

CONTRIBUTIONS FROM
THE MUSEUM OF HISTORY AND TECHNOLOGY:

PAPER 13

NORTH DEVON POTTERY AND ITS EXPORT
TO AMERICA IN THE 17TH CENTURY

C. Malcolm Watkins



FIGURE 1. North Devon sgraffito cup, deep dish, and jug restored from fragments excavated from fill under brick drain at May-Hartwell site, Jamestown, Virginia. The drain was laid between 1689 and 1695. Colonial National Historical Park.

NORTH DEVON POTTERY AND ITS EXPORT TO AMERICA IN THE 17th CENTURY

Recent excavations of ceramics at historic sites such as Jamestown and Plymouth indicate that the seaboard colonists of the 17th century enjoyed a higher degree of comfort and more esthetic furnishings than heretofore believed. In addition, these findings have given us much new information about the interplay of trade and culture between the colonists and their mother country.

This article represents the first work in the author's long-range study of ceramics used by the English colonists in America.

THE AUTHOR: C. Malcolm Watkins is curator of cultural history, United States National Museum, Smithsonian Institution.

POTTERY SHERDS FOUND ARCHEOLOGICALLY in colonial sites serve a multiple purpose. They help to date the sites; they reflect cultural and economic levels in the areas of their use; and they throw light on manufacture, trade, and distribution.

Satisfying instances of these uses were revealed with the discovery in 1935 of two distinct but unidentified pottery types in the excavations conducted by the National Park Service at Jamestown, Virginia, and later elsewhere along the eastern seaboard. One type was an elaborate and striking yellow sgraffito ware, the other a coarse utilitarian kitchen ware whose red paste was heavily tempered with a gross water-worn gravel or "grit." Included in the latter class were the components of large earthen baking ovens. Among the literally hundreds of thousands of sherds uncovered at Jamestown between 1935 and 1956, these types occurred with relatively high in-

cidence. For a long time no relationship between them was noted, yet their histories have proved to be of one fabric, reflecting the activities of a 17th-century English pottery-making center of unsuspected magnitude.

The sgraffito pottery is a red earthenware, coated with a white slip through which designs have been incised. An amber lead glaze imparts a golden yellow to the slip-covered portions and a brownish amber to the exposed red paste. The gravel-tempered ware is made of a similar red-burning clay and is remarkable for its lack of refinement, for the pebbly texture caused by protruding bits of gravel, and for the crude and careless manner in which the heavy amber glaze was applied to interior surfaces. Once seen, it is instantly recognizable and entirely distinct from other known types of English or continental pottery. A complete oven (fig. 10), now restored at



FIGURE 2.—Sketch of sherd of sgraffito-ware dish, dating about 1670, that was found during excavations of C. H. Brannam's pottery in Barnstaple. (Sketch by Mrs. Constance Christian, from photo.)

Jamestown, is of similar paste and quality of temper. It has a roughly oval beehive shape with a trapezoidal framed opening in which a pottery door fits snugly.

Following the initial discoveries at Jamestown there was considerable speculation about these two types. Worth Bailey, then museum technician at Jamestown, was the first to recognize the source of the sgraffito ware as "Devonshire."¹ Henry Chandlee Forman, asserting that such ware was "undoubtedly made in England," felt that it "derives its inspiration from Majolica ware . . . especially that of the early Renaissance period from Faenza."²

Bailey also noted that the oven and the gravel-tempered utensils were made of identical clay and temper. However, in an attempt to prove that earthenware was produced locally, he assumed, perhaps because of their crudeness, that the utensils were made at Jamestown. This led him to conjecture that the oven, having similar ceramic qualities,

¹ Worth Bailey, "Concerning Jamestown Pottery—Its Past and Present," *Ceramic Age*, October 1939, pp. 101-104.

² H. C. Forman, *Jamestown and Saint Mary's*, Baltimore, 1938, p. 133.

was also a local product. He felt in support of this that it was doubtful "so fragile an object could have survived a perilous sea voyage."³

Since these opinions were expressed, much further archeological work in colonial sites has revealed widespread distribution of the two types. Bailey himself noted that a pottery oven is intact and in place in the John Bowne House in Flushing, Long Island. A fragment of another pottery oven recently has been identified among the artifacts excavated by Sidney Strickland from the site of the John Howland House, near Plymouth, Massachusetts; and gravel-tempered utensil sherds have occurred in many sites. The sgraffito ware has been unearthed in Virginia, Maryland, and Massachusetts.

Such a wide distribution of either type implies a productive European source for each, rather than a local American kiln in a struggling colonial settlement like Jamestown. Bailey's attribution of the sgraffito ware to Devonshire was confirmed in 1950 when J. C. Harrington, archeologist of the National Park Service, came upon certain evidence at Barnstaple in North Devon, England. This evidence was found in the form of sherds exhibited in a display window of C. H. Brannam's Barnstaple Pottery that were uncovered during excavation work on the premises. These are unmistakably related in technique and design to the American examples. A label under a fragment of a large deep dish (fig. 2) in the display is inscribed: "Piece of dish found in site of pottery. In sgraffiato. About 1670." This clue opened the way to the investigation pursued here, the results of which relate the sgraffito ware, the gravel-tempered ware, and the ovens to the North Devon towns and to a busy commerce in earthenware between Barnstaple, Bideford, and the New World.

This study, conducted at first hand only on the American side of the Atlantic, is admittedly incomplete. Later, it is planned to consider sherd collections in England, comparative types of sgraffito wares, and possible influences and sources of techniques and designs. For the present, it is felt the immediate evidence is sufficient to warrant the conclusions drawn here.

The author is under special obligation to J. C. Harrington, chief of interpretation, Region 1, National Park Service, who discovered the North Devon wares

³ Worth Bailey, "A Jamestown Baking Oven of the Seventeenth Century," *William and Mary College Quarterly Historical Magazine*, 1937, ser. 2, vol. 17, no. 4, pp. 496-500.

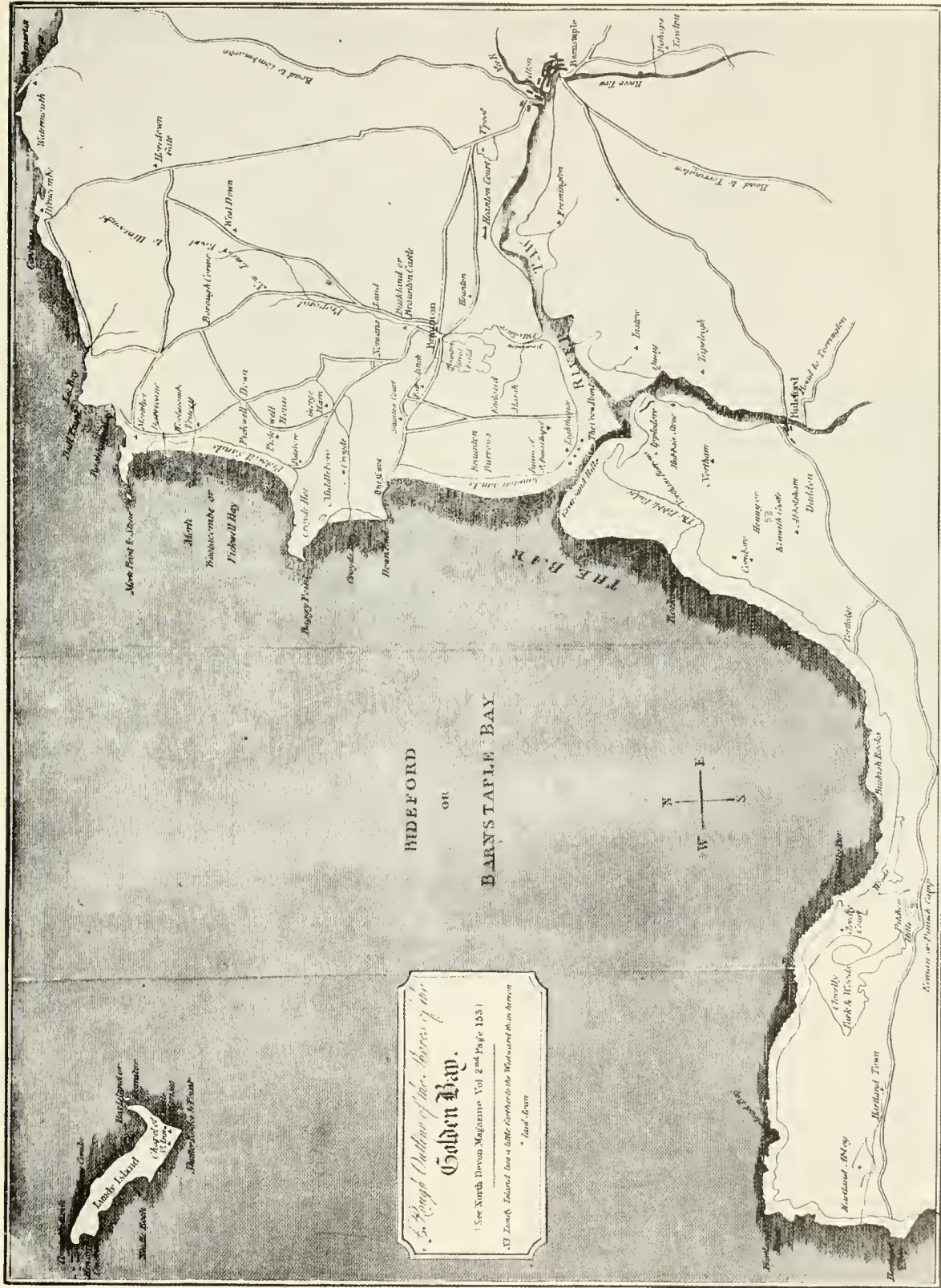


FIGURE 3. Map of the area around Bideford and Barnstaple. Reproduced from J. B. Gribble, *Memoirs of Barnstaple*, 1830.

and whose warm encouragement led to this paper. Also, the author is greatly indebted to the following for their help and cooperation: E. Stanley Abbott, superintendent, J. Paul Hudson, curator, and Charles Hatch, chief of interpretation, Colonial National Historical Park; Worth Bailey, Historic American Buildings Survey; Robert A. Elder, Jr., assistant curator, division of ethnology, U.S. National Museum; Miss

Margaret Franklin of London; Henry Hornblower II and Charles Strickland of Plimoth Plantation, Inc.; Ivor Noel Hume, chief archeologist, Colonial Williamsburg, Inc.; Miss Mildred E. Jenkinson, librarian and curator, Borough of Bideford Library and Museum; Frederick H. Norton, professor of ceramics, Massachusetts Institute of Technology; and Mrs. Edwin M. Snell of Washington.



Historical Background

Barnstaple and its neighbor Bideford are today quiet market centers and summer resorts. In the 17th and early 18th centuries, by contrast, they were deeply involved in trade with America and with the whole West of England interest in colonial settlement. Bideford was the home of Sir Richard Grenville, who, with Sir Walter Raleigh, was one of the first explorers of Virginia. As the leading citizen of Bideford, Grenville obtained from Queen Elizabeth a modern charter of incorporation for the town. Consequently, according to the town's 18th-century chronicler, "Bideford rose so rapidly as to become a port of importance at the latter end of Queen Elizabeth's reign . . . when the trade began to open between England and America in the reign of King James the First, Bideford early took a part in it."⁴ Its orientation for a lengthy period was towards America, and the welfare of its inhabitants was therefore largely dependent upon commerce with the colonies.

In common with other West of England ports, Barnstaple and Bideford engaged heavily in the Newfoundland fishing trade. However, "the principal part of foreign commerce that Bideford was ever engaged in, was to Maryland and Virginia for tobacco. . . . Its connections with New England were also very considerable."⁵

⁴ John Watkins, *An Essay Towards a History of Bideford in the County of Devon*, Exeter, 1792, p. 56.

⁵ *Ibid.*, pp. 65, 67-68.

During the first half of the 18th century Bideford's imports of tobacco were second only to London's, but the wars with France caused a decline about the year 1760.⁶ Barnstaple, situated farther up the River Taw, followed the pattern of Bideford in the rise and decline as well as the nature of its trade. Although rivals, both towns functioned in effect as a single port; Barnstaple and Bideford ships sailed from each other's wharves and occasionally the two ports were listed together in the Port Books. As early as 1620 seven ships, some of Bideford and some of Barnstaple registry, sailed from Barnstaple for America,⁷ but the height of trade between North Devon and the colonies occurred after the Restoration and lasted until the early part of the 18th century. In 1666, for example, the *Samuel* of Bideford and the *Philip* of Barnstaple sailed for Virginia, despite the dangers of Dutch warfare.⁸ The following year, on August 13, 1667, it was reported that 20 ships of the Virginia fleet, "bound to Bideford, Barnstaple, and Bristol have passed into the Severn in order to escape Dutch men-of-war."⁹ Later, in 1705, we find that the *Susanna* of Barnstaple, as well as the *Victory*, *~unt*,

⁶ *Ibid.*, p. 70.

⁷ Port Book, Barnstaple, 1620, Public Record Office, London (hereinafter referred to as *Port Book*), E 190/947.

⁸ *Virginia Magazine of History and Biography*, 1911, vol. 19, p. 31.

⁹ *Ibid.*, quoting Sainsbury Abstracts, p. 184.



FIGURE 4.—Old pottery in Torrington Lane (formerly Potter's Lane), East-the-Water section of Bideford. The photo was taken in 1920, just before the buildings were razed. (Courtesy of Miss M. E. Jenkinson.)

Devonshire, Laurell, Blackstone, and Mary and Hannah, all of Bideford, were anchored in Hampton Roads off Kecoughtan. They comprised one-ninth of a fleet of 63 ships from various English ports.¹⁰

Aside from such indications of a well-established mercantile trade, the entrenchment of North Devon interests in the colonies is repeatedly shown in other ways. Before 1645, Thomas Fowle, a Boston merchant, was doing business with his brother-in-law, Vincent Potter, who lived in Barnstaple.¹¹ In 1669, John Selden, a Barnstaple merchant, died after consigning a shipment of goods to William Burke, a merchant of Chuckatuck, Virginia. John's widow and administratrix, Sisely Selden, brought suit to recover these goods, which were "left to the sd. W^m Burke, &c, for the use of my late husband."¹²

¹⁰ *Virginia Magazine of History and Biography*, 1901, vol. 9, pp. 257-258.

¹¹ Bernard Bailyn, *The New England Merchants in the Seventeenth Century*, Cambridge, Massachusetts, 1955, p. 87.

¹² Isle of Wight County (Virginia) records, quoted in *William and Mary College Quarterly Historical Magazine*, 1899, ser. 1, vol. 7, p. 228.

