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The Ceramic Forms of the Potter Gottfried Aust at Bethabara,
North Carolina, 1755 to 1771

Stanley South

The Moravian settlement at Bethabara, North Carolina was begun on November 17, 1753 by pioneers from Pennsylvania who came to send missionaries to the Cherokee Indians. This first settlement of Moravians in North Carolina was an important nucleus of craftsmen who set standards of excellence that would make them admired and envied throughout the Carolina frontier. Among those of a new group arriving on November 4, 1755 was a man whose skill as a potter would result in his becoming a major economic force in the Moravian community. Gottfried Aust was a forceful eccentric whose talent was unquestioned, but his patience was short with those less skilled in the potter's art. He felt himself working with what he considered incompetent asses as apprentices, but to whom he was able to pass a great deal of his knowledge and skill.

Aust was indeed an important artisan contributing to the success of the Bethabara Oeconomie, the term they used to describe their communal way of life. Sales of his pottery brought huge crowds to the little town. On May 21, 1770 a Bethabara resident remarked,

There was an unusual concourse of visitors, some coming sixty or eighty miles to buy milk crocks and pans in our pottery. They bought the entire stock, not one piece was left; many could only get half they wanted and others, who came too late, could find none. They were promised more next week. (Fries, v. 1, p. 412)

The following year, on June 17, 1771, Brother Aust took down the half-timbered addition to his pottery shop and moved to the new town of Salem, having worked at Bethabara for fifteen years.

In 1963 a cooperative project of the North Carolina Department of Archives and History and The Southern Province of the Moravian Church, and the generosity of Mr. Charles H. Babcock, Sr. made possible the archaeological examination of Bethabara, including Aust's pottery shop. The waster dumps used by Aust from 1756 to 1763, and from 1763 to 1771 were located and carefully excavated. The pinpointing of the pottery shop site was made possible by maps of the town drawn by Gottlieb Reuter in 1760 and 1766, both of which show the pottery shop site. As excavation progressed the stone foundation of the shop was revealed, along with two clay wedging platforms with stone floors on which potter's clay was still lying. From the waster dumps over four thousand fragments of pottery as well as kiln furniture such as trivets, saggars, sagger pins and the spout from a slip cup were found. These undisturbed pottery deposits have revealed over thirty-five ceramic forms being made by Gottfried Aust between 1755 and 1771, and provide us with an excellent picture of the variety of wares being produced by this exceptionally talented colonial potter. Many facets of Aust's ware and that of his apprentices, also recovered at Bethabara, will be studied, but the focus of this paper will be the variety of forms produced by Aust at Bethabara.

In 1789 an inventory of the wares being made by Gottfried Aust at his Salem shop was taken, and from this list the terms for forms recovered at his Bethabara shop have been obtained. The major forms being made by Aust at this time were milk pots and pans, over one thousand pans and 3325 pots being inventoried. These forms, no doubt, were always major items of production. Other forms, however, recovered from the Bethabara excavation, were probably never made in great abundance. Delicate stemmed egg cup or wine glass forms in the shape of the familiar blown glass goblets of the period were being made on the wheel, as well as salt dishes that are almost exact parallels of silver forms of the mid-eighteenth century. Teacups and saucers with carefully turned feet, as thin as Oriental porcelain examples, were being masterfully thrown. Apothecary jars, tea cans and mugs were being made, similar to the delft and white salt-glazed stoneware forms of Europe.

Ware for cooking on the hearth was apparently made in some quantity as indicated by the number of fragments of what the German Brethren called "cook pots" found in the ruins of the town as well as in the pottery waster dumps. These cook pots were as shallow as skillets, or as deep as sauce pans, but are all characterized by having three legs and a hollow handle. A number of lids made by Aust were recovered, some fitting these cook pots. This form is more familiar in cast iron, but similar pottery examples have been recovered by Ivor Noël Hume in Virginia at the Challis Site.

