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EXCAVATIONS AT CLAY BANK
IN GLOUCESTER COUNTY, VIRGINIA, 1962-1963

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Figure 1.—DETAIL FROM AUGUSTINE HERMAN'S MAP OF VIRGINIA WHICH WAS PUBLISHED IN 1673.

Excavations at CLAY BANK in Gloucester County, Virginia, 1962–1963

This paper describes and analyzes artifacts recovered from the Jenkins site at Clay Bank, Gloucester County, Virginia. The building which overlay the excavated cellar hole does not appear on any known map. Among the number of interesting objects recovered was a large stem and foot from an elaborate drinking glass or candlestick of fine quality English lead metal. It was found in association with crude earthenwares, worn out tools, and broken and reused clay tobacco pipes, suggesting that this material was derived from various sources.

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EARLY IN JANUARY 1962 a brick foundation was discovered at Clay Bank in Gloucester County following the removal of a walnut tree beside the residence of Mr. William F. Jenkins. The tree was of no great antiquity but the foundation beneath it was thought by Mr. Jenkins to be worthy of archeological examination. The author, therefore, visited the site late in the same month and found that the brick footings were certainly of colonial date. From the small collection of ceramics and other artifacts also exposed by the tree, there was reason to suppose that the building had ceased to exist late in the 17th or perhaps early in the 18th century.

The site lay on the north bank of the York River on rising ground immediately west of Clay Bank landing. Little or nothing was known about the property in the colonial period and it was apparently identified on no known maps or land plats. However, the fact

that it was adjacent to part of the 18th-century Page family plantation (whose mansion house had been included in previous archeological work¹) and because the Clay Bank site gave promise of yielding information regarding domestic life in the late 17th century, the author decided to undertake limited excavation in the area of the structure.

With the assistance of local volunteer labor and the archeological staff of Colonial Williamsburg, two trenches were dug, one exposing a larger area of the brick foundation, and the other parallel to it some 11 feet to the west in the direction of the river. The first

¹ IVOR NOËL HUME, "Excavations at Rosewell, Gloucester County, Virginia 1957–1959" (paper 18 in *Contributions from the Museum of History and Technology: Papers 12–18*, U.S. National Museum Bulletin 225, by various authors; Washington: Smithsonian Institution, 1963), pp. 153–228. Hereafter cited as *Rosewell*.

cutting revealed the remains of a massive brick chimney measuring 10 feet 2 inches by 6 feet using oyster-shell mortar and laid in English bond. The brickwork was not bonded to, or abutting against, any wall foundation and it was therefore presumed that the building to which it belonged had stood on piers.

The second trench cut through mixed strata of sand, black soil, and scattered oystershells extending downward to a depth of at least 3 feet 9 inches, at which level a thick layer of shells was found. In the top of the shell stratum were fragments of glass wine bottles of the late 17th century and parts of an iron can. It was clear that the trench was not wide enough to enable the artifacts to be studied in situ or removed in safety, and consequently work was halted until the project could be developed into an area excavation.

Both the stratigraphy and the similarity in date of artifacts from top to bottom of the test trench strongly indicated that we were cutting through one deposit, probably the filling of a cellar belonging to the same building as the large brick chimney to the east. Remembering the huge quantities of artifacts that had been recovered from a single hole at neighboring Rosewell, it was hoped that yet another significant contribution would be made to the archeology of colonial Virginia. But in the final analysis the Clay Bank site was to prove less rich and less historically important (owing to a lack of adequate documentation) than had been anticipated. On the credit side, however, it did contribute new facts relating to building construction in 17th-century Virginia, as well as yielding a series of closely dated tools and miscellaneous artifacts, plus one piece of glass that is not only without parallel in America, but which is of sufficient importance to merit a place in the annals of English glass. For this one object alone, the Clay Bank project would have been eminently worthwhile.

Historical Background

Archeology may be termed the handmaiden of history in that it is truly the servant of the historian, providing information that is not to be gleaned from documentary records. At best it is a poor substitute for the written word, but when the two are used together the pages of history may acquire an enlivening new dimension. This is particularly true of American colonial history where the documentation often is extremely full.

Unfortunately Gloucester County was one of those whose Court Records were destroyed during the Civil

War, and it is difficult and often impossible to establish property histories over an extended period of time. However, it is debatable just how much of the blame can be laid at the doors of war, as many of the county's colonial records had already been destroyed in a fire at the clerk's office of the Gloucester courthouse in 1820.

No acceptable evidence has been found to definitely identify the original owner or the name of the building revealed by the 1962 excavations, though it has been supposed that the adjacent "Arludwy" (the present home of Mr. and Mrs. Jenkins) was originally named "New Bottle" and was built by Robert Porteus at the beginning of the 18th century. It was hoped that artifacts found on the site might provide evidence to support the Porteus association, but nothing conclusive was forthcoming. The only conceivable shred of evidence, thin to the point of transparency, was provided by a handsome 17th-century latten spoon bearing a thistle as its touchmark, suggesting, perhaps, that it was made by a Scots craftsman. As the family of Edward Porteus, the emigrant and father of Robert Porteus, came from New Bottle in Scotland, it might be argued that the spoon was among Edward's possessions when he arrived in Virginia. Such a deduction is readily assailable, but it is no more so than much other "documentation" relating to the Porteus family in Virginia.

The distinguished Gloucester County historian, Dr. William Carter Stubbs undertook considerable research into the history of the Porteus family, the results of which may be summarized as follows: Edward Porteus was living in Gloucester County by 1681 in which year he married the widow of Robert Lee. He died in 1694 leaving a widow and one son, "Capt." Robert Porteus who became heir to "New Bottle" plantation. Robert married the daughter of John Smith of "Purton" and after her death he married a daughter of Governor Edmund Jennings of "Rippon Hall" in York County. His two wives bore him 19 children, the best known of whom was Beilby Porteus who was born in 1731 after Robert had returned to England (in about 1727) to live at York. Beilby Porteus became Bishop of Chester and then of London, and died in 1808. Robert lived on in York until his death in 1758.²

The location of "New Bottle" has been the subject

² DR. & MRS. WILLIAM CARTER STUBBS, *Descendants of Mordecai Cooke and Thomas Booth* (New Orleans, 1923), p. 14 (footnote).

of dispute for many years, and as the recent excavations have done nothing to resolve the matter, it is not necessary to explore the conflicting opinions and evidence in detail. It is enough to recall that the *Vestry Book of Petsworth Parish*³ clearly places Robert Porteus in the Second Precinct which extended from Bennit's Creek up the York River to Jones' Creek. The First Precinct had begun at Clay Bank Creek and had reached to Bennit's Creek. Today most of these names have been changed; Clay Bank Creek is marked as Aberdeen Creek, the creek at Clay Bank which was apparently originally known as Bennit's Creek now has no name at all, and only Jones' Creek remains the same.

The only extant map that shows both Clay Bank Creek and Bennit's Creek is the Augustine Herman map of Virginia and Maryland published in 1673 (fig. 1). But this shows Bennit's Creek as being as long as the present Jones' Creek, while the latter is omitted from the map altogether. However, as the parish records delineating the bounds of the precincts in 1709 refer to both Bennit's Creek and Jones' Creek there cannot have been any confusion between them. It is therefore reasonably well established that the Porteus property lay between those creeks, which would place it north of the modern community of Clay Bank and south of Jones' Creek. Although it has not been proved that the Porteus land included

the York River frontage, it is reasonable to suppose that it did. Thus, if that conjecture is accepted, it becomes highly probable that the present "Ardudwy" and the adjacent early foundation are on what were once Porteus acres.⁴ The Porteus family continued to own this or other land in the Second Precinct until at least 1763 as the bounds of that precinct were ordered to be processioned in 1751, 1755, 1759 and 1763 beginning "on the Land of Rob^t Porteus Esq^r."⁵ As Robert Porteus never returned to Virginia after 1727 and died in 1758, it must either be assumed that the plantation was taken over by a son or that it was operated by a tenant or manager on "Capt." Robert Porteus' behalf. In the absence of any other documentation indicating the presence of any members of the Porteus family in Gloucester after October 1725,⁶ the latter construction seems most reasonable. The continuing references to Robert Porteus' land in the Second Precinct until 1763 may be explained as referring to the estate of the late Robert Porteus.

⁴ *Records of Colonial Gloucester County Virginia*, compiled by Polly Cary Mason (Newport News, 1946), vol. 1, p. 86. The Gloucester rent roll of 1704 showed Robert Porteus owning 892 acres and Madam Porteus (presumably his widowed mother) with 500 acres. The latter may have been situated elsewhere in the parish and have been property inherited by her at the death of her first husband, Robert Lee.

⁵ *Vestry Book*, pp. 284, 295, 304, 318.

⁶ *Vestry Book*, October 6, 1725, pp. 186-187. "Petso Parish Deter this Year in Tobacco . . . To Robert Portuse Esq^r for Keeping Two barsterd Children viz^t John & Watkinson Marvil 01333 1/2"

ACKNOWLEDGMENTS

I am greatly indebted to Mr. and Mrs. William F. Jenkins for drawing the Clay Bank site to my attention, for permitting me to do considerable damage to their garden in the course of its excavation, and for generously presenting the illustrated artifacts to the Smithsonian Institution. I also owe much to their daughter Mrs. William DeHardit for valuable historical information as well as for her constant and vigorous assistance with the actual digging. I am equally grateful to my wife, Audrey Noël Hume, and to Mr. John Dunton of Colonial Williamsburg for their part in the excavation, also to Mr. A. E. Kendrew, senior vice president of Colonial Williamsburg, and Mr. E. M. Frank, its resident architect, for their comments on both the chimney foundation and on the age of the existing house. I am

also indebted to Mrs. Carl Dolmetsch of Colonial Williamsburg's research department for her pursuit of cartographic evidence.

In addition I wish to express my thanks to Mr. R. J. Charleston, keeper of ceramics and glass, Victoria and Albert Museum, London, for examining and commenting on the glass, and to Mr. W. D. Geiger, director of craft shops, Colonial Williamsburg, for similar assistance in identifying the tools.

Finally, I am indebted to Miss Elizabeth Harwood of Aberdeen Creek for permission to illustrate examples of tobacco pipes found on her land, and to Colonial Williamsburg for subsidizing the preparation of this report.

May 1965

I. N. H.

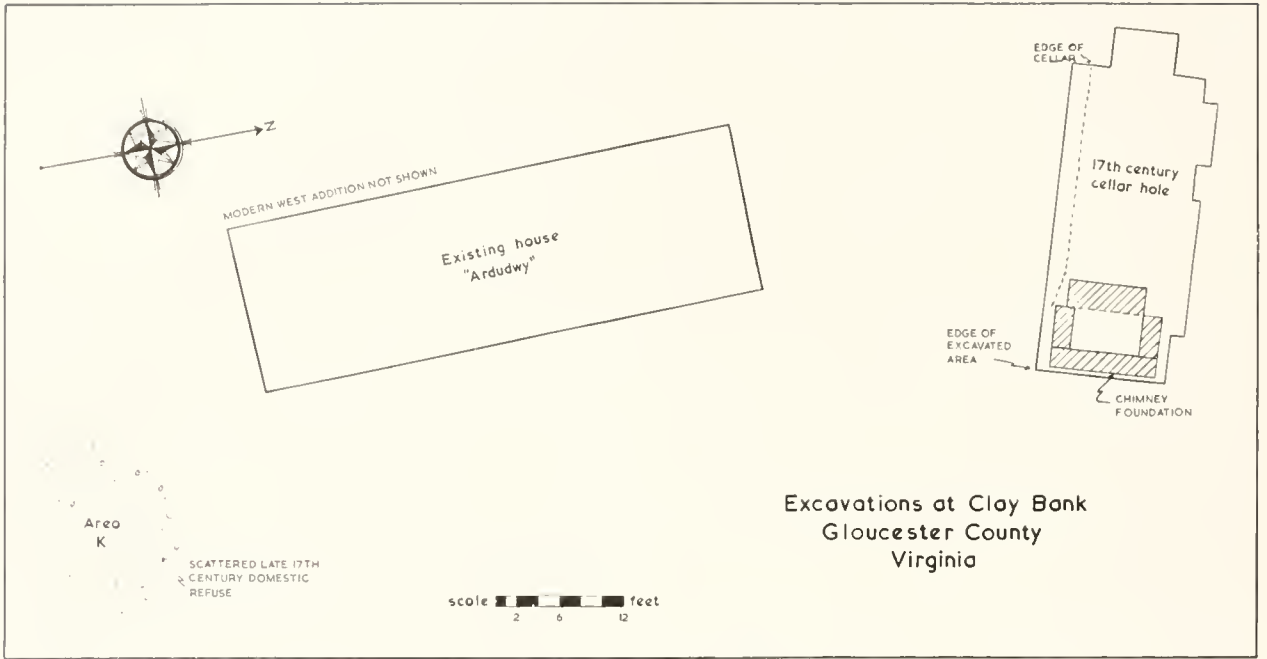


Figure 2.—PLAN OF EXCAVATIONS in relation to the existing house.