Burke was evidently an agent, or factor, who acted in Virginia on Selden's behalf. In Northampton County, alone, there resided six Bideford factors, remarkable when one considers the isolated location of this Virginia Eastern Shore county and the sparseness of its population in the 17th century.¹³ John Watkins, the Bideford historian, adds further evidence of mercantile involvement with the colonies, stating of Bideford that "some of its chief merchants had very extensive possessions in Virginia and Maryland."¹⁴ Both in New England and the southern colonies, local merchants acted as resident agents for merchants based in the mother country. Often tied to the latter by

¹³ P. A. Bruce, *Economic History of Virginia in the Seventeenth Century*, New York, 1895, vol. 2, p. 334.

¹⁴ Watkins, *op. cit.* (footnote 4), p. 65.

bonds of family relationship, the factors arranged the exchange of American raw materials for the manufactured goods in which their English counterparts specialized.

That there was a large and important commerce in North Devon earthenware to account for many of the relationships between Bideford, Barnstaple, and the colonies seems to have remained unnoticed. Indeed, the fact that the two towns comprised an important center of earthenware manufacture and export in the 17th century has hitherto received little attention from ceramic historians, and then merely as sources of picturesque folk pottery. Yet in the excavations

of colonial sites and in the British Public Records Office are indications that the North Devon potters, for a time at least, rivaled those of Staffordshire.

The earliest record of North Devon pottery reaching America occurs in the Port Book entry for Barnstaple in 1635, when the *Truelove*, Vivian Limbry, master, sailed on March 4 for New England with "40 doz. earthenware," consigned to John Boole, merchant.¹⁵ The following year the same ship sailed for New England with a similar amount. After the Stuart restoration larger shipments of earthenware are recorded, as illustrated by sample listings (below) chosen from Port Books in the British Public Records Office.

TYPICAL SHIPMENTS OF EARTHENWARE FROM NORTH DEVON

(Sample entries from Port Books, verbatim)

BARNSTAPLE 1665¹⁶

Date	Ship	Master	For	In Cargo	Subsidy
26 Aug 1665	Exchange of Biddeford	W ^m Titherly	New England	150 doz. of Earthenware	s d 7 - 6
4 Sept 1665	Philipp of Biddeford	Edmond Prickard	Virginia	30 doz. of Earthenware	1 - 6
28 Nov 1665	Providence of Barnstaple	Nicholas Taylor	Virginia	20 doz. of Earthenware	1 - 0

BARNSTAPLE AND BIDEFORD, 1680¹⁷

Date	Ship	Master	Shipment
Aug 6 th 1680	Forester of Barnstaple, for Maryland	Christopher Browning	Twenty dozen of Earthenware Subsidy 1/
Sept 6	Loyalty of Barnstaple	Philip Greenslade	30 dozen Earthenware Andrew Hopkins, merchant Subsidy 1/6

¹⁵ *Port Book*, E 190/959/6.

¹⁶ *Ibid.*, E 190/954/6.

¹⁷ *Ibid.*, E 190/959/6.

BARNSTAPLE, 1681 ¹⁸

Date	Ship	Master	To	Goods & Merchants
May 30 1681	Seafare of Bideford	Bartholomew Shapton	New England	Forty-two hundred [weight] parcells of Earthenware Subsidy 7/
28 June	Hopewell of Bideford	Peter Prust	Virginia	30 cwt. parcells of Earthenware Peter Luxeron Merchant Subsidy 5/
Aug. 12	Beginning of Bideford	John Limbry	Virginia	15 cwt. parcells of Earthenware Subsidy 2/6 Richard Corkhill Merchant ¹⁹

BIDEFORD, 1681 ²⁰

Date	Ship	Master	To	Goods
21 June	Beginning of Bideford	Thomas Phillips	Virginia	Thirty hundred pells of Earthenware Joseph Conor merchant Subsidy 5/
19 July	John & Mary of Bideford	Thomas Courtis	Maryland	750 parcells of Earthenware John Barnes, Merchant Subsidy 1/3
14 Aug	Exchange of Bideford	George Ewings	Maryland	40 dozen earthenware William Titherly Merchant Subsidy 2/
Aug. 22	Merchants Delight of Bideford	William Britten	Virginia	1500 parcells Earthenware Henry Guinness Merchant Subsidy 2/6
Aug. 23	Hart of Bideford	Henry Penryn	Virginia	1500 parcells of Earthenware John Lord Merch ^t Subsidy 2 6

¹⁸ *Ibid.*, E 190/960/10.

¹⁹ Richard Corkhill was one of the six Bideford factors residing in Northampton County. Bruce, *op. cit.* (see footnote 13).

²⁰ *Port Book*, E 190/959/6.

1682—BARNSTAPLE ²¹

Date	Ship	Master	To	Cargo, etc.
Michaelmas Quarter	Robert & William of North ^{am}	John Esh	Maryland	30 dozen Earthenware Subsidy 1/6 William Bishop merchant

BIDEFORD 1682—OUTWARDS ²²

Date	Ship	Master	To	Cargo, etc.
May 15	Seafare of Bideford	John Titherley	New England	42 cwt. parcells of Earthenware Barth. Shapton Merchant Subsidy 7/
July 9	John & Mary of Bideford	Thomas Courtis	Maryland	9 cwt parcells of Earthenware John Barnes Merchant Subsidy 1/6
July 20	Merchant's Delight of Bideford	William Bruston	Maryland	6 cwt parcells of Earthenware Samuel Donnerd merchant
Sept. 11	Exchange of Bideford	Mark Chappell	Maryland	30 cwt. parcells of earthenware Subsidy 5/ William Titherly Merchant

BARNSTAPLE/BIDEFORD OUTWARDS 1690 ²³

Date	Ship	Master	To	Cargo, etc.
Aug. 23	Yarmouth of Bideford	Roger Jones	Maryland	300 parcells of Earthenware Subsidy 6 ^d
Sept. 11	Expedition of Bideford	Humphrey Bryant	Maryland	1,200 parcells of Earthenware Subsidy 2/
Sept. 23	Integrity of Bideford	John Tucker	Maryland	300 parcells of Earthenware Subsidy 6 ^d
Sept. 23	Happy Return of Bideford	John Rock	Maryland	750 parcells of Earthenware Subsidy 1/3
Sept. 23	Sea Faire of Bideford	Tym. Brutton	Maryland	1800 parcells of Earthenware Subsidy 3/

²¹ *Ibid.*, E 190/960/8.²² *Ibid.*, E 190/960/3.²³ *Ibid.*, E 190/966/10.

Date	Ship	Master	To	Cargo, etc.	Subsidy
Dec. 6	Happy Returne	John Hartwell	Maryland	450 parcels of Earthen ware	9d

Another source shows that the *Eagle* of Bideford arrived at Boston from her home port on October 11, 1688, with a cargo consisting entirely of 9,000 parcels of earthenware, while on July 28, 1689, the *Freindship* (sic) of Bideford landed 7,200 parcels of earthenware and one hogshead of malt. On August 24 of the same year the *Delight* brought a cargo of "9,000 parcels of earthenware and 2 fardells of dry goods" from Bideford.²⁵

It will be noted that there was a close relationship between vessel, shipmaster, and factor, suggesting that there may have been an equally close connection between all of them and the owners of the potteries. The *Exchange*, for instance, seems to have been regularly employed in the transport of earthenware. In 1665, according to the listings, she sailed to New England under command of William Titherly. By 1681 Titherly had become a Maryland factor to whom the Exchange's earthenware was consigned then and in 1682. In the same way Bartholomew Shapton in 1681 sailed as master on the *Sea Faire* with earthenware to New England, becoming in the following year the factor for earthenware sent on the same ship under command of John Titherly.

The proportion of earthenware cargo to the carrying capacity of the usual 17th-century ocean-going ship, which ranged from about 30 to 50 tons, is difficult to estimate. A ton and a half of milk pans nested in stacks would be compact and would occupy only a small amount of space. A similar weight of ovens might require a much larger space. When earthenware shipments are recorded in terms of parcels, we are again left in doubt, since the sizes of the parcels are not indicated. We know, however, that the *Eagle*, which was a 50-ton ship, carried 9,000 parcels

of earthenware as her sole cargo in 1688, in contrast to the much smaller amounts shown in the sample listings where the parcel standard is used. Yet even a typical shipment of 1,500 parcels, with each parcel containing an indeterminate number of pots, must have filled the needs of many kitchens when delivered in Virginia in 1681. Certainly a shipment such as this suggests a vigorous rate of production and an active trade.

The export of earthenware from North Devon was not solely to America. As early as 1601 there were shipped from Barnstaple to "Dublyn—100 dozen Earthen Pottes of all sorts." In later years, selected at random, we find the following shipments to Ireland from Barnstaple listed in the Public Record Office Port Books: 1617, 290 dozen; 1618, 320 dozen; 1619, 322 dozen; 1620, 508 dozen; 1632, 260 dozen; 1635, 300 dozen; 1636, 480 dozen; 1639, 660 dozen. Typical of the destinations were Kinsale, Youghal, Limerick, Cork, Galway, Coleraine, and Waterford. As the century advanced, this trade increased enormously. In 1694, 17 separate earthenware shipments totaling 50,400 parcels were made from Barnstaple and Bideford to Dublin, Wexford, and Waterford.²⁶ It is possible that some of these cargoes were shipped to America, since it was necessary to list only the first port of entry. However, the rapid turnaround of many of the ships shows this was not usually the case.

Besides Ireland, Bristol and Exeter were destinations in a busy coastwise trade. In 1681, for example, large quantities of earthenware, tobacco pipes, and pipe clay were sent to these places.²⁷ Bristol merchants probably re-exported some of the earthenware to America.

The coastwise trade appears to have diminished very little as time passed. In 1755, *The Gentlemen's*

²⁴ *Ibid.*, E 190/968/10.

²⁵ Colonial office shipping records relating to Massachusetts ports, typescript in Essex Institute, Salem, Massachusetts, 1931, vol. 1, p. 78.

²⁶ *Port Book*, E 190/939/14; 942/13; 944/8; 951.

²⁷ *Ibid.*, E 190/959/5.

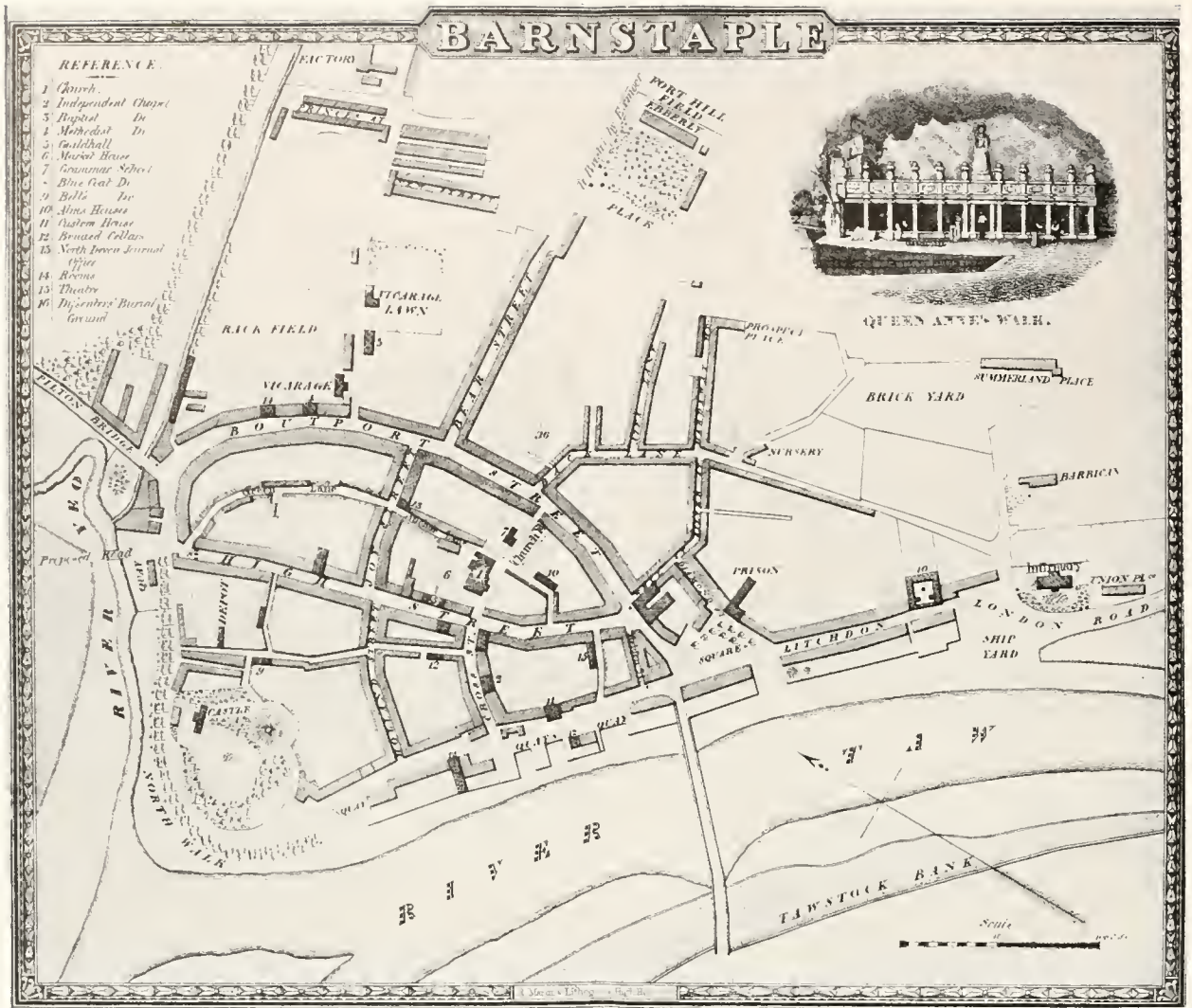


FIGURE 5.—Map of Barnstaple. Reproduced from J. B. Gribble, *Memorials of Barnstaple*, 1830.

Magazine carried an account of Biddeford, stating:²⁸

Great quantities of potters ware are made, and exported to Wales, Ireland, and Bristol . . . In the parish of Fremington are great quantities of reddish potters' clay, which

are brought and manufactured at Biddeford, whence the ware is sent to different places by sea.

John Watkins, in 1792, wrote:²⁹

The potters here, for making coarse brown earthenware, are pretty considerable, and the demand for the articles of their manufacture in various parts of the kingdom, is constantly great . . . The profits to the manufacturers of this article are very great, which is evidenced by several persons having risen within a few years, from a state of the greatest obscurity and poverty, to wealth and consequence of no small extent.

