sturdy farm buildings. Stopping places only, boom towns are shantytowns the world over. The archaeological record has to be stretched to fit this interpretation. Apart from some jewelry and fragments of gold and silver thread used to trim clothing, the artifacts recovered from sites of the sixteen teens and twenties do not bear witness to Virginia's sottish ways and tawdry vices. The most that can be said is that some sites present a notable contrast between the quantity and quality of discarded artifacts and the flimsiness of associated dwellings, barns, outbuildings, and enclosures.¹⁰⁶

A more serious objection is that Morgan's boom-town hypothesis lays a false scent for the period as a whole. While tobacco mania may have had a contributing effect in encouraging construction of ramshackle housing during the second decade of the century, as an explanation it fails to fit the known facts. First of all, historians cannot substantiate the complaint about opportunists returning to England with tobacco fortunes salted

¹⁰² E. S. Morgan, *American Slavery, American Freedom: The Ordeal of Colonial Virginia* (New York: W. W. Norton, 1975), pp. 108–30.

¹⁰³ Kingsbury, *Records*, 1:566.

¹⁰⁴ Kingsbury, *Records*, 4:572.

¹⁰⁵ Kingsbury, *Records*, 3:221.

¹⁰⁶ Ivor Noël Hume, "First Look at a Lost Virginia Settlement," *National Geographic* 155, no. 6 (June 1979):735–67; William Kelso, Kingsmill reports, in Appendix 1:1–4.

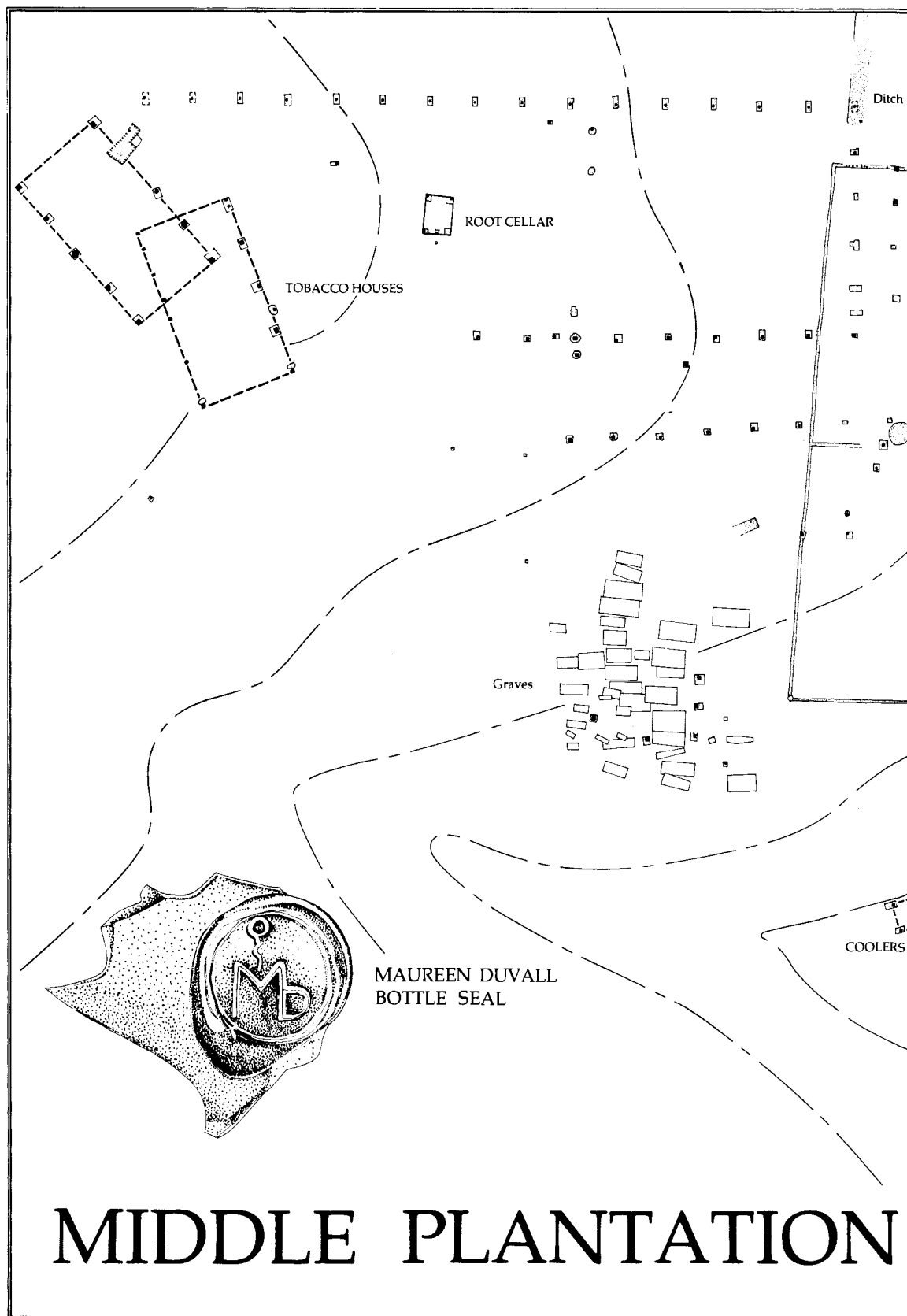
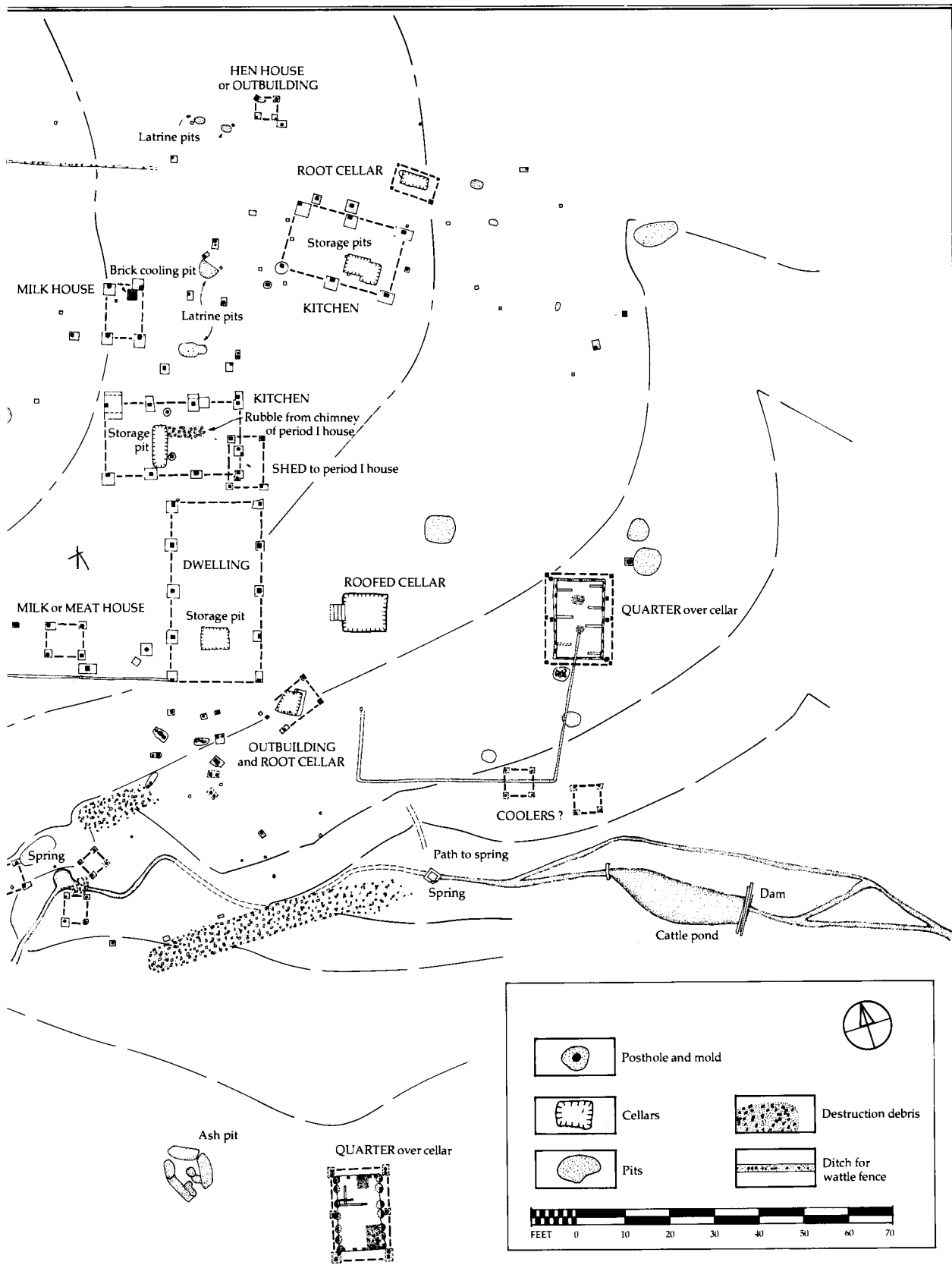


Fig. 10. Archaeological site plan of Middle Plantation, Anne Arundel County, Maryland, showing a merchant-planter's seventeenth-century farmstead overlain by an eighteenth-century tenement. (Drawing, William Depkins, Garry Wheeler Stone, and Chinh Hoang.)



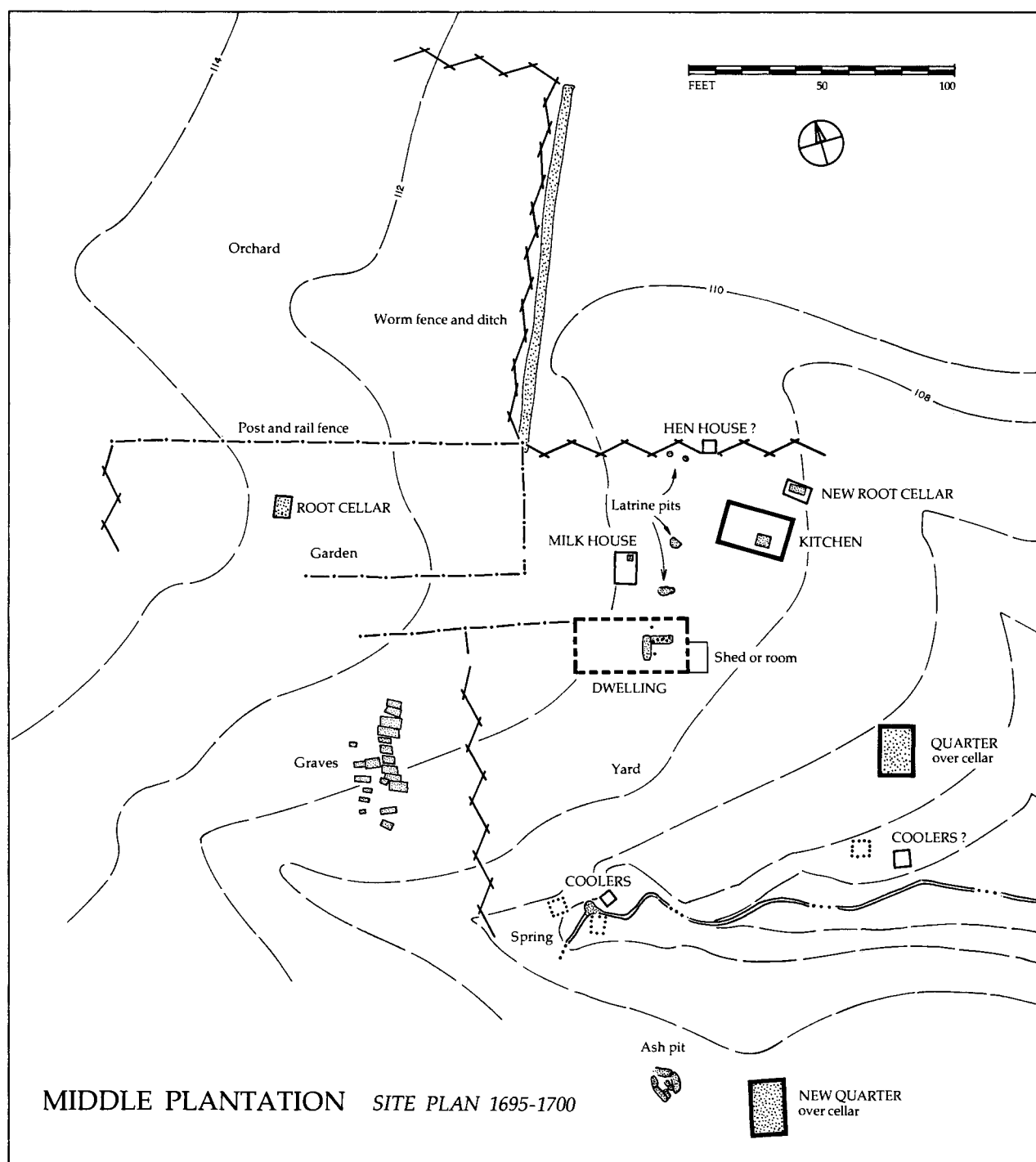


Fig. 11. Conjectural reconstruction of Middle Plantation, Anne Arundel County, Maryland, ca. 1695-1700. The garden palings shown are from two different periods. Only those rail fences are shown whose locations are implied by other features. (Drawing, Garry Wheeler Stone and Chinh Hoang.)

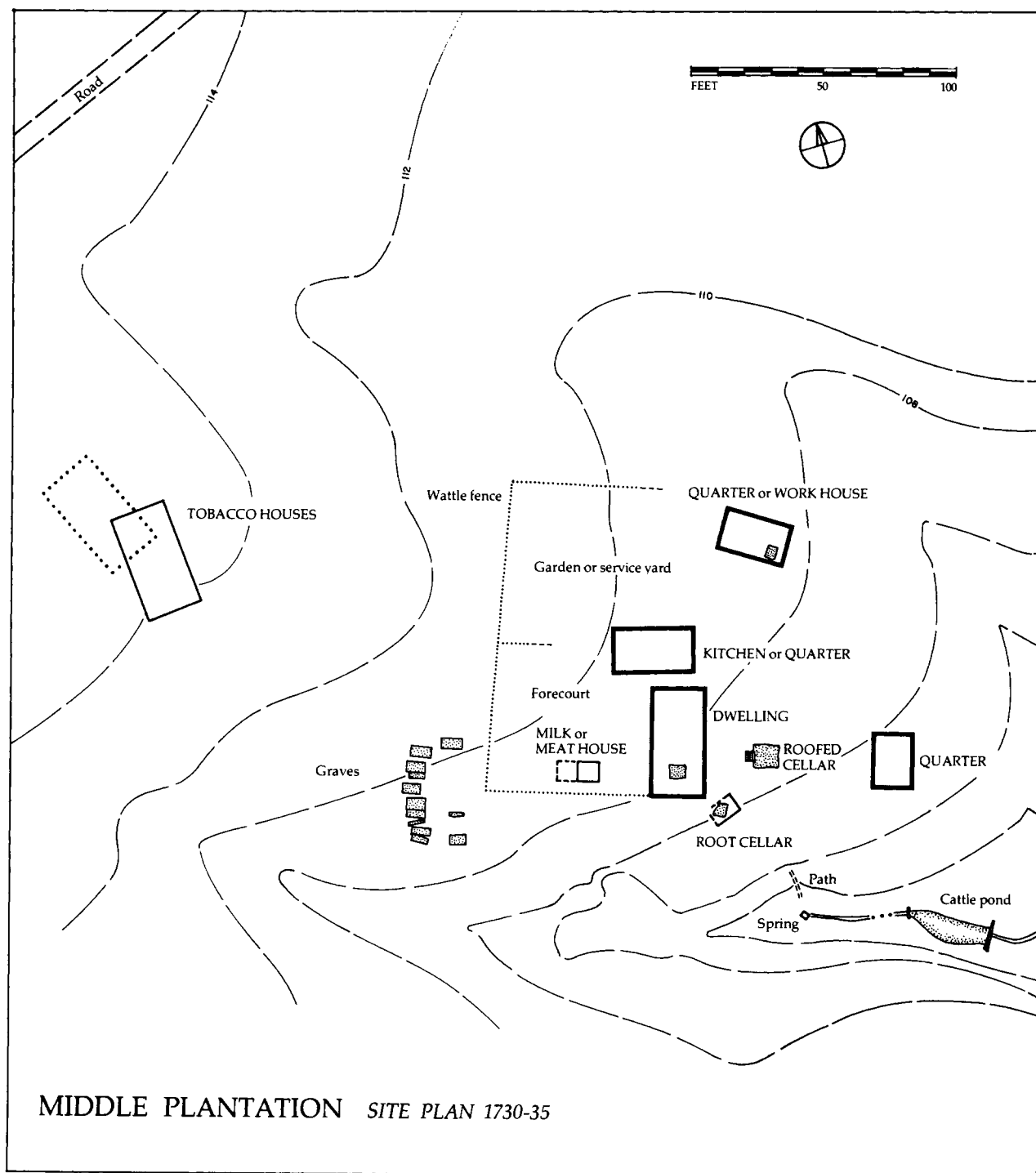


Fig. 12. Conjectural reconstruction of Middle Plantation, Anne Arundel County, Maryland, ca. 1730-35. (Drawing, Garry Wheeler Stone and Chinh Hoang.)

away. No doubt individual cases can be found to show that some Virginia planters engaged in profit taking in the manner of cane planters on the sugar islands, but the bulk of evidence is in the other direction. Immigrants to the mainland colonies came to stay.

Beyond that, there is simply the matter of timing. The boom lasted ten years and no more, the price of best tobacco falling to a penny a pound by 1630 from its high point of three shillings in 1619.¹⁰⁷ Yet, throughout the whole century, indeed well past 1750, the methods of building plainer sorts of farmhouses and barns changed hardly at all. As far as archaeologists can tell, the eighteenth-century builders at Middle Plantation, for instance, used most of the same techniques employed a century earlier in the boom towns along James River. The persistence of primitive housing standards requires a comprehensive explanation applicable not just to a decade or two, but to the whole colonial period.