A companion piece to the cook pots on the hearths at Bethabara was the brazier. This unusual form had a double bottom with holes punched through the upper bottom, and one or more triangular draft holes cut into the side of the chamber between. The rim had three knobs upon which a teapot or other vessel sat. Charcoal was placed inside and the ashes fell through the upper bottom into the lower chamber. A hollow handle with a bulbous end is characteristic of this form, and is apparently the ceramic counterpart of turned wooden handles with a similar form found on silver chafing dishes or braziers of the mid-eighteenth century. Here we see again the versatility of Aust in providing a ceramic adaptation of a form more familiar in silver than pottery.

The gentle art of tea drinking was apparently popular at Bethabara as indicated from the teacups and saucers, teapots and tea cans found in the waster dumps. Porringers with flat pierced handles in imitation of the pewter and silver porringers were being made, as well as bowls, flasks, roasting pans, jugs, funnels and beakers.

For lighting Bethabara homes Aust was making candlesticks in the same form as the silver smiths. Candle holders with a saucer shaped bowl were also made. The most interesting of the lighting devices, however, are the stand lamps with double bowls and a pottery wick tube. Only a very few of this type lamp are known, and they apparently occur primarily in Pennsylvania German settlements. This form is sometimes called a grease lamp, and is usually said to have been used to burn grease or tallow. However, this type fuel requires constant maintenance to keep the grease pressed around the wick, whereas oil requires much less maintenance. It is thought that this lamp was used to burn linseed oil, the lower bowl serving to catch the drippings from the wick, and as a safety factor to catch any oil that might be spilled from the upper bowl. In this regard we notice that an oil press was set up in Bethabara

and was producing oil in May 1757, and that at one time twenty gallons of linseed oil was on hand. I have tried using this oil in the excavated lamps and find that it burns very efficiently.

A number of short clay tobacco pipes were recovered from the waster dumps, and their presence in a context dating before 1771 was something of a surprise since it had been generally thought that this type of anthropomorphic pipe dated somewhat later. However, we know Aust was making pipes in 1755, and passing them on to the Indians in 1756, and his inventory of the pottery shop in 1766 listed one tobacco pipe press with eight molds. By examining the 175 fragments of pipes from the two waster dumps we find that there are seven of these molds represented. Four plain, smooth-surfaced pipe types were recovered, one fluted type with a fleur-de-lis motif, and two anthropomorphic types with relief faces on the bowl were found. These pipes were referred to as "pipe heads" in the 1789 inventory when 5568 were on hand to be sold at one cent each. A reed was used for the stem of these pipes, which were glazed green, brown, black or clear, (which produced a creamy yellow pipe), or were left unglazed. In his inventory of 1772 Aust listed only three lead pipe molds and one brass pipe mold, indicating that he had lost or discarded four of his molds since 1766. Pipes continued to form a vital part of the production of the pottery shop in Salem until the late 19th century, when a photograph shows hundreds of similar pipes drying in the sun in front of the pottery shop.

Pipe saggars with pins attached excavated along with the pipes provide information as to the method of placing the pipes in the kiln for firing. The saggars were made in the form of a cylinder with clay pins pressed while wet against the side of the sagger, allowing the end to protrude, over which the pipe bowl was placed. These pins were fastened in rows around the interior of the cylinder on small stepped-back shelves, or around the exterior of the cylinder. Another pipe sagger had a pin that was inserted into a hole punched through the sagger wall. The pins for the saggars were made by pressing the clay into half of a two-piece mold and then fitting the two halves together. The resulting pins were uniform in size, and clearly show the mold marks on each side of the pin. One example of a sagger pin was found that was made by forcing clay through a round hole, forming a long, compact uniform coil. This coil was then cut into short lengths for pins, and tapered at one end to fit the hole in the sagger by using a knife. A fragment of a pipe bowl was stuck to the pin with brown glaze, revealing a problem that apparently arose as a result of glazing. Sagger rims had three pins or posts of clay fastened to the rim which allowed another sagger to be placed on top without touching the top row of pipes.