²⁸ "Some Account of Biddeford, in Answer to the Queries Relative to a Natural History of England," *The Gentlemen's Magazine*, 1755, vol. 25, p. 445.

²⁹ Watkins, *op. cit.* (footnote 4), pp. 74-75.



FIGURE 6.—Gravel-tempered oven of the 17th or early 18th century, acquired in Bideford. (USNM 394505.)

FIGURE 7.—Gravel-tempered oven from 17th-century house on Bideford Quay. Borough of Bideford Public Library and Museum. (Photo by A. C. Littlejohns.)

Not only was coastwise trade in earthenware maintained throughout the 18th century but it was continued, in fact, until the final decline of the potteries at the turn of the present century.

Although great antiquity attaches to the origins of North Devon pottery manufacture—Barnstaple has had its Crock Street for 450 years³⁰—the principal evidence of early manufacture falls into the second half of the 17th century. We have seen that a growing America provided an increasing market for North Devon's ceramic wares. In 1668 Crocker's pottery was established at Bideford, and it is in the period following that Bideford's importance as a pottery center becomes noticeable. Crocker's was operated until 1896, its dated 17th-century kilns then still intact after producing wares that varied little during all of the pottery's 228 years of existence.³¹

In Barnstaple the oldest pottery to survive until modern times was situated in the North Walk. When it was dismantled in 1900, sherds dating from the second half of the 17th century were found in the surroundings, as was a potter's guild sign, dated

1675, which now hangs in Brannam's pottery in Litchdon Street, Barnstaple. A pair of fire dogs, dated 1655 and shaped by molds similar to one from the North Walk site, was excavated near the North Walk pottery.

Both Bideford and Barnstaple had numerous potteries in addition to Crocker's and Brannam's. One, in Potter's Lane in the East-the-Water section of Bideford, was still making "coarse plain ware" in 1906;³² its buildings were still standing in 1920. We have already observed that the Litchdon Street works of C. H. Brannam, Ltd., remains in operation in a modern building on the site of its 17th-century forerunner. Outside the limits of the two large towns there were "a number of small pot works in remote districts," including the parish of Fremington, where Fishley's pottery, established in the 18th century, flourished until 1912.³³ Jewitt states that the remains of five old potteries were found in the location of Fishley's.³⁴

The clay with which all the potters worked came from three similar deep clay deposits in a valley run-

³⁰ T. M. Hall, "On Barum Tobacco-Pipes and North Devon Clays," *Report and Transactions of the Devonshire Association for the Advancement of Science, Literature, and Art*, Devon, 1890, vol. 22, pp. 317-323.

³¹ T. Charbonnier, "Notes on North Devon Pottery of the Seventeenth, Eighteenth, and Nineteenth Centuries," *Report and Transactions of the Devonshire Association for the Advancement of Science, Literature, and Art*, Devon, 1906, vol. 38, p. 255.

³² *Ibid.*, p. 256.

³³ Bernard Rackham, *Catalogue of the Glaisher Collection of Pottery and Porcelain in the Fitzwilliam Museum*, Cambridge, 1950, ed. 2, vol. 1, pp. 10-11.

³⁴ Llewellyn Jewitt, *The Ceramic Art of Great Britain*, London, 1883, ed. 2, pp. 206-207.



FIGURE 8.—Views of opening of oven in figure 7, photographed before its removal from house. This illustrates how oven was built into corner of fireplace and concealed from view. At right, the oven door is in place. (Photos by A. C. Littlejohns.)

ning parallel with the River Taw in the parishes of Tawstock and Fremington between Bideford and Barnstaple. A geologist in 1864 wrote that the clay is "perfectly homogeneous . . . exceedingly tough, free from slightest grit and soft as butter."³⁵ When fired at too high a temperature, he wrote, the clay would become so vesicular that it would float on water. The kilns were bottle-shaped and, according to tradition, originally were open at the top, like lime kilns; the contents were roofed over with old crocks.³⁶

Apparently all the potteries made the same types of wares, "coarse" or common earthenware having comprised the bulk of their product. The utilitarian redware was indeed coarse, since it was liberally tempered with Bideford gravel in order to insure hardness and to offset the purity and softness of the Fremington clay. An anonymous historian wrote in 1755:³⁷

³⁵ George Maw, "On a Supposed Deposit of Boulder-Clay in North Devon," *Quarterly Journal of the Geological Society of London*, 1864, vol. 20, pp. 445-451.

³⁶ Charbonnier, *op. cit.* (footnote 31), pp. 255, 259.

³⁷ "Supplement to the Account of Biddeford," *The Gentlemen's Magazine*, 1755, vol. 25, p. 564.

Just above the bridge [over the River Torridge] is a little ridge of gravel of a peculiar quality, without which the potters could not make their ware. There are many other ridges of gravel within the bar, but this only is proper for their use.

John Watkins wrote that Bideford earthenware "is generally supposed to be superiour to any other of the kind, and this is accounted for, from the peculiar excellence of the gravel which this river affords, in binding the clay." His claim that "this is the true reason, seems clear, from the fact that though the potteries at Barnstaple make use of the same sort of clay, yet their earthenware is not held in such esteem at Bristol, &c. as that of Bideford"³⁸ is scarcely supportable, since the Barnstaple potters also used the same Bideford gravel. The fire dogs found in Barnstaple with the date 1655, referred to above, were tempered with this gravel, as were "ovens, tiles, pip-

³⁸ Watkins, *op. cit.* (footnote 4), p. 74. However, the "bye-laws" of Barnstaple for 1689 indicate that tempering materials were also obtained locally: "Every one that fetcheth sand from the sand ridge, shall pay for each horse yearly 1^d, and for every boat of Crock Sand 1^d., according to the antient customc." (Joseph B. Gribble, *Memorials of Barnstaple*, Barnstaple, 1830, p. 360.)

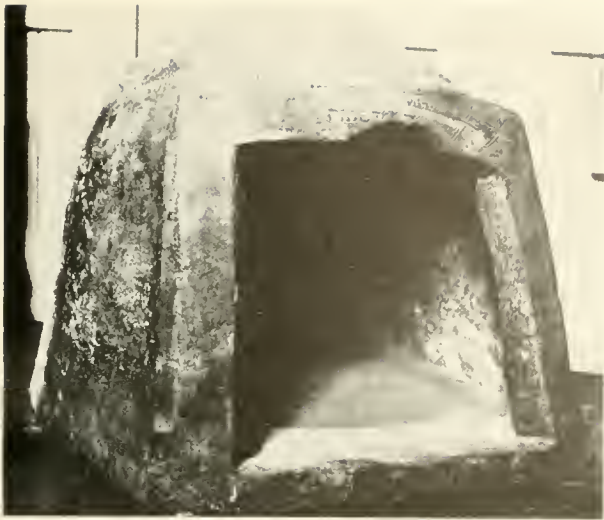


FIGURE 9.—Gravel-tempered oven made at Crocker pottery, Bideford, in the 19th century. Borough of Bideford Public Library and Museum. (Photo by A. C. Littlejohns.)



FIGURE 10.—Restored gravel-tempered oven from Jamestown. Colonial National Historical Park. (National Park Service photo.)

kins, etc.," in order "to harden the ware," according to Charbonnier, who also observed that "The ware generally was very badly fired. . . . From the fragments it can be seen that the firing was most unequal, parts of the body being grey in colour instead of a rich red, as the well-fired portions are." He noted that the potters applied "the galena native sulphide of lead for the glaze, no doubt originally dusted on to the ware, as with the older potters elsewhere."³⁹ A sherd of gravel-tempered ware is displayed in the window of Brannam's Barnstaple pottery, while a small pan from Bideford, probably of 19th-century origin, is in the Smithsonian collections (USNM 394440).

The most remarkable form utilizing gravel-tempered clay is found in the baking ovens which remained a North Devon specialty for over two centuries. These ovens vary somewhat in shape, and were made in graduated sizes. Most commonly they are rectangular with domed superstructures, having been molded or "draped" in sections, with their parts joined together, leaving seams with either tooled or thumb-impressed reinforcements. An oven obtained in Bideford has a flat top, without visible seams (USNM 394505; fig. 6).

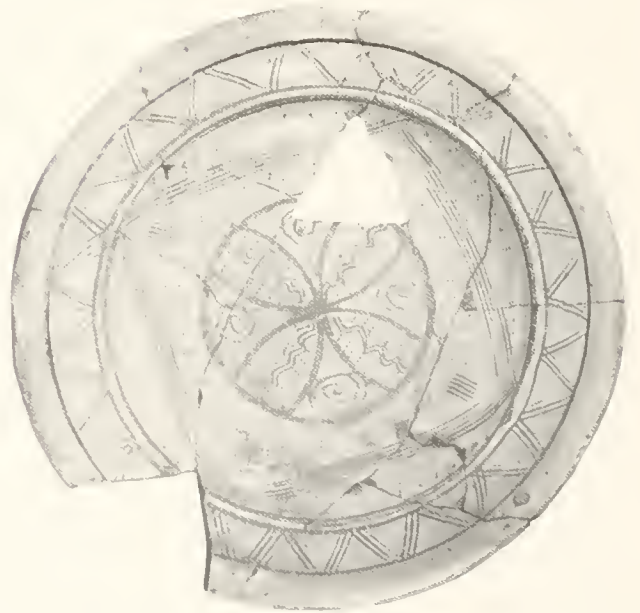
An early example occurs in Barnstaple, where, in a recently restored inn, an oven was found installed at the side of a fireplace which is "late sixteenth century in character." Pipes and a pair of woman's shoes, all dating from the first half of the 18th century, were found in the fireplace after it had been exposed, thus indicating the period of its most recent use.⁴⁰ An oven discovered intact behind a wall during alteration of a Bideford house is believed to date from between 1650 and 1675.⁴¹ That oven (figs. 7, 8) is now exhibited in the Bideford Museum.

At the other extreme, C. H. Brannam of Barnstaple in 1890 was still making ovens in the ancient North Walk pottery.⁴² The following year H. W. Strong wrote of Fishley's Fremington pottery that "shiploads of the big clay ovens in which the Cornishman bakes his bread . . . meet with a ready sale in

³⁹ B. W. Oliver, "The Three Tuns, Barnstaple," *Report and Transactions of the Devonshire Association for the Advancement of Science, Literature, and Art*, Torquay, Devon, 1948, vol. 80, pp. 151-152.

⁴⁰ Mildred E. Jenkinson in personal correspondence from Bideford, April 20, 1955.

⁴¹ Hall, *op. cit.* (footnote 30), p. 319.



the fishing towns on the rugged coast of North Cornwall.”⁴³ Fremington ovens also were shipped to Wales,⁴⁴ and, according to Jewitt, those made in the Crocker pottery in Bideford “are, and for generations

⁴³ H. W. Strong, “The Potteries of North Devon,” *Report and Transactions of the Devonshire Association for the Advancement of Science, Literature, and Art*, Devon, 1891, vol. 23, p. 393.

⁴⁴ Charbonnier, *op. cit.* (footnote 31), p. 257.

have been, in much repute in Devonshire and Cornwall, and in the Welsh districts, and the bread baked in them is said to have a sweeter and more wholesome flavour than when baked in ordinary ovens.”⁴⁵

Of ovens made at Barnstaple there is much the same kind of evidence. In 1851, Thomas Brannam

⁴⁵ Jewitt, *op. cit.* (footnote 34), vol. 1, pp. 205–206.



FIGURE 11.—Sgraffito-ware platters from Jamestown. The platter shown above has a diameter of 15 inches; the others, 12 inches. Colonial National Historical Park.

exhibited an oven at the Crystal Palace, where it was described as “generally used in Devonshire for baking bread and meat.”⁴⁶ In 1786, “Barnstaple ovens” were advertised for sale in Bristol at M. Ewers’

⁴⁶ *Great Exhibition 1851. Official, Descriptive, and Illustrated Catalogue*, London, 1851, p. 776, no. 131.

“Staffordshire, Broseley, and Glass Warehouse.”⁴⁷ Thirty-six years earlier, in 1750, Dr. Pococke, who indefatigably entered every sort of observation in his journal, noted that in Devonshire and Cornwall “they make great use here of Cloume ovens,⁴⁸ which are of earthen ware of several sizes, like an oven, and being heated they stop ’em up and cover ’em over with embers to keep in the heat.”⁴⁹ Pococke visited Calstock, “where they have a manufacture of coarse earthenware, and particularly of earthenware ovens.”⁵⁰

⁴⁷ W. J. Pountney, *Old Bristol Potteries*, Bristol, n.d., pp. 153-154.

⁴⁸ Cloume = cloam: “In O. E. Mud, clay. Hence, in mod. dial. use: Earthenware, clay . . . b. attr. or adj.” (J. A. H. Murray, ed., *A New English Dictionary on Historic Principles*, Oxford, 1893, vol. 2, p. 509.)

⁴⁹ J. J. Cartwright, ed., *The Travels through England of Dr. Richard Pococke*, Camden Society Publications, 1888, new ser., no. 42, vol. 1, p. 135.

⁵⁰ *Ibid.*, vol. 1, p. 131.

We have encountered only one other instance of ovens having been made at any place other than the North Devon communities around the Fremington clay beds. Calstock lies some 35 miles below Bideford in the southeast corner of Cornwall, just over the Devonshire boundary.

As for evidence concerning the manner in which these ovens were used in England, we have already seen that they were built into houses. Jewitt wrote that they "are simply enclosed in raised brickwork, leaving the mouth open to the front." They were heated until red hot by sticks or logs, which were then raked out with long iron tongs.⁵¹ A bundle of gorse, or wood, according to Jewitt,⁵² was sufficient to "thoroughly bake three pecks of dough." Pockocke's remarks to the effect that the ovens were covered over with embers to keep in the heat suggests that they were sometimes freestanding. However, this could also have been the practice when ovens were built into fireplaces.

From an esthetic point of view, the crowning achievement of the North Devon potters was their sgraffito ware, examples of which in Brannam's window display have already been noted. Further evidence in the form of 17th-century sherds was found by Charbonnier around the site of the North Walk pottery in Barnstaple. These consisted of "plates and dishes of various size and section . . . Extensive as the demand for these dishes must have been, judging from the heap of fragments, not a single piece has to my knowledge been found above ground."⁵³ The apparently complete disappearance of the sgraffito table wares suggests that they ceased to be made about 1700. They were apparently forced from the market by the refinement of taste that developed in the 18th century and by the delftware of Bristol and London and Liverpool that was so much more in keeping with that taste.