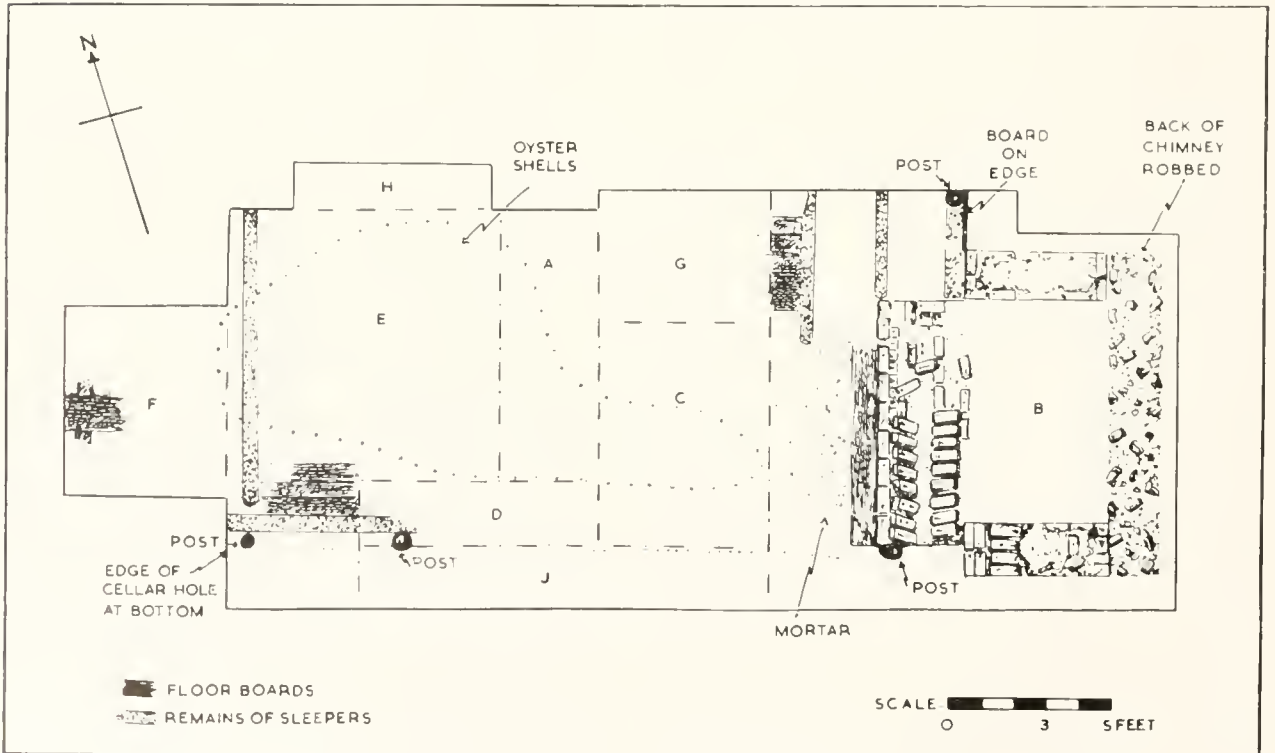


Figure 3.—PLAN OF EXCAVATED AREAS and structural remains.

Even if the modern Jenkins property is accepted as having been part of the Porteus plantation it does not necessarily follow that either the excavated foundation or the much modernized "Ardudwy" represent the remains of the Porteus house. However, there may be some grounds for arguing that the foundation and cellar hole were part of the house of Edward Porteus the emigrant. According to legend, Robert Porteus' property had once belonged to a Dr. Green at whose house Nathaniel Bacon died in 1676.⁷

Clues to the appearance of Robert Porteus' house are provided by an entry in the *Petsworth Parish Vestry Book* for November 12, 1704. There it was recorded that the church-wardens drew up an agreement ". . . wth Ezra Cotten for y^e building of a gleebehouse & a kitchen y^e S^d house to be of y^e Same Dementions as M^r Rob^t Pourtees. & to be framed on Good white oak Sills and to Stand upon blocks & to be lath^d. wth Goo[] oak lathes and Shingled wth Good Siprus Shingles The S^d house to be 36 foot in Length & 20 foot wide, y^e Roof to be 18 Inches Jet and to have two outSide Chimnies and two Closets adjoining to them, and all things Ells pertaining according to y^e Dementions of y^e above S^d Rob^t Pourtees house, Viz, y^e above S^d Kitchin to be foot Long & foot wide"⁸

The two important features of these instructions are the measurements of the building and the fact that it was raised on blocks and, therefore, did not have a walled basement beneath it. But while the measurements are stated to be those of the Porteus House, it does not necessarily follow that the elevation of the glebe house on blocks also drew its precedent from that source.⁹ However, if it did, then the modern "Ar-

dudwy" could not have been the Porteus home as this building not only measures 47 feet 3 inches by 15 feet 10 inches, but it is also built over a substantial brick-walled basement. On the other hand, the excavated cellar hole (though apparently having ended its life prior to about 1700) was almost certainly part of a building built on blocks or piers.

It seems reasonable to suggest that Ezra Cotten was assumed by the churchwardens to know more about the Porteus House than was given in their specifications, in which case it might be supposed that he had actually built that house. By extension it might also be assumed that the job had been completed a comparatively short while before the building of the glebe house was proposed. Therefore, if it can be established that Robert Porteus built himself a new house not too long before November 1704, it would probably follow that he had lived in his father's old house until that time. If Edward's house was then destroyed, it would certainly add further support to the theory that the excavated remains are part of that building.

Unfortunately, there seems little likelihood of obtaining any additional information regarding either the site of, or the appearance of Robert Porteus' house. The glebe house does not survive, having been abandoned in 1746,¹⁰ and the only other potential source of information has seemingly been lost. The Reverend Robert Hodgson in his *The Life of the Right Reverend Beilby Porteus*¹¹ stated that the bishop possessed ". . . a singular picture which, though not in the best style of coloring, was yet thought valuable by Sir Joshua Reynolds, as a specimen of the extent which the art of painting had reached at that time in America: and he himself very highly prized it, as exhibiting a faithful and interesting representation of his father's

⁷ *William & Mary Quarterly* (1896), ser. 1, no. 5, p. 279. "Oldmixon says that Bacon died at Dr. Green's in Gloucester, and Hening describes this place in 1722 as 'then in the tenure of Robert Porteus Esq.'" But as Robert Porteus purchased additional land in 1704, Dr. Green's home site may not have been the same as that of Edward Porteus.

⁸ *Vestry Book*, p. 85. The kitchen measurements are absent.

⁹ *Vestry Book*, pp. 74-75. At a previous vestry meeting on 28th June, 170[22] details of the proposed glebe house were given as follows: "Six & thirty foot Long & twenty foot wide with two Outside Chemneys two 8 foot Square Clossetts planckt above & below, with two Chambers above Staires and y^e Staires to Goe up in y^e midst of y^e house with 3 Large Glass windows Below Stair [] Each to have 3 Double Lights in y^m with a Glass window in Each Chamber above Staires Each to have 3 Lights in y^m & Each Clossett to have a window in it and Each window to have 3 Lights." There is no evidence that these specifications were derived from Robert Porteus' house.

¹⁰ *Vestry Book*, p. 273. May 28, 1746: "Ordered this Present Vestry, have thought it Better to Build a New Glebe house rather then to Repair the old one" Then follow specifications for the new building.

¹¹ ROBERT HODGSON, *The Life of the Right Reverend Beilby Porteus D.D.* (London, 1823) pp. 3-4. Hodgson describes Newbottle in the following terms: "It consisted chiefly of plantations of tobacco; and on one of these, called Newbottle (from a village of that name near Edinburgh, once belonging to his family, but now in the possession of the Marquis of Lothian), he usually resided. The house stood upon a rising ground, with a gradual descent to York river, which was there at least two miles over: and here he enjoyed within himself every comfort and convenience that a man of moderate wishes could desire; living without the burthen of taxes, and possessing, under the powerful protection of this kingdom, peace, plenty, and security."

residence." This last statement is assumed to be hearsay as Beilby Porteus was born in England in 1731 and did not, as far as we know, ever visit Virginia. Attempts to find the picture have met with no success¹² and in all probability it has long since been destroyed or at best, robbed of its identity.

Archeological and Architectural Evidence

It is not within the purpose of this paper to include an architectural study of "Ardudwy." Neither the building's measurements nor its basement lend credence to the belief that it was once the home of Robert Porteus. In addition, the 1704 specification called for exterior chimneys while those of "Ardudwy" are interior. The basement walls use shell mortar and include bricks of widely varying sizes, but although many of them have an early appearance, they

¹² A request for information was published in the English magazine *Country Life* (May 24, 1962), vol. 131, no. 3403, p. 1251. This yielded a reply from the Reverend W. B. Porteus of Garstang Vicarage, Nr. Preston, Lancashire. He noted that Bishop Beilby Porteus was buried at Sundridge in Kent and that prior to the Second World War family connections of the Bishop's wife named Polhill-Drabble still lived in that village and were deeply interested in their lineage. The Rev. Porteus feared that Mr. and Mrs. Polhill-Drabble were now dead, and as I have been unable to trace them, I assume that this is the case.



Figure 1. THE CHIMNEY and underhearth foundation.

may well have been reused from elsewhere. Interior details such as mantels and doors would seem to date from the early 19th century. What little of the framing that is visible is pegged but is liberally pierced with both wrought and cut nails. All in all, it seems probable that "Ardudwy" was built in the very late 18th or early 19th century. Archeological evidence supports this belief in that the property is richly scattered with artifacts of the late 17th century and of all dates after about 1800, but has yielded very few items that can be attributed to the 18th century. All appearances point to the abandoning of the immediate area as a habitation site after the destruction of the excavated building around 1700. The subsequent building of "Ardudwy" so close to the early house may be assumed to be coincidental, though the site is certainly a desirable and obvious location for a residence.

Little information as to the above ground appearance of the 17th-century structure was forthcoming, partly because it had almost certainly stood on piers or blocks, and partly because the excavations were restricted by limitations of time, labor, and the desire of the owners to retain at least something of their garden. Neither extensive probing nor a soil resistivity survey revealed evidence of a second chimney, nor did they give any clues as to the total length or breadth of the cellar hole. The back wall of the chimney had been deliberately dismantled and only a thin skin of brickbats and mortar on the bottom of the robber trench survived to mark its position. It is therefore quite possible that another chimney was dismantled with sufficient completeness to elude discovery by either of the exploratory methods used.