Saggars for holding small objects during firing were also found. Some of these had a hole in the center of the base to allow heat to move from one sagger to another. Others clearly showed the marks of small round objects placed on the bottom of the sagger during firing. Flat tiles were often used for small cups and bowls during firing; rippled and ridged tiles were also used to allow less sticking of the ware to the tile by the flowing glaze. Trivets with three arms were hand molded, and had three points on which to sit the ware in the kiln.

Another type had three prism shaped arms without points which allowed only a small surface of the foot of the vessel to touch the trivet. Ring trivets were made by throwing a cylinder on the wheel and cutting this into rings with a wire. A knife was then used to make three points on the two edges of the ring, producing a very effective means of stacking teacups in the kiln, a method still in use today.

White slip was used to cover the exterior or interior of some vessels before glazing. A clear glaze would then produce a yellow or cream colored ware, which was often dotted with spots of green glaze. The entire slipped exterior surface could be covered with a green glaze, producing a green exterior and a red interior. A clear lead glaze over a bowl slipped on the exterior only would produce a red interior and a yellow exterior. A yellow and brown slipware was produced by slipping the interior and applying a clear lead glaze, with a lead-manganese glaze on the exterior. These plain varieties of slipware were accompanied by the slip decorated ware applied with a slip cup.

The inventory of Aust's shop in 1766 lists three slip cups, and after he moved to Salem in 1772 three slip cups are again listed. In waster dump #2 a bone spout for one of these slip cups was found. By trailing colored slip over the surface of plates and bowls Aust produced decorative motifs such as tulips, pumpkins, wavy lines, leaves and stylized designs. It is particularly significant that no sgraffito type decorated slipware typical of the Pennsylvania slipwares was found, indicating a closer tie with European tradition than with that of Pennsylvania for the Aust ceramics.

In order to apply the slipware design in something of a controlled manner and to gain some degree of standardization, Aust roughed out the design he was to make by incising a general outline into the greenware plate surface and using these lines as a guide in applying the slip. These incised scratches can be seen when the slip decoration has flaked from the surface of a vessel in places, revealing the guide lines. A possible reference to this practice is found in the Moravian records of 1779 when Aust reported that Rudolph Christ had carried away from the pottery several of the forms which were used for making flowers for the fine pottery. This would seem to refer to a type of stencil into which the outlines of various flower designs had been cut.

The design motifs were applied by Aust by using dark slips on a white slipped background or light slips on a dark background. Brown slip or red slip could be obtained by various colors of clays, but how did he apply green slip? Several sherds indicated that the slip had fired green beneath the clear lead glaze, and that this slip was not a green glaze, but an applied slip. Some bisque fired sherds had similar designs, but instead of the bright green color of the glazed slip examples, this slip appeared as grey, pale blue, or very slightly green. The question immediately arose as to what type of slip Aust was applying that would appear slightly blue or grey on a bisque piece, but would fire bright green under a lead glaze. Obviously an analysis of the slip would answer this question. Fortunately the Federal Saline Water Research Station is located near our archaeological laboratory, and when this

problem and others dealing with the glazes and slips made by Aust was presented to the chemists there, they accepted the challenge with enthusiasm, and conducted an analysis. Their findings verified what we had suspected regarding the green-firing slip, that it contained copper. However, they found that it contained both copper oxide and metallic copper, indicating that Aust was using copper filings as well as burnt copper in his slip. During the bisque firing this slip would remain grey or only slightly oxidized, but during the glaze firing the copper would be trapped beneath the lead glaze, staining it green.

When the 1789 inventory of Aust's Salem pottery was made he had on hand 1568 pounds of glazing. This was no doubt, lead, which was the major glazing ingredient. When Aust was at Bethabara in 1763, a wagon brought 1000 pounds of lead from Fort Dobbs to exchange it for pottery. In 1761 the Moravians opened a lead and silver mine on New River, about eighty miles from Bethabara, and it was from here that lead was brought to the pottery shop; three hundred pounds arriving in June 1764. Also listed in the 1789 inventory were burnt copper, manganese, and "iron color", obviously for use in making colored glazes, and as we have seen, for adding to slip for use in making decorated polychrome slipware. Lumps of brown and black slag with pockets of blue-green glassy substance were found throughout the area of the waste dumps, which upon analysis has proved to be a combination of iron, lead and copper, and are apparently lumps of unground glaze material. A mortar, probably for grinding such lumps, was inventoried by Aust in 1766 and 1772, and may be the same one now in the restored pottery shop museum at Old Salem.