However, certain kinds of sgraffito ware continued to be made without apparent interruption until early in the present century. Instead of useful tableware, decorated with symbols and motifs characteristic of 17th-century English folk ornament, we find after 1700 only presentation pieces, particularly in the form of large harvest jugs. The harvest jugs were made for annual harvest celebrations, when they were passed around by the farmers among their field hands in a

folk ritual observed at the end of harvest.⁵⁴ Unlike the sgraffito tablewares, where style and taste were deciding factors in their survival, these special jugs were intended to be used only in annual ceremonies. Thus they were carefully preserved and passed on from generation to generation, with a higher chance for survival than that which the sgraffito tablewares enjoyed.

The style of the harvest jugs is in sharp contrast to that of the tablewares, the jugs having been decorated in a pagan profusion of fertility and prosperity symbols, mixed sometimes with pictorial and inscriptive allusions to the sea, particularly on jugs ascribed to Bideford. The oldest dated examples embody characteristics of design and techniques that relate them unmistakably to the tablewares, while later specimens made throughout the 18th and 19th centuries show an increasing divergence from the 17th-century style. An especially elaborate piece was made for display at the Great Exhibition of 1851 in the Crystal Palace.⁵⁵

Less complicated pieces, with a minimum of incising, were made for ordinary use, as were plain pieces whose surfaces were covered with slip without decoration. The trailing and splashing of slip designs on the body of the ware, practiced in Staffordshire and many of our colonial potteries, apparently was not followed in North Devon.⁵⁶

Sites Yielding North Devon Types

Excepting the Bowne House oven and a 1698 jug (see p. 45), no example of North Devon pottery used in America is known to have survived above ground. Archeological evidence, however, provides a sufficient record of North Devon wares and the tastes and customs they reflected. Following are descriptions of the principal sites in which these wares were found.

JAMESTOWN, VIRGINIA: MAY-HARTWELL SITE.

The site of Jamestown, first permanent English settlement in North America, has been excavated at intervals by the National Park Service. The early excavations were under the supervision of several

⁵⁴ Jenkinson correspondence (footnote 41).

⁵⁵ *Made in Devon. An Exhibition of Beautiful Objects Past and Present*. Dartington Hall, 1950, p. 9.

⁵⁶ Charbonnier, *op. cit.* (footnote 31), p. 258.

⁵¹ Jenkinson correspondence (see footnote 41).

⁵² Jewitt, *op. cit.* (footnote 34), pp. 206-207.

⁵³ Charbonnier, *op. cit.* (footnote 31), p. 258.



FIGURE 12.—Sgraffito-ware cup and plate from Jamestown. The cup is 4 inches high; the plate is 7 inches in diameter. Colonial National Historical Park.

archeological technicians directing Civilian Conservation Corps crews. In September 1936, J. C. Harrington became supervising archeologist of the project, and until World War II he continued the work as funds permitted. Except for the privately sponsored excavation of the Jamestown glasshouse site by Harrington in 1947, no extensive archeological work was thereafter undertaken until 1954, when John L. Cotter was appointed chief archeologist. Thorough exploration of Jamestown was his responsibility until 1956.⁵⁷

One of the most interesting subsites in the Jamestown complex was the two and one-half acres of lots which belonged successively to William May, Nicholas Merriweather, William White, and Henry Hartwell. The site was first explored in 1935. On this occasion there was disclosed a meandering brick drain that

had been built on top of a fill of artifactual refuse, mostly pottery sherds. The richness of this yield was unparalleled elsewhere at Jamestown; from it comes our principal evidence about the North Devon types sent to America.

The May-Hartwell site was explored further and in far greater detail in 1938 and 1939 by Harrington, whose unpublished typescript report is on file with the National Park Service.⁵⁸ Harrington's excavation, in the light of historical documentation, led to the conclusion that the brick drain had been laid during Henry Hartwell's occupancy of the site

⁵⁷ John L. Cotter, *Archeological Excavations at Jamestown, Virginia*. Archeological Research Series, no. 4, National Park Service, U.S. Department of the Interior, Washington, 1958.

⁵⁸ J. C. Harrington, *Archeological Report, May-Hartwell Site, Jamestown: Excavations at the May-Hartwell site in 1935, 1938, and 1939 and Ditch Explorations East of the May-Hartwell Site in 1935 and 1938*.



FIGURE 13.—Sgraffito-ware jugs, about 8 inches high, from Jamestown, Colonial National Historical Park.

between 1689 and 1695. This was supported by the inclusion in the fill of many bottle seals bearing Hartwell's initials, "H. H." Hartwell married the widow of William White, who had purchased the property from Nicholas Merriweather in 1677. That was the year following Bacon's Rebellion, when Merriweather's house presumably was destroyed.

There were many hundreds of sherds in the fill under and around the brick drain, as well as in other ditches in the site. The North Devon types were found here in association with numerous classes of pottery. The most readily identifiable were sherds of English delftware of many forms and styles of decoration related to the second half of the 17th century. There were occasional earlier 17th-century examples, also, as might be expected. No 18th-century intrusions were noted in the brick drain area, and only a scattering in other portions; none was found in association with the North Devon sherds.

JAMESTOWN, VIRGINIA: OTHER SITES.

North Devon wares occur in the majority of sites at Jamestown, but it is not always possible to date them from contextual evidence because precise archeological records were not always kept in the early phases of the excavations. Nevertheless, narrow dating is easily possible in enough sites to suggest date horizons for the wares.

The earliest evidence occurs in material from a well (W 21)—excavated in 1956⁵⁹—that contained an atypical sgraffito sherd described below (p. 43). The sherd lay beneath a foot-deep deposit that included Dutch majolica, Italian sgraffito ware, and tobacco pipes, all dating in form or decoration prior to 1650. This sherd is unique among all those found at Jamestown, but it is essentially characteristic of North Devon work. Presumably it is a forerunner of the typical varieties found in the May-Hartwell site and elsewhere.

No gravel-tempered sherds occur in contexts that can positively be dated prior to 1675. A sizable

⁵⁹ Cotter, *op. cit.* (footnote 57), p. 158.



FIGURE 14.— Sgraffito-ware jug and cups from Jamestown. Colonial National Historical Park.

deposit of gravel-tempered sherds was found between the depth of one foot and the level of the cellar floor of the mansion house site (Structure 112) located near the pitch-and-tar swamp. This house was built before 1650, but burned, probably during Bacon's Rebellion in 1676.⁶⁰ The sherds were doubtless part of the household equipment of the time. All other ceramic fragments, with one exception, were associated with objects dating earlier than 1660.

In sites dating from before about 1670, no North Devon wares are found, excepting the early sgraffito sherd mentioned above. Such was the case with a brick kiln (Structure 127) of early 17th-century date and two sites (Structure 110 and Kiln C) in the vicinity of the pottery kiln. In Structure 110 all the ceramics date from before 1650.⁶¹

The latest occurrence of gravel-tempered wares is in contexts of the early and middle 18th century. A pit

near the Ambler property (Refuse Pit 2)⁶² yielded a typical early 18th-century deposit with flat-rimmed gravel-tempered pans of characteristic type. Associated with these were pieces of blue delft (before 1725), Staffordshire "combed" ware (made throughout the 18th century, but mostly about 1730-1760), Nottingham stoneware (throughout the 18th century), gray-white Hohn stoneware (last quarter, 17th century), Buckley black-glazed ware (mostly 1720-1770), and Staffordshire white salt-glazed ware (1740-1770).

HAMPTON, VIRGINIA: KECOUGHTAN SITE.

In 1941, Joseph B. and Alvin W. Brittingham, amateur archeologists of Hampton, Virginia, excavated several refuse pits on the site of what they believed to be an early 17th-century trading post located at the original site of Kecoughtan, an Indian village

⁶⁰ *Ibid.*, pp. 112-119.

⁶¹ *Ibid.*, pp. 102-112.

⁶² *Ibid.*, pp. 151-152.



FIGURE 15. This sgraffito-ware chamber pot, from Jamestown, has incised on the rim *WR 16...*, probably in reference to the king. Height, 5½ inches. Colonial National Historical Park.



FIGURE 16.—Sgraffito-ware harvest jug made in Bideford, with the date "1795" inscribed. Borough of Bideford Public Library and Museum. (Photo by A. C. Littlejohns.)

and colonial outpost settlement which later became Elizabeth City, Virginia. Rich artifactual evidence, reflecting on a small scale what was found at Jamestown, indicates a continuous occupancy from the beginning of settlement in 1610 to about 1760.⁶³ The collection was given to the Smithsonian Institution in 1950.

JAMES CITY COUNTY, VIRGINIA: GREEN SPRING PLANTATION.

In 1642 Sir William Berkeley arrived in Virginia to be its governor. Seven years later he built Green Spring, about five miles north of Jamestown. The house remained standing until after 1800. Its site was excavated in 1954 by the National Park Service under supervision of Louis R. Claywood, Park Service archeologist.⁶⁴ The project, supported jointly by the

Jamestown-Williamsburg-Yorktown Celebration Commission and the Virginia 350th Anniversary Commission, was executed under supervision of Colonial National Historical Park at Yorktown, Virginia.

WILLIAMSBURG, VIRGINIA: EARLY 18TH-CENTURY DEPOSITS.

A small amount of North Devon gravel-tempered ware was found in sites excavated in Williamsburg by Colonial Williamsburg, Inc. These excavations have been carried out as adjuncts to the Williamsburg restoration program over a 30-year period. Few of the North Devon sherds found can be closely dated, having occurred primarily in undocumented ditches, pits, and similar deposits. However, it is unlikely that any of the material dates earlier than the beginning of the 18th century, since Williamsburg was not authorized as a town until 1699. It is significant, in the light of this, that North Devon pan sherds in the Williamsburg collection have characteristics like those of specimens from other 18th-century sites. Also sig-

⁶³ Joseph B. Brittingham and Alvin W. Brittingham, Sr., *The First Trading Post at Kicotan (Kecoughtan), Hampton, Virginia*, Hampton, 1947.

⁶⁴ Louis R. Claywood, *Excavations at Green Spring Plantation, Yorktown*, 1955.



FIGURE 17.—Views of North Devon harvest jug used in Sussex County, Delaware. This jug, 11 inches high and dated 1698, is in the collection of Charles G. Dorman. The inscription reads:

“Kind S^r: i com to Gratifey youre Kindness Love and
and Courtisy and Sarve youre table with Strong beare for this
intent i was sent heare: or if you pleas i will supply youre workmen when in
harvist dry when they doe labour hard and swear^e good drinke is better far then Meat”

nificant is the fact that no sgraffito ware occurs here. A gravel-tempered pan (fig. 23) from the Coke-Garrett House site was found in a context that can be dated about 1740–1760.

WESTMORELAND COUNTY, VIRGINIA: SITE OF JOHN WASHINGTON HOUSE.

In 1930 the National Park Service became custodians for “Wakefield,” the George Washington birthplace site on Pope’s Creek in Westmoreland County. About a mile to the west of “Wakefield” itself, but within the Park area, is the site of Bridges Creek Plantation, purchased in 1664 by John Washington, the earliest member of the family in America. It was occupied by John at least until his death in 1677, and probably by Lawrence Washington until a few years later. Much artifactual material was dug from the

plantation house site, including the largest deposits of North Devon types found outside of Jamestown.⁶⁵

STAFFORD COUNTY, VIRGINIA: MARIBOROUGH SITE.

A short-lived town was built in 1691 at the confluence of Potomac Creek and the Potomac River on Potomac Neck. The town was abandoned by 1720, but six years later became the abode of John Mercer, who developed a plantation there. The site of his house was excavated by the Smithsonian Institution in 1956. Two small sherds of North Devon gravel-tempered ware were found there in a predominantly mid-18th-century deposit.

⁶⁵ J. Paul Hudson, “George Washington Birthplace National Monument, Virginia,” National Park Service Historical Handbook Series, no. 26, Washington, 1956.

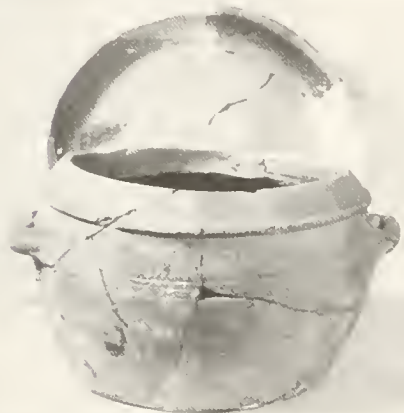
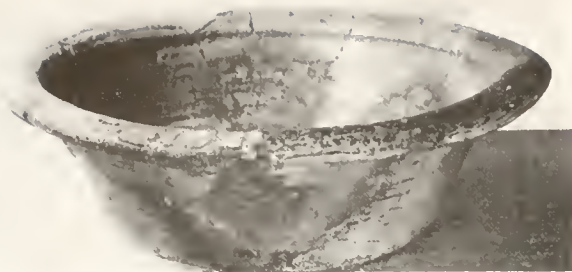


FIGURE 18.—Gravel-tempered pan (top) and cooking pot with cover, all from Jamestown. The pan has a height of $4\frac{1}{2}$ inches and a diameter of 15 inches. The pot is 6 inches high and $9\frac{1}{2}$ inches in diameter; the diameter of its cover is 10 inches. Colonial National Historical Park.

GALVERT COUNTY, MARYLAND: ANGELICA KNOLL SITE.

Since 1954 Robert A. Elder, Jr., assistant curator of ethnology at the United States National Museum, has been investigating the site on the Chesapeake Bay of a plantation or small settlement known as Angelica Knoll. This investigation has revealed a generous variety of gravel-tempered utensil forms, including both 17th and 18th century styles. The range of associated artifacts points to a site dating from the late 17th century to about 1765.

KENT ISLAND, QUEEN ANNE COUNTY, MARYLAND.

A small collection of late 17th-century and early 18th-century material—gathered by Richard H. Stearns near the shore of Kent Island, a quarter-mile south of Kent Island Landing—includes both North

Devon types. The collection was given to the United States National Museum.

LEWES, SUSSEX COUNTY, DELAWARE: TOWNSEND SITE.

The Townsend site was excavated by members of the Sussex County Archeological Society in 1947. This was primarily an Indian site, but a pit or well contained European artifacts, including a North Devon gravel-tempered jar (fig. 25). The village of Lewes, originally the Dutch settlement of Zwaanandael, was destroyed by the British, who occupied the area in 1664.⁶⁶ The European materials from the Townsend site were given to the United States National Museum.

PLYMOUTH, PLYMOUTH COUNTY, MASSACHUSETTS: "R.M." SITE.