There is another way to make a system of tobacco agriculture responsible for the lack of substantial housing. Tobacco was an unusually labor-intensive crop. It returned profits in direct proportion to the number of hands that a planter employed. New planters were wise to spend as much cash as they could scrape together on the purchase of servants or slaves and cut corners on capital improvements, at least when starting out. Unfortunately, no one itemized the costs incurred in setting up a small tobacco plantation until the eighteenth century, but there are probate inventories from the mid-seventeenth that appraise "House and Plantation" at less than the value of a single cow or at a figure only three times greater than the value of the decedent's suit of clothes.¹⁰⁸ Cases such as these suggest that small planters sometimes had no other choice than to allocate their limited resources in ways that left them poorly housed. They could scarcely do otherwise

when even wealthy men found compelling reasons to economize. One was the astronomically high cost of employing carpenters and bricklayers. William Fitzhugh strongly advised an English correspondent headed for Virginia not to count on building "a great or English framed house, for labor is so intolerably dear & workmen so idle & negligent that the building of a good house to you there will seem insupportable." He spoke of his own recent experience. "When I built my own house & agreed as cheap as I could with workmen & as carefully & diligently took care that they followed their work, notwithstanding that we have timber for nothing but felling & getting in place, the frame of my house stood me in more money . . . than a frame of the same Dimensions would cost in London by a third at least . . . & near three times as long preparing" (emphasis added).¹⁰⁹ As late as 1775, when the author of *American Husbandry* tallied up the cost of settling a tobacco plantation in Virginia, the purchase price of twenty Negro field hands exceeded by five times the expense of building the "house, offices, and tobacco-house."¹¹⁰

Here again is the homesteader, living frugally and husbanding his resources in hopes of bountiful harvests and good markets. But if he were so unlucky as to be starting out in the third quarter of the seventeenth century when tobacco prices began their thirty- to forty-year slide into the depths of depression, then the homesteader might have found himself stalled and trapped at a stage that other men in happier times had quickly passed through. Those who a few years earlier had looked forward to becoming small freeholders were increasingly likely to end up as tenants after 1680.¹¹¹ Tenancy encouraged the proliferation of im-

¹⁰⁸ William Fitzhugh to Nicholas Hayward, January 30, 1686/87, in Davis, *Fitzhugh*, pp. 202-3.

¹⁰⁹ Harry James Carman, ed., *American Husbandry* (1775; reprint ed., New York: Columbia University Press, 1939), pp. 168-70. "Posted" slave quarters on such plantations were valued at £5 apiece, one-third the cost of building a frame house for an overseer Loyalist Claims, AO 13/27, Public Record Office, London.

¹¹¹ Russell R. Menard, "From Servant to Freeholder: Status Mobility and Property Accumulation in Seventeenth-Century Maryland," *William and Mary Quarterly*, 3d ser. 30, no. 1 (January 1973): 37-64; Lorena S. Walsh, "Servitude and Opportunity in Charles County, Maryland, 1658-1705," in Aubrey C. Land, Lois Green Carr, and Edward C. Papenfuss, eds., *Law, Society, and Politics in Early Maryland* (Baltimore and London: Johns Hopkins University Press, 1977), pp. 111-33; Lois Green Carr and Russell R. Menard, "Immigration and Opportunity: Servants and Freedmen in Early Colonial Maryland," in Tate and Ammerman, *Chesapeake in Seventeenth Century*, pp. 206-42; Willard F. Bliss, "The Rise of Tenancy in Virginia," *Virginia Magazine of History and Biography* 58, no. 4 (October 1950): 427-41; Stiversson, *Poverty in a Land of Plenty*, pp. 1-55, 85-103.

¹⁰⁷ Russell R. Menard, "A Note on Chesapeake Tobacco Prices, 1618-1660," *Virginia Magazine of History and Biography* 84, no. 4 (October 1976): 401-10, and "Farm Prices of Maryland Tobacco, 1659-1710," *Maryland Historical Magazine* 68, no. 1 (Spring 1973): 80-85.

¹⁰⁸ *Archives of Maryland*, 4:387, 499. The author of the 1684 pamphlet promoting settlement in Pennsylvania reckoned that an "ordinary beginners" house and a barn "of the same Building and Dimensions" ought to cost 16.1 percent of his expenses the first year, which were estimated to be £30.2.6 for an immigrant family's passage and passage and clothes for two servants, £1.0.0 for two month's lodging "till a house be built," £15.10.0 for the house and barn (including £3.10.0 for nails and hardware), £16.17.6 for one year's provisions, and £24.10.0 for livestock (*Information and Direction*, p. 2).

permanent buildings for reasons that made sense to both leaseholders and landlords. One of the latter, Fitzhugh, believed no sensible landowner would provide accommodations for tenants, there being many, he explained, who "for a seven year's Lease will build themselves a convenient dwelling & other necessary houses & be obliged at the expiration of their time to leave all in good repair." If anyone were foolish enough to build "an ordinary Virginia house" for lease to tenants, "it [would] be some Charge & no profit," he predicted, "& at the expiration of [the] tenant's time, the plantation [would] not be in better order than the way before proposed."¹¹² All things considered and given the state of the economy in Maryland and Virginia in the final decades of the seventeenth century, the absence of surviving buildings from that period should come as no surprise, nor should the evidence that many tenants and small freeholders spent those years patching, repairing, and shoring up dilapidated structures that had long since outlived their expected usefulness.

Tobacco madness in the 1620s and economic stagnation after 1680 were not the only obstacles to a settled way of life in the South. Disease and an abnormally high mortality rate among immigrants were fundamental sources of social instability. Figures alone tell the grim story. Male immigrants who lived to celebrate their twenty-second birthdays were already middle-aged. Seventeen percent of them would be dead before they were thirty, 41 percent before the age of forty, and 70 percent before fifty.¹¹³ In contrast, a boy who reached his majority in New England in the same middle decades of the century could expect to live another fifty years; forty for those who grew up in rural England.¹¹⁴ Contemporaries called the killer "seasoning," a process of adjusting to the Chesapeake climate in which malaria left its victims sickly and susceptible to other, fatal illnesses.¹¹⁵

¹¹² William Fitzhugh to Nicholas Hayward, January 30, 1786/87, in Davis, *Fitzhugh*, p. 202.

¹¹³ Lorena S. Walsh and Russell R. Menard, "Death in the Chesapeake: Two Life Tables for Men in Early Colonial Maryland," *Maryland Historical Magazine* 69, no. 2 (Summer 1974): 211–27; Russell R. Menard, "Immigrants and Their Increase: The Process of Population Growth in Early Colonial Maryland," in Land, Carr, and Papenfuse, *Law, Society, and Politics*, pp. 88–110.

¹¹⁴ Maris A. Vinovskis, "Mortality Rates and Trends in Massachusetts before 1860," *Journal of Economic History* 32, no. 1 (March 1972): 184–213; Lawrence Stone, *The Family, Sex, and Marriage in England, 1500–1800* (New York: Harper & Row, 1977), p. 72.

¹¹⁵ Darret B. Rutman and Anita H. Rutman, "Of Agues and Fevers: Malaria in the Early Chesapeake," *William and Mary Quarterly*, 3d ser. 33, no. 1 (January 1976): 31–60.

The effect on family life was devastating. Few children grew up in the care of both their natural parents. Two of every three lost either a mother or a father before coming of age; one of three lost both. Orphans were legion; orphans and guardians and stepparents and half brothers and sisters sometimes all lived under one roof.¹¹⁶ Fathers had no assurance that the wealth they accumulated would be passed on to their heirs in ways they could anticipate. Widows remarried, estates were broken up, and guardians not uncommonly despoiled their wards' inheritances. The law permitted the sale of orphans' property to preserve the value of their assets, but such action effectively dispossessed them of their fathers' farmsteads.¹¹⁷ These were excellent reasons *not* to plan too far ahead or build things to last. Better to put profits back into production and spend disposable income on material comforts that could be enjoyed immediately. Planters 300 years ago may have made such choices deliberately. If so, their trash pits would yield just what archaeologists have found on most early sites in Maryland and Virginia, a wealth of utensils used for eating, drinking, and storing food, articles of apparel and personal adornment, farm tools, weapons, and even such architectural frills as delft fireplace tiles and fancy casement windows, all in association with buildings guaranteed to last a lifetime—a planter's lifetime—and not much more.

Still and all, it must have been human nature for healthy people to suppose that they would continue to be the lucky ones, that their lives would be spared. The survivors looked forward no doubt to improving their housing standards as soon as circumstances allowed. But, unfortunately, circumstances had a way of not allowing, not after 1680, because the market for tobacco went bad, and generally not throughout the period as a whole, because for many men and women both luck and life ran out. Fathers and mothers died, family assets were dispersed, old buildings fell hopelessly into

¹¹⁶ Darret B. Rutman and Anita H. Rutman, "'Now-Wives and Sons-in-Law': Parental Death in a Seventeenth-Century Virginia County," in Tate and Ammerman, *Chesapeake in Seventeenth Century*, pp. 153–82; Lorena S. Walsh, "'Till Death Us Do Part': Marriage and Family in Seventeenth-Century Maryland," in Tate and Ammerman, *Chesapeake in Seventeenth Century*, pp. 126–52; Daniel Blake Smith, "Mortality and Family in the Colonial Chesapeake," *Journal of Interdisciplinary History* 8, no. 3 (Winter 1978): 403–27.

¹¹⁷ Lois Green Carr, "The Development of the Maryland Orphans' Court, 1654–1715," in Land, Carr, and Papenfuse, *Law, Society, and Politics*, pp. 41–62; E. McN. Thomas, "Orphans Courts in Colonial Virginia" (M.A. thesis, College of William and Mary, 1964), esp. pp. 23–24, 43–44 for abuses by guardians.

disrepair, plantations were sold or neglected or exploited or simply minimally maintained by guardians, and years later the returning orphan sons or daughters had to begin all over again by building more temporary structures. Tenants came, built cheaply, and went away again. Freeholders stayed longer, but exceedingly high building costs encouraged repairs as long as possible and discouraged genuine improvements when finally irretrievably dilapidated structures had to be replaced. In short, the bay country was a perpetual frontier. Each generation was a homesteader generation; each frequently had to start from scratch.

The ill effects of an agriculture that required a continual supply of new recruits to replace the laborers who fell victim to seasoning held sway in the region as long as tobacco remained the exclusive market crop. The long depression after 1680, by breaking the labor-replacement cycle, set in train the events that eventually brought relief.¹¹⁸ Low prices for the staple crop meant tight credit for planters, and that quickly stanching the flow of servants from England, Wales, and Ireland. The hardier, native-born population was thus given time to recover a more normal balance between the sexes, which in turn encouraged the formation of more numerous and longer-lasting families. Natural growth in the native population had already begun in the older settled areas, but sharply reduced numbers of British immigrants in the last decades of the century and their displacement by African slaves when the traffic in servants resumed hastened the ascendancy of a generation of colonists American born and bred.¹¹⁹ As life assumed a more normal, settled character, planters learned to place greater confidence in the hope that the accumulated fruits of their labors could and would be handed down to their descendants.

All benefited from the general tendency toward demographic equilibrium and social stability, but not all at once. Wealthy men with large estates and many slaves, being best able to ride out hard times, were also best prepared to recover their fortunes

first when tobacco prices improved.¹²⁰ These were the "Gentlemen" whose "large Brick Houses," newly built, received Robert Beverley's commendations in 1705. Homegrown patricians, they ruled their counties, married their cousins, and founded parochial dynasties that delighted in building architectural monuments to their self-esteem and their belief in a posterity. Others followed their lead as prosperity returned after 1715 with the result, already noted in regard to the region as a whole, that durable buildings of all sizes began to appear more frequently from the second quarter of the eighteenth century onward. Yet it must also be said that such buildings were far from commonplace before the 1780s; nor was their frequency everywhere uniform from one part of the Chesapeake to another. Unlike the northern colonies, where, once the process of replacing homestead housing began, impermanent buildings vanished almost completely from the older, longest-settled regions within a generation or two, rebuilding in Maryland and Virginia proceeded slowly and unevenly throughout the eighteenth century.

Historians searching for a working hypothesis to explain so protracted a course of development may find it useful to approach the problem as would a writer of detective fiction. Having established that demographic recovery provided a widespread *opportunity* to improve standards of living, the historical investigator must go on to prove that planters in the region had both a *means* and a *motive*. There is no question on either score so far as the great planters are concerned. But what of middling-sized, 350-acre planters, smaller freeholders, and even tenant farmers—the people whose numbers sustain vernacular traditions and in whom resides the collective genius of folk material culture?

The ability to replace inferior, worn-out buildings with better, longer-lasting ones varied from place to place and period to period. How and why requires a closer look at the behavior of sub-regional microeconomies in the period following the great end-of-the-century depression. The long years of unprofitable tobacco sales had forced many smaller operators to diversify their economic activities. Typically they resorted to by-employments, grew larger food crops, and made at home the manufactured goods—chiefly cloth and

¹¹⁸ Russell R. Menard, "The Tobacco Industry in the Chesapeake Colonies, 1617–1730: An Interpretation," *Research in Economic History* 5 (1980): 109–77; Russell R. Menard, "From Servants to Slaves: The Transformation of the Chesapeake Labor System, 1680–1710," *Southern Studies* 16 (1977): 355–90.

¹¹⁹ Carole Shammas, "English-born and Creole Elites in Turn-of-the-Century Virginia," in Tate and Ammerman, *Chesapeake in Seventeenth Century*, pp. 274–96; David W. Jordan, "Political Stability and the Emergence of a Native Elite in Maryland," in Tate and Ammerman, *Chesapeake in Seventeenth Century*, pp. 243–73.

¹²⁰ Gloria L. Main, "Maryland and the Chesapeake Economy, 1670–1720," in Land, Carr, and Papenfuss, *Law, Society, and Politics*, pp. 134–52.

shoes—that previously they had purchased from abroad with income from the sale of the staple. The tobacco market's recovery in the seventeenth century brought a mixed response from smaller planters.¹²¹ In a few localities they never went back to growing the crop, having developed in the meantime lucrative trades in specialized local products. The more common practice was to take up planting again but to supplement tobacco with other cash crops and exports. Meat, corn, wheat, fruits and vegetables, dairy products, firewood, naval stores, shingles, and staves found expanding markets in the islands, in the region's growing towns and cities, and in a hungry population that multiplied twelvefold in the hundred years ending in 1800. By that date, mixed farming and the craft activities needed to support it had replaced the region's heavy dependence on tobacco everywhere except in southern Maryland and southside Virginia.

While systematic surveys of vernacular architecture in the region are nowhere as advanced as studies of its local economies, county-by-county inventories of historic structures compiled by state preservation agencies in Maryland and in Virginia are now sufficiently numerous to be used to draw a map that shows the distribution of surviving buildings in several localities on both sides of the bay (fig. 13).¹²² An intelligible pattern emerges at

once, one that suggests how smaller planters acquired the means to take advantage of their brighter prospects after 1700. Incomplete as the architectural evidence still is, there is a pronounced correlation between areas and even neighborhoods that shifted to a diversified economy and the first appearance in those places of improved vernacular buildings.

Examples are too numerous to be explained as mere coincidence. Take Lower Norfolk County, Virginia, for instance (fig. 13, no. 1). Its planters gave up tobacco in the middle 1680s never to plant it again in marketable quantities. Between 1700 and the 1720s they turned overwhelmingly to the cultivation of cereal grains, mostly corn, but in the meantime they had avoided the worst rigors of depression by developing a brisk island trade in tar, pitch, and pork. It is surely significant that the earliest small brick houses in Virginia, buildings of the late seventeenth century and very early eighteenth, are concentrated in the Lynnhaven district of Lower Norfolk (later Princess Anne) County.¹²³ In the same general area a one-room frame house dated 1714 still stands along the banks of the Nansemond River.¹²⁴

Across the mouth of the bay, the lower eastern shore of Virginia also grew less and less tobacco after 1700 and none to speak of by 1740 (no. 2). It, too, is a locality that boasts not only two of Virginia's earliest timber-framed buildings, both single-unit houses built sometime between 1680 and 1720, but also, in Northampton County, an unusual abundance of small, smart, mostly one-story, brick farmhouses from the middle decades

¹²¹ For the region as a whole, see Arthur P. Middleton, *Tobacco Coast: A Maritime History of Chesapeake Bay in the Colonial Era* (Newport News, Va.: Mariners' Museum, 1953), pt. 2; Aubrey C. Land, "Economic Behavior in a Planting Society: The Eighteenth-Century Chesapeake," *Journal of Southern History* 33, no. 4 (November 1967): 469–85; Allan Kulikoff, "The Colonial Chesapeake: Seedbed of Antebellum Southern Culture?," *Journal of Southern History* 45, no. 4 (November 1979): 513–40; Peter V. Bergstrom, "Markets and Merchants: Economic Diversification in Colonial Virginia, 1700–1775" (Ph.D. diss., University of New Hampshire, 1980); Lois Green Carr, P. M. G. Harris, and Russell R. Menard, "The Development of Society in the Colonial Chesapeake," National Endowment for the Humanities Grant no. RS-23687–76–431 (1976–79), St. Mary's City Commission, St. Mary's City.

¹²² County surveys of vernacular buildings on file with Virginia Historic Landmarks Commission, Richmond, and Maryland Historical Trust, Annapolis. Studies of local agricultural economies used in the following analysis include, besides Bergstrom, "Markets and Merchants," and Carr, Harris, and Menard, "Development of Society in Colonial Chesapeake," Paul G. E. Clemens, *The Atlantic Economy and Colonial Maryland's Eastern Shore: From Tobacco to Grain* (Ithaca: Cornell University Press, 1980); Carville V. Earle, *The Evolution of a Tidewater Settlement System: All Hallow's Parish, Maryland, 1650–1783*, Department of Geography Research Paper 170 (Chicago: University of Chicago, 1975); James B. Gouger III, "Agricultural Change in the Northern Neck of Virginia, 1700–1860" (Ph.D. diss., University of Florida, 1976); Harold B. Gill, Jr., "Wheat Culture in Colonial Virginia," *Agricultural History* 52, no. 3 (July 1978): 380–93; Ronald Hoffman, *A Spirit of Dissension: Econom-*

ics, Politics, and the Revolution in Maryland (Baltimore and London: Johns Hopkins University Press, 1973), pp. 6–15; Kevin P. Kelly, "Economic and Social Development of Seventeenth-Century Surry County, Virginia" (Ph.D. diss., University of Washington, 1972); Allan Kulikoff, "Tobacco and Slaves: Population, Economy, and Society in Eighteenth-Century Prince George's County, Maryland" (Ph.D. diss., Brandeis University, 1976); Bayley Marks, "Economics and Society in a Staple Plantation System: St. Mary's County, Maryland, 1790–1840" (Ph.D. diss., University of Maryland, 1979); Michael Lee Nicholls, "Origins of the Virginia Southside, 1703–1753: A Social and Economic Study" (Ph.D. diss., College of William and Mary, 1972); Stiversson, *Poverty in a Land of Plenty*; Lorena S. Walsh, "Charles County, Maryland, 1658–1705: A Study of Chesapeake Social and Political Structure" (Ph.D. diss., Michigan State University, 1977); Robert A. Wheeler, "Lancaster County, Virginia, 1650–1750: The Evolution of the Southern Tidewater Community" (Ph.D. diss., Brown University, 1972).

¹²³ Lynnhaven House (134–37), Thoroughgood House (134–33), Weblin House (134–31). Numbers refer to historic building survey inventory done by Virginia Historical Landmarks Commission.