The jambs of the partially surviving chimney (fig. 4) were laid in English bond and were 1 foot 7 inches thick and 4 feet 4 inches long.¹³ The interior width of the fireplace measured 7 feet, which was large by 18th-century domestic standards, but not uncommon in the 17th century before separate kitchens became the rule.¹⁴ Both jambs were built into the side of the cellar hole and were seated on a bed of small rocks,

¹³ Seven courses surviving, top at 2 ft. 2 in. below modern grade. Shell mortar. Specimen bricks: 9 in. by 4 $\frac{1}{2}$ in. by 2 $\frac{7}{8}$ in. (salmon) and 7 $\frac{1}{2}$ in. by 4 $\frac{1}{4}$ in. by 2 in. (dark red).

¹⁴ A late 17th- or very early 18th-century house at Tutter's Neck in James City County, measuring 42 ft. 3 in. by 19 ft. 1 in., possessed a chimney at either end with dimensions of 9 ft. 11 in. by 4 ft. 11 in. and 9 ft. 9 in. by 5 ft. The jambs varied in thickness from 1 ft. 6 in. to 1 ft. 11 in. See footnote 22.

but the robbed backwall had rested only on the natural sandy clay at a depth of 2 feet 3 inches below the modern grade. In front of the chimney, and rising from the cellar floor, was a massive brick-walled underhearth 7 feet 6 inches wide and projecting out from the fireplace to a distance of 5 feet.

A curious and still unexplained feature of the underhearth was a 4- by 3-inch channel running across the top of the surviving foundation for a distance of 6 feet 9 inches, starting at the south face and terminating 9 inches short of the north. This channel had been bricked over and the remaining bricks had dropped into it (fig. 5) presumably after a wooden beam, which once occupied the space, had rotted or burned out. Traces of burned or carbonized wood lay on the clay bottom of the channel, but the bricks over it displayed no evidence of fire. The only conceivable explanation for the presence of the wood must be that it was part of a frame used to hold the block of natural sandy clay together while the underhearth wall was being erected around it. As the underhearth foundation would have originally risen at least another 2 feet 6 inches above the timber to the floor level of the house, the wood would not have been in danger of igniting from the heat of the domestic fire. But if the house ultimately burned, it is possible that the exposed end of the timber might have caught fire and slowly been consumed along its entire length.

The cellar hole had been cut into natural sandy clay to an average depth of 5 feet 3 inches below the modern grade. Its backfilling was predominantly of the same sandy clay and, consequently, the exact edge of the cellar hole was sometimes hard to determine. It was probably because of this similarity between the natural subsoil and the cellar's fill that the feature failed to show up in the soil resistivity survey. Owing to previously mentioned limiting factors, only the southeast corner of the cellar hole was found and only parts of the south and east walls were traced out. Consequently, it can merely be said that the cellar exceeded 27 feet in east-west length and 11 feet 2 inches in width (fig. 3).

Three post holes were found against the south face, while the rotted remains of another vertical post were found north of the chimney supporting a much-decayed horizontal board that had served torevet the east face. A broad-bladed chisel (fig. 14, no. 6) was found behind the board where it had probably been lost while the timbering was being installed.

Further slight traces of horizontal boards were found

along the south face, suggesting that the soft sides of the large cellar hole had been supported in this way. But it was not possible to determine whether the boards had been placed only on sections of the wall that seemed in danger of sliding in or whether the entire interior had been sheathed with planks. The south side of the cellar hole sloped outwards at an approximate 65 percent angle and the traces of boards lay against it.¹⁵ However, it was not possible to tell whether the vertical posts had been similarly sloped, but it is reasonable to assume that they would have done so.

Parts of the cellar's wooden floor still survived (figs. 6 and 7) and comprised boards ranging in width from 5 to 7 inches laid over sleepers or joists 4 to 6 inches wide. The height of the underlying timbers could not be determined as the weight of the cellar fill might be assumed to have pressed the floorboards down as the wood of the sleepers decayed. Only occasional floorboards survived and the channels left by decayed sleepers did not extend across the full width of the excavated cellar. From these facts it was deduced that the boards had been cut from woods of different types, some of which had decayed more completely

¹⁵ ALBERT C. MANUCY, "The Fort at Frederica," Notes in *Anthropology* (Tallahassee: Florida State University, 1962), vol. 5, pp. 51-53. An excavated powder magazine of 1736 exhibited similar construction.



Figure 5.—DETAIL OF COLLAPSED BRICKS in the underhearth. (Photo courtesy of E. DeHardit.)

than others, and that the sleepers were made from short and sometimes roughly cut lengths of timber. These sleepers may, in fact, have served only as a base for anchoring the ends of floorboards, as was certainly the case northwest of the underhearth where the nails from the ends of five boards had dropped through into the channel left by the decayed sleeper. It may be supposed, therefore, that the sleepers' location would have been dictated by the vagaries of board length rather than by the design of a planned, measured foundation and that they served as ties for the floor, rather than joists raising it off the natural clay beneath.

In addition to the remains of the carefully laid floor, another much-decayed board, 10 inches wide, and of uncertain thickness, was found running north/south immediately west of the underhearth. This board was partially covered by mortar, suggesting that it had been set on the dirt during the building of the brick structure.

The filling of the cellar in the vicinity of the chimney and underhearth comprised a single massive deposit of sandy clay, scattered through which were numerous iron nails, isolated oystershells and occasional fragments of pottery, glass, and tobacco-pipe stems. A similar unified filling was encountered at the western end of the excavation, but towards the middle a large and irregular deposit of oystershells was sealed within the sand at a depth of 4 feet 6 inches sloping upward to 3 feet 6 inches towards the south wall. The shell layer averaged from 6 to 9 inches in thickness and was



Figure 6.—REMAINS OF WOODEN FLOOR BOARDS in the cellar.
(Photo courtesy of E. DeHardit.)

found to contain many of the more important artifacts.

On the wooden floor of the cellar lay a thin $\frac{1}{2}$ - to 1-inch layer of wood ash, mortar, and occasional brick-bats. Had this accumulation been considerably thicker it might have suggested that the building above had been destroyed by fire. But although the presence of this skin of debris could not be explained, it was far from sufficient to support such a conclusion.

The topsoil over the entire area had been disturbed to a depth of at least 1 foot, presumably by deep plowing. Over the cellar fill, humus and a sandy loam extended to a depth of 1 foot 8 inches at the south edge and to 2 feet 1 inch in the middle. The bottom of this stratum contained nothing but late 17th- or early 18th-century artifacts, including an important and well-preserved latten spoon.¹⁶ A small 19th-century disturbance cut into the south cellar edge towards the west end of the excavation, but caused little disturbance to the main fill. Another, much larger, late 19th-century trash deposit had been dug into the fill to the northwest of the chimney and this had reached to a depth of 3 feet 6 inches below the modern grade. The removal of the walnut tree had created a similar disturbance immediately south of the refuse deposit, while a trench for a 20th-century water pipe had cut yet another slice through the same area. None of these disturbances had caused any damage to the lower filling of the cellar.

DATING EVIDENCE FOR THE CELLAR

The majority of the excavated artifacts were scattered throughout the cellar fill and were of similar types from top to bottom of the deposit. These objects included wine-bottle and drinking-glass fragments, potsherds of English and perhaps Portuguese tin-enamelled earthenware, and more than 600 tobacco-pipe fragments, all of them indicating a terminal date of about 1700. A quantitative analysis of the tobacco-pipe stem fragments using the Binford formula¹⁷ provided a mean date of 1698.

Method of Excavation

Digging was initially confined to the immediate vicinity of the chimney foundation (Area B on fig. 3) and to the previously described test trench (A). An east-west trench (D) was next dug to link the two and to isolate the disturbed areas of the tree hole and 19th-century pit in Areas C and G.

¹⁶ E2, Figure 12, no. 1.

¹⁷ See footnote 27.

Owing to a shortage of labor and the rigors of the weather, it was necessary to confine the digging to small areas which could be completed in a single day's work. Consequently, it was not possible to clear the whole area, as one part would be back-filled during the digging of the next. Mr. and Mrs. Jenkins, the owners of the property, were extremely tolerant of the damage that was done to their gardens, but after the clearance of the large area E, they indicated that the project had gone far enough. Nevertheless, they were persuaded to permit the cutting of another smaller test area to the west (F), but when this, too, failed to find the westerly extremity of the cellar, the project was abandoned. Subsequently, relatives of the owners cut into the exposed north face of area E and extracted a number of potsherds and other fragmentary objects from the sand filling.¹⁵ The undercutting of the bank extended to a distance of 1 foot 6 inches without encountering the north edge of the cellar, thus showing that the total width was in excess of 14 feet.

Extensive probing all around the total area of excavation failed to produce any further traces of the building, though the 1 foot 8 inches of topsoil and sandy loam was found to be bedded on numerous small deposits of oystershells and scattered brickbats. Test holes found that all the located deposits north and west of the existing house had been laid down or disturbed in the 19th century. Five test traverses with a soil resistivity meter west and south of the excavation area produced numerous anomalies which, when checked out, all failed to be associated with the 17th-century cellar. It seemed that the misleading readings were caused by variations in the density and moisture-retaining qualities of the natural sandy clay subsoil.

Early in 1963, while planting a small tree to the south of the existing house, Mr. Jenkins encountered a stratum of oystershells at approximately 8 inches below the present grade. (Fig. 2, Area K.) A series of small test holes was subsequently dug to the south and southeast of the house, and showed that the layer of shells (average thickness 4 inches) overlay the subsoil and was spread over an area at least 15 by 10 feet. A small number of 19th-century pottery fragments were found mixed into the stratum, but the vast majority of the artifacts comprised bottle glass and earthenwares

¹⁵ The undercutting is shown on the plan (fig. 3, area 11) as a straight-edged unit. This has been done for the sake of neatness, but it should be noted that there was actually a series of holes that presented an extremely ragged appearance.

of similar types to those encountered in the cellar hole excavation.¹⁹ The most important item was a pewter spoon handle of late 17th-century character (fig. 15, no. 27) stamped with the initial "M." The presence of this obvious domestic refuse was not satisfactorily explained, but it is concluded that it was originally deposited on the land surface and later disturbed by cultivation.

Landscaping work towards the York River west of the house had yielded a few widely scattered fragments of colonial and Indian pottery as well as numerous 19th-century sherds. The colonial material was predominantly of late 17th- or early 18th-century date, but two sherds of Staffordshire combed dishes were of a type unlikely to date before about 1720. No archeological digging was undertaken in these areas.

Archeological Stratigraphy

Each excavated area was given an identifying letter (fig. 3) and each stratum a number. Thus an artifact marked "B2" was found in the archeological area that contained the chimney and was recovered from the top stratum of sandy loam and clay. It should be

¹⁹ An unusual lead-glazed earthenware rim sherd from a jar was probably from the same pot as other fragments (fig. 15, no. 14) found in the cellar hole.



Figure 7.—REMAINS OF DECAYED BOARD ON FLOOR IN FRONT OF UNDERHEARTH. (Photo courtesy of E. DeHardit.)

noted that not all layers and deposits tabled below were encountered in any one excavation area, while some were confined to single locations.

1. Topsoil and brown loam to 1 foot 8 inches over cellar hole.
2. Sandy loam merging into top of sandy clay fill or silting, spreading over edges of cellar hole and sealing the chimney remains. About 1690-1700 with some top disturbance.
3. Main sandy clay fill, extending to oystershell deposit in central areas. About 1690-1700.
- 3A. Sandy clay fill extending to within 6 inches of floor in Area B, against wall north of chimney. The same as Strata 3-5 but without the oystershell layer that divided them elsewhere. About 1690-1700.
- 3B. Sandy clay as above, but from areas where Stratum 4 was absent. About 1690-1700.
4. Oystershell deposit in Areas A, C and E, sealed by sandy clay Stratum 3. About 1690-1700.
5. Sandy clay under oystershell layer, reaching to cellar floor. About 1690-1700.
6. Ash and sand layer on remains of cellar floor; principal artifacts concentrated against south face of cellar hole in Areas D and E. About 1690-1700.
- 6A. Similar layer to Stratum 6, confined to Area B north of the chimney and underhearth foundation. About 1690-1700. (The same number is given to a chisel found behind a horizontal wall board at this level, but which may have been deposited when the cellar was built rather than at its date of abandonment. Fig. 14, no. 6.)
7. Objects lying in slots left by rotted-floor sleepers. About 1690-1700.
8. Late disturbance at southwest corner of excavation, Area E. 19th century.
9. 3-inch layer of light-grey soil beneath Stratum 2 extending down to top of oystershell layer (4) from southwest; confined to Areas E and F. About 1690-1700, possibly disturbed at upper west edge.
10. Unstratified material from all areas of the cellar-hole excavation, derived from frost disturbances and the results of removing the walnut tree.
11. Finds from oystershell and artifact layer beneath topsoil southeast of the existing house. About 1690-1700 with a few much later intrusions. (Area K, fig. 2.)
12. Surface finds recovered from field west of existing house.