A site of a house believed to have been Robert Morton's, located south of the town of Plymouth, was excavated by Henry Hornblower II. It contained North Devon gravel-tempered sherds. The collection is now in the archeological laboratory of Plimoth Plantation, Inc., in Plymouth.

ROCKY NOOK, KINGSTON, PLYMOUTH COUNTY, MASSACHUSETTS: SITES OF JOHN HOWLAND HOUSE AND JOSEPH HOWLAND HOUSE.

The John Howland house was built between 1628 and 1630; it burned about 1675. The site was excavated between September 1937 and July 1938 under supervision of the late Sidney T. Strickland.⁶⁷ Several gravel-tempered utensil sherds were found here, as well as a piece of an oven (see fig. 26). Artifacts from this and the following site are at the Plimoth Plantation laboratory.

The foundations of the Joseph Howland house, adjacent to the John Howland house site, were excavated in 1959 by James Deetz, archeologist at Plimoth Plantation. This is the only New England site of which we are aware that has yielded North Devon sgraffito ware. Two successive houses apparently

⁶⁶ Virginia Cullen, *History of Lewes, Delaware*, Lewes, 1956; C. A. Bonine, "Archeological Investigation of the Dutch 'Swanendael' Settlement under de Vries, 1631-1632," *The Archeologist, News Letter of the Sussex Archeological Association*, Lewes, December 1956, vol. 8, no. 3.

⁶⁷ S. T. Strickland, *Excavation of Ancient Pilgrim Home Discloses Nature of Pottery and Other Details of Everyday Life*, typescript, n.d.

stood on the site. Statistical evidence of pipe-stem-bore measurements points to 1680-1710 as the first principal period of occupancy.⁶⁸

MARSHFIELD, PLYMOUTH COUNTY, MASSACHUSETTS:
WINSLOW SITE.

This site, excavated by Henry Hornblower II and tentatively dated 1635-1699, yielded considerable quantities of gravel-tempered ware. Cultural material is predominantly from about 1675.

FLUSHING, LONG ISLAND, NEW YORK: THE JOHN BOWNE HOUSE.

The John Bowne House is a historic house museum at Bowne Street and Fox Lane, Flushing, Long Island, maintained by the Bowne House Historical Society. Bowne was a Quaker from Derbyshire, who built his house in 1661. A North Devon oven is still in place, with its opening at the back of the fireplace.

YORKTOWN, VIRGINIA.

The National Park Service has excavated at various locations in Yorktown, both in the neighboring battlefield sites and the town itself. Yorktown, like Marlborough, was established by the Act for Ports in 1691. In several of the areas excavated, occasional sherds of North Devon gravel-tempered ware were found. In refuse behind the site of the Swan Tavern, opened as an inn in 1722 but probably occupied earlier, a single large fragment of a 15-inch sgraffito platter was discovered. No other pieces of this type were found, associated artifacts having been predominantly from the 18th century.

Descriptions of Types

NORTH DEVON SGRAFFITO WARE

Sites: Jamestown, Kecoughtan, Green Spring, John Washington House, Kent Island, Yorktown, Joseph Howland House.

PASTE

Manufacture: Wheel-turned, with templates used to shape collars of jugs and to shape edges and sometimes ridges where plate rims join bezels.

⁶⁸ James Deetz, *Excavations at the Joseph Howland Site (C5), Rocky Nook, Kingston, Massachusetts, 1959: A Preliminary Report*, Supplement, *The Howland Quarterly*, 1960, vol. 24, nos. 2, 3. The Pilgrim John Howland Society, Inc.



FIGURE 19.—Gravel-tempered bowl (top) and pipkins from Jamestown, Colonial National Historical Park.

Temper: Fine, almost microscopic, water-worn sand particles.

Texture: Fine, smooth, well-mixed, sharp, regular cleavage.

Color: Dull pinkish red, with gray core usual.

Firing: Two firings, one before glazing and one after. Usually incomplete oxidation, shown by gray core. A few specimens have surface breaks or flakings incurred in the firing and most show warping (suggesting that "rejects," unsalable in England, were sent to the colonists, who had no recourse but to accept them).

SURFACES

Treatment: Inner surfaces of plates and bowls and outer surfaces of jugs, cups, mugs, chamber pots, and other utensils viewed on the exteriors are coated with white kaolin slip. Designs are scratched through the slip while wet and into the surface of the paste, exposing the latter. Undersides of plates and chargers are often scraped to make irregular flat areas of sur-



FIGURE 20.—Gravel-tempered chafing dish from Jamestown. Colonial National Historical Park. (Smithsonian photo 43104.)

face. Slip-covered portions are coated with amber glaze by sifting on powdered galena (lead sulphide). Containers which are slipped externally are glazed externally and internally. Slip and glaze do not cover lower portions of jugs, but run down unevenly.

Color: Slipped surfaces are white where exposed without glaze. Unglazed surfaces are a dull terra cotta. The glaze varies in tone from honey color to a dark greenish amber. When applied over the slip, the glaze ranges from lemon to a toneless brown-yellow, or, at best, a sparkling butter color. When applied directly over the paste and over the incised and abraded designs, the glaze appears as a rich mahogany brown or dark amber.

FORMS

Plates, platters, and chargers:

- (a) Diameter 7''-7½''. Upper surface slipped, decorated, and glazed. (Fig. 12.)
- (b) Diameter 12''; depth 2''-3''. Upper surface slipped, decorated, and glazed. (Fig. 11.)
- (c) Diameter 14½''-15''; depth 2''-3''. Upper surface slipped, decorated, and glazed. (Fig. 11.)

All have wide rims, but of varying widths, raised bezels, and heavy, raised, curved edges.

Baluster wine cups: Height 3¾''-4''. Slipped and decorated externally; glazed internally and externally. (Figs. 12, 14.)

Concave-sided mugs: Height about 4''. Slipped and decorated externally; glazed internally and externally. (Only complete specimen, at Jamestown, has incised band around rim.) (Fig. 14.)

Jugs: Height 6½'' and 8''-8½''. Globose bodies, vertical or slightly everted collars tooled in a series of ridged bands, with tooled rims at top. Some have pitcher lips, some do not. Slipped, decorated, and glazed externally above an incised line encircling the waist; glazed internally. (Figs. 13, 14.)

Eating bowls: Diameter, including handle, 9''-10''; depth 3¼''-4''. Straight, everted sides, flat rims, with slightly raised edges, one small flat loop handle secured to rim. Slipped, decorated, and glazed internally and on rim.

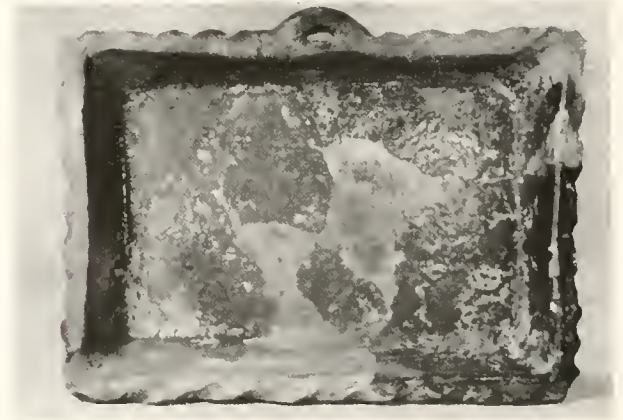


FIGURE 21.—Gravel-tempered baking pan from Jamestown. Length, 15 inches; width, about 12 inches. Colonial National Historical Park.

Chamber pots: Height 5½''. Curving sides, terminating at heavy, raised, rounded band surmounted by concave, everted rim. Rim 1'' wide and flat. Slipped, decorated, and glazed externally and internally. (Fig. 15.)

Candlestick: Unique specimen. Height 6''. Bell-shaped base with flange and shaft above with socket at top. Handle from bottom of socket to bottom of shaft. Upper portion slipped, decorated, and glazed.

Ripple-edged, shallow dish: Unique specimen. Diameter 9¼''. Concave, rimless dish or plate with edge crimped as for a pie or tart plate. Upper surface slipped, decorated, and glazed.

Technique: (1) Incising through wet slip into paste with pointed tool for linear effects. (2) Excising of small areas to reveal paste and to strengthen tonal qualities of designs. (3) Incising with multiple-pointed tools having three to five points, to draw multiple-lined stripes. (4) Stippling with same tools.

Motifs: The motifs are varied and never occur in any one combination more than once. There are two general categories of design, geometric and floral, although in some cases these are joined in the same specimen.

In the geometric category, the majority of plate rims are decorated with hastily drawn spirals and *guilloches*. The centers may have circles within squares, circles enclosing compass-drawn petals, circles within a series of swags embellished with lines. Triple-lined chevrons decorate the border of one plate. A chamber pot is decorated with diagonal stripes of multiple lines, between which wavy lines are punctuated by small excised rectangles. Some cups, jugs, and the candlestick are simply decorated with vertical stripes, between which are wavy lines, stippling, and excised blocks.

The floral category includes elaborate and intricate stylized floral and vine motifs: tulips, sunflowers, leaves, tendrils, hearts, four-petaled flowers. One plate (fig. 11) combines the geometric feeling of the first category with the floral qualities of the second in its swag-and-tassel rim and swagged band, which encloses a sunflower springing from a stalk between two leaves.

The design motifs are unique in comparison with those found on other English pottery of the 17th century. The geometrical patterns and spiral ornaments, which also occur in Hispanic majolica, have



FIGURE 22.—Slip-coated porringers and drinking bowl (center). Colonial National Historical Park.



FIGURE 23.—North Devon gravel-tempered pan with typical terra cotta paste and characteristic 18th-century flattened rim, slightly undercut on the interior. This pan, measuring $13\frac{1}{4}$ inches in diameter and $4\frac{3}{8}$ inches high, was found at the Coke-Garrett house site in Williamsburg, Virginia, in a context attributed to the period about 1740–1760. Colonial Williamsburg, Inc. (*Colonial Williamsburg photo 59-DW-703-44*.)

a Moorish flavor. Christian symbols—especially tulips, sunflowers, and hearts—are recurrent, as they are on contemporary West-of-England furniture, pewter, and embroidery and on the carved chests, and crewel work of Puritan New England. There is considerable reason to believe that there was a connection between North Devon sgraffito-ware manufacture and design on the one hand and the influx of Huguenot and Netherlands Protestant artisans into southern and southwestern England on the other. Low Country immigrant potters were responsible for two other ceramic innovations elsewhere in England—stoneware and majolica.

ATYPICAL SPECIMEN

Already mentioned is a large fragment of a dish found in a context not later than 1640 and cruder and simpler in treatment than the remainder of North Devon sgraffito ware thus far seen. It nevertheless belongs to the same class. Its paste has the same



FIGURE 24.—Gravel-tempered pan sherds from Kecoughtan site, Hampton, Virginia. United States National Museum.

UNIQUE FEATURE

characteristics of color and fracture, while the firing has left the same tell-tale gray core found in a large proportion of North Devon sherds. Surface treatment techniques match those reflected in the typical dish sherds—glazed slip over the red paste on the interior; unglazed, scraped, and abraided surfaces on the underside. The yellow color is paler and the glazed surface is duller. The rim has a smaller edge and omits the heavy raised bezel usually occurring on the typical plates and chargers. The design motifs—crude and primitive in comparison with those described above—consist of a series of stripes on the rim, drawn at right angles to the edge with a four-pointed tool, and crude hook-like ornaments traced with the same tool in the bowl of the plate. This may be regarded as a forerunner of the developed sgraffito ware made in the second half of the 17th century.

The flat rim of a chamber pot from Jamestown (fig. 15) has “WR 16 . . .” scratched through the slip. It is probable that the initials indicate “William Rex,” for William III, who became king in 1688. Why the king should be memorialized in such an undignified fashion could be explained by the fact that Barnstaple and Bideford were strongly Puritan and also Huguenot centers. Although William was a popular monarch, he was, nevertheless, head of the Church of England, and an anti-royalist, Calvinist potter might well have expressed an earthy contempt in this way. Later, in the 18th century, George III appears to have been treated with similar disrespect by Staffordshire potters, who made saltglazed chamber pots in the style of Rhenish Westerdal drinking jugs, flaunting “GR” emblems on the sides. Owners’ initials or names do not occur on any of the North Devon wares found in American sites, nor do the initials of the potters. Otherwise, it would seem unlikely that the only exception would appear on the rim of a chamber pot.

Sherds owned by C. H. Brannam, Ltd., and excavated at the site of the Litchdon Street pottery in Barnstaple.—The largest of these is part of a deep dish (fig. 2). Its border design seems to be a degenerate form of a beetle-like device found on Portuguese majolica of the period. From a crude oval with a stippled line running the length of it, extends a spiral scroll, terminating in a heavy dot, reminiscent of the tendrils found on the Portuguese examples. From incised lines near the rim and on the edge of the bezel are small linear “hooks.” The interior has sunflower petals flanking a short, stylized palmette, with another stalk and pair of leaves above, reaching up to what may have been an elaborate floral center, now missing. This decoration resembles closely the interiors of the floral-type plates and chargers found at Jamestown. A section of plate rim is similar to typical rims found in American sites. The surface color is the butter yellow found on the best Jamestown pieces. Paste color also matches.

Sherds from the North Walk pottery in Barnstaple, described by Charbonnier.—These were found near the site, on the banks of the Yeo and in a pasture. They include plates and dishes, some finished and others thrown out in the biscuit state. Charbonnier illustrates a plate with a zig-zag or chevron border and an incised bird in the center. The chevron appears on Jamestown specimens but the bird does not.