¹²⁴ Old Woodward House (133–41).

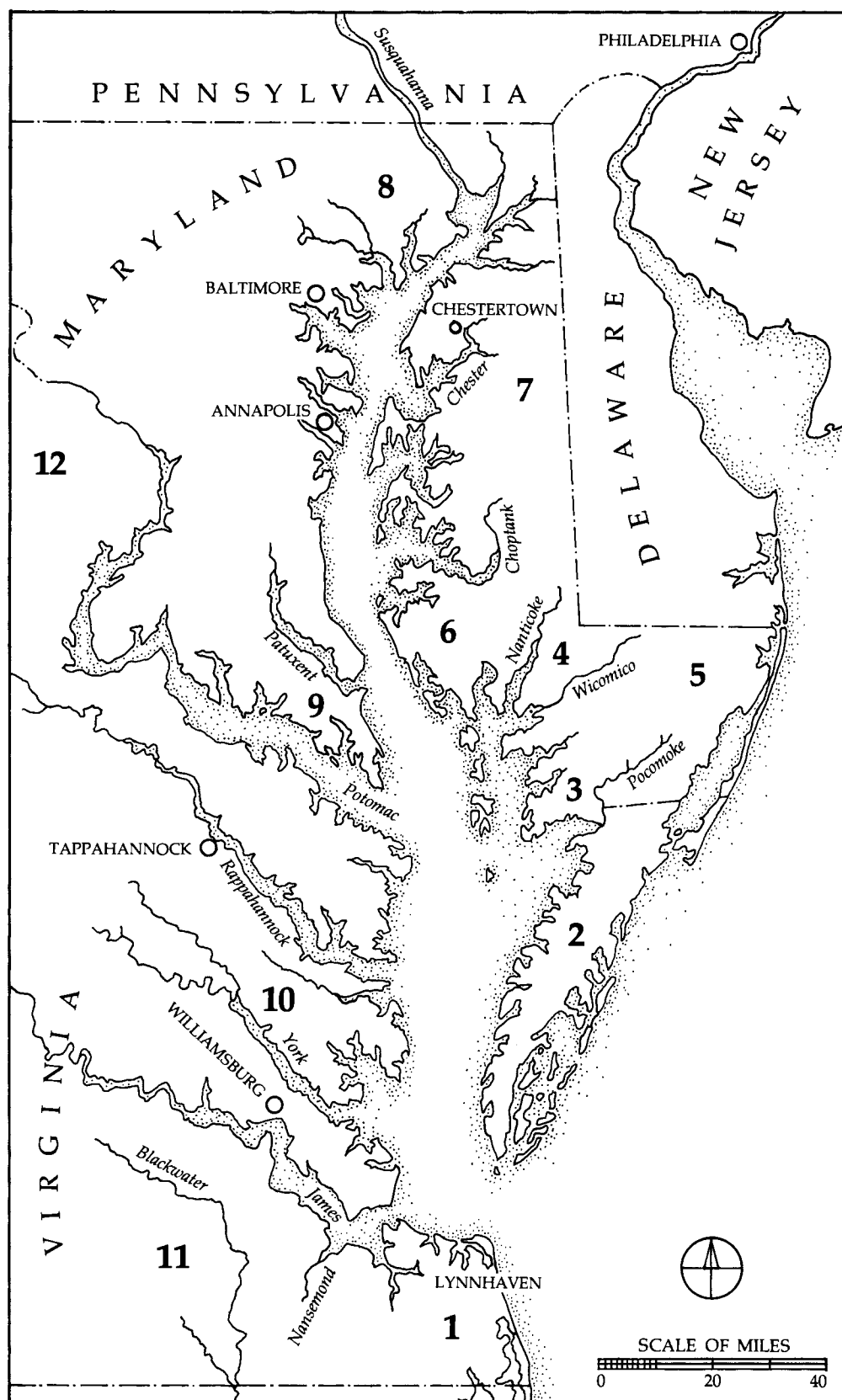


Fig. 13. Farming regions and farm building improvements in Tidewater Maryland and Virginia, 1700-1800. Place names and numbered localities are identified in the text. (Drawing, Cary Carson.)

of the eighteenth century by which time tobacco patches there had mostly been plowed into cornfields.¹²⁵

No region demonstrates the sensitive relationship between agriculture and vernacular building better than the bay-side counties on the lower eastern shore of Maryland (no. 3). Recent research suggests that tobacco production declined after 1680 in Somerset County. It recovered again in the 1730s, strongly in Monie, Manokin, and Annemessex hundreds, but only marginally on the neck of land between the Wicomico and Nanticoke rivers (the area that became Wicomico County). There (no. 4) corn began to rival the traditional staple, and by the 1750s corn surpluses were probably worth more than the tobacco crop. Be that as it may—and herein lies the instructive comparison—Somerset County (the three lower hundreds) produced corn too, actually more per acre than Wicomico farms but never in quantities that matched the value of the tobacco crop. In short, both sections engaged in mixed farming, one favoring corn, the other tobacco.¹²⁶ Yet, rebuilding in the two areas followed different courses. A chronological distribution of surviving structures in Wicomico duplicates a pattern common to other early cereal-growing regions: permanent vernacular buildings began to appear in numbers when grain production overtook the export of tobacco and their frequency increased steadily from then to the mid-nineteenth century. Rebuilding in Somerset by contrast gathered momentum little by little throughout the eighteenth century, then suddenly boomed after 1790 for a period of thirty or forty years. In so doing, it behaved like other regions where tobacco remained the dominant export. There seems no denying that cash crops are a historian's best clue to predicting the time and the place of widespread rebuilding.

There was no cash crop to bring wealth to the subsistence farms of Worcester County, hemmed in between the Pocomoke marshes and the Atlantic beaches (no. 5). Not surprisingly Worcester is poor in surviving eighteenth-century buildings. The same can be said of swampy Dorchester farther up

the shore (no. 6), and the same explanation offered.¹²⁷

The fertile plain above the Choptank River, the upper eastern shore, followed a different course (no. 7). It became the breadbasket of the Chesapeake in this period. The shift from tobacco to wheat was under way by the 1720s on farms at the head of the bay where wagons plied back and forth to Philadelphia. Wheat superseded tobacco as the major market crop in Kent County by 1750 and was becoming a significant source of income for planters as far south as Talbot County, although many, especially those seated near convenient navigation, continued to rely chiefly on tobacco until after 1775. By the fourth quarter of the century the rapidly expanding city of Baltimore added its demand to the market for locally grown foodstuffs (no. 8). Farmers responded accordingly, so much so that what was said of Baltimore County in 1794—"wheat has turned away Tobacco; and the erection of Grist Mills and the growing of Wheat go Hand in Hand, increasing yearly everywhere"—applied generally to the northern counties on both shores.¹²⁸ Surviving vernacular buildings chart the progress of diversification from the head of the bay southward. A group of dated brick houses above Chestertown, Kent County, span the years from 1721 to the eighties, but the greatest number record dates in the sixties and the seventies.¹²⁹ Below Kent in Queen Anne's County, an area surveyed with great thoroughness, four of every five surviving eighteenth-century houses belong to the last quarter of the century and include the first extant frame houses in the county.¹³⁰ Less precise but similar numbers hold too for the upper western shore.¹³¹

Southern Maryland, that whole region lying between the bay and the navigable length of the Potomac, was premier tobacco country throughout the period, indeed to the Civil War (no. 9). Its planters grew just enough corn to eat and late in

¹²⁷ Dorchester County survey, Maryland Historical Trust; information from Michael Bourne, Chestertown, Maryland.

¹²⁸ William Strickland, *Journal of a Tour in the United States of America, 1794-1795*, ed. J. E. Strickland (New York: New York Historical Society, 1971), p. 223.

¹²⁹ Kent County survey, Maryland Historical Trust; information from Marsha Fritz, Annapolis, Maryland.

¹³⁰ Queen Anne's County survey, Maryland Historical Trust; information from Orlando Ridout V, Annapolis, Maryland. A comprehensive survey of Caroline County turned up no pre-Revolutionary houses whatsoever; see Michael Bourne, *Inventory of Historic Sites in Caroline County*, ed. Christopher Weeks (Annapolis: Maryland Historical Trust, 1980).

¹³¹ Information for Harford (formerly Baltimore) County compiled by Bel Air American History Club and kindly provided by David Hill, Bel Air, Maryland.

¹²⁵ Pear Valley, Northampton County (65-52), Red Hill (destroyed), Accomac County (01-133). See Bernard L. Herman and David G. Orr, "Pear Valley et al.: An Excursion into the Analysis of Southern Vernacular Architecture," *Southern Folklore Quarterly* 39, no. 4 (December 1975): 307-27.

¹²⁶ The authors are grateful to Lois Green Carr for permission to cite these yet unpublished findings. For vernacular buildings in Somerset, Wicomico, and Worcester counties, see Maryland Historical Trust, *Historic Sites Inventory II* (Annapolis: Maryland Historical Trust, 1973).

the century small quantities of grain to sell, but tobacco was almost as much the unchallenged cash crop in 1800 as it had been ever since this oldest part of Maryland was settled. Six early houses still stand in the area, but, even as exceptions that prove the rule, they are of limited significance considering that three of the frame structures¹³² were only saved by the expedient of later encasing them inside brick walls and the single original brick dwelling¹³³ was the residence not of a true planter, but of a wealthy merchant. The real history of rebuilding in southern Maryland is well represented by St. Mary's County. A comprehensive survey of all historic structures in that area shows even more clearly than Somerset the slight extent to which tobacco agriculture stimulated improved building standards.¹³⁴ Of more than 150 extant structures built before 1860 only four date from the early eighteenth century, not quite a score from the middle decades, and barely that number again from the last third of the century. There is no sign, in other words, of even the very gradually accelerated rate of rebuilding that the mixed economy of Somerset County sustained prior to the building boom that started there in the 1790s. The first burst of building activity in St. Mary's County came about ten years later. So did the first attempts at diversification, and then only successfully in the few coastal neighborhoods where broad alluvial plains provided enough tillable acreage for wheat fields. These were precisely the areas where many small, single-story, frame houses (described in the 1798 federal tax assessment) were replaced in the early 1800s by much larger, often two-story, brick dwellings. Once begun, the rebuilding continued unabated through the 1840s, its progress unaffected by the embargo on tobacco in 1808 and the crop's lackluster performance after 1820. Prices for wheat remained high throughout the period.

Farther south still, farmhouse-sized buildings on the three great necks of land between the Potomac and the James (no. 10) have been neglected by scholars in proportion to their preoccupation with the celebrated mansions of the re-

gion. The absence of systematic fieldwork leaves a large hole in our distribution map, which is only poorly compensated for by the tentative observation that Virginia planters' devotion to tobacco in the area seems to have left the usual smattering of substantial brick farmhouses from the first half of the eighteenth century, but virtually no small, frame houses (except perhaps around Tappahannock) until the seventies, eighties, and nineties. By then investments in corn, wheat (especially in northern Virginia), and other diversified crops exceeded the commitment to tobacco with the predictable effect that rebuilding gathered force until the 1840s at least. Beyond that cautious statement nothing more can be said about improved housing standards in bay-side tidewater Virginia until reliable surveys are undertaken.

Vernacular buildings in the southern and southside counties of Virginia had received even less attention from architectural historians except for a group of houses in the neighborhood of the Blackwater River dividing Surry from Sussex (no. 11).¹³⁵ Like southern Maryland, Surry returned to growing tobacco after 1720 and kept up its production for as long as historians have followed the county's economic development. Surviving houses in the interior of that county are exceedingly rare even from the middle decades of the century. Finally in the 1780s and 1790s small, one- and two-room brick farmhouses made the kind of sudden appearance along the river that elsewhere heralded the advent of grain growing. If by now our hypothesis has acquired predictive powers, it can be supposed that diversification in Surry and Sussex will date from the closing years of the century.

All around the bay, then, wherever recent studies of local agricultural economies can be placed alongside surveys of vernacular architecture, a picture emerges of tobacco planters diversifying their cash crops and soon after replacing impermanent buildings with houses and barns substantial enough to have survived in considerable numbers to the present day. How mixed farming encouraged rebuilding is not yet clearly understood but enough is known to attempt an explanation. New markets abroad and a growing population at home increased demand for wheat and flour, thereby creating opportunities for large and small producers alike, although each capitalized on them somewhat differently. The key was a farmer's

¹³² Sarum [after 1714], Charles County (CH-15), Cedar Park [1702], Anne Arundel County (AA-141); and Holly Hill [1698 and 1713], Anne Arundel County (AA-817). Morgan Hill farm [1725], Calvert County (CT-61) and Sotterley (circa 1710), St. Mary's County (SM-7), have always remained frame dwelling.

¹³³ Ocean Hall [1703], St. Mary's County (SM-111). Both Sotterley and Cedar Park were built by merchants, too.

¹³⁴ Carson and Stinson, survey, St. Mary's County; for Charles and Calvert counties see Maryland Historical Trust, *Historic Sites Inventory I* (1973; rev. ed., Annapolis: Maryland Historical Trust, 1980).

¹³⁵ Upton, "Early Vernacular Architecture."

access to labor and how he was able to employ it throughout the growing season. Tobacco and corn required regular attention from planting to harvest; wheat once sown was left unattended until reaping time but then, in the space of a few critical weeks, all available hands were needed from sunup to sundown to bring in the vulnerable crop.¹³⁶ Slaveholders who owned enough land to grow wheat and tobacco could use their labor force to plant both and gamble that the grain would ripen by early summer after the young tobacco plants were transplanted. When the weather cooperated these larger planters got in two cash crops and two incomes with the same labor force.

Small producers could profit too, even without owning slaves because harvest was the only time when extra labor was needed; a man and his family could plant more acres in small grains than they themselves could harvest as long as hired hands or help from neighbors could be obtained when the ripened crop was ready to be gathered. Grain culture, therefore, opened up to small growers economic opportunities on a scale that in an exclusively tobacco economy required ownership of slaves or indentured servants.

Corn and wheat offered other advantages. They were much easier for farmers to process than tobacco which, when cut, had to be hung, cured, taken down again, stripped, sorted, tied into hands, and packed into hogsheads. Throughout the Chesapeake wheat was efficiently threshed by horse treading, after which it, like shucked corn, was ready for milling or could be economically transported in the seed to local markets. Food crops destined for southern Europe or the West Indies were subject to many of the same hazards and expenses—and profits—of the tobacco trade. But foodstuffs sold locally or in regional trading networks spared farmers the high cost of overseas transportation, insurance, and faraway middlemen's services. Grain culture may also have lessened poorer planters' indebtedness to the storekeepers who extended them credit for essential manufactured goods as a lien against next year's crop.¹³⁷ Historians have not yet decided how tightly merchants held tobacco planters in debt, but one Marylander remembered that "as the culture of *wheat*, and the manufacturing it into *flour* travelled southward, the people became more happy, and independent of the British storekeepers who had kept them in debts and

dependent."¹³⁸

All in all, marketing foodstuffs was less entangling; sold locally it avoided the risks inherent in venturing a luxury crop in an unpredictable foreign market, it returned a steady, reliable annual income, and—basic to our explanation for the spate of rebuilding that finally removed most impermanent dwellings from the southern landscape—it minimized for small producers the disadvantage of not employing a large force of slave laborers. In short, corn and wheat built many modest fortunes. Profits from grain growing found their way into the pockets of even the poorest agriculturalists—tenant farmers. The dwellings of those who leased property on the proprietary manors of Maryland, when surveyed in 1767–68, were found to be smallest and meanest in southern Maryland, slightly more commodious in Kent and Baltimore counties (although still not much affected by the recent shift there to wheat production), and largest and best built on the lease lots of Monocacy Manor in Frederick County (no. 12) where wheat and rye had been major cash crops since the valley was settled in the 1740s. Not since the heyday of tobacco planting in the mid-seventeenth century had small farmers enjoyed such a favorable economic outlook. The difference this time was that, being more likely to live out their natural years and surer of an orderly inheritance, many solidified their gains and improved, not just replaced, old-fashioned homestead housing. Eighteenth-century property owners settled bequests on members of their immediate families much more often than had been the practice earlier and frequently with much greater attention to how the legacy was to descend to their children's

¹³⁸ John Beale Bordley, *Essay and Notes on Husbandry and Rural Affairs* (2d ed.; Philadelphia: Thomas Dobson, 1801), p. 301. The adverse effect of tobacco culture on the independence and self-sufficiency of small farmers can be seen from a modern example to work in reverse, that is to say, where diversified crops are given up to grow tobacco, sharecroppers and small producers experience the declining standards of living described by Harry Crews in his recollections of Bacon County, Georgia, in the 1920s: "Before tobacco came into Bacon County, the farmers were self-sufficient in a way they were never to be again. In the days before tobacco they grew everything they needed and lived pretty well. Since they were too far south to grow wheat, they had to buy flour. But almost everything else they really wanted, they could grow. . . . But tobacco took so much of their time and energy and worry that they stopped growing many of the crops they had grown before. Consequently, they had to depend upon the money from the tobacco to buy what they did not grow. A failed tobacco crop then was a genuine disaster that affected not just the individual farmer but the economy of the entire county" (Harry Crews, *A Childhood: The Biography of a Place* [New York: Harper & Row, 1978], p. 27).

¹³⁶ Stiversson, *Poverty in a Land of Plenty*, pp. 85–103.

¹³⁷ Stiversson, *Poverty in a Land of Plenty*, pp. 99–100, n. 38.