The collection of objects from the Clay Bank cellar hole is important for a small number of rare items and because the deposit provided accurate dating for a much larger group of less impressive artifacts. Unfortunately, neither category included pieces that were of much help in establishing anything of the history of the property.

A small cannonball of the 3-pound type used by light fieldpieces of the minion class was found in the top of the sand stratum (D3) against the south face of the cellar. Guns of this caliber may well have been used during Bacon's Rebellion, and there might be some who would care to use the excavated ball to support the legend that Bacon died at Clay Bank. The ball, it has been argued, could have been left behind by Bacon's forces when they vacated the site in the fall of 1676. However, such a conjecture, based on so little evidence, can hardly be taken seriously.

The single clue pointing to a Porteus family association, the latten spoon with its presumed Scottish mark, hardly merits any more serious consideration than the cannonball. Somewhat more tenable, however, may be the suggestion furnished by two artifacts, that the cellar hole was in the vicinity of a cooper's workshop. The objects in question were a "chisel" (fig. 14, no. 7) used specifically for driving down barrel hoops, and a race knife (fig. 12, no. 3), a tool frequently used by coopers to mark the barrels. No documentary evidence has been found to indicate the presence of a cooper in the Second Precinct of Petsworth Parish in the late 17th century though the Vestry Book does contain an entry for October 4th, 1699, ordering an orphan to be indentured to a cooper in King and Queen County.²⁰

Other tools from the Clay Bank cellar included spade and hoe blades, a large wedge, and a carpenter's chisel, a range of items that did nothing to support a coopering association, but which did tend to indicate that the artifacts might have come from a variety of sources.

The pottery included a high percentage of coarse earthenwares, among which were fragments of two, or possibly three, lead-glazed tygs and a similarly glazed cup (fig. 15, nos. 7, 8, and 9), all objects that would have been best suited either to a yeoman's household or to a tavern. The large quantity of

²⁰ *Vestry Book*, p. 56. "Nicholas Lewis" indentured to "Henry Morris of Straten Major in y^e County of King and Quine . . . to Learn y^e said orphan y^e art of Cooperly."

tobacco-pipe fragments present might support the latter construction but the dearth of wine-bottle pieces does not. Numerous fragments of English delftware were found scattered through the filling from top to bottom, most of them in very poor condition. While none of the pieces was of particularly good quality, a medium-sized basin with crude chinoiserie decoration in blue, is of some importance. The vessel (fig. 15, no. 1) is of a form that is extremely rare from the 17th century, but which clearly was the ornamental ancestor of the common washbasins of the 18th century.²¹

In marked, and even staggering contrast to the assemblage of cheap and utilitarian earthenware, was the presence of a massive lead-glass stem from a "ceremonial" drinking glass or candlestick, a form undoubtedly made in London in the period 1685-1695 (fig. 10). Although the double-quatrefoil stem units and central melon knob are paralleled by existing glasses, the heavily gadrooned foot is seemingly unknown. This last feature gives the foot such weight that it has led Mr. R. J. Charleston, Keeper of Ceramics at the Victoria and Albert Museum in London, to suggest that the stem may come from a candlestick (fig. 11) rather than from a large, covered glass. However, no parallels for such a candlestick are known.

One might be tempted to believe that a glass candlestick would be more likely to have been brought to 17th-century Virginia than would a seemingly pretentious, covered, "ceremonial" drinking-glass. But in 1732, Thomas Jones²² of Williamsburg made a settlement upon his wife in case of his death, and among the possessions listed were "6 glass decanters, 6 glasses with covers . . ." ²³ Covered glasses ceased to be popular after about 1720 when fashions in glass were turning from the icy sparkle of mass towards more delicate and lighter designs. It is possible, therefore, that the Jones' glass might have been of the general

²¹ Rosewell, fig. 26, nos. 1-4.

²² Thomas Jones was the younger brother of Frederick Jones, whose James City County home site at Tutter's Neck was excavated in 1961. See IVOR NOËL HUME, "Excavations at Tutter's Neck in James City County, Virginia, 1960-1961" (paper 53 in *Contributions from the Museum of History and Technology*; U.S. National Museum Bulletin 249; Washington: Smithsonian Institution), 1965, fig. 20, no. 8. Hereafter cited as *Tutter's Neck*. A fragment of a lead-glass gadrooned Romer of the same period as the Clay Bank stem was found on the Tutter's Neck site.

²³ MARY STEPHENSON, "Cocke-Jones Lots, Block 31" (MS., Research Dept., Colonial Williamsburg, Virginia, 1964), p. 6.

type indicated by the Clay Bank stem. But be this as it may, there is no doubt that the excavated stem is the finest piece of glass of its period yet discovered in America, and that it is sufficiently important to be able to add a paragraph to the history of English glass.

Other glass objects included the powdered remains of a small quatrefoil-stemmed wineglass, a form common in the period 1680-1700.²⁴ Like so many glasses of its type, the metal was singularly impermanent when buried in the ground, and little or nothing could be salvaged of it. Also present were fragments of at least seven wine bottles of the short-necked, squat-bodied forms of the late 17th century, as well as one fragment of a short-necked and everted-mouthed case bottle. A few fragments of cylindrical pharmaceutical bottles were also found as was a well-preserved bottle of similar metal but in wine-bottle shape (fig. 9 and fig. 15, no. 19). Such bottles are thought to have been used for oils and essences, and their manufacture seems to have been confined to the period about 1680-1720.

Tobacco-pipe fragments (fig. 16) were plentiful throughout the cellar fill and provided a useful range of bowl forms as well as a key to the dating of the deposit. All the bowls were of types common in the last years of the 17th century, a period in which the two English bowl styles of the second half of the century (one evolving with a spur and the other with a heel) merged together into the single spurred form of the 18th century.²⁵ In addition, the Clay Bank cellar contained examples of bowls with neither heel nor spur, a style never popular in England, and which seems to have been developed specifically for the American market initially copying the shape favored by the Indians.

No fewer than 648 stem fragments were recovered from the cellar and their stem-hole diameters, using J. C. Harrington's chart,²⁶ indicated a manufacture date in the period 1680-1710. Because pipes are considered to have had a short life, it is generally assumed that the dates of manufacture and deposition are not far apart. Other artifacts from the

²⁴ *Tutter's Neck*, fig. 17, no. 17; also I. NOËL HUME, "Some English Glass from Colonial Virginia," *Antiques* (July 1963), vol. 84 no. 1, p. 69, figs. 4 and 5.

²⁵ IVOR NOËL HUME, *Here Lies Virginia* (New York: Knopf, 1963), fig. 105.

²⁶ J. C. HARRINGTON, "Dating Stem Fragments of Seventeenth and Eighteenth Century Clay Tobacco Pipes," *Archaeological Society of Virginia, Quarterly Bulletin* (September 1954), vol. 9, no. 1.

deposit, notably the large glass stem, the wine bottles, small wineglass and, of course, the pipe bowl shapes, together suggested a terminal date for the group within the period 1690–1700. Using the Binford formula,²⁷ the 648 stem fragments suggested a mean date of 1698. Experience has shown that the formula is likely to be accurate to three or four years either way on a sampling of that size.²⁸

The presence of the same maker's initials, I-F, on pipe bowls at different levels of the cellar fill strongly pointed to a homogeneity of deposition. Although it is impossible to identify the owners of the initials with any certainty, it is worth noting that there was a Josiah Fox making pipes in Newcastle-under-Lyme in and after 1683 whose initials are the same as those most common in the Clay Bank cellar. The I-F mark was somewhat unusual in that it was impressed between two N's across the top of the stem (fig. 16, no. 11). All other marks, save one, were in the normal position, to left and right of the heels. These comprised W F (William Ferry, Marlborough, about 1700?), or perhaps W.P., H I (Henry Jones, London, 1688?)²⁹ and V R. The remaining mark, S A (fig. 16, no. 14) occurred on the bases of two bowls with neither heels nor spurs. From the oystershell layer south of the existing house came a bowl fragment ornamented with the name of a well-known Bristol pipemaking family, T TIPPET, in a raised cartouche on the side. This was probably Jacob Tippett whose name appeared in the Bristol Freedom Rolls in 1680.³⁰

In addition to the few marked bowls, two stems were of interest in that they had been ground or pared down to enable the pipes to be used again, one being only 2¼ inches in length (fig. 16, nos. 12 and 13). Such frugality might be construed as being associated with a household of small means. Also present were a few brown stem fragments and part of one decorated bowl (fig. 8, no. 9) of Virginia, possibly Indian, manufacture.

²⁷ Mathematical formula based on Harrington's chart, prepared by Lewis H. Binford, University of Chicago. See LEWIS H. BINFORD, "A New Method of Calculating Dates from Kaolin Pipe Stem Samples," *Southeastern Archaeological Newsletter* (June 1962), vol. 9, no. 1, pp. 19–21.

²⁸ AUDREY NOËL HUME, "Clay Tobacco-Pipe Dating in the Light of Recent Excavations," *Archaeological Society of Virginia, Quarterly Bulletin* (December 1963), pp. 22–25.

²⁹ ADRIAN OSWALD, "The Archaeology and Economic History of English Clay Tobacco Pipes," *Journal of the Archaeological Association* (London, 1960), ser. 3, vol. 23, pp. 40–102.

³⁰ ADRIAN OSWALD, "A Case of Transatlantic Deduction," *Antiques* (July 1959), pp. 59–61.

The importance of the Jenkins site cellar hole lies solely in its provision of a valuable group of closely dated artifacts. The excavations failed to reveal either the size of the building or any indication of its original ownership and purpose. The structure does not appear on any known map nor can it be equated with any specifications contained in the *Vestry Book* of Petsworth Parish or any other documentary source now available. Much local legend and speculation has been considered and regretfully rejected in the absence of any supporting evidence. The site does lie in the Second Precinct of Petsworth Parish and it has been established that the Porteus family did own land therein. Consequently it is quite possible that the Jenkins site was once part of that tract. But it does not necessarily follow that the cellar hole was part of the Edward Porteus family residence.

A *terminus post quem* of about 1700 for the filling of the cellar hole has been well established on the archaeological evidence. The structure itself is represented by the large cellar hole which had been floored and walled with boards and vertical posts, and by the massive chimney at the east end. The absence of any abutting walling, coupled with our inability to find any traces of other foundations, strongly suggests that the building stood on piers or wooden blocks.

The artifacts include a number of extremely interesting objects; but the curious juxtaposition of the large glass stem (figs. 10 and 11) with crude earthenwares, wornout tools and broken and reused clay tobacco pipes makes it probable that the refuse was derived from different sources. Whereas the iron objects resting on the cellar floor may have been in the building when it was destroyed, it is clear that the large oystershell deposit (and therefore, the glass stem that it contained) must have been brought from elsewhere. It might therefore be deduced that the excavated structure had been a kitchen building or, perhaps, an overseer's house rather than the home of the owner of the glass stem.

The dearth of 18th-century colonial artifacts on the Jenkins property seems to indicate, at best, a less intensive occupation after the destruction of the building that overlay the excavated cellar hole. It seems improbable, therefore, that the existing "Arduwly" was in existence before the late 18th century.