Harvest jugs.—18th-century North Devon harvest jugs examined by the writer display the same characteristics of paste, slip, and glaze as the Jamestown sherds. However, the jugs differ stylistically to a marked degree, suggesting that later potters were not affected by the influences that appear in the earlier work (fig. 16). The earliest harvest jug of which we are aware is a hitherto unrecorded example, dated 1698, that is in the collection of Charles G. Dorman. This is the only harvest jug yet encountered with a history of use in America and the only North Devon sgraffito piece known to have survived above ground on this continent. It is a remarkably vigorous pot, having a great rotund body, a high flaring collar, and a lengthy inscription (see fig. 17). A female figure under a wreath of pomegranates forms the central motif. The head is turned in left profile, with hair cascading to the shoulders. The bust is highly stylized in an oval shape, within which are intersecting curved lines forming areas decorated with diagonal incising or with rows of short dashes. The design



FIGURE 25.—Gravel-tempered food-storage jar from Townsend site, Lewes, Delaware. Height, 12 inches; diameter at base, 9 inches. (USNM 60.1188; Smithsonian photo 38821.)

here is strongly reminiscent of the geometrical decoration on Jamestown plates and deep dishes. A pair of unicorns flanks the central figure, and behind each unicorn are a dove and swan, at left and right respectively. Under these are sunflowers and tulips, while a tulip stands above rows of leaves on a stem below the handle. Feather-like leaves flank the lower attachment of the handle. At the junction of the shoulder and collar is a narrow band of incised tulips. Above this is a heavy ridge from which springs the flaring collar. Under the spout is a male head, wearing a wig which is depicted in the same manner as the pomegranates on the wreath, and a

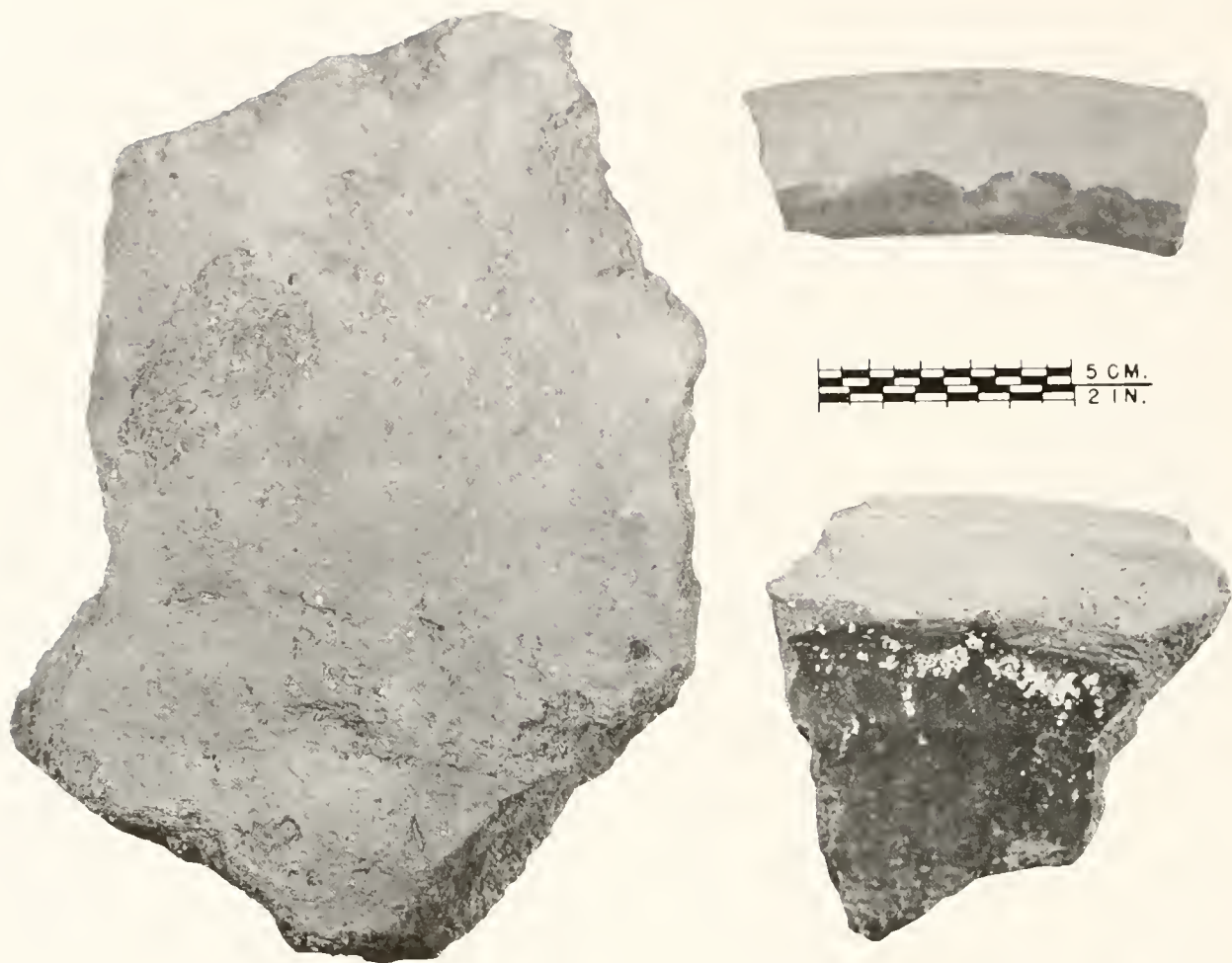


FIGURE 26.—Gravel-tempered sherds from Plymouth, Massachusetts: fragment of oven (left) and rim sherd (upper right), from John Howland house site; and pan-rim sherd from “R. M.” site. Plimoth Plantation, Inc., Plymouth. (*Smithsonian photo 45008-B.*)

stylized hat and stock-like collar. One suspects that the man is a clergyman, although his eyes are cast down in a most worldly manner upon the lady below. He is flanked by a pair of doves; behind each dove is a vertical tulip with stem and leaves.

Some of the shading is applied with a four-pointed tool, as in many of the Jamestown pieces, although the tool was smaller. The handle bears the same characteristics as those on jugs found at Jamestown—the same carelessly formed ridge, the same spreading, up-thrust reinforcement at the base of the handle.

Unlike the Jamestown jugs, this one is covered completely on the exterior with slip and glaze. However, since this was a presentation piece, we could expect more careful treatment than was usual on pots made for commercial sale.

The jug descended in a Sussex County, Delaware, family—on the distaff side, curiously. Family recollection traces its ownership back to the early 19th century, with an unsubstantiated legend that it was used by British soldiers during the Revolutionary War. We may conclude at least that the jug is not a recent import and surmise that it was probably brought to America as an heirloom by an emigrating Devon family, perhaps before the Revolution. Sussex County has a stable population, mostly of old-stock English descent. It was settled during the second half of the 17th and first half of the 18th centuries. There is a strong possibility, therefore,



FIGURE 27.—Gravel-tempered sherds from Angelica Knoll site, Calvert County, Maryland. United States National Museum. (*Smithsonian photo 45008-4.*)

that the jug was introduced into Delaware at a comparatively early date.

Many other harvest jugs have been similarly cherished in England. An almost exact counterpart of the Delaware jug, and obviously by the same potter, is in the Glaisher collection in Cambridge. This jug, dated "1703/4,"⁶⁹ displays such variations as absence of the male head and a different inscription. Another jug, with a hunting scene but with a similar neck and collar treatment, seems again to be

by the same hand; it is dated "1703."⁷⁰

From the standpoint of identifying and dating the archeologically recovered sgraffito ware, these jugs are important in showing certain traits similar

⁷⁰ John Eliot Hodgkin and Edith Hodgkin, *Examples of Early English Pottery, Named, Dated, and Inscribed*. London, 1891, p. 59.

⁶⁹ Rackham, *op. cit.* (footnote 33), vol. 2, p. 11, fig. 8D, no. 58.

to those found in the sherds, while displaying other characteristics that are distinctly different. They support the archeological evidence that the Jamestown pieces are earlier than the jugs and that new design concepts were appearing by the turn of the century in a novel type of presentation piece.

NORTH DEVON PLAIN SLIP-COATED WARE

This is a plain variant of the sgraffito ware, differing only in the absence of decoration and in some of the forms.

Site: Jamestown.

FORMS

Plates: Diameter 7''-11½''. Profiles as in sgraffito plates. Upper surface slipped and glazed.

Eating bowls: Diameter 9''; height 3½''. Profile and handle same as in sgraffito bowls. Slipped and glazed on interior and over rim.

Porrings: Diameter 5½''; height 2¾''. Ogee profiles. Horizontal loop handle applied ¾'' below rim on each. Slipped and glazed on interiors. (Fig. 22.)

Drinking bowls: Diameter of rim, including handle, 5''; height 2¾''-3''; diameter of base 2''. In shape of mazer bowl, these have narrow bases and straight sides terminating in raised tooled bands at the junctions with vertical or slightly inverted rims 1'' in height. Each has a horizontal looped handle attached at bottom of rim. Slipped and glazed on interiors. (Fig. 22.)

Wavy-edge pans: Diameter 9''-10''; height 2''. Flat round pans with vertical rims distorted in wide scallops or waves. Purpose not known. Slipped and glazed on interiors.

NORTH DEVON GRAVEL-TEMPERED WARE

Sites: Jamestown, Kecoughtan, Green Spring, Williamsburg, Marlborough, John Washington House, Kent Island, Angelica Knoll, Townsend, John Bowne House, "R. M.," Winslow, John Howland House.

PASTE

Manufacture: Wheel-turned, except ovens and rectangular pans, which are "draped" over molds. (See "Forms," below.)

Temper: Very coarse water-worn quartz and feldspathic gravel up to one-half inch in length; also occasional sherds. Proportion of temper 15-25 percent, except in ovens, which were about 30 percent.

Texture: Poorly kneaded, bubbly, and porous, with temper poorly mixed. Temper particles easily rubbed out of matrix. Very irregular and angular cleavage because of coarse temper. Hard and resistant to blows, but crumbles at fracture when broken.

Color: Dull pinkish red to deep orange-red. Almost invariably gray at core, except in ovens.

Firing: Carelessly fired, with incomplete oxidation of paste.

SURFACE

Treatment: Glazed with powdered galena on interiors of containers, never externally. Glaze very carelessly applied, with much evidence of dripping, running, and unintentional spilling.

Texture: Very coarse and irregular, with gravel temper protruding.

Color: Unglazed surfaces range from bright terracotta to reddish buff. Glazed surfaces on well-fired pieces are transparent yellow-green with frequent orange splotches. Overfired pieces become dark olive-amber, sometimes approaching black. Rare specimens have slipped interiors subsequently glazed, with similar butter-yellow color effect as in sgraffito and plain slip-coated types.

FORMS

All forms are not completely indicated, there being many rims not represented by complete or reconstructed pieces. The following are established forms.

Round, flat-bottomed pans: Diameter 16'', height 4''; diameter 16'', height 5''; diameter 18'', height 4''; diameter 15'', height 4½''; diameter 13¼'', height 4¾''. Heavy rounded rims. Glazed internally below rims. These were probably milk pans, but may also have served for cooking and washing. Those lined with slip may have functioned as wash basins. (Figs. 18, 23.)

Round, flat-bottomed pans: Diameter approximately 19'', height unknown. (No complete specimen.) Heavy rims, reinforced with applied strips of clay beneath external projection of rim. Reinforcement strips are secured with thumb impressions or square impressions made by end of flat tool. (Figs. 28, 29.)

Cooking pots: Diameter 12'', height 6''; diameter 8'', height 5''. Curving sides, terminating at tooled concave band with flattened, slightly curving rim above. Glazed inside.

Bowls: Diameter 8'', height 5''. Sides curved, with flattened-curve rims, tooled bands below rims. Glazed internally. (Fig. 19.)

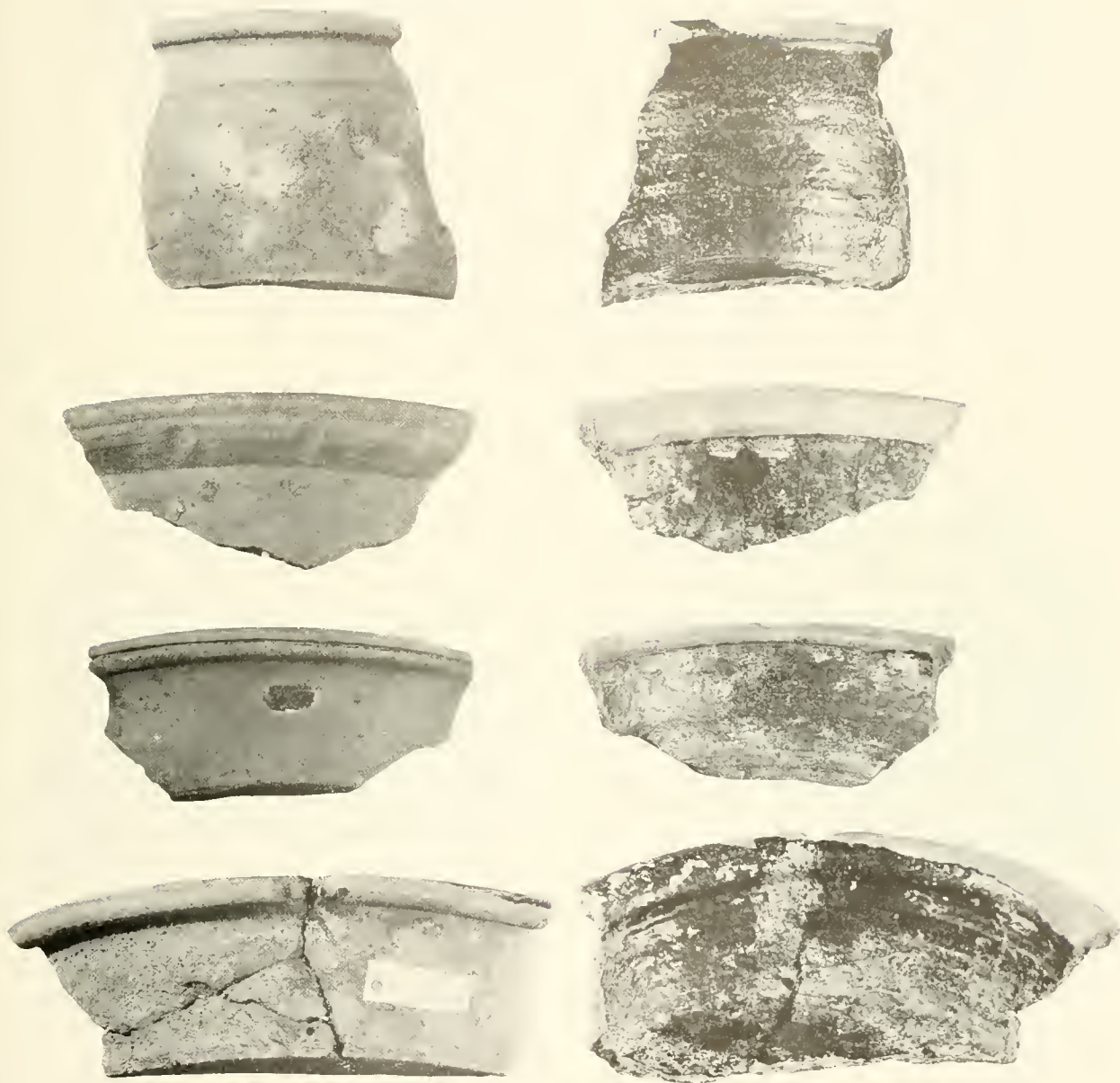


FIGURE 28.—Exteriors (left) and interiors of gravel-tempered sherds. Top to bottom: bowl; pan; heavy pan with reinforced rim; and pan with 18th-century-type rim. Colonial National Historical Park. (From Smithsonian photos 43039-A, 43041-A.)