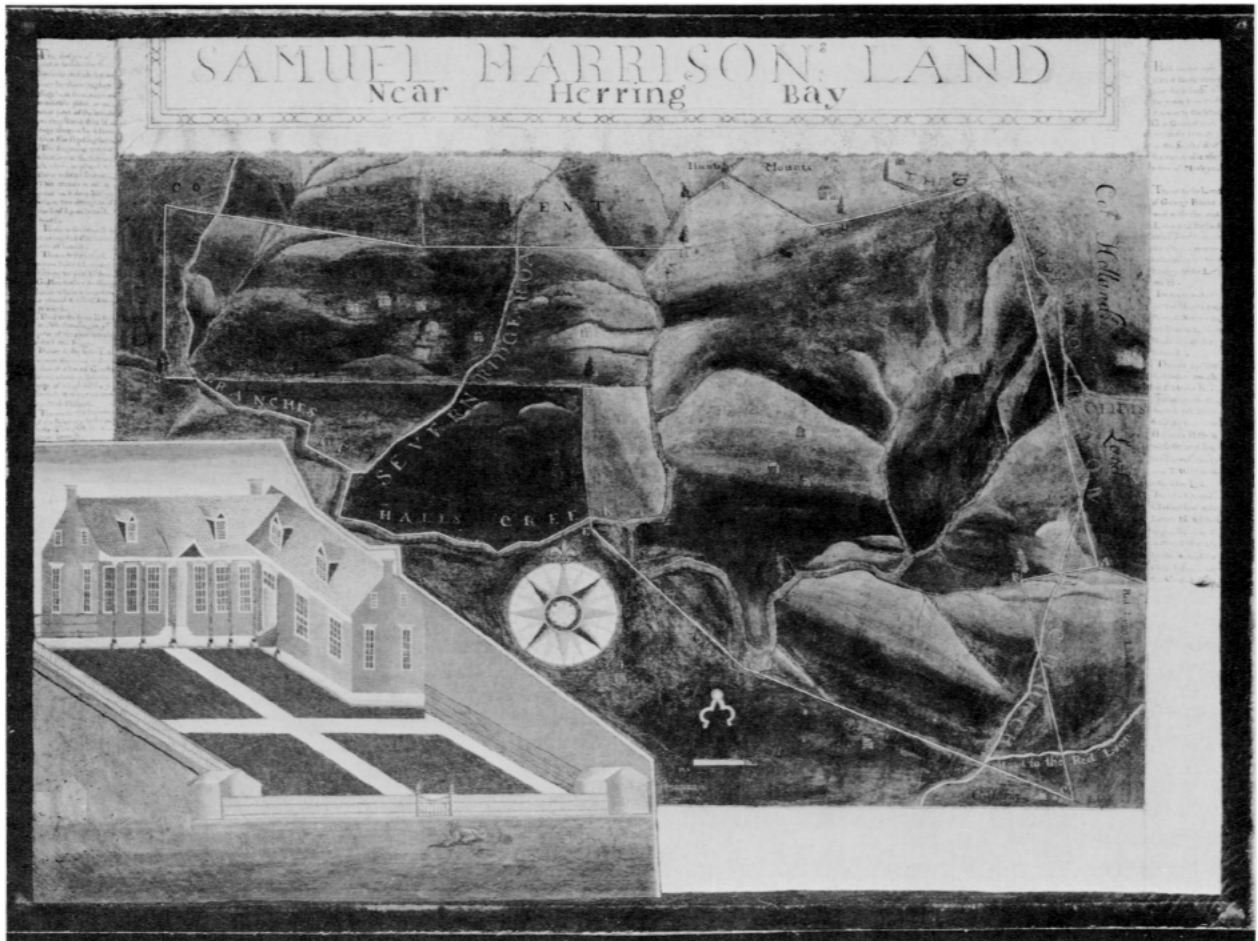


Fig. 14. Samuel Harrison's plantation Holly Hill, Anne Arundel County, Maryland, before 1733. Oil on wood; H. $42\frac{3}{4}$ ", W. $54\frac{5}{8}$ ". The painting is signed "AS." (Mr. and Mrs. Brice Clagett: Photo, Colonial Williamsburg Foundation.)

children.¹³⁹ That more children lived to become heirs was only part of the reason; many testators also now had valuable improvements to endow them with.

Our explanation for the belated advent and long duration of the "great rebuilding" in the southern colonies has emphasized conditions largely beyond the control of individual planters. Demographic balance and social stability were, we have argued, prerequisites to the settled way of life that brought with it the opportunity to make a house a home. Even then, normalcy and order were often insufficient by themselves to break tobacco's stranglehold on many smaller planters. Opportunity waited on means, and those means frequently were not forthcoming until still other

external circumstances—new markets for new crops—enriched local agricultural economies. But why, it might be asked, did quite ordinary farmers choose to spend their profits from wheat and corn on better, not just newer, housing? Such choices imply preferences, and preferences raise questions about motives. When desire operates on a person's will causing it to act in certain ways, outside influences have been converted into intensely personal, internal impulses. Usually these are extremely difficult for historians to fathom, and this case is no exception. But the attempt is worth making, because mentalities are the real locus of cultural change. The "vernacular threshold" was a state of mind before it became an architectural reality.

Archaeologists have recently borrowed from social historians a hypothesis inspired by anthropological studies of peasant communities. It postulates that rural England and the American colonies underwent a fundamental social and psychological change, which was felt most intensely in

¹³⁹ James W. Deen, Jr., "Patterns of Testation: Four Tidewater Counties in Colonial Virginia," *American Journal of Legal History* 16, no. 2 (April 1972): 154–63. The trend appears to continue after 1720 according to preliminary observations from the York County Project, National Endowment for the Humanities Grant no. RS-00033-80-1604 (1979–81), Research Department, Colonial Williamsburg Foundation, Williamsburg.

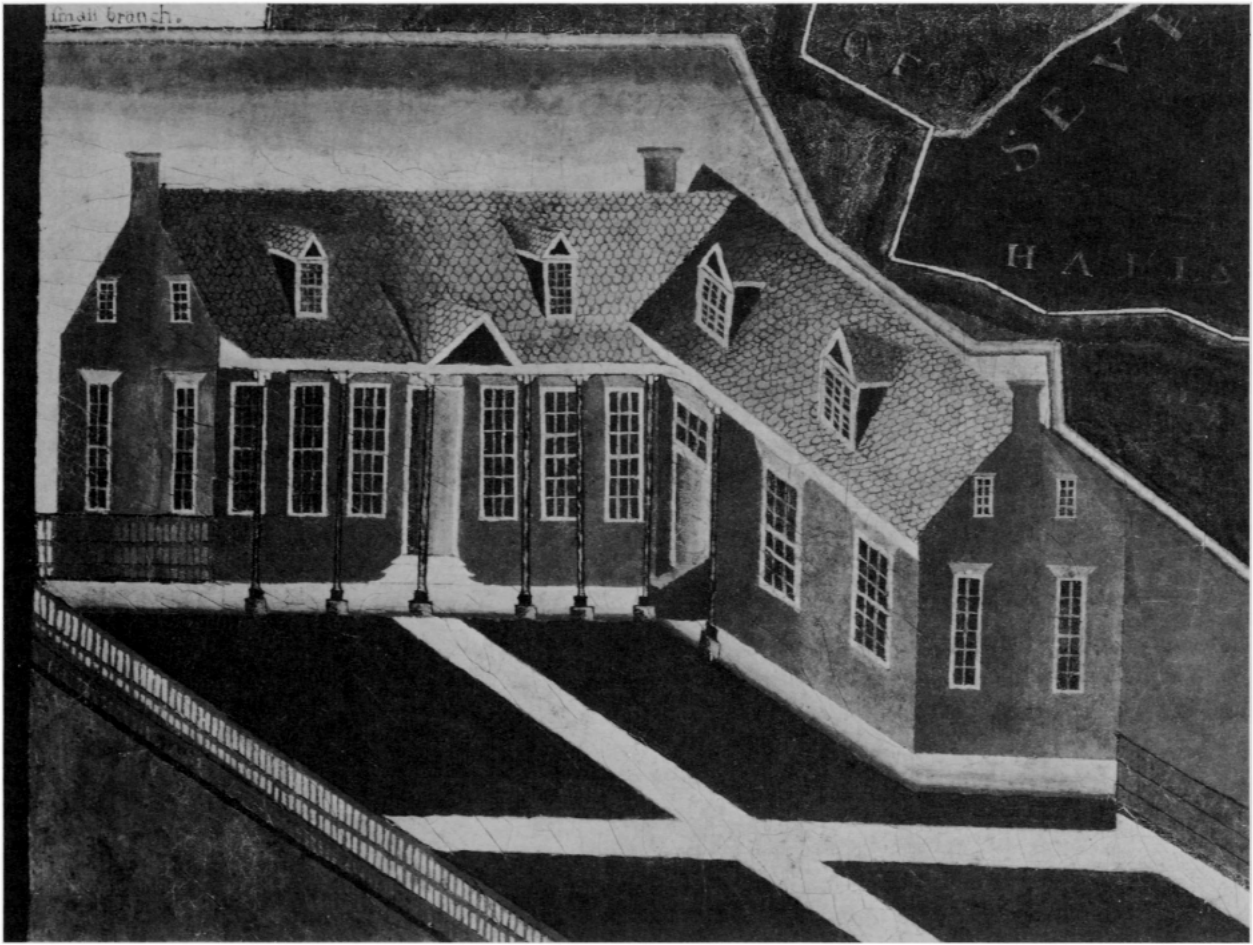


Fig. 15. Detail of figure 14. The frame house of 1698 and the addition made to it in 1713 were encased in brick when the right-hand wing was built, probably in the 1720s. Note the unusual piazza surmounted by a small pedimented roof.

the hundred years between 1650 and 1750. Less often explained than merely described as the transformation of “medieval folkways” into a “Georgian” or “modern world view,” the interpretation lays heavy emphasis, so far as its effects on material culture are concerned, on an emergent self-awareness and a passion for self-expression.¹⁴⁰ They found outlet, so the argument goes, in a profusion of personal and household artifacts that displayed status and thereby increasingly conferred it. The idea is compelling not least of all because it receives reinforcement from scholars studying the same period from the different perspectives of economic and agrarian history and the history of the family. Yet, for all that, there is more

that needs be said. Like sociologists’ “modernization theory,” with which it has much in common, its usefulness lies chiefly in its descriptive power. In and of itself, it explains nothing. The temptation to attribute to a new and pervasive world view all the significant changes archaeologists have observed in early American material culture has to be resisted. Each case requires its own very careful demonstration and explanation.

As for impermanent architecture, this essay has shown that it cannot simply be labeled “medieval” (although it employed some very ancient methods of construction), nor is it accurate to ascribe to its builders and users “peasant mentalities.” On the contrary, as far back as southern planters can be heard expressing their sentiments about impermanent building—in the language of the statute of 1647, in Thomas Cornwaleys’s observation that Maryland settlers lived in cottages, in John Smith’s disparaging description of the barnlike “curiosities” at Jamestown—little more is revealed

¹⁴⁰ James Deetz, *In Small Things Forgotten: The Archaeology of Early American Life* (Garden City, N.Y.: Doubleday, 1977), pp. 28–43; Cary Carson, “Doing History with Material Culture,” in *Material Culture and the Study of American Life*, ed. Ian M. G. Quimby (New York: W. W. Norton, 1978), pp. 58–64.

than a fine sense of expediency typical of people who found themselves in that special state of incipient economic growth that we have called homesteading. Homesteaders quickly learned that they must allocate time, energy, and resources to those activities that would contribute soonest to making a living. Once they had developed a fairly reliable livelihood and reestablished a self-sustaining family and community life, most of them expected as a matter of course to fence fields, plant orchards, breed livestock, raise barns, and build houses for the longer term. For some, we have suggested, those aspirations did not rule out such well-built, earthfast structures as Cedar Park, at least not in the seventeenth century. But if we are to take contemporaries at their word, there were always those who saw the practical advantage of buildings able to last many years without major repairs. A house or barn whose sills were raised off the ground on masonry foundations enhanced the value of a man's estate, thereby bringing a higher sale price or endowing his heirs with a richer patrimony. The desire to confer the wealth of one generation on selected beneficiaries of the next was a time-honored custom among country folk in England and much of western Europe.¹⁴¹ If that impulse was intensified by the greater commitment parents were beginning to make to the upbringing and future prospects of their children, as some social historians believe, it perhaps is true after all that the decline of impermanent architecture owed something to the rise of what has been called "affective individualism."¹⁴² But that seems to stretch a point. Compared to the fashionable appearance that a house might exhibit to those with educated tastes or the convenience that its plan might afford a family that had learned to value privacy, the mere fact that it stood on continuous sills or was made entirely of brick had little social significance. Its real value was something an appraiser or a tax assessor could put a figure on, a monetary value. Its psychological value was the feeling of pride and accomplishment it must have engendered in men and women who had succeeded in overcoming the obstacles inherent in homesteading.

Few, if any, house-proud Chesapeake planters put into words that sense of achievement. One, Samuel Harrison of Anne Arundel County, left another kind of statement. His father had been

one of the lucky survivors, living a long and prosperous life and leaving at his death in 1716 an estate of 5,500 acres. His home plantation he gave in life interest to his wife. Samuel received six large tracts of land including a quarter called Holland's Hills (later corrupted to its present name, Holly Hill) on which a modest, one-story, two-bay, unpainted clapboard house was built in 1698, perhaps for an overseer or Samuel himself, who was then nineteen. It was enlarged in 1713 by the addition of another room, a loft, a lean-to, and a brick chimney.¹⁴³ Whether or not its frame stood on earthfast posts, the house conformed in all other respects to the usual manner of building among tobacco planters in the region. But the Harrisons' circumstances were most unusual, and as soon as his inheritance was assured, Samuel set about rebuilding Holly Hill. The former cottage he enclosed with brick walls. He built a handsome new addition, also of brick, containing a fine large parlor, a generous stair hall, a dining room with a built-in "bowfat" for his china, and two upstairs chambers, the one over the parlor paneled and marbleized in hues of red, green, and cream. He retrimmed and repainted the old house throughout. When he was finished, he hired a limner to paint and frame a large wooden panel that still hangs above the parlor fireplace (fig. 14).¹⁴⁴ It depicts—platlike—the broad acres he inherited from his father and that his descendants would continue farming for three generations. Down the right-hand margin are inscribed its precise metes and bounds. In the lower left-hand corner is a formal portrait of the house he had just improved (fig. 15). And across the top in block capitals (lest someone miss the point) is emblazoned the legend SAMUEL HARRISON'S LAND. The Harrisons had crossed the vernacular threshold. By a combination of prudence, longevity, and good timing the immigrant homesteader had waxed rich, weathered the depression, and stubbornly refused to die until the very year that tobacco prices began improving. His American-born son inherited an opportunity that the father had worked a lifetime for and provided the means to achieve. The son accomplished the rest. It was the way founding a family in the American colonies was supposed to happen but in the South so seldom did.

¹⁴¹ John Goody, Joan Thirsk, and E. P. Thompson, *Family and Inheritance: Rural Society in Western Europe, 1200–1800* (New York: Cambridge University Press, 1976); Alan Macfarlane, *The Origins of English Individualism: The Family, Property, and Social Transition* (Oxford: Blackwell, 1978).

¹⁴² Stone, *Family, Sex, and Marriage*, pp. 211–69.

¹⁴³ Measured drawings in the Historic American Buildings Survey, Library of Congress, correct a somewhat inaccurate description in Carson, "The 'Virginia House' in Maryland," pp. 186–91. Recent dendrochronological analysis dates the first and second construction periods precisely.

¹⁴⁴ The authors are grateful to Mr. and Mrs. Brice Clagett for permission to photograph and illustrate the painting.

Appendix 1

Site Reports¹⁴⁵

1. LITTLETOWN QUARTER, KINGSMILL, James City County, Virginia (44JC 35). Salvage excavations carried out in 1972–75 by Virginia Historic Landmarks Commission explored four seventeenth-century habitation sites along the north side of James River four miles below Williamsburg on land patented beginning about 1620.¹⁴⁶ Their investigation has brought to light a variety of earthfast timber-building techniques, especially those employing hole-set uprights.

One of the earliest is Littletown Quarter (occupied circa 1625–50), a four-bay house, 41 by 18 feet, erected on five pairs of hole-set posts (see fig. 6). The building stood long enough to need repairs to the southeast corner posts.

Near the center of the structure a smaller configuration of nine post molds, describing a rectangle 16 feet 6 inches by 12 feet 6 inches, was first thought to be the remains of a timber chimney or scaffolding for a chimney. After the discovery of several strikingly similar structures on the Governor's Land farther up the James (Appendix 2:14,15), it seemed more likely that the hole-set building at Littletown Quarter replaced a still earlier structure raised on puncheons, which were not set, but driven into the ground, hence the absence of postholes.

Clay pipes and domestic artifacts from a nearby trash pit provide the only evidence that one or both buildings was used for a dwelling.

2. KINGSMILL TENEMENTS, KINGSMILL, James City County, Virginia (44JC 39). A group of five early buildings believed to have been a tenant farmstead or servants' quarter belonging to Richard Kingsmill exhibits a veritable lexicon of impermanent building techniques. Numerous domestic artifacts from four nearby trash pits indicate that one or more structures was used as a

dwelling, but heavy plowing has removed up to a foot of original stratigraphy including all evidence of hearths. Posthole patterns suggesting hole-set chimney frames have allowed archaeologists to speculate which buildings were houses.

Tenement I was raised on seven pairs of earthfast posts arranged in four, 10-foot bays with half bays at each end (see fig. 6). The latter have been interpreted as smoke bays or chimney hoods rather than sheds, because it is supposed that three smaller postholes at the extreme northwest end of the building held footings for a lean-to or open porch. Actually, neither they nor any other excavated feature rule out the possibility that the structure was a 43-foot farm or storage building with shedded ends. Clearly it had no structural sills, for its most unusual feature, stud molds along the curtain walls, indicate that three or four 6-inch uprights were driven into the ground between each pair of posts and probably nailed to the plates overhead. Such being the case, it is likely that the building had an earthen floor.

Tenement II (see fig. 6) employed two technologies: hole-set posts for a four-bay, 40-by-18-foot core structure and uprights standing on trench-laid sills for a central porch 10 feet square and a 25-foot shed across the rear. The large postholes, decidedly rectangular in plan and oriented to the long axis of the building, suggest reverse assembly in tie-beam pairs, a supposition strengthened by the fact that the post molds along each side are somewhat out of line. Smaller postholes centered on the gables have been interpreted as supports for timber chimneys, but that is only an inference based on a similar configuration of posts at Utopia Leasehold (discussed below). The trench-laid features adjoining the main range are believed to have been footings for a porch and a shed, not remains of a wattle-fence enclosure, because one of the trenches contained fragments of a wooden sill.

Three nearby structures are assumed to have been outbuildings. One, a three-bay, 18-by-30-foot building, was part of the same range as Tenement II, but how they may have served each other is unknown. Another, 50 feet to the north and west, appears from the wider spacing of its central bay to have been a barn. The smallest structure on the site, a two-bay building east of the barn, enclosed three shallow pits intended perhaps for roots or seed storage. As in the case of Tenement II intermediate posts were centered on each gable, but in so small a building it is difficult to interpret them as evidence for chimney frames.

¹⁴⁵ The excavations described here were conducted by the institutions named on p. 136 above, with financial support from National Endowment for the Humanities, National Science Foundation, Rockefeller Foundation, William H. Donner Foundation, Jacob and Anita France Foundation, National Geographic Society, Heritage Conservation and Recreation Service, Steuart Petroleum Company, Doris Buffett, Anheuser-Busch and Busch Properties, and Southside Historic Sites.

¹⁴⁶ William M. Kelso, "Historical Archaeology at Kingsmill," interim reports, 1972–75, Virginia Historical Landmarks Commission, Research Center for Archaeology, Williamsburg.