The ware of Gottfried Aust has been classified into types based on the variations produced through different colors of clay and glazes. There are four types with white paste. A clear lead glaze over this paste produces a cream colored, or light yellow ware. A clear lead glaze on the interior and a lead plus manganese glaze on the exterior produces a brown and yellow ware. Clear lead glaze on the interior and a lead plus copper glaze on the exterior produces a green and yellow ware, and of course, coating both sides with the copper-lead glaze results in a green glazed ware.

Five types are made with a red paste. When a clay free of small specks of manganese-iron particles is used for the paste and covered with a lead glaze, a clear redware is produced. When clay with small particles of manganese-iron nodules (found as natural inclusions in the subsoil at Bethabara) is used, a ware that varies from red to brown is produced, and is characterized by brown bleeding dots and streaks. When manganese is added to the clear lead glaze, a dark brown to black glaze is produced through which the paste cannot be seen. These three types actually represent a continuum from red to dark brown-black depending upon the number of manganese-iron nodules present in the paste, and the amount of manganese added to the glaze mixture.

The fourth of the five red paste types is characterized by a paste that is more orange to buff than the deeper range of red, and is covered with a dull black glaze resembling a black slip. In the field we referred to this type as lampblack glazed ware, and when the glaze was analyzed, carbon was found, verifying this conjecture. The last of the red paste types is a ware that is glazed on the interior with a clear

lead glaze, and on the exterior with a manganese-lead glaze, producing a red interior and a brown exterior; a red and brown ware.

Besides the clear lead glazed decorated slipware types there are four plain types of slipware previously mentioned which are: yellow and red slipware, green and red slipware, green-spotted yellow slipware, and yellow and brown slipware.

It becomes clear from an examination of Aust's ceramics that he was able to produce a range of fourteen types by varying the combinations of clays, glazes and slips, and as was probably also the case with many other colonial potters, capable of producing a far greater range of types than "the common redware" so often said to have been the sole product of eighteenth century potters. It is true that many of Aust's types are made with red clay, but his treatment of form, glaze and slips was such that it would be unfair and inaccurate to refer to his pottery as "the common redware".

The records of the Moravians describe Aust's temperament and success as a potter, and the recovery of examples of his work amply illustrate his skill. Another facet of the man is illustrated in fragments of several oriental porcelain sherds and scratch-blue stoneware fragments with green glaze along the edges. These were found not only in Aust's waster dumps, but in other ruins throughout the town, and raised the question as to their function. A detailed examination revealed that this green glaze was being used as a bonding agent to cement together broken porcelain and stoneware, its success in this respect being reflected in this type sherd being found in a number of the ruins of the town, reflecting a return of the patched vessels to their owners. Thus a handful of unique sherds reaffirm the degree to which Gottfried Aust served the needs of the people of Bethabara, and at the same time, tell us a bit more of the ingenuity and inventiveness of the man himself, at the same time revealing a previously unknown method of patching pottery practiced (by one potter at least) in colonial America.

After the fragments of Aust's pottery were glued together the archaeologist used the Stockton profile gauge to produce exact scale drawings of the pottery forms. These were then reduced with a pantograph to produce the drawings illustrated in the plates accompanying this paper. These drawings, therefore, are not sketches of Aust's forms, but the exact form as thrown by Aust on the wheel. I am indebted to George Demmy for the final polishing and preparation of the plates. The analysis chart illustrates the relationship between Aust's forms and the type of paste and glaze characterizing each type. One of the most promising aspects of the study of Aust's pottery is the comparison of his ware with that of his apprentices Rudolph Christ and Gottlob Krause.... but that is another story.