Cooking pots: Diameter (including handles) 9½'', height 6''. Profile a segmented curve, with rim the same diameter as base. Exterior flange to receive cover. Small horizontal loop handles. Band of

three incised lines around waist. (Fig. 18.)

Cooking pot covers: Diameters 7'', 10'', 10½'', 11''. Flat covers, with downward-turned rims. Off-center loop handles, probably designed to facilitate exam-



FIGURE 29.—Exteriors (left) and interiors of gravel-tempered sherds. Pan (top) with 18th-century-type rim, and handle of heavy pan with reinforced rim. Colonial National Historical Park. (From Smithsonian photos 43039-C, 43039-D.)

ination of contents of pot by permitting one to lift up one edge of cover. Covers are sometimes numbered with incised numerals. Unglazed. (Fig. 18.)

Pipkins: Diameter 7'', height 3''; diameter 8½'', height 3½''; diameter 8¼'', height 4''; diameter 8'', height 5''. Curving sides, terminating at tooled concave band with flattened, slightly curved rim above. Three stubby legs. Stub handle crudely shaped and

casually applied at an upward angle. Glazed inside. Used as a saucepan to stand in the coals. (Fig. 19.)

Rectangular basting or baking pans: Length 15'', width 11¾'' (dimensions of single restored specimen at Jamestown; many fragments in addition at Jamestown and Plymouth). Drape-molded. Reinforced scalloped rim. Heavy horizontal loop handles are sometimes on sides, sometimes on ends. Glazed inside. (Fig. 21.)

Storage jars: Various sizes. The one wholly restored specimen (Lewes, Delaware) has a rim diameter of 8'' and a height of 12½''. Rims of largest examples (diameters 7'', 10'', 12'') have reinforcement strips applied below external projection. Heavy vertical loop handles, with tops attached to rims.



FIGURE 30.—Exteriors (left) and interiors of gravel-tempered sherds. Top to bottom: rim of small bowl; rim of small jar with internal flange to receive cover; and pipkin handle. Colonial National Historical Park. (From *Smithsonian photos 43039-C, 43039-D.*)

Most have interior flanges to receive covers. Glazed inside. Such jars were essential for preserving and pickling foods and for brewing beer. (Fig. 25.)

Plate warmer or chafing dish: Unique specimen. Diameter (including handle) 11", height 7". Heavy, flaring pedestal foot supports wide bowl, glazed inside. Flat rim with slight elevation on outer edge. Protruding vertically from rim are three lugs or supports for holding plates. Vertical loop handles extend from rim to lower sides of bowl. "Spirits of wine" were probably burned in the bowl to heat the plate above. (Fig. 20.) Fragmentary pedestals, similar in profile to the one here (but smaller, having step turnings around base) may have been parts of smaller chafing dishes). (Fig. 31.)

Ovens: (1) One wholly reconstructed oven at Jamestown. Made in sections on drape molds: base, two sides, two halves of top, opening frame, and door. Side and top sections are joined with seams, reinforced by finger impressions, meeting at top of trapezoidal opening. The opening was molded separately and joined with thumb-impressed reinforcements. A

flat door with heavy vertical handle, round in section, fits snugly into opening. Thickness varies from $\frac{3}{4}$ " to $1\frac{1}{2}$ ". Unglazed, although smears of glaze dripped during the firing indicate that the oven was fired with glazed utensils stacked above it. (Fig. 10.)

(2) Oven in place in Bowne House, Flushing, Long Island. Similar in shape to Jamestown oven. Opening is arched.

(3) Body sherd and handle sherds at Jamestown, from additional oven or ovens.

(4) Body sherd from dome-top oven similar to those at Jamestown and Flushing. John Howland House site, Rocky Nook, Kingston, Plymouth County, Massachusetts. (Fig. 26.)

Paste color, temper, and texture are consistent when examined microscopically. Resemblance is very close between oven sherds from the Jamestown and Howland house sites, and between these and a large chip obtained from the Smithsonian's oven purchased in Bideford. Except for a somewhat lower proportion of temper, utensil sherds from various sites are consistent with the oven fragments. The Smithsonian's 19th-century Bideford pan also closely resembles these, except for the proportion of temper, which is somewhat less. Further close resemblance of form exists between the Jamestown and Flushing ovens and those in the Bideford Museum. (Figs. 7, 9.)

In 1954 comparative tests were made by Frederick H. Norton, professor of ceramics at Massachusetts Institute of Technology. Jamestown clay was used for a control. Thin sections, made of sherds found at Jamestown, were fired at several temperatures and the results recorded in photomicrographs. Of the gravel-tempered sherd submitted in these tests, Professor Norton commented, "The clay mass looks quite dissimilar from the Jamestown clay."

No other identifiable English ware of this period compares with the gravel-tempered pottery, the use of gravel for temper apparently being restricted to North Devon. Gravel is found in red earthenware sherds from Spanish colonial sites and in olive oil jars of Hispanic origin, but both the quality and proportion of temper differs, as do the paste characteristics, so that no possibility exists for confusion between them and the North Devon ware.

The North Devon potteries produced gravel-tempered ovens that probably were unique in England. Ceramic ovens were made elsewhere, to be sure; Jewitt describes and illustrates an oven made in Yearsley by the Yorkshire Wedgwoods in 1712, but it is in no way related to the North Devon form. We have mentioned Dr. Pococke's allusion to "earthenware ovens" made in the mid-18th century at Calstock on the Cornish side of the Devonshire border, about 35 miles from Bideford; however, one may suppose that these were the products of diffusion from the North Devon center, if, indeed, they even resembled the North Devon ovens.

The closest comparisons with the North Devon ovens are to be found in Continental sources. A woodcut in Ulrich von Richental's *Concilium zu Constanz* (fig. 35), printed at Augsburg in 1483, shows

an oven whose shape is similar to that of the Jamestown specimen. The oven in the woodcut is mounted on a two-wheeled cart drawn by two men. A woman is removing a tart from the flame-licked opening while a couple sits nearby at a table in front of a shop. Le Moyne, a century later, depicted the Huguenot Fort Caroline in Florida.⁷¹ Just outside the stockade, on a raised platform under a thatched lean-to appears an oven whose form is similar to that of typical North Devon examples (fig. 36). It is a safe assumption that the ovens in both Richental's and Le Moyne's scenes were ceramic ovens, for both were used outdoors in a portable or temporary manner. No other material would have been suitable for such use.

This portable usage gives support to Bailey's conjecture that the Jamestown oven may have been used indoors in the winter and outdoors in the summer. He noted that carbon had been ground into the base, as though the oven had lain on a fireplace hearth.⁷² Sidney Strickland, writing about his excavation of the John Howland House site, noted that the stone fireplace foundation there had no provision for a built-in brick oven of conventional type.⁷³ Not having recognized the earthen oven sherd, he assumed that bread was baked on the stone hearth. The pottery oven may well have been placed on the hearth or have been set up in an outbuilding. That ovens of some sort, whether ceramic or brick, were used away from houses is borne out by occasional documentary evidence. In 1662 John Andrews of Ipswich, Massachusetts, bequeathed a "bake house" worth 2 pounds, 10 shillings. In 1673, Henry Short of Newbury provided in his will that his widow should have "free egress and regress into the Bakehouse for baking & washing." In 1679 the inventory of Lt. George Gardner's estate in Salem listed his "dwelling house, bake house & out housing."⁷⁴ Bailey quotes the records of Henrico County, Virginia, to show a similar usage in the South.⁷⁵

⁷¹ J. Le Moyne, *Brevis Narratio eorum quae in Florida . . .*, Frankfurt, 1591, pl. 10.

⁷² Bailey, *op. cit.* (footnote 3), pp. 497-498.

⁷³ Strickland, *op. cit.* (footnote 67).

⁷⁴ The probate records of Essex County, Massachusetts, Salem, Massachusetts, 1916, vol. I, p. 378; vol. 2, p. 346; vol. 3, p. 328.

⁷⁵ Bailey, *op. cit.* (footnote 3), p. 498.



FIGURE 31.—Pedestal bases of small chafing dishes or standing salts. Top, exterior and interior of one sherd; bottom, exterior and top view of another sherd. Colonial National Historical Park. (From Smithsonian photos 43039-C, 43030-D.)

The only unquestionable evidence of how these ovens were used remains in the Bowne House, where the oven is built into the fireplace back. Originally, the oven protruded outdoors from the back of the chimney.⁷⁶

Conclusions

Archeological, documentary, and literary evidences indicate that yellow sgraffito ware, gravel-tempered earthenware utensils, and gravel-tempered pottery ovens were made in several potteries in and around Barnstaple and Bideford in North Devon. Clay from the Fremington clay beds was used.

The North Devon potteries manufactured for export, sending their wares to Ireland as early as 1600 and to America by 1635. The trade was particularly heavy in the years following the Stuart Restoration and was tied to the influential 17th-century West-of-England commerce with America. New England,

Maryland, and Virginia received many shipments of North Devon pottery, an entire cargo of it having been delivered in Boston in 1688.

Sgraffito ware found in colonial sites in Virginia and Maryland is from a common source. The style of decoration is unique to English pottery and reflects Continental elements of design. It is reminiscent of decoration found on English and colonial New England furniture and embroideries. The only counterparts of this ware—matching it in style, paste color, and technique—are found among 17th-century sherds excavated from the sites of two potteries in Barnstaple. The 18th-century and 19th-century North Devon sgraffito ware surviving above ground differs considerably in style and form but in other respects it is the same as the ware found archeologically in Virginia and Maryland. The stylistic differences, noticeable on a piece in the Glaisher collection dated as early as 1704 (in which traces of the earlier style remain), were introduced by the turn of the century, thus strengthening the conclusion that the sgraffito tablewares found archeologically in this country must date from before 1700.

⁷⁶ *Bowne House; A Shrine to Religious Freedom*, Flushing, New York. Pamphlet of The Bowne House Historical Society, Flushing, N.Y., n.d.



FIGURE 32.—Photomicrographs of gravel-tempered sherds enlarged twice natural size, showing cross-sectional fractures. Top left, pan sherd from Jamestown (Colonial National Historical Park); top right, pan sherd from Angelica Knoll site, Calvert County, Maryland (United States National Museum); and oven sherd from Bideford (United States National Museum).

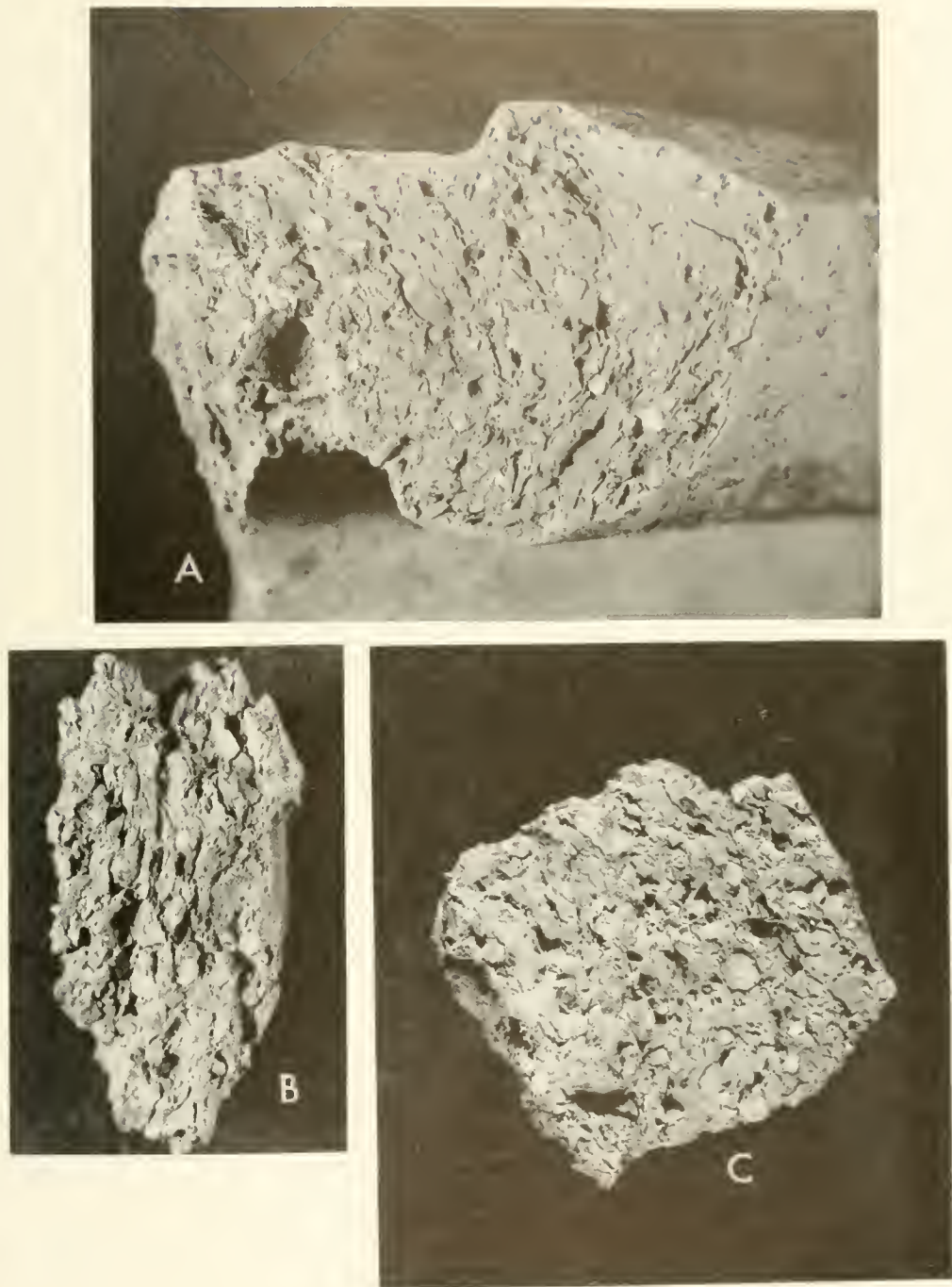


FIGURE 33.—Photomicrographs of gravel-tempered sherds enlarged three times natural size, showing cross-sectional fractures. Top, pan sherd from “R. M.” site, Plymouth, Massachusetts (Plimoth Plantation, Inc.); lower left, oven sherd from Jamestown (Colonial National Historical Park); and oven sherd from John Howland house site, Rocky Nook, Plymouth, Massachusetts (Plimoth Plantation, Inc.).