Domestic refuse and household artifacts of exceptional quality, all recovered from trash pits located in the yard adjacent to the first and second tenements, date principal occupation of the site to the second quarter of the century. The small, two-bay structure may have continued in use into the period represented by a late seventeenth-century pipe bowl found in one of the storage pits.

3. LITTLETOWN (PETTUS) PLANTATION, KINGSMILL, James City County, Virginia (44JC 33). The largest, most extensive group of structures found at Kingsmill is believed to have been built by Col. Thomas Pettus sometime shortly after 1641 (see fig. 9). Altered and enlarged by him and his heirs over a period of nearly fifty years, its various structures are not easily arranged into a neat sequence of building periods. The main block, a five-bay structure, 50 by 18 feet overall, was raised on twelve 10-inch dressed posts set up in large, flat-bottomed postholes 3 feet 6 inches square and aligned regularly enough to suggest assembly in sidewall units. The studs may have been fastened to interrupted sills laid in shallow trenches, traces of which were observed at the west end and along the north side (these may also have been drainage trenches). A rectangular patch of soft brickbats located inside the north wall line and within the central bay was all that remained of what may once have been a foundation for an axial chimney.

Perpendicular to the main block and possibly attached to its north wall was a three-bay structure, 30 by 18 feet, heated by a large, exterior brick chimney at the far end. The building replaced two successively earlier structures in the same location, both predecessors being, however, only two bays long and, therefore, freestanding outbuildings to the 50-foot structure, which is presumed to have been the principal dwelling house. The first outbuilding and the house must have been original and contemporaneous; the fill in their post molds contained either no artifacts or only prehistoric materials (four pottery fragments). The two-bay building—a kitchen perhaps—was repaired in the third quarter of the seventeenth century (dated by pipestems in the backfill) and then entirely reposted and attached to the main building.

Besides the house and ell, another structure, 32 by 22 feet, standing at right angles to the east end of the dwelling, may have been a connecting wing if the four small postholes between the two sections were footings for a link rather than supports for an

open porch. The wing itself was a three-bay building with a brick chimney raised against the south gable. Sometime after construction a brick-lined half cellar was excavated underneath the north end. The only datable artifact associated with the structure, a circa 1620–50 wine glass fragment found in the cellar builder's trench, is no help in narrowing down a date range for construction from the second quarter of the century to sometime immediately prior to the building's destruction by fire, circa 1680–1700. Debris from the fire contained an ornamental casement window presumably from the structure overhead or the adjacent house.

A further addition to the main block was a hole-set posted shed tucked behind the house alongside the ell, apparently to shelter a dairy or a cooler. A shallow, tiled cistern, 13 feet 9 inches long by 3 feet 8 inches wide, with a bottom sloped toward a drain at the north end, seems a likely design for a tank in which to stand milk pans and butter pots.

The dairy and the structure it adjoined (a kitchen conceivably) formed the west side of a service yard defined to the north by a well and to the east by a range of three more hole-set outbuildings—a two-bay structure of undetermined function (perhaps a quarter or work house), a 10-foot-square poultry house possibly (suggested by the marl yard enclosed by a drainage or water-collection ditch), and an 8-by-9-foot smokehouse with a 5-foot-6-inch-square brick firebox inside.

Debris from the cellar, the well, and the dairy cistern indicates that the farmstead eventually burned down but after it had been abandoned, probably following its purchase in 1700 by James Bray II. The farmhouse he immediately set about building nearby was brick, but his kitchens and outbuildings were still hole-set posted structures.

4. UTOPIA LEASEHOLD, KINGSMILL, James City County, Virginia (44JC 32). A small but well-appointed dwelling (see fig. 9), a half mile east of the Littletown plantation house on property that the Pettuses owned and used for grazing cattle, was built about 1660 and occupied until 1710 or so. It was a three-bay, 29-by-18-foot structure whose carefully aligned, 11-inch dressed posts and square, flat-bottomed postholes invite comparison with similar features associated with buildings at the Pettus farmstead. A brick-lined half cellar, its walls laid in English bond, was entered from a bulkhead on the west gable. The house apparently

contained two rooms heated by timber-framed chimneys raised against the gables. Their fireboxes were lined with daub, fragments of which were found in the cellar fill. Each chimney stack was set up on a pair of hole-set posts, somehow coupled with a shedded entrance to the cellar steps on the west and probably a pented closet on the east.

A two-bay outbuilding of unknown use lay north of the dwelling. To the south, a garden and a well were enclosed by a fence and a drainage ditch that emptied into a probable stock pond.

Comparative analysis of the ceramic assemblages from this and the Pettus site reinforces the implication of the historical evidence that the occupants at Utopia were smaller fry. The faunal remains suggest that they were Europeans, not slaves, and judging from the chimneys and well-built cellar, they were probably leaseholders rather than tenants-at-will.¹⁴⁷

5. WAREHOUSE, FLOWERDEW HUNDRED, Prince George County, Virginia (44PG 65). Archaeological excavations at Flowerdew Hundred plantation have brought to light a group of twelve early seventeenth-century buildings on land patented in 1619 by Sir George Yeardley, governor and captain general of Virginia.¹⁴⁸ On receiving the grant, Yeardley apparently set to work at once building a palisade across the neck of land on which the settlement was sited and behind it constructed no fewer than twelve dwellings, three storehouses, and four tobacco houses reported to be standing in 1624/25.¹⁴⁹

Archaeologists may have located at least one of the warehouses inside a fortified or fenced enclosure approximately 240 by 110 feet, fronting on

the James. The building (see fig. 7) measures 42 by 16 feet overall and stands in the southeast quarter of the enclosure near the gate. Its east end abuts what may have been a loading platform connected to a wharf. The long north and south walls are delineated by rows of closely set, irregularly shaped postholes about 18 to 24 inches in diameter and approximately 2½ to 3 feet on centers. The holes are so shallow—4 to 8 inches—that traces of only three post molds survived.

Two rows of postholes, 5 feet apart, mark each end of the building. Those at the extreme ends are smaller and shallower—about 1 foot in diameter and approximately 2½ to 4 feet from center to center. The inner rows are each formed by three large postholes, those on the ends aligned with the sidewalls and the third centered more or less in between. All six are about 3 feet square, as are two more located halfway along each sidewall. Four of these larger holes contain post molds that are roughly squared, about 12 inches on a side and approximately 1 foot deep.

If the three large postholes are correctly interpreted as framed gables, the length of the building was 32 feet with 5 feet left over at each end for lean-to sheds lightly constructed of hole-set puncheons. Interpreted another way, the shallow pits at the extreme ends of the building might also have been footings for timber chimneys, in which case the structure would more likely have been a dwelling. However, having found no hearths or burned subsoil, archaeologists favor its interpretation as a shedded warehouse entered from a loading platform at the northeast corner of the structure through a doorway represented by a 5-foot gap in the row of smaller postholes.

The most unusual feature of the building, its 16-foot bays between major structural uprights, invites speculation that the hole-set studs in the sidewalls served in the manner of puncheons to support the long lengths of plate that bore the weight of the roof. Certainly a building so sparingly framed obscures any useful distinction between hole-set studs and what early Virginians termed “punches sett into the Ground” to the point that there could be argued a logical connection between earthfast studs and closely set driven posts.

Although the postholes and post molds contained no artifacts that date the construction or demolition of the warehouse specifically, the complex of structures and features inside the enclosure yielded thousands of beads, pipe fragments, pot-

¹⁴⁷ Merry A. Outlaw, Beverly A. Bogley, and Alain C. Outlaw, “Rich Man, Poor Man: Status Definition of Two Seventeenth-Century Ceramic Assemblages from Kingsmill” (paper presented to the annual meeting of the Society for Historical Archaeology, Ottawa, Canada, 1977); Henry M. Miller, “Pettus and Utopia: A Comparison of the Faunal Remains from Two Late Seventeenth-Century Virginia Households” (paper presented to the Conference on Historic Sites Archaeology, Winston-Salem, North Carolina, 1978).

¹⁴⁸ Norman F. Barka, “The Archaeology of Flowerdew Hundred Plantation: The Stone House Foundation Site. An Interim Report,” typescript, 1976, Southside Historical Sites and Department of Anthropology, College of William and Mary, Williamsburg; Norman F. Barka, “Early Seventeenth-Century Architecture at Flowerdew Hundred Plantation: The Enclosed Settlement,” typescript, 1981, Flowerdew Hundred Foundation.

¹⁴⁹ Annie L. Jester, ed., *Adventurers of Purse and Person, Virginia, 1607–1625* (New Jersey: Privately printed, 1956), pp. 20–22.

tery sherds, pieces of armor, gun parts, sword gear, and tools. Many were manufactured as early as the late sixteenth century and none later than the second quarter of the seventeenth century. The fortified area as a whole, therefore, and the warehouse by association have been assigned to the period of Yeardley's ownership, 1619–24, or to the years immediately afterward when Flowerdew Hundred was sold to Abraham Piersey, treasurer and cape merchant of the colony.¹⁵⁰

6. STONE HOUSE FOUNDATION, FLOWERDEW HUNDRED, Prince George County, Virginia (44PG 64). Seven hundred feet west of the enclosed area described above the foundations of a contemporaneous structure have been found, this one almost certainly a dwelling (see fig. 7). Excavated completely, the house is part of a larger, unexplored domestic complex.

Stone footings enclose a rectangular area 41 by 24 feet with an 8-by-10-foot projection slightly off center on the north side toward the river. Inside, a cobblestone foundation underpins the brick and brickbat remains of a 9-by-10-foot, H-shaped chimney. Both fireboxes are 5 feet wide.

The position of the chimney toward the west end of the building lines up with narrow gaps in the foundation walls, which, taken together, suggest a building of four bays. Rooms can be arranged conjecturally into a familiar English plan by placing a heated parlor in the westernmost bay, the chimneystack and perhaps an entrance lobby in the narrow one next to it, a hall in the central, widest bay, and one or two unheated service rooms at the eastern "lower" end of the building. The projecting ell would thereby have opened off the hall and may have accommodated either a staircase or possibly another small room. Soil stains indicate that additional rooms or sheds were later built against the north and east sides of the house.

A low stone foundation, built in a shallow construction trench, underpinned the house frame. Building stones of any sort are rarely found on seventeenth-century sites in the tidewater region. These in Flowerdew Hundred are irregular to squarish slabs of siltstone, roughly dressed on all surfaces. There are seventy major stones altogether; the largest measures 2 feet 5 inches by 1 foot 10 inches by 5 inches. Barnacles adhere to some; others are discolored by either burning or natural oxidation, which occurred before the

stones were used for the foundation. As this type of siltstone is not native, the reused material must have been conveyed to the site from a distant source, conceivably as ballast, possibly from the Bristol area where deposits of a similar siltstone occur.

The features that bring the house into a discussion of earthfast building techniques are the gaps regularly spaced along the foundations into which upright timbers once were fitted. The stonework is interrupted at the four corners of the main block, at the outer corners of the projecting ell (an area disturbed by plowing), once each in the middle of the short east and west walls, and at such regular intervals along the sidewalls as suggests a 10-, 8-, 12-, and 10-foot bay system. In all, the foundation wall is interrupted fourteen times. The corner spaces are uniformly broad (3 by 2 feet); those along the walls somewhat narrower. Some of the stones bear traces of mortar on the faces adjoining the gaps. In one a brick mortared to an adjacent stone shows that the builders gave careful attention to the exact size of the openings.

Shallow rectangular depressions were excavated inside several gaps, conspicuously those at the corners. The largest of these features measures 2 feet 10 inches by 1 foot 5 inches by 6 inches. Each extends to a depth equal to or slightly lower than the base of the foundation stones (about 1 foot below original grade) and was filled with destruction debris consisting of pieces of finished plaster, charcoal, burned soil, and so forth. The marks are thought to have been created by pressure from a frame of heavy uprights standing directly in the shallow builder's trench.

The archaeological evidence suggests construction in the following sequence: (1) excavation of the builder's trench, (2) construction of the stone foundation wall in the trench, dirt packed under some stones leveling the wall surface for a topping of brickwork, (3) erection of the timber frame, probably including installation of interrupted sills between the uprights, (4) heightening the footings to the level of the sills with at least two courses of brickwork, and (5) backfilling the trench. The ground-standing frame lasted twenty or thirty years before its destruction before 1650.

7. MIDDLE PLANTATION, Anne Arundel County, Maryland (18AN 46). No site better illustrates the varied and extensive use that planters made of earthfast building techniques or the longevity of those techniques on farmsteads that declined in social status. In this case a merchant-planter's home plantation of circa 1670 be-

¹⁵⁰ Nell M. Nugent, *Cavaliers and Pioneers: Abstracts of Virginia Land Patents and Grants, 1623–1666* (Baltimore: Genealogical Publishing Co., 1963).

came a tenement after about 1710. The excavation of Middle Plantation, 9 miles west of present-day Annapolis, brought to light the remains of twenty-two buildings, some framed on hole-set posts and others box-framed on earthfast blocks (see fig. 10).¹⁵¹ A probate inventory of 1694 indicates that there were other structures standing then for which there is no archaeological evidence, probably because they were set on shallow brick footings or on trench-laid sills eradicated by later plow disturbance. That loss is partly compensated by the site's numerous subsurface storage pits and cellars, some of which were a form of impermanent vernacular building never encountered by architectural historians and seldom by archaeologists.

The seventeenth-century plantation (see fig. 11). Maureen Duvall patented Middle Plantation in 1664. The fertile, well-watered, well-drained tract straddles a ridge between the Patuxent and South rivers. There Duvall built his dwelling plantation on a small headland overlooking a spring.

A Huguenot émigré, Duvall first appears in the Maryland records in 1659, when, having served out his indenture, he exercised his right to fifty acres of land. Within twenty-five years he rose from the status of carpenter to that of merchant-planter. At his death in 1694, he left his children and third wife 2,856 acres and credits and moveables worth £1,400.

Duvall's probate inventory mentions several buildings: a dwelling and kitchen, a milk house, a quarter, and a new storehouse. The old storehouse was probably still standing too, and the inventory implies the presence of several tobacco houses on the home plantation. Excavations also revealed a root cellar, three coolers, several latrines, a hen house possibly, and three buildings that probably were constructed soon after Duvall's death—a second quarter, a new kitchen, and a new root cellar.

Neither Duvall's dwelling, kitchen, or storehouses left an identifiable timber mold pattern, but the location of the house is indicated by a subfloor pit and an adjacent area of brick rubble. Bracketing features—a fence line to the west and a small structure to the east—suggest that the dwelling measured about 42 by 20 feet, enclosing three rooms listed in the inventory, a hall, a middle

room, and a south lower chamber. The original kitchen may have been either a wing or a separate outbuilding.

Early building on the site employed hole-set carpentry work as well as box framing raised on earthfast blocks. A separate milk house and a shed attached to the east end of Duvall's dwelling are presumed (from the uniform basal elevations of the postholes) to have been hole-set structures; so too were several tiny coolers, disposable buildings (discussed below) that were simply pulled down and replaced whenever their timber footings decayed. The most easily interpreted evidence for posts in the ground are the holes and molds associated with the circa 1700 kitchen, a two-bay building northeast of the house. Its mostly rectangular construction holes were all dug to the same depth; impressions of dressed timbers are all located against the north side of the holes, persuasive evidence that the walls were raised as preassembled frames. Before being placed in the ground, the butt of each post had been deliberately charred to preserve it from decay.

The two-bay building thought to have been the newer quarter (located southeast of the spring) can only have been a box-framed structure raised off the ground on hole-set blocks, for the timber molds vary in depth and are curiously paired at the corners, both features unfamiliar in post-in-the-ground construction. Blocks may also have supported the very similar structure west of the house lot, the first quarter conceivably.

The eighteenth-century plantation (see fig. 12). A decade or two after Duvall's death, the plantation became a tenement. His heir, Lewis Duvall, was absent from the province in 1710 and resided permanently in South Carolina by 1718. Nevertheless, the Duvalls owned Middle Plantation until 1763. Their tenants maintained the structures poorly. The dwelling house had to be replaced by about 1720, and both quarters had been abandoned (one was entirely rebuilt) ten years later. Only the (conjectured) kitchen remained, reused perhaps as a work house or a slave quarter. The new buildings were numerous, especially for a tenement, but all, save one, were cheaply built earthfast structures. They lasted less time than the seventeenth-century buildings.

Two structures replaced Duvall's dwelling, one 40 by 20 feet and the other 30 by 16 feet. The arrangements of outbuildings around them indicates that the larger was the house. The small structure was close enough to have been a kitchen. These and a very small outbuilding—a milk or

¹⁵¹ This account is based on the excavation records and artifact collections of Mr. and Mrs. William P. Doepkins, whom the authors wish to thank for their assistance. Mr. Doepkins is preparing a full excavation report, which will differ in some details from the conclusions reached here. Robert Keeler and Alexander Morrison II helped analyze the site.

meat house possibly—were grouped around a forecourt enclosed by a wattle fence, the home lot now having turned ninety degrees to face west toward a road. To the north another fence enclosed a garden or service yard between these buildings and what had been the kitchen of circa 1700. A covered cellar was built directly behind the house, and beyond it a new structure of unknown purpose—perhaps another quarter—was erected. A tobacco field and drying houses replaced the old garden west of the home lot.

The tenant responsible for rebuilding the plantation apparently moved away after exhausting the best tobacco ground, for the home lot became smaller as the cellar, the quarter or work house, and the new east quarter fell into disuse and were demolished after about 1740. The house and outbuildings around the watted courtyard lasted until about 1760 when they too were abandoned after a life span of about forty years.

While most of the eighteenth-century buildings were earthfast structures, it is often difficult to tell which were raised on posts in the ground and which on hole-set blocks. The two tobacco houses preserve the clearest evidence. The westernmost structure employed five pairs of posts set up in construction holes of uniform depth. Six uprights were dressed along their full length whereas the feet of the other four were left round and only hewn square above grade as was indicated by circular post-mold imprints at the bottom of the holes, which in one case became a square impression just below the plow zone. Clubfooted posts may have been that much more resistant to decay.

The second drying barn, also four bays long, left a pattern of timber molds that vary considerably one from another in size, cross section, basal elevation (by over a foot), and spacing. Three extra molds fall between those marking the bay intervals. Their placement suggests not door posts but blocks inserted under sagging sills.

Cellars, pits, and coolers. Throughout most of its history Middle Plantation afforded its farmers a range of subsurface storage facilities so varied in size and character that they must have served different uses. Eleven or twelve in all, they fall into four categories—full cellars, shallow subfloor pits under major buildings, separately roofed root cellars, and one small, brick-lined cooling pit. There were at least two types in use at any one time.