Excavation at Bethabara, North Carolina

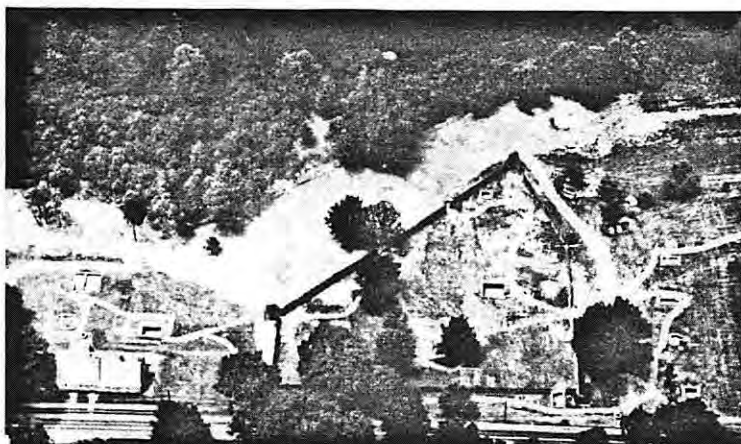


Plate 1

Aerial View of Bethabara Showing Palisade Fort and Open Cellars.



Plate 2

Pottery in Gottfried Aust's Waster Dump



Plate 3

The Outline of the West Bastion Ditch of the Fort with Aust's Pottery Shop Ruin in the Background



Plate 4

Fort Bastion Ditch During Excavation



Plate 5

The Doctor's Laboratory During Excavation

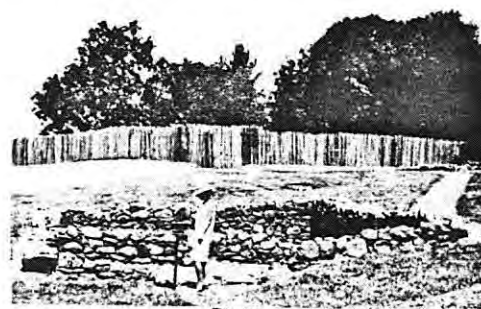


Plate 6

The Laboratory after Stabilization with Palisades Replaced in the Original Fort Ditch in the Background

Ceramic Forms of Gottfried Aust
1755 - 1771

- Plate I Cook Pan and Plate
- Plate 2 Restored Teapots
- Plate 3 Anthropomorphic Pipes
- Plate 4 Restored Brazier with Teapot in Position as Used
- Plate 5 Egg Cup and Salt Dishes
- Plate 6 Water Bottle with Lamp Black Glaze
- Plate 7 Stand Lamp Burning Linseed Oil

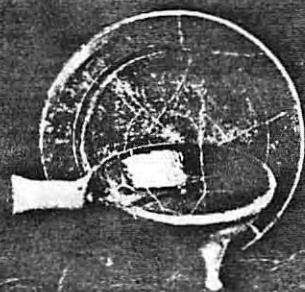


Plate 1



Plate 2



Plate 3



Plate 4

Ceramic Forms of Gottfried Aust



Plate 5



Plate 6



Plate 7

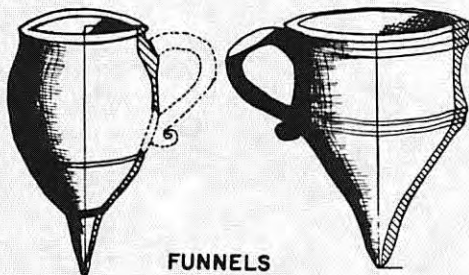
The Ceramic Forms of GOTTFRIED AUST

MADE AT BETHABARA FROM 1755 TO 1771

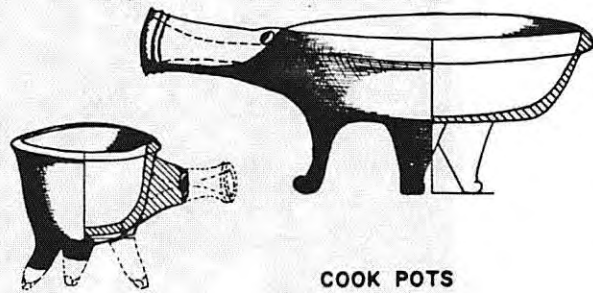
Stanley South, ARCHAEOLOGIST

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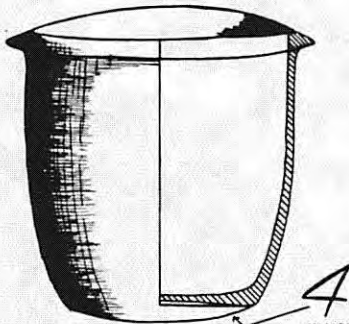
DENNY FEB. 1966