Illustrations

The objects illustrated in figures 8 through 16 are representative of the principal artifacts found in the Clay Bank excavations. The dating given below refers to the objects' period of manufacture; their terminal or throwaway date is determined by their archeological contexts, which are indicated by area and stratum designations. (See p. 11, Archeological Stratigraphy, and fig. 3.)

FIGURE 8

1. Marly fragment from small plate, English delftware, decorated in blue with chinoiserie design, probably of Chinamen, rocks, and grasses. The background color has a very pale-blue tint, unlike the pure whites and pinkish whites that are generally associated with London pieces of the period. The closest parallel for this sherd is in the Bristol City Museum in England³¹ and is attributed to Brislington. An example of the style, attributed to Lambeth and dated 1684 is illustrated by F. H. Garner in his *English Delftware*;³² but unlike the Clay Bank fragment, the central decoration does not reach to the marly. About 1680–1690. E4. (Fig. 15, no. 6.)
2. Handle fragment from chamberpot or posset pot, English delftware, decorated with irregular horizontal stripes in blue. The handle is pronouncedly concave in section, and lacking ornament on its edges (as usually occurs on posset pots)³³ a chamberpot identification seems most likely. The form ranges from the late 17th century at least through the first quarter of the 18th. E2.
3. Mug or jug, lower body and base fragment only, English delftware, white inside, with manganese stipple on exterior. Probably Southwark, first half of the 17th century. E4. (Fig. 15, no. 4.)
4. Basin, English delftware, wall fragments only illustrated (for full reconstruction see fig. 15, no. 1), the glaze, pale blue, ornamented with central chinoiserie design of similar character to no. 1. The wall was decorated with narrow horizontal
5. Basal fragment of plate, tin-glazed earthenware, decoration of uncertain form in two tones of blue outlined in black. Portuguese? 17th century. C4.
6. Base fragment from globular jug, English brown salt-glazed stoneware, probably from same vessel as no. 7. Late 17th or early 18th century. C3.
7. Neck fragment from bulbous mug or jug, decorated within multiple grooving,³⁴ ware and date as above. A3.
8. Tyg fragments, black lead-glazed, red-bodied earthenware (sometimes called Cistercian ware), the body decorated with multiple ribbing. (For reconstruction see fig. 15, no. 7.) Such drinking vessels were made with up to six or eight handles, but two was the most usual number and those were placed close together as indicated here. The form was prevalent in the period 1600–1675, though taller examples were common during the preceding century.³⁵ A3, C3.
9. Tobacco pipe bowl, pale-brown ware, burnished, and decorated with impressed crescents and rouletted lines, local Indian manufacture?³⁶ Second half of 17th century. E4.
10. Body fragment of cord-marked Indian cooking pot, Stony Creek type,³⁷ light red-tan surface flecked with ocher and with a localized grey core. Middle Woodland. B1.
11. Projectile point, buff quartzite, broad stem and sloping shoulders. Late archaic. E9.

³⁴ For shape parallel (but not body) see *Tutter's Neck*, fig. 18, no. 21.

³⁵ BARNARD RACKHAM, *Medieval English Pottery* (London: 1948), pl. 94. BARNARD RACKHAM, *Catalogue of the Glaisher Collection of Pottery and Porcelain* (Cambridge, 1935), no. 20, pl. 3A.

GRISELDA LEWIS, *A Picture Book of English Pottery* (London, 1956), fig. 23.

³⁶ J. C. HARRINGTON, "Tobacco Pipes from Jamestown," *Archeological Society of Virginia, Quarterly Bulletin* (Richmond: June 1951), fig. 4.

³⁷ I am indebted to Dr. B. C. McCary of the Archeological Society of Virginia for the identification of the prehistoric Indian artifacts. CLIFFORD EVANS, "A Ceramic Study of Virginia Archeology," (Bureau of American Ethnology Bulletin 160; Washington: Smithsonian Institution, 1955), p. 69.

³¹ W. J. POUNTNEY, *Old Bristol Potteries* (Bristol, 1920), pl. 3 (lower left), and p. 37.

³² F. H. GARNER, *English Delftware* (London, 1948), pl. 26B.

³³ For a posset pot with these handle characteristics attributed to Brislington, 1706–1734, see W. M. WRIGHT, *Catalogue of Bristol and West of England Delft Collection*, (Bath: Victoria Art Gallery, 1929), pl. 3.



Figure 8. — FRAGMENTS OF ENGLISH DELFTWARE, stoneware, earthenware, and Indian objects.



Figure 9.—BOTTLE OF GREEN GLASS in the form of a miniature wine bottle.

FIGURE 9

A small glass bottle in wine-bottle style but probably intended for oil or vinegar, and fashioned from a pale-green metal comparable to that used for pharmaceutical phials and flasks. The base has a pronounced conical kick, but is not appreciably thicker than the walls of the body. The mouth is slightly everted over a V-sectioned string rim. On the yardstick of wine-bottle evolution such a bottle is unlikely to have been manufactured prior to 1680 or later than about 1720. E5. (See also fig. 15, r.o. 19.)

FIGURES 10 AND 11

Stem and foot fragment from an elaborate drinking glass or candlestick, English lead metal of splendid quality. The solid stem is formed from two quatrefoil balusters between which is a melon knob with mereses above and below. The stem terminates in two mereses of increasing size and is attached to an elaborately gadrooned foot, only part of which survives. Any suggestion that the foot is actually part of the base of the bowl is negated by the presence of a rough pontil scar inside it, as well as by the fact that the surviving fragment spreads out at so shallow an angle that no other construction is possible.



Figure 10.—AN ELABORATE STEM of English glass, London, about 1685-1695.

The stem form is most closely paralleled by two goblets illustrated in W. A. Thorpe's *History of English and Irish Glass*,³⁸ one of which contains within its stem an English fourpenny piece of 1680. Because no known goblet exhibits the high, gadrooned foot of the Clay Bank example, it has been suggested that the stem may be that of a candlestick.³⁹ While this is certainly a reasonable supposition, it must be added that neither have examples of candlesticks been found in this form. (For conjectural reconstruction see fig. 11.) Although it is extremely unfortunate that no upper fragments were found, there is no doubt as to the date of the surviving section, nor is there any

³⁸ W. A. THORPE, *A History of English and Irish Glass* (London, 1929), vol. 2, pl. 29 and 31, no. 2.

³⁹ See p. 13.

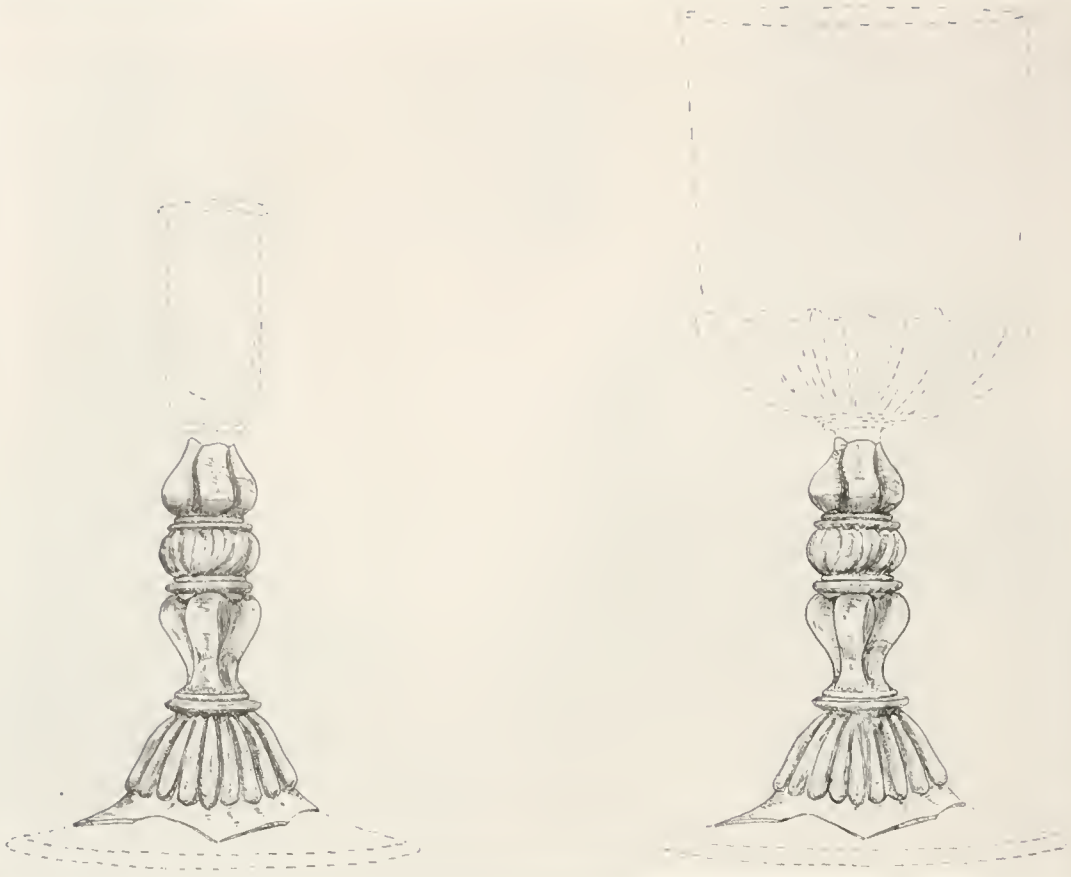


Figure 11.—THE CLAY BANK STEM RECONSTRUCTED as both a drinking glass and a candlestick.
Height of fragment is $5\frac{1}{4}$ inches. About 1685-1695.

denying that it is on a par with the best English glass of its period. London, about 1685-1695. Height of fragment $5\frac{1}{4}$ inches. E4.

FIGURE 12

1. Spoon, latten, tinned, the bowl oval and the handle flat with a trilobed terminal. The back of the bowl possesses an extremely rudimentary rat-tail that is little more than a solid V slightly off-center at the junction of stem and bowl. The maker's mark inside the bowl bears the initials W W flanking a thistle, perhaps suggesting a Scots origin for the spoon. Last quarter of 17th century. E2.
2. Cutlery handle, bone, roughly round-sectioned at its junction with the iron shoulder but becoming triangular towards the top. A4.

3. Race knife, steel, a tool used by coopers and joiners to inscribe barrels and the ends of timbers. At one end is a tapering, round-sectioned tang to which a wooden handle was attached; beside this, and probably originally recessed into the wood, is a rectangular-sectioned arm, terminating in a small blade curved over at the end. The arm is hinged at the shoulder of the tool and could be folded back to inscribe large arcs and to be used as an individual cutting instrument. At the other end is a small blunt spike with spiral grooving and raised cordons, and a small fixed knife with a curved blade that could be used to cut in the opposite plain to that of the moveable arm. The arm is stamped with the maker's name WARD. Attempts to identify an English toolmaker of that name working in the second half of the 17th



Figure 12.—LATTEN SPOON and other small finds.