Full cellars under both quarters were walled with split puncheons driven into the floor and lined on the inside with 1-inch plank. Afterward the floors were surfaced with packed clay. The east

cellar (circa 1670) was fitted with raised platforms along both sides of a central aisle, the surviving sleepers showing that the platforms were wide enough to hold rows of wooden casks. The south cellar (circa 1700), perhaps superseding the earlier one, which was prone to flooding, may have been partitioned and partly floored with plank; one corner was surfaced with brick rubble. Such large cellars were intended for the storage of casked foodstuffs, salted meat perhaps but more likely fermented cider. A visitor to the region in 1702 noted the importance of cool cider cellars: "As the common man does not have good cellars, this drink cannot be kept during the summer, but turns sour."¹⁵² Duvall's 1694 inventory lists "17 old cider casks" in his quarter.

In contrast to the cellars with headroom were several subfloor storage pits—shallow, rectangular, unlined holes beneath the seventeenth- and eighteenth-century dwellings. Too small for storing casked goods, they were well suited to keep dairy products cool in summer and fruit and roots from freezing during winter. Robert Beverley observed in 1705 that it was necessary to bury seed potatoes "under Ground, near the Fire-Hearth, all the Winter . . . for the least Frost coming at them rots and destroys them." Similarly in 1770 Landon Carter's overseer searched the "holes and boxes" under the slaves' cabins for a stolen butter pot.¹⁵³

In size halfway between full cellars and subfloor pits were four small cellar outbuildings. One stood in the seventeenth-century garden, a second was located immediately behind the new kitchen, and a third and fourth were convenient to the southeast end of the eighteenth-century dwelling. Two were crudely built, unlined pits that occupied most of the floor space in the post-in-the-ground structures that covered them. Loose planks were probably laid over the holes so that the upper parts of the structures could be put to other uses. The root cellar in the garden was different. Its four hole-set posts stood directly in the corners of the excavated pit, were enclosed with 2-inch plank, and probably supported a low roof. A similar, perhaps ground-laid roof must have covered the cellar pit east of the eighteenth-century house complex. That one was entered down a short flight of dirt steps. Both

¹⁵² William J. Hinke, trans. and ed., "Report of the Journey of Francis Louis Michel from Bern, Switzerland, to Virginia, October 2, 1701–December 1, 1702," *Virginia Magazine of History and Biography* 24, no. 1 (January 1916): 33.

¹⁵³ Robert Beverley, *The History and Present State of Virginia*, ed. Louis B. Wright (Chapel Hill: University of North Carolina Press, 1947), p. 145; Jack P. Greene, ed., *The Diary of Colonel Landon Carter of Sabine Hall, 1752–1788*, vol. 1 (Charlottesville: University Press of Virginia, 1965), p. 495.

seem to have resembled a later cellar structure still used on the farm in 1923.¹⁵⁴ Excavated at a depth of approximately 4 feet, it was 6 by 8 feet and was posted at the four corners, planked around the outside, and roofed with weatherboards. Dirt steps provided access to the root crops stored there.

Butter, milk, and cream were kept cool in two kinds of outbuildings at Middle Plantation—dairies and “coolers.” The structure north of Duvall’s dwelling was apparently the “milk house” referred to in his inventory. It contained a shallow and unusually small, 2-by-2-foot brick-lined pit. The shortage of dairy equipment and storage vessels itemized in the inventory (one churn and two butter pots) or excavated in the vicinity of the milk house suggests that the building was used less for storage and more as a work room, the small cooling pit intended perhaps only for dairy products in daily use. Bulk storage seems to have been consigned to the coolers standing near the spring and farther east along the stream’s edge where sherds of numerous milk pans and butter pots were found. Coolers were small, framed boxes, roofed and sided with clapboards and elevated on hole-set stilts. Food, especially milk, was passed through a door in one side and placed on the shelves that lined the interior. The milk house and coolers at Middle Plantation are associated with Duvall’s residency. The later tenants’ dairying activities cannot be located with certainty, the small structure along the south fence line being the only likely milk house.

8. ST. JOHN’S, ST. MARY’S CITY, St. Mary’s County, Maryland (18ST 1–23). Archaeologists exploring a site known as St. John’s adjoining the early Maryland settlement at St. Mary’s City have found the remains of a fairly substantial dwelling, which, notwithstanding its box frame and low cobblestone foundations, was floored with boards nailed to joists that the builders laid directly on the ground. St. John’s not only shows that there were many intermediate steps on the way from perishable to permanent buildings, but its complicated later history of repairs and additions using a technology of hole-set construction is a reminder that those steps were not always progressive improvements.

John Lewger built the house in 1638. A former Anglican clergyman from Somerset, he was commissioned by Lord Baltimore as a judge, a council

member, and the colony’s chief administrative and financial officer. His house, like Gov. Leonard Calvert’s nearby, served as a public meeting place for the assembly and provincial court until Lewger’s departure in 1645. His son followed him at St. John’s; then a planter, Henry Fox, in 1650; three years later merchant Simon Overzee; and finally Gov. Charles Calvert, who lived there from 1662 to 1667. Thereafter, the Calverts leased it to a succession of innkeepers. The buildings collapsed or were pulled down by 1720. By then the dwelling, its yards, and surrounding outbuildings underwent many alterations, which can be reconstructed from archaeological evidence and two sets of documents: a series of lawsuits from the residence of Overzee 1653–60, and a 1678 lease with an annexed list of “Reparations and other things to be made and done at the Manner house and Lands of St. John’s.”¹⁵⁵

As first built the house was a fully framed, five-bay building, 52 feet long by 20 feet 6 inches wide, its sills underpinned with continuous cobblestone footings (see fig. 2). The main, central entrance opened into a narrow lobby against a timber chimney shaft set on back-to-back brick fireboxes. These heated two ground-floor rooms—an ample kitchen to the west and opposite it an even larger undivided parlor, presumably the room in which Lewger held public meetings.¹⁵⁶ There was a closet alongside the fireplace in the parlor, probably tucked under an enclosed staircase that ascended from the kitchen to chambers in the loft overhead. The house was probably only one story high, covered—both roof and walls—with riven clapboards, floored and plastered within, the windows glazed, and a stone-walled cellar located under half the parlor.¹⁵⁷ By and large the house was well built, a product of the English housing revolution in a place where durable dwellings were a prerequisite few could afford.

¹⁵⁵ The historical documentation is summarized in Garry Wheeler Stone, “St. John’s Archaeological Questions and Answers,” *Maryland Historical Magazine* 69, no. 2 (Summer 1974): 146–68. The site is further reported in Robert W. Keeler, “The Homelot on the Seventeenth-Century Chesapeake Tidewater Frontier” (Ph.D. diss., University of Oregon, 1978); technical report by Garry Wheeler Stone, “Society and Housing on Maryland’s First Frontier: John Lewger’s St. John’s” (Ph.D. diss., University of Pennsylvania, in preparation).

¹⁵⁶ The presence of a doorway in the east gable argues against an inner room, for the artifacts scattered outside this doorway contained parlor, not service-room, materials; see Keller, “Homelot.”

¹⁵⁷ The house foundations are natural cobbles gathered from nearby beaches. The dressed masonry blocks used to build the cellar walls are ferruginous sandstone quarried from the banks of the Potomac.

¹⁵⁴ Interview with William P. Doepkins by Garry Wheeler Stone, April 15, 1977.

Subsequent alterations and additions to St. John's failed to maintain the same standard. A small subterranean dairy or cool room, which an early owner attached shedlike to the north side of the kitchen after the house was built, was raised on a pair of hole-set posts. Wooden steps led down from the kitchen into a plank-lined pit paved with cobbles. Nearby to the northeast, the two-bay box frame of an early quarter or storehouse (19 by 15 feet) stood on low blocks planted only 2 feet deep and irregularly spaced. The windows were glazed, but, since no fragments of wall plaster were recovered, it stands to reason that the walls were left unfinished inside or else were boarded; we know they were whitewashed sometime before 1678. The floor was earth or laid with loose planks.

The dairy shed was short-lived. Overzee demolished it and built a separate milk house. He also converted the outbuilding behind the parlor into a kitchen. By removing the cooking activities (as well as the cooks) from the house, the kitchen became a hall and the house as a whole was less frequented by Overzee's servants and slaves.

Post-in-the-ground technology was so entrenched by midcentury that subsequent rebuildings employed it almost exclusively. The workman who was called in to replace the rotted foot of a post in the house chose not to splice on a new tenon but instead removed a section of the sill, dug a hole through the cobblestone foundation, and grafted a hole-set block to the amputated post. Charles Calvert's improvements to the property after 1662 were in the same manner. A new room—later termed the "Room called the Nursery"—was added ell fashion off the northwest corner of the house. Calvert also built a "little House near to the Gate" along the east side of the foreyard, perhaps then as later "for a Quarter." This three-bay, 30-by-20-foot building was more likely framed on hole-set posts than raised blocks, because the timbers were hewn square and set to a roughly even depth. It seems to have been a post-in-the-ground structure pushed up in pre-assembled sidewall frames. We believe it was a two-unit building with centrally located front and rear doorways. A brick fireplace heated the south room. The windows were unglazed. Calvert's work at this time may or may not also have included raising the height of the main house or adding dormers to the roof, for subsequently it was referred to as the "great house," a designation that the original story-and-loft dwelling might not have merited.

Calvert again turned his attention to St. John's

in 1678, this time in preparation for renewing the lease (see fig. 2B). The terms required the leaseholder to repair the foundations under the great house, underpin the nursery with brick, patch the fireplaces, and rebuild the staircases if need be. The house was to be pantiled, and a two-story porch added to the front. Five outbuildings needed repair, the kitchen, the quarter near the gate, a house next to the pasture, a stable, and a hen house in the orchard. The lessee was also obligated to build a new oven with a "shade" over top and fence the garden with clapboard pales. Much of the work was executed, some of it more ambitiously than the specifications called for. The workman pulled down the old brick and timber chimney in the great house and built another in Flemish bond against the rear wall, thereby enlarging the lobby presumably for a staircase that was no longer wanted in the former kitchen, now a more private hall. The cellar under the parlor was repaired, and its floor paved with brick, but there is no evidence that the nursery was underpinned. Instead, a wooden block was inserted under the northwest corner. Likewise, a pair of hole-set posts was used to build not the porch tower as specified, but a small chamber jettied over the door on brackets, which were framed into two large, post-in-the-ground uprights fastened to the chimney bay posts. The continued employment of hold-set timbers offset, in the long run, any advantages gained from the greater use of masonry; the house and outbuildings all fell or came down within forty years.

Excavations inside the main dwelling yielded an unusual amount of information about floor construction. The joists or sleepers to which the floor planks were nailed were entirely independent of the sills, not part of the house frame at all. The floor frames appear to be original. Not only is there no evidence of earlier earth floors, but there are clear signs that adding the dairy shed and building the 1678 chimney required modifications in an existing floor frame.

Most of the original joists seem to have been laid in shallow slots in the topsoil. Under the kitchen, where much of the topsoil had been removed during construction, some of the joists merely rested on the ground surface where they were held in position by small cobblestones while the floor planks were nailed in place. By the time of the 1678 renovations, the ground level under the kitchen (by then the hall) had risen with the gradual accumulation of debris, so that, when two new joists were installed after the reconstruc-

tion of the chimney, the workmen had to dig generous construction ditches, set the joists, and then carefully backfill the ditches around them.

The kitchen and parlor floors were framed differently. The sleepers under the kitchen were laid across the width of the room. Their spacing, center to center, varied from 2 feet 10 inches to 2 feet 2 inches. The floor may have been planked in halves, for there were traces of a double row of nails in the center sleeper.

The parlor joists ran longitudinally to take advantage of support provided by the west cellar wall. Each was presumably half the length of the room, originating or terminating on the cellar wall. Those that underpinned the floor in the west half of the room were designed for 2-foot centers, but their actual positions varied considerably, perhaps to make room for the ends of the joists that spanned the cellar. Floorboards in the parlor measure approximately 12 inches by 14 to 14½ inches.

Why did the builders of St. John's construct inferior floors when joists fully framed to the sills would have required only a few additional days of labor? The most likely explanation is that the carpenter thought of floors, as many of his fellow English housewrights did, as optional extras—refinements for a parlor or a threshing floor—but not integral parts of a house or barn frame. Ground-and-trench-laid sleepers are known from Essex, and several such floors have survived in New England where underlying cellars protected the sleepers.¹⁵⁸

9. OUTBUILDING, GERRET VAN SWERINGEN SITE, ST. MARY'S CITY, St. Mary's County, Maryland (18ST 1–19). Excavations along Aldermanbury Street in the late seventeenth-century village have uncovered traces of an outbuilding 21 by 18½ feet, whose box frame was raised off the ground on the hole-set blocks (see fig. 8). Located at the back of a lot patented by innkeeper Gerret van Sweringen in 1672, the ancillary structure was put up for him or his son during extensive renovations to the property, circa 1690–1700. Fragments of window glass, wall plaster, and the brick base of a firebox and apparent oven suggest that the building was used as a combination bake house and servants' quarter.

¹⁵⁸ J. Frederick Kelly, *Early Domestic Architecture of Connecticut* (New Haven: Yale University Press, 1924), pp. 25–26; P. J. Huggins, "Excavations at Sewardstone Street, Weltham Abbey, Essex, 1966," *Post-Medieval Archaeology* 3 (1969): 54, 60; M. W. Barley, *The English Farmhouse and Cottage* (London: Routledge and Kegan Paul, 1961), p. 258.

The squared wooden blocks that supported the sills left a pattern of postholes and post molds that recreated the steps involved in setting a box frame on blocks. The carpenter first marked out the four corners of his intended building, at which point he dug roughly rectangular pits. In these he set up lengths of waste timber and leveled their tops to a line. The sills were placed on these. He then excavated shallow holes along the length and the breadth of the building to hold the intermediate blocks that were snuggled up under the sills to support them as work began on the house frame itself.

The archaeological clues to block construction are here unmistakable: deeply excavated corner holes of varied depth, smaller, shallower (by as much as 2 feet 3 inches) depressions for the intermediate blocks, scantling of various sizes, and, although not here so much as at other sites, frequent disregard for spacing in regular bays. All are characteristics of earthfast footings that were unrelated to the structural frame they underpinned.

10. CEDAR PARK, Anne Arundel County, Maryland (AA-141). The only known hole-set building to last almost 300 years, Cedar Park is a paradox that poses a difficult question—in what way, besides its posts in the ground, was this building impermanent? Although Cedar Park literally had feet of clay, its twelve hole-set posts supported the most massively framed, most expertly carpentered early timber building extant in all of Maryland and Virginia.¹⁵⁹

The house (see fig. 4) was built in 1702 as a one-story, five-bay building with a hall and parlor downstairs, a porch tower centered on the east elevation, and chambers in the loft reached by a newel staircase alongside the chimney in the northwest corner of the north room.¹⁶⁰ The chambers were lit by a pair of dormer windows on each slope of a steep gable roof. Brick chimneys, enclosed inside the gable ends, heated the rooms downstairs and perhaps also the chambers. An earth-walled cellar, excavated beneath the central portion of the house, stored root vegetables, which were tumbled down a paved chute running under the rear (west) wall. The entire house—roof, walls, and tower—was sheathed in oak clapboards. Those on the roof

¹⁵⁹ Photographs and measured drawings are held by St. Mary's City Commission, St. Mary's City, awaiting transfer to the Historic American Buildings Survey collection at the Library of Congress. The authors are grateful to Mr. and Mrs. E. W. Bridgeman, Jr., for permission to record the house.

¹⁶⁰ J. Reaney Kelly, "Cedar Park, Its People and Its History," *Maryland Historical Magazine* 58, no. 1 (March 1963): 30–53.

served as subroofing for a covering of round-butt shingles.

In 1736 appraisers of the estate of Richard Galloway II, a merchant who had owned the property since 1690, inventoried the house and named the rooms—a “Hall” (apparently the south room) furnished for dining and sitting, a “Parlor” used as a bedroom, and, upstairs, sleeping chambers over each, the “Hall Chamber” (farthest from the stair), the more private and better appointed of the two.¹⁶¹ The “Porch” and “Porch Chamber” were places to store unwanted tools and furniture, while above them a “Peake Roome” was sparsely equipped as a sleeping loft. A separate “Kitchen” was probably located off the south end convenient to the hall. No lean-to rooms are mentioned. Somewhere nearby there was a “Store” where Galloway kept his stock of merchandise.

The complicated history of subsequent alterations to the house is important to understanding why the original building survived. It can be summarized briefly. The first addition was a lean-to, 9 feet wide, built on brick footings across the rear of the house to provide two (or possibly three) back rooms and two ample, 6-by-9-foot closets, one at each end.¹⁶² Then sometime around the middle of the eighteenth century one of Galloway's heirs lengthened the house (including the lean-to) and rebuilt the chimneys to make room for a central passage large enough to accommodate a generous flight of stairs. The old timber-framed structure was faced with a new brick skin laid in the all-header bond then fashionable in nearby Annapolis. In the course of that work the bricklayers underpinned the sills. A frame kitchen was erected against the south gable to share the new chimney stack with the dining room. Four new, pedimented, dormer windows, whitewashed over a coat of Spanish brown, replaced the older, narrower dormers on the east slope of the roof. The roof itself was recovered with more round-butt shingles. A brick cocoon now entirely enveloped the old timber-framed house, all except—oddly enough—the clapboarded porch tower. It may have been an open porch with a grillwork of

turned spindles like one at Bond Castle in Calvert County, which perhaps the owner wished to retain for ventilation.

The porch too was finally swallowed up inside a much larger, two-story, brick and frame addition attached to the front circa 1825—an enormous projecting bay, which was later tricked out with the gingerbread porches that now give the whole building its resemblance to a beached riverboat.¹⁶³ Perhaps in the 1820s, maybe earlier, the lean-to was widened 3 feet and its west wall relaid in English bond. About 1850 the interiors were re-trimmed in the Greek revival style, and the fenestration of the lean-to wall was altered a second time. More remodeling in 1962 removed a kitchen that had certainly been rebuilt at least once since the eighteenth century.

By rights Cedar Park should have gone the way of other hole-set buildings. Only the brick shell and lean-to saved the timber frame inside, thereby preserving for our inspection the only known complete skeleton of an early post-in-the-ground building. The house as first built was raised in sidewall units one piece at a time. Each 15–16-foot post was reared separately and left loosely standing in its pit, the interrupted sills then inserted and pegged to the posts one at a time, the braces installed, the studs stood in their mortises picket fashion, and, finally, the heavy plate raised with a block and tackle and lowered inch by inch onto the waiting tenons of the posts and studs.¹⁶⁴ Pegs hammered into the joints tightened the free-standing frames, which were then ready to bring into plumb, the housewrights installing the sleepers and end sills in the process. When both walls were standing perfectly upright, six substantial tie-beams were set in place directly over the posts and oversailing the wall plates by a foot at each end. The lighter end girts were positioned first in order to square up the structure, followed by the other, larger tie-beams starting in the middle and working toward each end. As each was slid into place, nine common joists were fitted in between. When the carpenters reached the endmost bays, the common joists could not be mortised at both ends since the girts were already fixed, so there the joists were simply lapped and pegged. Presumably,

¹⁶¹ Liber 30, folios 384–91, Anne Arundel County Inventories, Hall of Records, Annapolis.