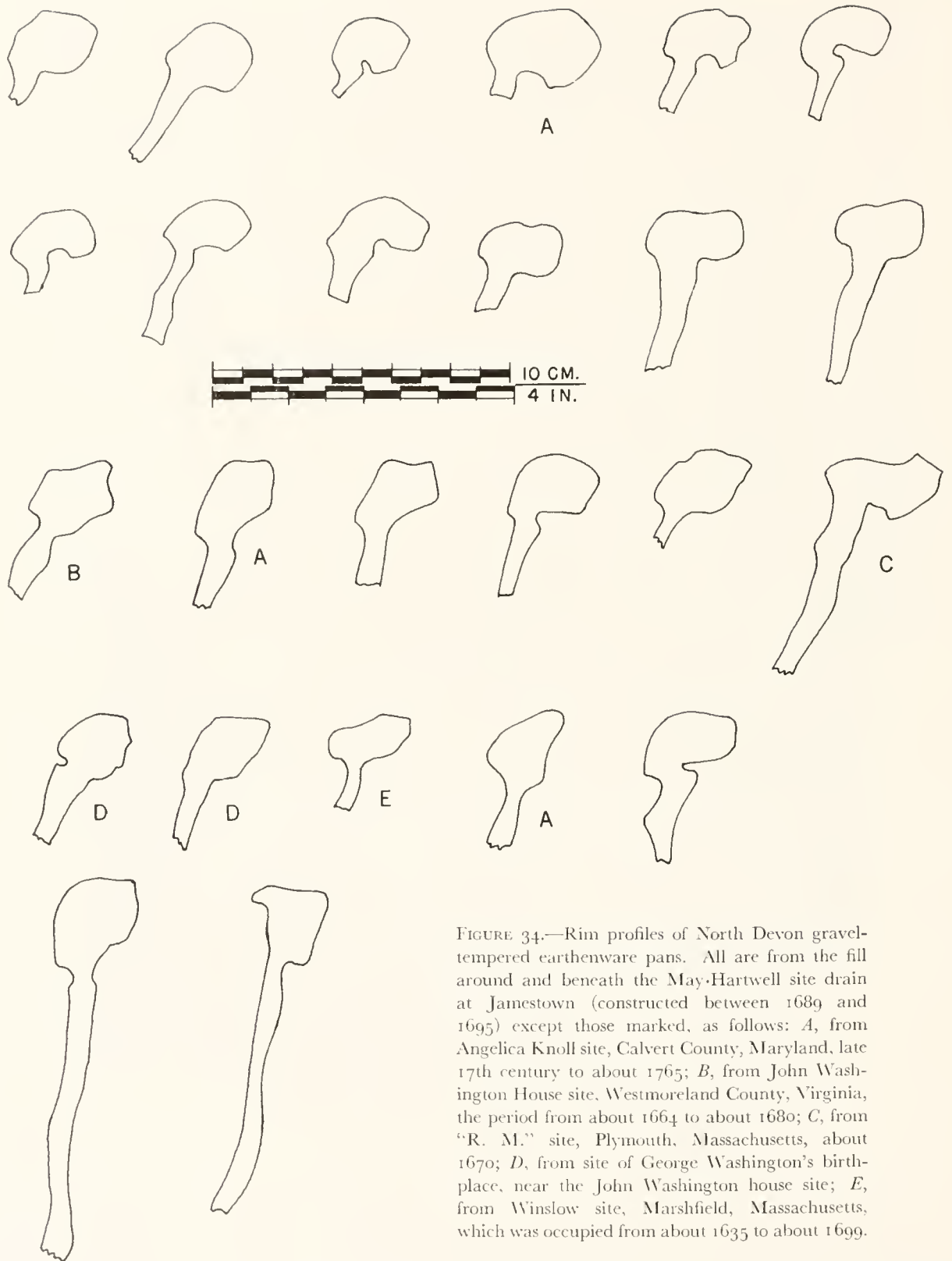
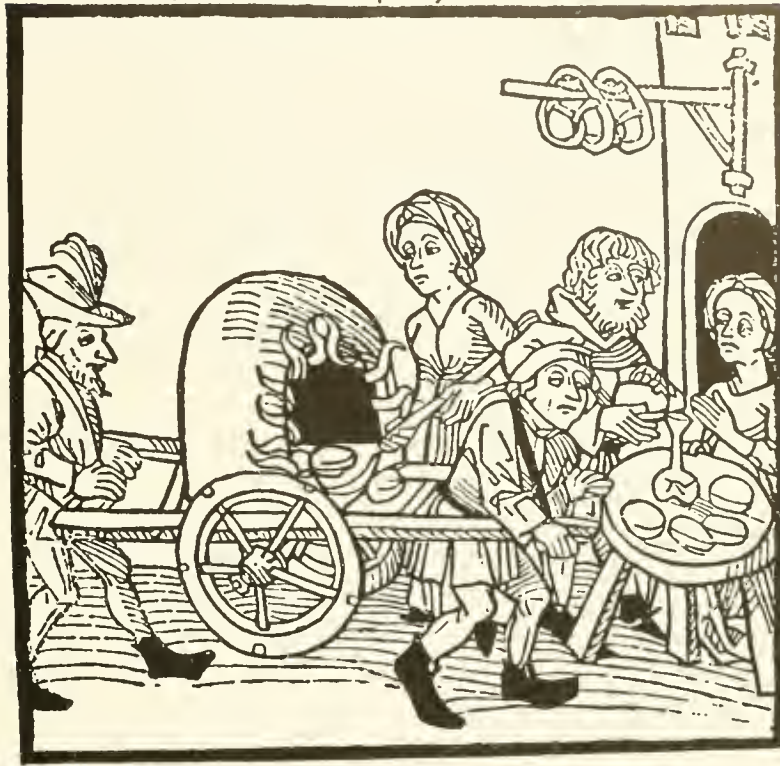


FIGURE 34.—Rim profiles of North Devon gravel-tempered earthenware pans. All are from the fill around and beneath the May-Hartwell site drain at Jamestown (constructed between 1689 and 1695) except those marked, as follows: *A*, from Angelica Knoll site, Calvert County, Maryland, late 17th century to about 1765; *B*, from John Washington House site, Westmoreland County, Virginia, the period from about 1664 to about 1680; *C*, from "R. M." site, Plymouth, Massachusetts, about 1670; *D*, from site of George Washington's birthplace, near the John Washington house site; *E*, from Winslow site, Marshfield, Massachusetts, which was occupied from about 1635 to about 1699.

mit vischen gebachen wie die einer gezen wolt haben de
 to fand man genug in gelichen vnd gutem kauff. vñ
 darnach sy dan keftlich warent vñ einer kauffen wolt.
 vnd ist dise figur : -

Wie man basteten in der stat costencz.
 vmbfaret vñnd die fail het.



For kitchen utensils, tiles, and other objects subject to heat or breakage, the same Fremington clay received an admixture of fine pebbles, or gravel, secured at a special place in the bed of the River Torridge in Bideford. The use of gravel was described by 18th-century writers as well as by later historians. As found in America, the gravel-tempered ware apparently is unique among the products of either English or colonial American potters.

A specialty of the North Devon potteries was the manufacture of ovens made of the same gravel-tempered clay as the kitchen utensils. The appearance of these ovens and the method of making them remained virtually the same from the 17th through the 19th centuries. At Jamestown, a wholly reconstructed oven reveals typical North Devon traits throughout,

FIGURE 35.—Baker's portable oven in a woodcut from Ulrich von Richenthal's *Concilium zu Constanz*, printed at Augsburg, Germany, in 1483. Lessing J. Rosenwald Collection, Library of Congress.

while a fragment of an oven from the John Howland House site near Plymouth displays, under a microscope, the same qualities of paste and temper as in a fragment of an oven obtained in Bideford by the Smithsonian Institution. Sherds of gravel-tempered utensils from several American sites also match the oven fragments. Paste characteristics, exclusive of the temper, are the same in the sgallito ware, the gravel-tempered ware, and the ovens. Furthermore,

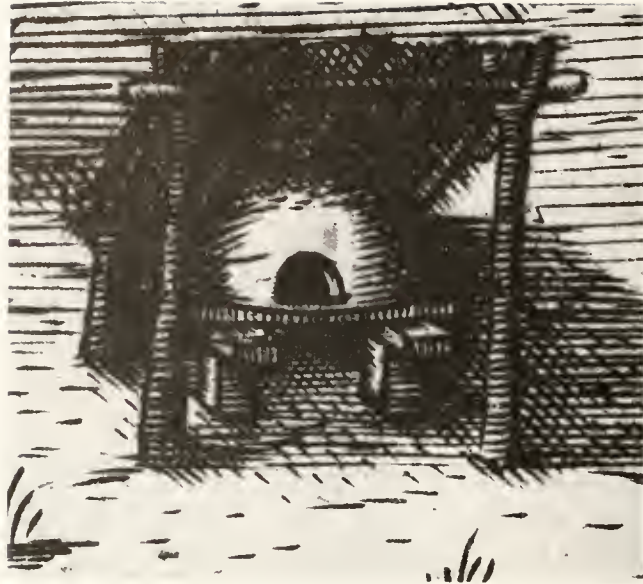


FIGURE 36.—Detail from De Bry's engraving of Le Moyne's painting of Fort Caroline, depicting an oven on a raised platform under a crude shed. Fort Caroline was a French Huguenot settlement established in Florida in 1564. Rare Book Room, Library of Congress.

the gravel-tempered ware occasionally is found with a plain coating of slip, which, under the glaze, has the same yellow color as the sgraffito ware, while an undecorated variant of the sgraffito ware also occurs with a similar plain slip.

All these wares, including the ovens, are interrelated—the specimens found in America having been shipped in a busy North Devon-North American trade. The North Devon towns, moreover, were an important pottery-making center for export markets in the West of England, Ireland, and North America. Thousands of parcels of earthenware were shipped to the American colonies from Bideford and Barnstaple during the 17th century. Any doubts that ovens were among these overseas shipments are dispelled by the knowledge that they continually were being shipped in the English coastwise trade, and also by intrinsic and comparative evidence that oven sherds found on American sites are of North Devon origin.

The only known counterparts of the North Devon ovens are Continental. A 15th-century example appears in an Augsburg woodcut, and a 16th-century specimen is depicted in De Bry's engraving after Le

Moyne's painting of Fort Caroline, the Huguenot settlement in Florida. There are many suggestions of Huguenot and Low Country influences on North Devon pottery. Bideford and Barnstaple both were Puritan strongholds in the 17th century, and both became French Huguenot centers, especially after the revocation of the Edict of Nantes in 1685.

The style of sgraffito decoration changed radically after about 1700. After that date, decoration was confined mainly to harvest jugs and presentation pieces. Gravel-tempered utensils and ovens continued to be made, but the North Devon trade with America ceased by 1760.

Archeological evidence indicates that gravel-tempered ware was used in America between about 1675 and about 1760. An isolated example of sgraffito pottery, distinguished by crude design and glaze, dates from before 1640. The typical sgraffito ware is illustrated by specimens found in the fill under and around the brick drain in the May-Hartwell site at Jamestown. This ware dates between 1677 and 1695. No other sites provide a more certain dating than this. Sgraffito ware found at Bridge's Creek, Virginia (John

Washington house site), may date as early as 1664, but may be as late as 1677 or a few years thereafter.

The May-Hartwell oven was also found in the drain fill, so presumably it also was used before 1695. The oven fragment from the site of the John Howland house dates between about 1630 and about 1675, the lifetime of the house. The oven in the Bowne House is no earlier than 1664, the date of construction.

Typical sgraffito ware, therefore, dates from 1664 to 1695, plus or minus a few years. Gravel-tempered ware predominates in the same period, but extends well into the 18th century, probably to about 1760. Ovens date from between 1664 and 1695. The concentrations of wares within the limits of the May-Hartwell drain site correspond roughly with records of heavy shipments of the wares between 1681 and 1690. The earliest shipment recorded was to New England in 1635.

The sgraffito ware probably served as much for decoration as for practical use. Each piece was decorated differently, with elaborate designs, and in such a manner that it could provide a colorful effect on a court cupboard or a dresser, matching in style the carved woodwork or crewel embroidery of late 17th-century furnishings. Although sgraffito ware represented a degree of richness and dramatic color, it did not match the elegance of contemporary majolica, decorated after the manner of Chinese porcelain. Heavy and coarse, the sgraffito ware essentially was a variant of English folk pottery, reflecting the less sophisticated tastes of rural West of England. It did not occur in the colonies after 1700, by which time it was supplanted in public taste by the more refined majolica.

Gravel-tempered ware apparently was esteemed as a kitchen ware, much as is the modern "ovenware" or Pyrex in the contemporary home. Since gravel-tempered ovens were widely used in the West of

England, they were accepted by settlers in America, especially where built-in brick ovens were lacking.

Unlike those of Staffordshire or Bristol, the North Devon potteries failed to develop new techniques or to change with shifts in taste. The delftware of London and Bristol and the yellow wares of Bristol and Staffordshire became preferable to the soft and imperfect sgraffito ware. In the same way, the kitchen ware of Staffordshire and the adequate redwares of American potters made obsolete the heavy, ugly, and incomparably crude gravel-tempered ware, while American bricklayers, having adopted the custom of building brick ovens into fireplaces, outmoded the portable ovens from North Devon after 1700. Any chance of a renaissance of North Devon's potteries was killed by the blockading of its ports in the mid-18th century. From then on the potteries continued traditionally, their markets gradually shrinking at home in the face of modern production elsewhere. Today, only Brannan's Litchdon Street Pottery in Barnstaple has survived.

OTHER REFERENCES CONSULTED

- BEMROSE, GEOFFREY. *Nineteenth-Century English Pottery and Porcelain*. New York, n.d. (about 1952).
- BLACKER, J. F., *Nineteenth-Century English Ceramic Art*. London, 1911.
- CHAFFERS, WILLIAM, *Marks and Monograms on Pottery and Porcelain*, 14th issue, London, 1932.
- GRIBBLE, JOSEPH B., *Memorials of Barnstaple*. Barnstaple, 1830.
- HAGGAR, REGINALD, *English Country Pottery*. London, 1959.
- HONEY, W. B., *European Ceramic Art from the end of the Middle Ages to about 1815*. London, n.d. (about 1952).
- MANKOWITZ, WOLF, AND HAGGAR, REGINALD G., *The Concise Encyclopedia of English Pottery and Porcelain*. London, 1957.
- METEYARD, ELIZA, *The Life of Josiah Wedgwood*. London, 1865.

U.S. GOVERNMENT PRINTING OFFICE: 1960

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C. Price 35 cents