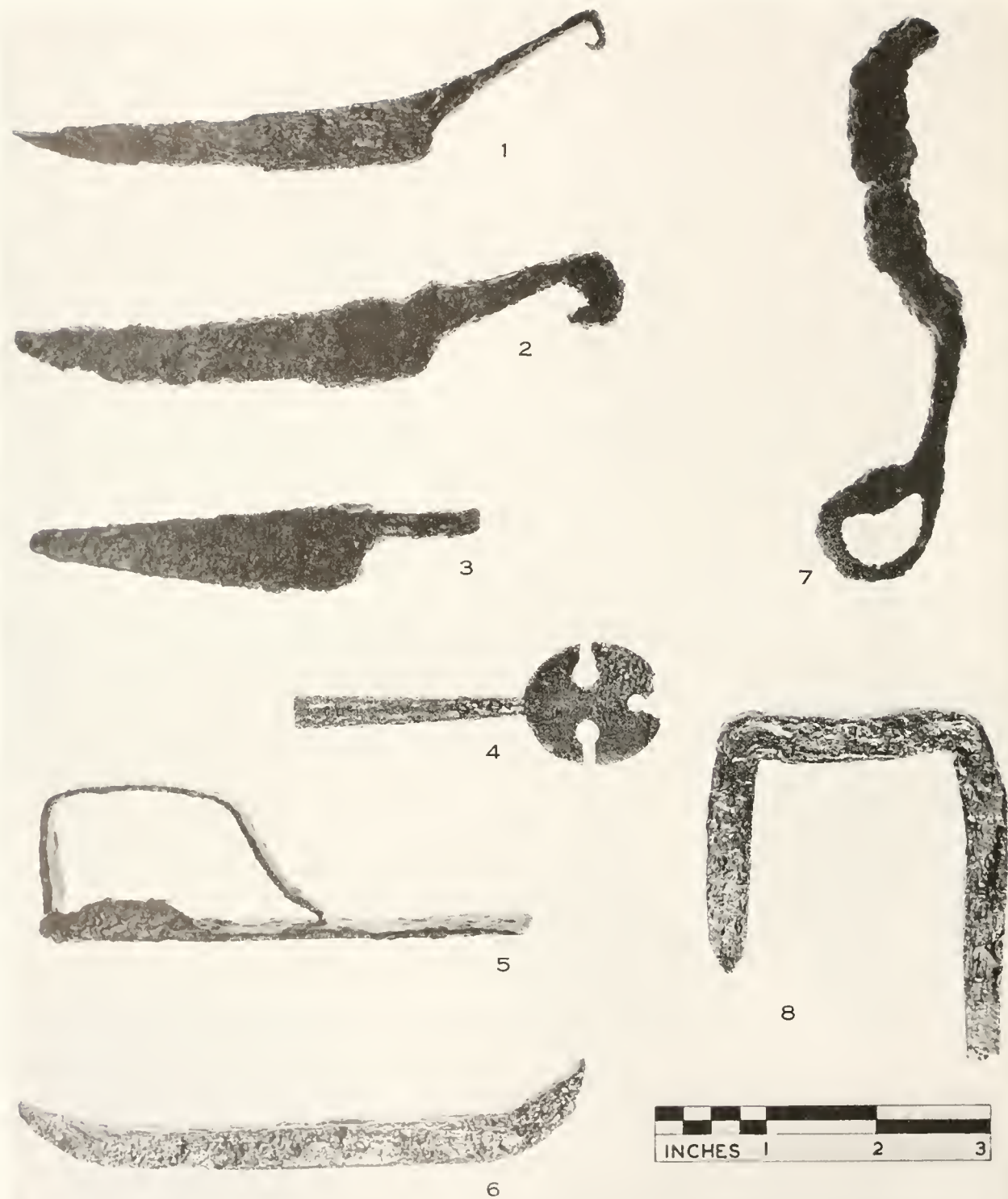


Figure 13.—CHEEKPIECE FROM BIT, saw set, and other iron objects.

century have been unsuccessful. The tool is well made and possesses a surprising amount of decoration on the shoulders, in the shape of faceting at the corners and sculpturing of the flat surfaces.⁴⁰ E4. (See also fig. 15, no. 22.)

4. Gimlet, iron, the shaft drawn out at the top to grip the wooden handle, the spoon-shaped blade is badly distorted but the terminal worm still survives in part. B6A.
5. Tack, brass, probably from trunk or upholstery, convex head roughly trimmed, diameter $\frac{1}{2}$ inch. C3.
6. Boss, cast brass, from cheekpiece of bridle; the slightly dished edge and central nipple appear to have been ornamental devices more popular in the 17th than in the 18th century.⁴¹ This object overlay the robbed rear-chimney foundation at its northeast corner. B2.
7. Strainer fragment, brass or bronze; the edge flat and therefore not part of a colander, probably originally attached to an iron handle. Diameter approximately $8\frac{1}{2}$ inches. E2.

FIGURE 13

1. Object of uncertain purpose, iron, the pointed "blade" without cutting edge and $\frac{1}{8}$ inch in thickness, the tang drawn out, rectangular in section and clenched at the end. A2.
2. Object similar to the above,⁴² but heavier, the tang wider than the thickness of the "blade," $\frac{3}{8}$ inch and $\frac{3}{16}$ inch respectively. E4.
3. Knife blade, iron, small flaring shoulders and round-sectioned tang. The blade is of unusual shape and may have been honed down to its present size. C4.
4. Saw wrest or saw set, iron, used to grip and bend the teeth of saws sideways to enlarge the width of the cut and thus prevent the blade from binding.⁴³ C2.
5. Object of uncertain purpose, iron, comprising a

flat strip $\frac{5}{8}$ inch in width at one end and tapering to $\frac{1}{16}$ inch at the other which exhibits a small right-angled flange before turning upwards and back on itself, narrowing to a thinner strip measuring $\frac{5}{16}$ inch in width, and forming a loop. The base strip has a small notch at its broad end.⁴⁴ C3.

6. Cramp^(?), iron, perhaps intended to be set in mortar and used to join masonry; rectangular in section and drawn down almost to a point at either end. E4.
7. Cheekpiece from snaffle bit, iron, incomplete, angular knee with hole for linking element between rein and bit. This is a 17th-century characteristic common at Jamestown⁴⁵ but rare among the many bits from Williamsburg. E2.
8. Staple, iron, both points broken and the back somewhat bowed, probably as a result of having been driven. C3.

FIGURE 14

1. Eye of hoe, iron, possibly a grub hoe similar to no. 2, in an advanced state of decay with the blade represented only by the narrow triangular spine; no trace of a maker's mark. C3.
2. Grub hoe, iron, the eye and part of the blade surviving, the spine thick and narrow, no maker's mark. The form has no published parallel either from Jamestown or Williamsburg. An example with similar shoulders, but with a V-shaped blade edge, was found on the Challis pottery kiln site in James City County in a context of about 1730. [C.S.21F; unpublished.] E4.
3. Broad hoe, iron, with eye and part of the originally D-shaped blade surviving; the spine shallow, short and flat, with clearly impressed maker's initials I H within an oval. Circular and oval marks are common in the 17th century but are rare in the 18th.⁴⁶ E4.

⁴⁰ HENRY C. MERCER, "Ancient Carpenters' Tools," *Bucks County Historical Society* (Doylestown, Pa., 1951), p. 51 and fig. 49. JOHN L. COTTER, "Archeological Excavations at Jamestown, Virginia," *U.S. National Park Service Archeological Research Series*, no. 4 (Washington, 1958), p. 174, pl. 72 top.

⁴¹ COTTER, no. 1, p. 176, pl. 74 top.

⁴² These objects are extremely common on 18th-century sites. *Rosewell*, p. 224, and fig. 36, no. 8. *Tutter's Neck*, fig. 16, no. 12.

⁴³ MERCER op. cit., p. 295ff.

⁴⁴ Two larger examples were found in a cache of metal objects deposited in about 1730 and found on the Challis pottery kiln site in James City County. Two more were encountered in excavations on the Hugh Orr house and blacksmith shop site on Duke of Gloucester Street in Williamsburg where they apparently dated from the mid-18th century.

⁴⁵ CARL GUSTKEY, "Sir Francis Wyatt's Horse," *The National Horseman* (April 1953), [no pagination] fig. 2.

⁴⁶ The majority of marked 18th-century hoes excavated in Virginia exhibit rectangular stamps, while postcolonial marks tend to be stamped on the blades rather than the raised spines and without any die edge being impressed.

4. Hoe blade, iron, from which the eye and spine appear to have been removed. It cannot be ascertained whether the blade is part of a cut-down broad hoe or whether it was always roughly square in form. The latter shape was well represented in a cache of agricultural tools of uncertain date found in excavations at Green Spring in James City County.⁴⁷ E4.
5. Stirrup, iron, rectangular footplate with its surface hammered to increase the grip, the sides round-sectioned but flattened towards the leather-loop which is drawn out into ornamental ears. The style was common in the late 17th century. E4.
6. Forging chisel, iron, socketed for attachment to a wooden handle, the socket and shaft square-sectioned, the blade 2¼ inches wide and the cutting edge improved by a welded plate of superior metal extending 17⁄8 inches up the blade. Found behind a wallboard at floor level. B6A.
7. Cooper's chisel, iron, the blade 1¾ inches in width and with a groove running the length of the ¼-inch broad edge to grip the edge of the hoop while hammering it into place. The shaft is round-sectioned and spreads into a flat mushroom head. C4.
8. Wedge, iron, of large size, rectangular head measuring 2¾ inches by 17⁄8 inches, length 7¾ inches and weight 4 pounds. The head shows no evidence of heavy usage and consequently there is no clue as to why such an object should have been thrown away. A close parallel (7¼ inches in length) was found at Ste Marie I in Canada on the site of the early Jesuit settlement of 1639-1649.⁴⁸ B3A.
9. Spade, iron edge from wooden blade, the upper edge of the metal split and the extended sides possessing small winglike projections, and nails at the ends which together served to attach the iron to the wood. Iron edges for wooden spades are not included in the artifact collections from 18th-century Williamsburg, but were plentiful in various sizes in mid-17th-century contexts at Mathews Manor in Warwick County. [Unpublished.] C3.
10. Projectile, solid iron, cast in a two-piece mold, diameter 2¾ inches, weight 3 pounds 1 ounce. This is possibly a ball from a minion⁴⁹ whose shot weight is given in Chambers' *Cyclopaedia* (1738) as 3 pounds 4 ounces, the difference possibly being occasioned by the Clay Bank specimen's decayed surface. D3.

FIGURE 15

1. Basin, English delftware, reconstruction on basis of rim, body and base fragments, about 1680-1690. (Fig. 8, no. 4) A3, B1, B3, C3, C4, E2, F2, H3.
2. Basin as above, lower body fragments.
3. Basin as above, base fragment.
4. Mug or jug, lower body fragment, manganese stippled. First half of 17th century(?). (Fig. 8, no. 3.) E4.
5. Plate, English delftware, rim and base fragments (also section), decoration in two tones of blue, the fronds outlined in black. London(?). About 1670-1700. A3, E3.
6. Plate, English delftware, about 1680-1690. (Fig. 8, no. 1.) E4.
7. Tyg, black lead-glazed red ware, double handled; height conjectural. 17th century. (Fig. 8, no. 8.) A3, B3, B6A, C3, C4, E3, E9, F3, G2, G3A, H3, 10.
8. Tyg, rim sherd only, brown lead-glazed red ware, thinner than no. 7 and its ribbing not extending as close to the mouth; diameter approximately 4½ inches, 17th century. B1.
9. Mug, black lead-glazed red ware, thin-walled bulbous body; handle conjectural. The form's closest published parallel is a red ware example which was exhibited at the Burlington Fine Arts Club, London, in 1914, and bore the legend MR. THOMAS FENTON in white slip below the rim. The piece was identified as Staffordshire, about 1670.⁵⁰ A comparable mug was found in 1964 in excavations at Mathews Manor in Warwick County in a context of the second quarter of the 17th century. [W.S.199; unpublished.] A3, G3A, H3.
10. Rim sherd from large pan, red body liberally flecked with ocher, thin lead glaze, the rim folded

⁴⁷ LOUIS R. CAYWOOD, "Green Spring Plantation," *Archaeological Report*, Virginia 350th Anniversary Commission (Yorktown: United States National Park Service, 1955), pl. 9 (bottom).

KENNETH E. KIDD, *The Excavation of Ste Marie I* (Toronto: University of Toronto Press, 1949), p. 108 and pl. 24b.

⁴⁹ See p. 12 for a consideration of the ball's possible significance.

⁵⁰ *Catalogue of Exhibition of Early English Earthenware*, Burlington Fine Arts Club (London, 1914), p. 29 and fig. 41.