¹⁶² Dating the lean-to is a problem. It followed the construction of the house soon enough to perfectly preserve the hole-set posts along the west wall, yet the 1736 inventory makes no mention of it. Apparently the posts survived forty years untouched by decay. The number of rooms in the early lean-to is suggested by one original and one later door post framed into the west wall plate and sills. The closets are indicated by plaster stains on the plate and corner posts.

¹⁶³ Casper Morris, *Memoir of Miss Margaret Mercer* (Philadelphia, 1848), p. 101.

¹⁶⁴ A hole burned 1½ inches into the west face of the north-west corner post may have lodged the end of a pole used to hold the post upright if in the block-and-tackling maneuver the corner post bore the main weight of the plate as it was being lowered along the length of the wall and the posts and studs joggled into the mortises one after another.

the postholes were backfilled either immediately before or after installation of the tie-beams, probably afterward when the frame was at last as rigid as the builders could make it.

The six principal rafters of the roof frame were erected next, according to the carpenters' marks, from north to south, from "I" to "VI." As each was raised, it was coupled to its neighbor with two pairs of butt purlins. Wind-braces strengthened the three central bays. Common rafters, mortised and tenoned at the apex, were notched over the upper purlins and their feet nailed to those below. The lower purlins were mounted not on the rake of the roof, but level, so that the common rafters could be carried at a gentler pitch to the eaves on short additional pieces nailed to the purlins and standing on the false plates. This produced flared eaves well forward of the principal rafters, which were let into the tie-beams directly over the posts, thus making a compact post-and-truss unit. The false plates lay along the upper ends of the tie-beams and were further supported by short spurs running out from the nearest common joists, over top the wall plates, and into notches underneath the false plates. The roof trusses stood without reinforcement from structural collar beams; those provided were merely edge nailed to the purlins to carry the lath and plaster ceilings of the attic chambers.

The frame at Cedar Park, especially the roof frame, is remarkably well built as buildings go in the Chesapeake region. The dimensions of the scantling exceed that of most other structures, and its carpentry joints exhibit a degree of sophistication unknown in other early buildings in Maryland and Virginia. The posts, for example, measure 9 by 11 or 12 inches, the interrupted sills 7 by 9 inches, and the wall plates 8 by 9½ inches. The tie-beams are 13 inches broad and 12 inches deep.

At a time and in an area where nails were fast replacing even simple mortise and tenon joints, the elaborate joinery at Cedar Park is exceptional.¹⁶⁵ For instance, the common joists were given a soffit-tenon with an oversquinted shoulder and diminished haunch. Each butt purlin at the collar level was joined to the principal rafters by a face-tenon and square haunch, both of reduced width, most with pegs. The trusses were actually held together by the lower purlins, firmly mortised to the

principals with pegged central-tenon, housed shoulders, and sunken abutment-cheeks. Even the principal rafters were joined at the ridge with a soffit-shoulder to take the roof's great weight off their central tenons. Only the riven common rafters and the tacked-on collar beams could afford to be slight and waney, for they were not really part of the structural frame at all.

This formidable piece of timber framing was raised on posts embedded 4 feet or more in ground that was sure to destroy them years before the roof and walls would need attention. Certainly the housewright foresaw that eventually. Timber for members that would come in contact with the ground was knowledgeably chosen for its preservation qualities: cedar for posts and sills, locust for sleepers (the rest of the frame is oak and poplar). Moreover, the 18-inch diameter post butts were left undressed below the sills to prolong their lives as much as possible (an uncommon, but not unknown, practice). It is unconvincing to argue that post-in-the-ground construction saved the carpenter time and Galloway money. In fact, it cost more to cut and fit twenty mortises and tenons for the interrupted sills than the twelve that proper ground sills would have required. That seems to leave only one other explanation. By the time Cedar Park was built, hole-set construction had become one of several equally acceptable ways of building in the region. Cedar Park, the timber-framed building, lasted a lifetime. That apparently satisfied this and probably many other builders' expectations.

Appendix 2

Inventory of Earthfast Buildings in Maryland and Virginia

1. CEDAR PARK, Anne Arundel County, Maryland (AA-141). Dwelling, 50 feet by 20 feet 9 inches, five bays, one story, hall and parlor plan, central porch tower, end chimneys, interrupted sills framed into hole-set posts, built 1702, extant. Recorded by Cary Carson, J. Richard Rivoire, and Garry Wheeler Stone for St. Mary's City Commission. Photographs and drawings are in preparation for Historic American Buildings Survey, Library of Congress. See Appendix 1:10 for full description and bibliography. See fig. 4.

¹⁶⁵ The terms used to describe these joints follow Cecil A. Hewett, *The Development of Carpentry, 1200-1700* (Newton Abbot: David and Charles, 1969), esp. pp. 9-19, 195-208.

2. MIDDLE PLANTATION, Anne Arundel County, Maryland (18AN 46). A tobacco plantation settled circa 1665 by merchant-planter Maureen Duvall. Later occupied and continuously rebuilt by tenants until circa 1760. Excavated 1968–77 by William P. Doepkins. Report in preparation. See Appendix 1:7 for full description. See figs. 10, 11, 12.

(A) Milk house, 12 by 8 feet, four hole-set posts, 2 feet square brick-lined cooling pit inside, circa 1665–1720. See fig. 11.

(B) Quarter, 19 by 13 feet, frame possibly raised on blocks over full cellar, circa 1665–1730. See fig. 11.

(C) Kitchen, 25 by 15 feet, two bays, hole-set posts, two shallow storage pits under floor, circa 1700–1720. Reused as quarter or work house to circa 1740. See fig. 11.

(D) Quarter, 20 feet 6 inches by 13 feet, frame raised on hole-set blocks over full cellar, circa 1700–1730. See fig. 11.

(E) Dwelling, 40 by 20 feet, four bays, hole-set posts, shallow storage pit under floor, circa 1720–60. See fig. 12.

(F) Kitchen, 30 by 16 feet, three bays, hole-set posts, circa 1720–60. See fig. 12. The kitchen formed part of a complex of earthfast outbuildings including a milk or meat house, a roofed cellar, and possibly another quarter.

(G) Tobacco house, 40 by 22 feet, four bays, hole-set posts, eighteenth century. See fig. 12.

(H) Tobacco house, 40 by 21 feet, frame raised on earthfast blocks, eighteenth century. See fig. 12.

(I) Coolers (at least five), 5 or 6 feet square, four hole-set posts, seventeenth century.

(J) Roofed cellars (four), various sizes, four hole-set posts, seventeenth and eighteenth centuries.

3. ST. JOHN'S, ST. MARY'S CITY, St. Mary's County, Maryland (18ST 1–23). House and outbuildings built in 1638 by John Lewger of Somerset, England, a councillor and officer in Lord Baltimore's Maryland government. After 1650 owners included a planter, a merchant, Gov. Charles Calvert, and several innkeepers who ran the establishment as an ordinary until its destruction circa 1720. Excavated 1972–76 by Garry Wheeler Stone for St. Mary's City Commission. See Appendix 1:8 for full description and bibliography. See fig. 2.

(A) Dwelling, 52 feet by 20 feet 6 inches, five bays, box frame on cobblestone footings, central chimney, lobby entrance, kitchen-parlor plan, ground- and trench-laid floor joists, 1638 to about

1720; repairs and renovations in 1660s and after 1678 made extensive use of earthfast construction.

(B) Quarter or storehouse, 19 by 15 feet, two bays, box frame on hole-set blocks, circa 1640; converted to kitchen circa 1655.

(C) Quarter, 30 by 20 feet, three bays, hole-set posts, two rooms, gable end chimney, built circa 1662–66.

4. GERRET VAN SWERINGEN SITE, ST. MARY'S CITY, St. Mary's County, Maryland (18ST 1–19). A tenement and several earthfast outbuildings located along Aldermanbury Street on a lot patented in 1672 by Gerret van Sweringen, alderman, sheriff, and innkeeper. Extensively rebuilt apparently as his residence circa 1690; replaced by new house circa 1740. Ongoing excavations begun 1975 by Garry Wheeler Stone for St. Mary's City Commission. Preliminary summary of van Sweringen's career and property holdings at St. Mary's City in Garry Wheeler Stone and Lois G. Carr, *Gerret van Sweringen*, typescript, 1977, St. Mary's City Commission.

(A) Kitchen 1, 15 feet 6 inches by 17 feet, two bays, hole-set posts with interrupted sills, gable end chimney, circa 1675. Demolished and replaced by kitchen 2.

(B) Kitchen 2, 20 feet by 18 feet 6 inches, two bays, hole-set posts with interrupted sills, brick floor, post-in-the-ground timber chimney at one end, circa 1690, removed by circa 1740.

Nearby a small, hole-set structure with a cellar underneath was probably a dairy.

(C) Outbuilding, 21 feet by 18 feet 6 inches, box frame raised on hole-set blocks, brick chimney on gable, circa 1690, removed by 1740. This one-room building may have served as a bake house and quarter. See Appendix 1:9 for full description. See fig. 8.

5. CAPT. JOHN HICKS'S HOUSE, ST. MARY'S CITY, St. Mary's County, Maryland (18ST 1–22). Dwelling, 40 by 16 feet, four bays, two end chimneys, earth-walled cellar, box frame raised on hole-set blocks, circa 1720, demolished circa 1745. John Hicks was an English mariner who became a wealthy planter, slave owner, and officeholder. Excavated 1968–69 by J. Glenn Little III and Stephen Israel for St. Mary's City Commission. Reported in Lois G. Carr, J. Glenn Little, and Stephen Israel, "Salvage Archaeology on the John Hicks Leasehold," 2 vols., typescript, 1971. St. Mary's City Commission, 1971; Garry Wheeler Stone, J. Glenn Little, and Stephen Israel, "Ceramics from the John Hicks Site, 1723–1743: The

Material Culture," in *Ceramics in America*, ed. Ian M. G. Quimby (Charlottesville: University Press of Virginia, 1973), pp. 103–39.

6. CLIFTS PLANTATION, Westmoreland County, Virginia (44WM 33). Farmstead built circa 1670 by merchant-planter Thomas Pope and occupied until circa 1730 by servant- and slave-owning tenants. House site fortified in 1675 with palisade and bastions for protection against Indians. Excavated 1976–78 by Fraser D. Neiman for Robert E. Lee Memorial Association. Reported in Fraser D. Neiman, "Domestic Architecture at the Clifts Plantation: The Social Context of Early Virginia Building," *Northern Neck of Virginia Historical Magazine* 28, no. 1 (December 1978): 2096–3128; Fraser D. Neiman, *The "Manner House" before Stratford* (Stratford, Va.: Robert E. Lee Memorial Association, 1980); technical report in preparation.

(A) Dwelling, 41 feet by 18 feet 6 inches, five bays with projecting porch and ell, hole-set posts, circa 1670. The three-unit structure, termed "the manner house," built with both a through-passage and a lobby entry. Passage blocked circa 1685. Several other enlargements and alterations before demolition circa 1730.

(B) Servants' quarter 1, 25 by 18 feet, three bays, hole-set posts, circa 1670. Two-room quarter with no loft or interior plasterwork. Possibly heated by open hearth. Demolished and replaced by quarter 2.

(C) Servants' quarter 2, 35 by 19 feet, four bays, hole-set posts, circa 1690. Two unplastered rooms, one of which was heated by wood-framed chimney built against gable.

(D) Barn, 14 feet 6 inches by 20 feet, two bays, hole-set posts, circa 1705. Largest of several hole-set outbuildings and farm structures.

7. HALLOWES SITE, Westmoreland County, Virginia (44WM 6). Dwelling, 50 by 20 feet, five bays, internal chimney, hole-set posts, circa 1670. A dwelling or tenement house on the land of Restitute Whiston Steel, granddaughter of Maj. John Hallows, an indentured servant who ultimately accumulated over 5,000 acres of land. Structure occupied during 1670s and 1680s. Like Clifts Plantation (see Appendix 2:6), fortified with palisade and corner bastions during period of Susquehannock attacks and ensuing Bacon's Rebellion (1676). Excavated 1968–69 by William T. Buchanan, Jr., and Edward F. Heite for Virginia Historical Landmarks Commission. Reported in William T. Buchanan and Edward F. Heite, "The Hallows Site: A Seventeenth-Century Yeoman's Cottage in Virginia," *Historical Archaeology* 5 (1971):

38–48; field notes (1968–70) by Edward F. Heite deposited at Virginia Historical Landmarks Commission, Richmond.

8. JOHN WASHINGTON SITE, Westmoreland County, Virginia (44WM 204). Dwelling, 40 by 21 feet, four bays, hole-set posts, circa 1656. Possibly built for a partnership of planters, this house stood on land purchased in 1664 by Col. John Washington, an English sea captain turned planter. Test excavated 1977 by John L. Cotter and Brooke S. Blades for the National Park Service. Reported in Brooke S. Blades, "Archaeological Excavations at the Henry Brook and John Washington Sites, George Washington National Birthplace Monument, Virginia," typescript, 1979, National Park Service; Charles E. Hatch, Jr., *Popes Creek Plantation: Birthplace of George Washington*, ed. George C. Mackenzie (Wakefield, Va.: Wakefield National Memorial Association in cooperation with National Park Service, 1979), addendum by Brooke S. Blades, pp. 147–66.

9. GEORGE WASHINGTON BIRTHPLACE, Westmoreland County, Virginia (44WM 92). Dwelling 30 by 20 feet, three bays, hole-set posts, first half eighteenth century. Excavated 1974–75 by Norman F. Barka for Southside Historical Sites. Reported in Norman F. Barka, "Archaeology of George Washington Birthplace, Virginia," typescript, 1978, Southside Historical Sites.

10. HENRY BROOK SITE, Westmoreland County, Virginia. (44WM 205). Dwelling, approximately 20 by 19 feet, second-period cellar obliterated most of first-period structure, brick chimney may have superseded earlier hole-set timber chimney, artifact concentration suggests late seventeenth- to early eighteenth-century occupation, abandoned about 1735. Test excavated 1977 by John L. Cotter and Brooke S. Blades for the National Park Service. Reported in Brooke S. Blades, "Archaeological Excavations at the Henry Brook and John Washington Sites, George Washington National Birthplace Monument, Virginia," typescript, 1979, National Park Service; Charles E. Hatch, Jr., *Popes Creek Plantation: Birthplace of George Washington*, ed. George C. Mackenzie (Wakefield, Va.: Wakefield National Memorial Association in cooperation with National Park Service, 1979), addendum by Brooke S. Blades, pp. 147–66.

11. FORT A. P. HILL, Caroline County, Virginia (44CE 49). Dwelling, 36 by 16 feet, four bays, hole-set posts, second quarter eighteenth century,

probably destroyed third quarter eighteenth century. Little is known about this small dwelling, which may have had a lobby entry against a timber chimney. Test excavated 1978 by Mary C. Beaudry for Southside Historical Sites. Reported in Mary C. Beaudry, "An Eighteenth-Century Post Structure (44CE 49), Caroline County, Virginia," typescript, 1978, Southside Historical Sites.

12. MOYSONEC, New Kent County, Virginia (44NK 32). Dwelling, 24 by 16 feet, three bays, hole-set posts, late seventeenth century. Excavated 1975 by Norman F. Barka for Southside Historical Sites. Report in preparation.

13. JAMESTOWN ISLAND, James City County, Virginia (no site no.). No early earthfast buildings have been found at Jamestown. Those reported here belong to later periods in the history of this colonial capital. Historical archaeology was in its infancy when many of the Jamestown sites were explored. Consequently the information is often incomplete. Excavated 1934–58 by National Park Service archaeologists. Reported in John L. Cotter, *Archaeological Excavations at Jamestown, Virginia* (Washington, D.C.: National Park Service, 1958); John L. Cotter and J. Paul Hudson, *New Discoveries at Jamestown* (Washington, D.C.: Government Printing Office, 1957).

(A) Structure 22, dwelling, 22 by 19 feet, three bays, hole-set posts, third quarter seventeenth century.

(B) Structure 71–77, dwelling, 40 by 18 feet, probably five bays, hole-set posts, second quarter seventeenth century. Probably built in two sections, structure 71–77 was destroyed by fire and replaced by structure 41.

(C) Structure 41, dwelling, 53 by 20 feet, six bays, hole-set posts, late seventeenth century.

(D) Structure 110, dwelling, 21 feet 6 inches by 20 feet 4 inches, two bays, ground-standing frame with interrupted sills, circa 1630–50. Converted to a bake house or workshop, this building was underpinned with brick footings that left gaps at the corners and along the sides for the posts of a ground-standing frame similar to the Stone House at Flowerdew Hundred (see Appendix 2:25).

(E) Structure 45, outbuilding, 28 by 18 feet, three bays, hole-set posts, late seventeenth century. Probably a kitchen to structure 19, tentatively identified as the Woodhouse Inn.

(F) Structure 116, possible dwelling 29 by 15 feet, three bays, hole-set posts fourth quarter seventeenth century.

14. THE MAINE, James City County, Virginia (44JC 41). Tenements on this site are among the earliest and least substantial earthfast structures yet excavated in the Chesapeake. Excavated 1976 by Alain Outlaw for the Virginia Research Center for Archaeology. Reported in Alain Outlaw, "Subberbs of James Cittie." *Governor's Land Archaeological District Excavations: The 1976 Season* (Charlottesville: University Press of Virginia, forthcoming).

(A) Dwelling, 22 by 20 feet with 4-foot shed, unbayed, closely set driven posts, circa 1618–25.

(B) Probable outbuilding, 27 by 10 feet, unbayed, driven posts, circa 1618–25.

(C) Probable outbuilding, 17 by 16 feet, unbayed, driven posts, circa 1618–25.

(D) Dwelling, 18 by 15 feet, unbayed, closely set driven posts, circa 1618–25.

15. PASBEHAY TENEMENT, James City County, Virginia (44JC 42). Dwelling, 20 feet 6 inches by 16 feet 6 inches, unbayed, hole-set posts, circa 1635–50. Excavated 1976 by Alain Outlaw for the Virginia Research Center for Archaeology. Reported in Alain Outlaw, "Subberbs of James Cittie." *Governor's Land Archaeological District Excavations: The 1976 Season* (Charlottesville: University Press of Virginia, forthcoming).

Accompanying dwellings were a posted outbuilding and a separate root cellar.

16. DRUMMOND HOUSE, James City County, Virginia (44JC 43). Dwelling, 36 by 18 feet, three bays, central chimney, hole-set posts frequently repaired, circa 1648. Part of a large complex of seventeenth-century buildings built on land patented by William Drummond (first governor of North Carolina) and occupied into the eighteenth century. Ongoing excavations begun 1977 by Alain Outlaw for the Virginia Research Center for Archaeology. Report in preparation.

17. KINGSMILL, James City County, Virginia (44JC 39). Several neighboring plantations, quarters, and tenements occupied from about 1625 into the eighteenth century. Excavated 1972–75 by William M. Kelso for the Virginia Research Center for Archaeology. See Appendix 1:1, 2, 3, 4 for bibliography.

(A) Littleton Quarter 1, structure, 16 feet 6 inches by 12 feet 6 inches, two bays, driven posts, preceded Quarter 2. See Appendix 1:1 for full description. See fig. 6.

(B) Littleton Quarter 2, dwelling, 41 by 18

feet, four bays, hole-set posts, circa 1625–50. See Appendix 1:1 for full description. See fig. 6.

Partially overlaid by two eighteenth-century structures associated with the Bray Plantation. Each was a two-bay, hole-set shedded structure with plank-lined storage boxes under the floor.

(C) Kingsmill Tenement I, dwelling, 52 feet 6 inches by 18 feet, four bays with half bays on each end, hole-set posts and studs, built about 1625 on land owned by Richard Kingsmill, resident of Jamestown (dating otherwise uncertain). See Appendix 1:2 for full description. See fig. 6.

(D) Kingsmill Tenement II, dwelling 40 by 18 feet, four bays, hole-set posts, central porch and rear shed built on trench-laid sills, circa 1625. See Appendix 1:2 for full description. See fig. 6.

Nearby three outbuildings framed on hole-set posts; one with wider central bay presumably a barn or a granary; another with storage pits in floor.

(E) Littleton (Pettus) Plantation, dwelling, 50 by 18 feet, six bays with 30-foot, three-bay ell and 32-foot, three-bay wing, all on hole-set posts, about 1640–90. Built and occupied by Col. Thomas Pettus, emigrant from Essex and member of the Governor's Council. See Appendix 1:3 for full description. See fig. 9.

Three small hole-set outbuildings enclosed a yard northeast of the house. Some distance away three larger hole-set structures probably served agricultural uses.

(F) Utopia Leasehold, dwelling, 29 by 18 feet, three bays, timber chimneys at gable ends, brick-lined cellar, hole-set posts, circa 1660–1710. Subordinate to Littleton Plantation. See Appendix 1:4 for full description. See fig. 9.

Two-bay, hole-set outbuilding associated.

(G) Bray Plantation, a kitchen (24 by 16 feet), another nearly identical outbuilding, a dairy, and (probably) a smokehouse—all hole-set structures—surrounded the early eighteenth-century double-pile Bray mansion house. Five hole-set agricultural buildings lay some distance from the house—three four-bay barns or tobacco houses, a four-bay aisled barn with large gable doors, and a small, square corn house fenced around on four sides.

(H) Kingsmill Plantation, dwelling, ? by 18 feet, hole-set posts, occupied circa 1640–1700. Overbuilt by construction of a large brick house for Lewis Burwell II.

(I) Burwell's Landing Ordinary, kitchen, 20 by 16 feet, brick footings enlarged to 30 by 25 feet by addition raised on hole-set posts, third quarter

eighteenth century. Adjoined ordinary, a frame building standing on brick piers.

(J) Hampton Key, dwelling, 28 by 24 feet, three bays, hole-set posts including center posts in each gable, circa 1770–90.

18. WOLSTENHOLMTOWN, MARTIN'S HUNDRED, James City County, Virginia. Company town laid out by 1621 for the Martin's Hundred Society (see Appendix 2:19). A hole-set palisaded fort faced the James River at one end of a long, open area flanked by a row of dwellings and a storehouse on one side and one large barn or warehouse opposite. Excavated 1977–79 by Ivor Noël Hume for Colonial Williamsburg Foundation. Reported in Ivor Noël Hume, "First Look at a Lost Virginia Settlement," *National Geographic* 155, no. 6 (June 1979): 735–67; final report in preparation for publication.

(A) Site C (44JC 115), structure inside fortified enclosure, 39 by approximately 15 feet, bays uncertain, hole-set posts, circa 1620–22. Difficult to sort out, the complex of hole-set structures inside the fort may have been occupied by the settlement's governor, William Harwood.

(B) Site C, dwelling in company compound, 60 by 15 feet, four bays, possibly three rooms, animal shelter in end bay, timber chimney(s), hole-set posts and trench-laid sills, circa 1620–22.

(C) Site C, storehouse in company compound, 25 by 15 feet, unbayed, closely spaced hole-set posts, trench-laid sills, circa 1620–22.

(D) Site C, dwelling, 20 by 15 feet, 8-foot shed, unbayed, timber chimney, closely spaced hole-set posts, circa 1620–22.

(E) Site C, possible company barn, 45 by 29 feet, unbayed, three heavy hole-set posts supported ridge pole, intermediate posts carried central partition, walls framed on smaller, closely spaced, hole-set posts, circa 1620–22.

(F) Site H (44JC 120), structure, 18 by 12 feet, additions to north and west, unbayed, timber chimney, hole-set posts and trench-laid sills, circa 1620–22.

19. MARTIN'S HUNDRED, James City County, Virginia. A particular plantation of at least 21,500 acres allotted to the Martin's Hundred Society in 1618 and 1622. The first seat at Wolstenholmtown (see Appendix 2:18) was not reoccupied after its destruction in the Indian uprising of 1622, the survivors returning to old and new plantations. Recent testing indicates that parts of Martin's Hundred—later corrupted to Merchant's Hundred—was occupied throughout the sev-

enteenth century. Ongoing excavations begun 1970 by Ivor Noël Hume for Colonial Williamsburg Foundation. Reported in Ivor Noël Hume, "First Look at a Lost Virginia Settlement," *National Geographic* 155, no. 6 (June 1979): 735-67; final report in preparation for publication.

(A) Site A (44JC 116), dwelling, 22 by 18 feet, two bays enlarged to four bays, through-passage, hole-set posts, circa 1625-45. A shed across part of east side was built later still. A 20-by-18-foot, two-bay, hole-set structure aligned perpendicularly with the end of the dwelling may have been an attached ell or a separate outbuilding. Plantation thought to have belonged to William Harwood, governor of Martin's Hundred.

Five hole-set outbuildings clustered close to the house.

(B) Site A, roofed cellar, 19 by 17 feet, 4 feet deep in subsoil, hole-set posts in floor secured plank walls and supported roof, earth steps. Used as trash pit during occupation of nearby farmstead. May have been initial dugout shelter.

(C) Site B (44JC 113), structure, 44 by 22 feet, four bays, hole-set posts including center posts in gable ends, brick hearth, second quarter seventeenth century.

(D) Site E (44JC 117), structure, 20 by 15 feet, two bays, hole-set posts, possible timber chimney, circa 1625-45.

20. YORKE VILLAGE, York County, Virginia (44YO 17). Dwelling, 28 by 17 feet, three bays, hole-set posts, mid-seventeenth century. Other earthfast structures were also encountered but not investigated. Test excavated 1976-77 by James M. Smith for Southside Historical Sites. Reported in James M. Smith, "Archaeology of Yorke Village and the First and Second York Parish Churches," typescript, 1978, Southside Historical Sites.

21. YORKTOWN POTTERY FACTORY, YORKTOWN, York County, Virginia (44YO 102). Industrial structure, 33 by 16 feet, four bays, hole-set posts, circa 1720-45. Excavated 1966-81 by Norman F. Barka for Department of Anthropology, College of William and Mary. Reported in Norman F. Barka, "The Archaeology of Kiln 2, Yorktown Pottery Factory, Yorktown, Virginia," typescript, 1979, Department of Anthropology, College of William and Mary; Barka, "First Annual Report, Archaeological Investigations, Yorktown Pottery Factory, Virginia," typescript, 1980, Department of Anthropology, College of William and Mary; C. Malcolm Watkins and Ivor Noël Hume,

The Poor Potter of Yorktown, Museum of History and Technology, Paper 54 (Washington, D.C.: Smithsonian Institution, 1967).

22. BENNETT FARM, York County, Virginia (44YO 68). Dwelling, 34 by 20 feet, four bays, hole-set posts, no sills suggested by hole-set door post, location of wattled chimney unknown, narrow shed across north side, built about 1640-50, abandoned about 1700. Began perhaps as 20-by-20-foot, one-room cottage, thereafter enlarged by addition of two smaller bays. Frame raised in tie-beam pairs braced with earthfast props along both walls. Owned by Humphrey Tompkins, a small planter who owned one servant but no slaves. Excavated 1978 by Nicholas M. Lucchetti for Virginia Research Center for Archaeology. Report in preparation.

Associated with two small, hole-set outbuildings.

23. RIVER CREEK, York County, Virginia (44YO 67). Two successive hole-set dwellings on property owned by Thomas Trotter and afterward by his son Richard. Both were planters, Richard employing as many as five indentured servants in 1675 and at least six slaves by 1699.

(A) Dwelling 1, 36 by 21 feet, four bays, hole-set timber chimney, hole-set posts. Preceded dwelling 2.

(B) Dwelling 2, 34 feet 6 inches by 20 feet, three full bays, half bay on west gable, timber framed east gable chimney built with hole-set posts and studs, hole-set wall posts, circa 1670, lasted into early eighteenth century. Hole-set posts may have been reared as tie-beam pairs and braced with earthfast props along north wall as at nearby Bennett Farm (see Appendix 2:22). Both Richard Trotter and Humphrey Tompkins (of Bennett Farm) had dealings with local housewright Enos MacKentosh. Excavated 1979 by Nicholas M. Lucchetti for Virginia Research Center for Archaeology. Report in preparation.

24. MATHEWS MANOR SITE, Warwick County, Virginia (44NN 44). Two earthfast structures built about 1650 shortly after the destruction of a "fine house" belonging to Capt. Samuel Mathews. May have housed tenants. Excavated 1965 by Ivor Noël Hume in cooperation with Colonial Williamsburg Foundation. Excavation register and field notes filed at Department of Archaeology, Colonial Williamsburg.

(A) Dwelling, 46 by 18 feet, five bays (including

cross-passage), hole-set posts frequently repaired, circa 1650. Plan appears to have been inner room/hall/passage/work or storage room. Chimney backed on cross-passage.

(B) Possible dwelling, 41 by 19 feet, five bays, central chimney, hole-set posts including center posts in gables (all much repaired), circa 1650.

25. FLOWERDEW HUNDRED, Prince George County, Virginia. A particular plantation patented, settled, and fortified in 1619 by George Yeardley, governor and captain general of Virginia. Excavated 1972–78 by Norman F. Barka for Southside Historical Sites. See Appendix 1:5, 6 for bibliography.

(A) Warehouse (44PG 65), 42 by 16 feet, two oversized bays, hole-set principal posts and heavy, closely spaced, hole-set studs, circa 1619–30. See Appendix 1:5 for full description. See fig. 7.

(B) Dwelling (44PG 64), 41 by 24 feet, four bays, one-bay wing, interior brick chimney, ground-standing frame, interrupted sills, additions employed hole-set posts, circa 1619–30. See Appendix 1:6 for full description. See fig. 7.

(C) Dwelling (44PG 66), 35 by 20 feet, four bays, brick end and gable chimney, storage pits under floor and hearth, hole-set posts, circa 1680–1740.

(D) Dwelling (44PG 72), 47 by 17 feet, four bays, hole-set posts, circa 1650–75.

26. MAYCOCK PLANTATION, Prince George County, Virginia (44PG 40). Dwelling, 35 by 18 feet, four uneven bays, central chimney, hole-set posts, circa 1630–50. The narrow (7-foot) first and second bays suggest either some cross-passage plan or a later addition to a two-bay cottage. Excavated 1970 by Norman F. Barka for the Department of Anthropology, College of William and Mary. Report in preparation.

Appendix 3

Charles County Courthouse, Maryland

A courthouse, built in 1674, enlarged eight years later, and extensively repaired in 1699 and 1715, is one of the best-described seventeenth-century hole-set frame structures in Maryland and the only

one for which useful pictorial information survives (fig. 16). The building itself disappeared long ago, but the record of its construction and reconstruction fills in many details that are otherwise beyond recovery.

John Allen, gentleman, began building the courthouse as a dwelling. During construction the Provincial Assembly passed an act requiring each county to provide a suitable courthouse, and Allen agreed to finish the dwelling as a public building. The structure was a one-story and loft building, 25 feet long by 22 feet wide. There was an 8-by-10-foot porch on the front and a 12-foot-6-inch-wide

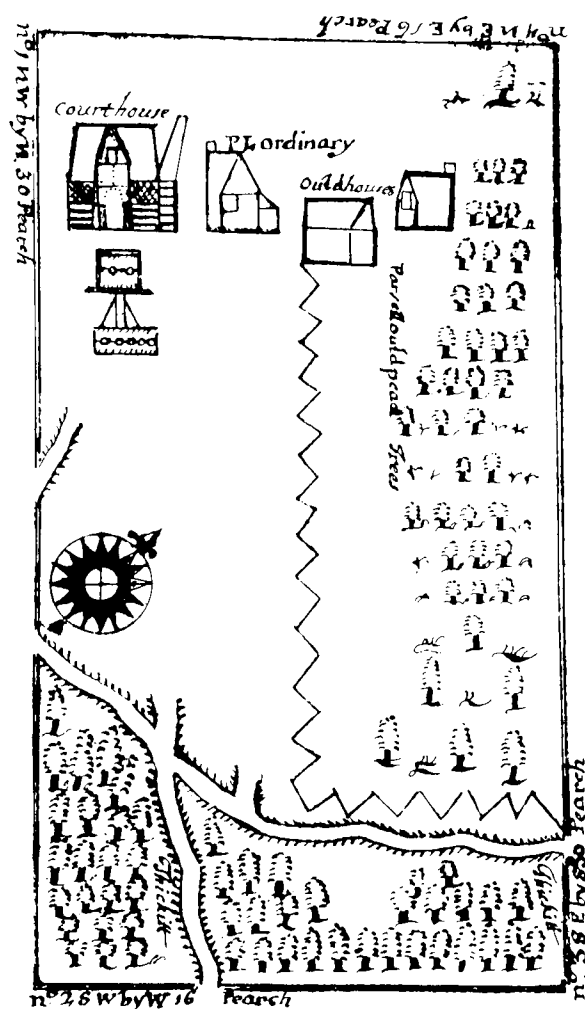


Fig. 16. A surveyor's plat of 1697 showing the Charles County, Maryland, courthouse. The chimney is shown in its first location. Nearby are "P[hilip] L[ynes's] ordinary," two outhouses, and a "Parcell ould peach Trees" enclosed in a worm rail fence. From Margaret Brown Klapthor and Paul Dennis Brown, *A History of Charles County, Maryland, Written in Its Tercentenary Year of 1958* (La Plata, Md.: Charles County Tercentenary, 1958), facing p. 22.

shed across the rear. The shed was partitioned into two rooms. The main structure had a single ground-floor room with one chamber above and another over the porch. A brick chimney stack at the north end of the building provided fireplaces for the lower room and the loft. The lower room was to be "well wainscotted, the upper roome well daubed & sealed with mortar white limed & sized, & the shead sealed & lined with riven boards." The house was to be finished with "all necessary & Convenient doores, locks, keyes, bolts, latches, hinges, staircases, staires, windowes, window frames, Casements & glasse to be well glazed . . . above & below." Allen agreed to keep the courthouse in good repair unless its foundation "shall happen to decay with rotonnesse."¹⁶⁶ In 1682 the building was lengthened 10 feet, and in the new space a "seat of judicature" was erected "with turned work as at the provincial court" and with "a convenient place for the placing of his Lordships arms."¹⁶⁷

Despite the building's superior finish, twenty-five years later it had to be completely rebuilt. At the September 1699 term the court directed that it be "new posted and new groundselled and all the lower floor to be made new with new sleepers and to be laid with new plank." They ordered new exterior weatherboard and a new roof. The old chimney was removed and a window put in its place.

The commissioners' language does not fully describe the framing system being repaired. *Post*, *sill*, and *sleeper* are inexact terms. Yet, the fact that it was necessary to replace the floor completely suggests that the joists were ground laid rather than raised on sills. Likewise, insofar as both the 1674 contract and 1699 bill of repairs deal at length with decay in the foundations, it seems likely that the building was erected on hole-set posts, connected perhaps by interrupted sills, but was not fully framed with continuous sills supported on blocks. Allen's agreement to maintain the structure probably would have included re-blocking, since that task would have taken a carpenter and a couple of laborers only a day or two.

Much more certain is the manner of building an addition to replace the rear shed, for the commissioners were careful to specify "a Twenty Foot square New Roome to be made on the Backside of

the Court house Opposite to the Porch with an Outside Chimney and Clossett at the End of the said Room. . . . The New Roome not to be Framed Worke but with Posts In the Ground of Locust strong and Sufficiently Built." The chimney was frame, for the county paid to have it filled, daubed, and whitewashed in 1702.¹⁶⁸ It and the adjacent closet appear to have been built in a half-bay shed. Comparable post-mold patterns have been excavated at Utopia Leasehold (see Appendix 1:4) and Kingsmill Tenement (see Appendix 1:2).

The new room's hole-set timbers rotted so quickly as to cause suspicion that the carpenter substituted a softer wood for locust. In 1715 the commissioners directed another carpenter to "Lay" the addition "on blocks" and construct a new chimney.¹⁶⁹

The 1715 repairs to the addition were part of a second rebuilding almost as extensive as the repairs of 1699. While some of the earlier work was still sound, the weatherboards, doors, and shutters (all new in 1699) needed repair, and the clapboard roof—frame and all—had to be replaced. The 1715 specifications hint that the Charles County commissioners were growing impatient with the recurrent expense and inconvenience of impermanent construction. They had begun looking for quality shingle timber—cypress—in 1714, and they specified that the new roof rafters and shingle lath were to be sawn, not split.¹⁷⁰ One step at a time—clapboards to shingles, hole-set posts to hole-set blocks—the Charles County courthouse was evolving away from its impermanent beginnings.

Addendum

As this essay was going to press a second early house with a surviving hole-set frame came to light. It is Sotterley, St. Mary's County, Maryland (SM-7).

¹⁶⁸ Charles County Court and Land Records X, book 1, folio 192; 4, book 1:337.

¹⁶⁹ Charles County Court and Land Records E, book 2, folio 486.

¹⁷⁰ Charles County Court and Land Records E, book 2, folio 439. That the earlier roofs were covered with clapboards is an assumption. Shingles are not mentioned in the contracts, but clapboards were specified in 1674 and 1699 to line the shed and addition.

¹⁶⁶ *Archives of Maryland*, 60:615–18.

¹⁶⁷ Charles County Court and Land Records E, book 1, folios 36–37, Hall of Records, Annapolis.