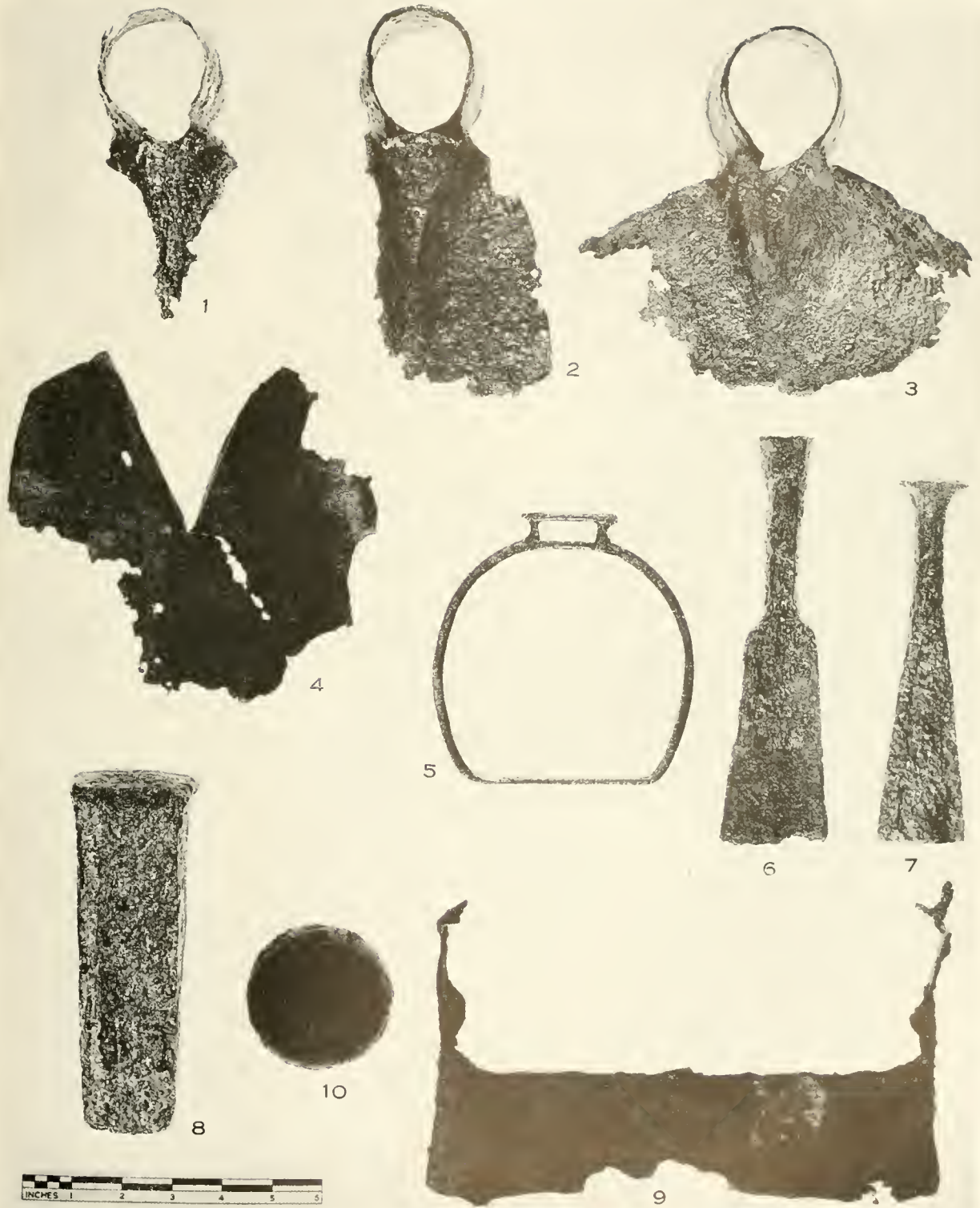


Figure 14.—IRON TOOLS, STIRRUP, and cannon ball.

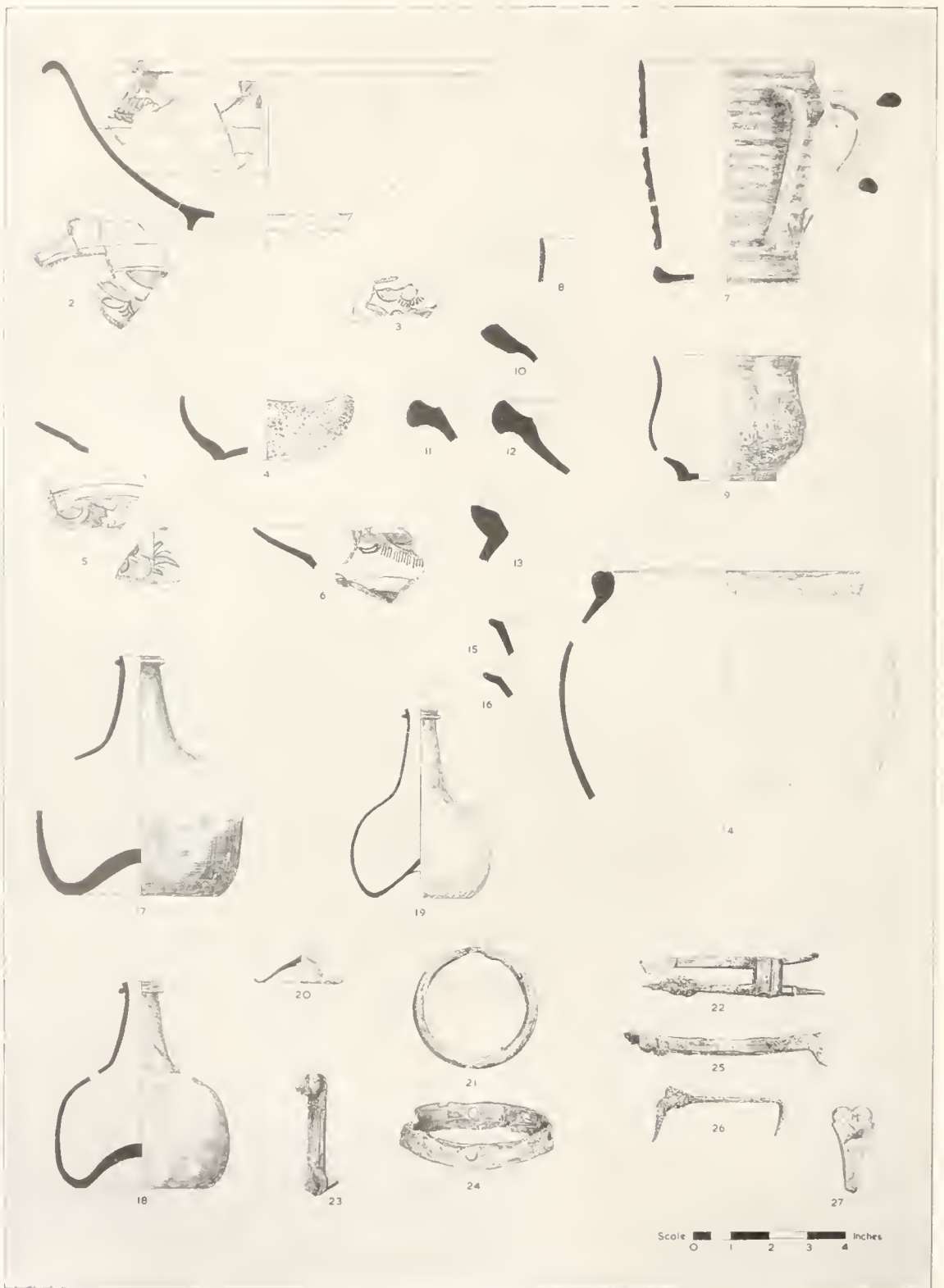


Figure 15.—DRAWINGS OF POTTERY, glass, and metal objects.

- and flattened on the upper edge. This fragment is of importance in that it is almost certainly made from the local Tidewater Virginia clay, yet the rim technique has not been found on any of the pottery kiln sites so far located. Date uncertain. K11.
11. Rim sherd from pan or wide bowl, red ware with greenish-brown lead glaze, the rim thickened and undercut. This form, and variants on it, were common from the mid-17th century and on through the 18th, and they are therefore impossible to date on stylistic grounds alone. Probably English. C4.
 12. Rim sherd from large shallow pan, red ware with yellowish-green lead glaze; the rim thickened, folded and undercut, the upper surface flattened and with a pronounced ridge at its angle with the bowl; diameter approximately 1 foot 6 inches. Dating considerations as no. 11. Probably English. E4.
 13. Rim sherd from storage jar, red ware with brown lead glaze, the rim thickened, folded, and flattened on the top; diameter approximately 10½ inches. The form was common from about 1650 to 1750. Probably English. E2.
 14. Storage jar or pipkin, pale-pink ware flecked with ocher and occasional granules of quartz, a clear lead glaze imparts an orange color to the surface, and is locally streaked with green. The rim is heart-shaped in section, having a groove along its upper surface, and the body is extremely finely potted. There is good reason to suppose that this vessel is of Virginia manufacture, in which case the 17th-century colony possessed a potter of greater ability than any of those whose kilns have yet been found. Another fragment of this pot, or one identical to it, was found to the southeast of the existing house. C4, E4, 10, K11.
 15. Rim sherd from wide bowl of Colono-Indian⁵¹ pottery, grey shell-tempered ware with stick- or pebble-burnished reduced surface, the rim everted and flattened. The ware is contemporary with the European artifacts from the site and is the earliest datable fragment yet recovered. A3.
 16. Rim sherd from bowl of Colono-Indian pottery, buff shell-tempered ware with stick- or pebble-burnished oxidized surface, the rim everted, flattened and very slightly dished. K11.
 17. Wine bottle, olive-green glass in an advanced state of decay, the neck short and broad and the mouth slightly everted over a roughly applied string rim, the body squat and slightly broader at the shoulder than at the base, a domed basal kick and no obvious pontil scar. This is a composite drawing illustrating the shape typical of the bottles from the Clay Bank site cellar hole. The two fragments cannot be proved to be part of the same bottle. About 1680–1700. Neck A2. Body F3.
 18. Wine bottle, half-bottle size, olive-green glass in an advanced state of decay, the form similar to the above but slightly weaker in the shoulder. About 1680–1700. C4.
 19. Bottle, in form of miniature wine bottle, the glass a pale green similar to that used in the making of pharmaceutical phials. (Fig. 9.) About 1680–1720. C4.
 20. Base of pharmaceutical bottle, pale-green glass with pronounced conical kick and rough pontil scar, the metal very thin. The principal dating characteristics of these bottles are the shapes of the mouths and the slope of the shoulders; in the absence of those, no close dating is possible.⁵² C4.
 21. Ring, iron, round section, considerable evidence of wear at one point on the inside edge suggesting that this object had been attached to a link of chain or perhaps has been held by a staple or eye. Such rings are frequently to be found attached to stalls in stables. B6A.
 22. Race knife, the dashed outline indicating the angle of the hinged blade in its open position. (See fig. 12, no. 3.) E4.
 23. Object of uncertain purpose, iron, slightly convex on the upper face, flat behind, and with a small, flat tongue projecting from the rear. A much rusted lump adhering to the front may conceal a similar projection or it may have simply attached itself in the ground. C3.
 24. Collar, iron, four unevenly spaced nail holes for attachment to a wooden shaft having an approximate diameter of 3½ inches. D6A.
 25. Object of uncertain purpose, iron, rectangular-sectioned bar narrowing to a small blade-like ear at one end and flattened into the opposite

⁵¹ IVOR NOËL HUME, "An Indian Ware of the Colonial Period," *Archeological Society of Virginia, Quarterly Bulletin* (September 1962), vol. 17, no. 1, p. 5.

⁵² IVOR NOËL HUME, "A Century of London Glass Bottles, 1580–1680," *The Connoisseur Year Book* (London, 1956), p. 102, fig. 14 right.

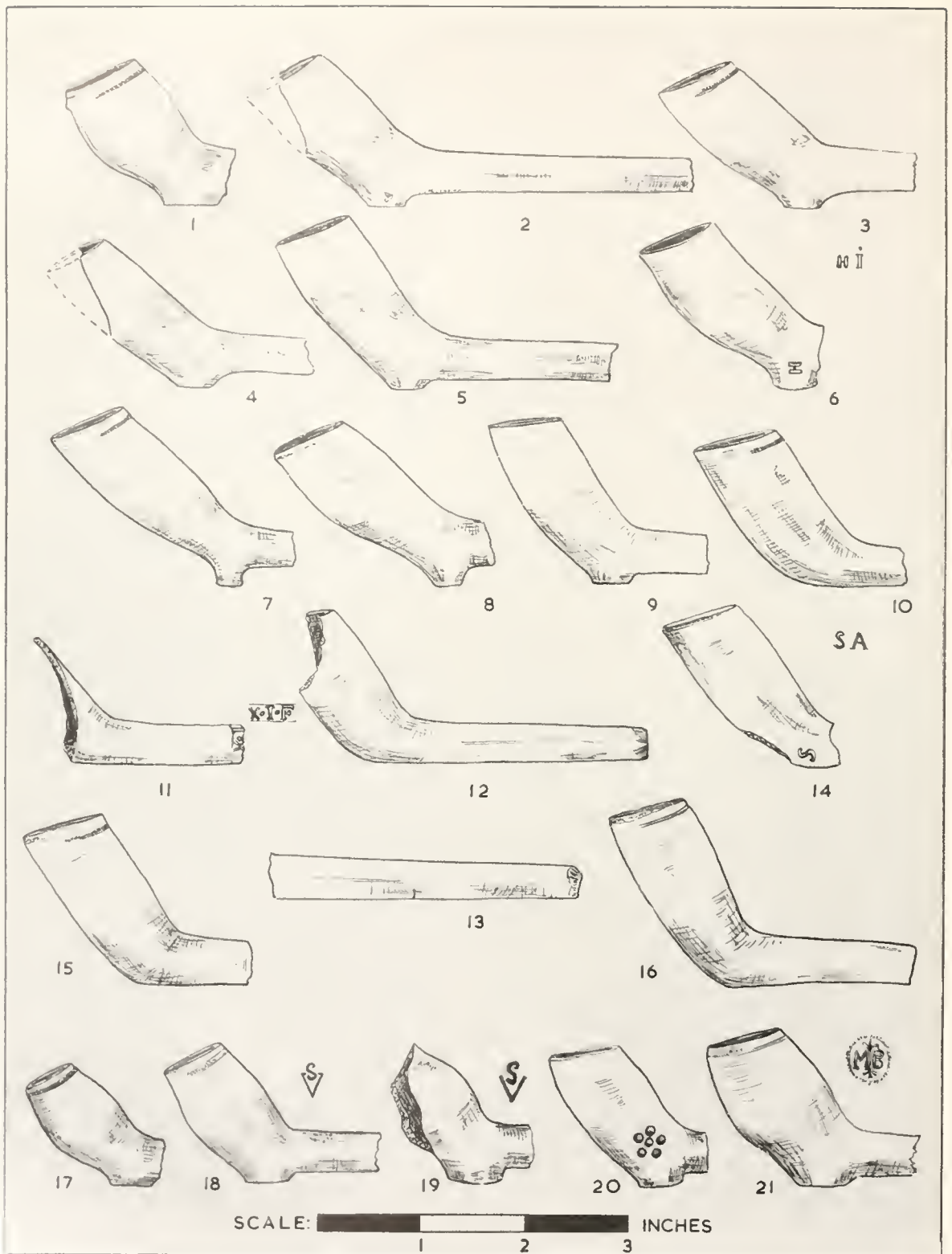


Figure 16. DRAWINGS OF TOBACCO-PIPE BOWL SHAPES from Clay Bank and Aberdeen Creek.

plain at the other, apparently for attachment. E4.

26. Staple or light handle for a small box, the narrow ends perhaps originally clenched and since broken. C3.
27. Handle of spoon, pewter, a heart-shaped terminal above two small lobes, the letter M stamped with a well-cut die close to the edge, and a roughly incised cross below it. A late 17th-century terminal form. K11.

FIGURE 16

1. Tobacco-pipe bowl, clay, white surface and grey core, the bowl heavy and bulbous, large flat heel, rouletted line below the mouth, stem-hole diameter $\frac{7}{64}$ inch. (See no. 19 for possible parallel.) About 1650–1690. E7.
2. Tobacco-pipe bowl and incomplete stem, clay, white surface and grey core, cylindrical bowl form with shallow heel extending from the fore edge of the bowl, initials V R on either side of heel, stem-hole diameter $\frac{9}{64}$ inch. About 1680–1700. E4. Another example from B6A.
3. Tobacco-pipe bowl, clay, white surface and grey core, form similar to No. 2, but the heel slightly more pronounced and with rouletted line below the mouth, stem-hole diameter $\frac{6}{64}$ inch. About 1680–1700. A3.
4. Tobacco-pipe bowl, white clay, form similar to no. 2, but more slender and the heel smaller, stem-hole diameter $\frac{6}{64}$ inch. About 1675–1700. E7.
5. Tobacco-pipe bowl, white clay, evolved form of no. 2, the bowl at a more pronounced angle to the stem, stem-hole diameter $\frac{6}{64}$ inch. About 1690–1720. A3.
6. Tobacco-pipe bowl, white clay, the bowl shape a cross between no. 2 and the more elegant and slender style of no. 7, pronounced and somewhat spreading heel with maker's initials H I on either side, stem-hole diameter $\frac{6}{64}$ inch. About 1670–1700. A3.
7. Tobacco-pipe bowl, clay, white surface and grey core, narrow "swan-neck" form with small heel that is almost a spur, rouletted line below the mouth, stem-hole diameter $\frac{7}{64}$ inch, about 1680–1700. E4.
Another example (not illustrated) bears the maker's initials WP (or R) on the sides of the

heel,³³ stem-hole diameter $\frac{6}{64}$ inch. A3.

8. Tobacco-pipe bowl, white clay, form similar to no. 7 except that the bowl is not quite as long and the fore edge of the heel is less pronounced, stem-hole diameter $\frac{6}{64}$ inch, about 1680–1700. A3.
9. Tobacco-pipe bowl, white clay, the bowl broader and at a sharper angle to the stem than in the preceding examples, the heel shallow and its fore edge extending from the bowl as in nos. 2 5, stem-hole diameter $\frac{6}{64}$ inch, about 1690–1720. A3. This example is significant in that it represents the evolutionary merging of the cylindrical and bulbous bowl forms, with their varying heels and spurs, into a single bowl shape that persisted through the 18th century. It should be noted that the illustrated bowl retains the thin-walled circular mouth common to most examples of its period. The mouth often becomes more oval and the walls thicker in specimens dating later into the 18th century.
10. Tobacco-pipe bowl, white clay, more or less cylindrical rouletted line below the mouth, and with neither heel nor spur. The absence of these last features is thought to have been dictated by English pipemakers catering for the American Indian market and initially copying aboriginal forms. Stem-hole diameter $\frac{7}{64}$ inch, about 1680–1700. H3.
11. Fragment of tobacco-pipe bowl and stem, clay, white surface and pink core to bowl, but burnt white through stem; bowl shape apparently similar to no. 10, stamped initials across top of stem at the fracture, I-F flanked on either side by a period and a cross,³⁴ stem-hole diameter $\frac{6}{64}$ inch. E4.
12. Tobacco-pipe bowl and stem fragment, white clay, the form very similar to no. 10 but without rouletting below the mouth. The pipe is of interest in that the stem fracture has been pared

³³ A William Partridge was named in the Bristol Freedom Roll for 1689, cf. OSWALD, *op. cit.* (footnote 30), p. 88.

³⁴ *Ibid.*, p. 70. Perhaps Jacob Fox, Bristol Freedom Roll for 1688, or John Fletcher, Chester Freedom Roll 1673, or Josiah Fox of Newcastle-under-Lyme who was working in 1684. Other examples with this mark occur in groups A3 and A4, also on the Harwood property (surface find) close to the north bank of Aberdeen (Clay Bank) Creek. See p. 14. A single unstratified example has been found in Williamsburg, coming from disturbed topsoil behind Capt. Orr's Dwelling on Duke of Gloucester Street.

down after breaking to create a new mouthpiece and a stem only approximately $2\frac{1}{4}$ inches in length. Stem-hole diameter $\frac{7}{64}$ inch, about 1680–1700. C4.

13. Tobacco-pipe stem fragment, white clay, broken off at junction with bowl and pared down at the other end as no. 12 thus creating a 3-inch stem. Hole diameter $\frac{6}{64}$ inch, date indeterminate. B6A.
14. Tobacco-pipe bowl, white clay, bowl shape similar to no. 2 but without heel; maker's initials on the base of the bowl, almost certainly SA though the companion initial has been lost from the other side.⁵⁵ Stem-hole diameter $\frac{6}{64}$ inch, about 1680–1700. C4.
15. Tobacco-pipe bowl, clay, white surface and grey core, slightly more evolved than no. 10 being more sharply angled at its junction with the stem as well as being slightly longer and narrower in the bowl. Note that this pipe still possesses the rouletted line below the mouth that tends to be characteristic of 17th-century examples. Stem-hole diameter $\frac{3}{64}$ inch, about 1690–1710. A3.
16. Tobacco-pipe bowl, clay, white surface and grey core, essentially similar to no. 15, but longer in the bowl and even more angled at its junction with the stem. Stem-hole diameter $\frac{6}{64}$ inch, about 1690–1710. B3A.

(Nos. 17–21 are surface finds from an as yet unexcavated site on farmland owned by Miss Elizabeth Harwood, approximately a mile and a

quarter south of Clay Bank, and north of Aberdeen Creek. They are included here as examples of earlier 17th-century occupation in the Clay Bank area, and because one of the stem fragments from this site bears the same X·I·E·X mark as appears on five examples (no. 11) from the Jenkins site cellar hole.)

17. Tobacco-pipe bowl, white clay, flat broad heel, the bowl somewhat bulbous in the mid section, neat rouletted line below the mouth. Stem-hole diameter $\frac{7}{64}$ inch, about 1630–1670.
18. Tobacco-pipe bowl, white clay with slipped surface, the bowl shape characteristic of the mid-17th century, flat heel, and roughly applied rouletted line below the mouth; maker's mark \checkmark stamped on upper surface of stem. Stem-hole diameter $\frac{7}{64}$ inch, about 1650–1690.
19. Tobacco-pipe bowl, fragment only, clay, white surface and grey core, the bowl extremely bulbous and with a pronounced flat heel. Maker's mark \checkmark stamped on the upper surface of the stem; dies different to those used for no. 18, but undoubtedly the same maker. This is important in that it illustrates the wide difference in bowl shapes produced, apparently contemporaneously, by a single maker. Stem-hole diameter $\frac{7}{64}$ inch, about 1650–1690.
20. Tobacco-pipe bowl, white clay, the bowl and early form of no. 3 ornamented on the sides with six molded dots in high relief,⁵⁶ the heel similar to no. 17 though slightly deeper. Stem-hole diameter $\frac{8}{64}$ inch, about 1640–1670.
21. Tobacco-pipe bowl, white clay with slipped surface, heavy bulbous bowl and flat heel with the maker's mark MB on the base; a narrow rouletted line around the bowl mouth. Stem-hole diameter $\frac{7}{64}$ inch, about 1650–1680.

⁵⁵ Oswald lists no maker with these initials in the appropriate period. However, a bowl impressed on the back with the initials SA over the date 1683 was found in the river Thames at Queenhithe (London) and is in the author's collection. See also D. R. ATKINSON, "Makers' Marks on Clay Tobacco Pipes Found in London," *Archaeological News Letter* (London, April 1962), vol. 7, no. 8, p. 184; no. 24; and fig. 2, no. 24. See also *Rosewell*, p. 221 (footnote 96).

⁵⁶ A pipe with similar ornament is in the author's collection of examples from the river Thames at London.