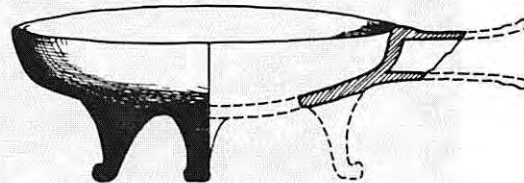
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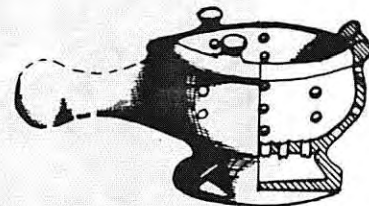
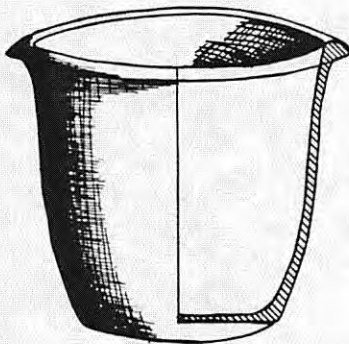
COOK POTS



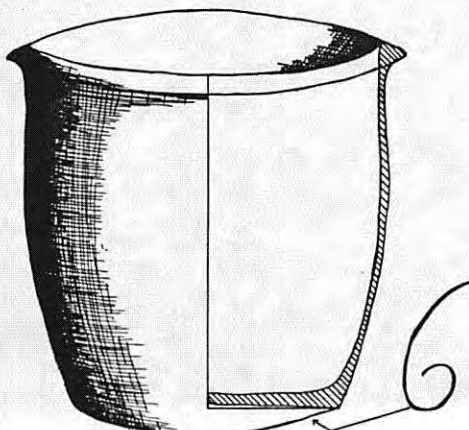
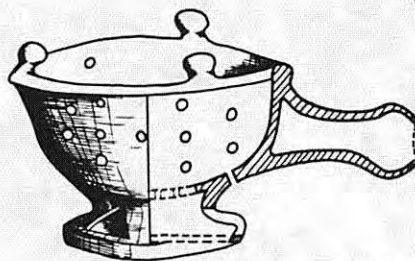
4
INCISED ON BASE



SKILLET

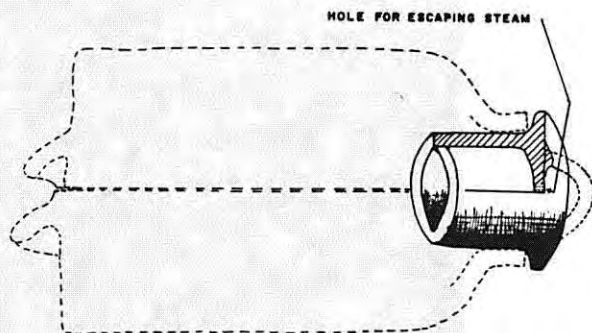


BRAZIER



MILK POTS

6
INCISED ON BASE



ROASTING PAN
STOPPER

Figure 2

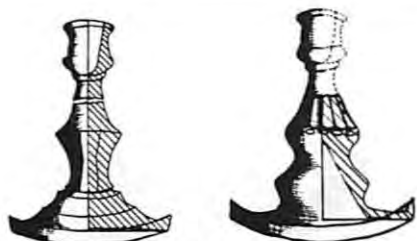
The Ceramic Forms of GOTTFRIED AUST

MADE AT BETHABARA FROM 1755 TO 1771

Stanley South, ARCHAEOLOGIST

Scale 0 1 2 3 4 5 6 Inches

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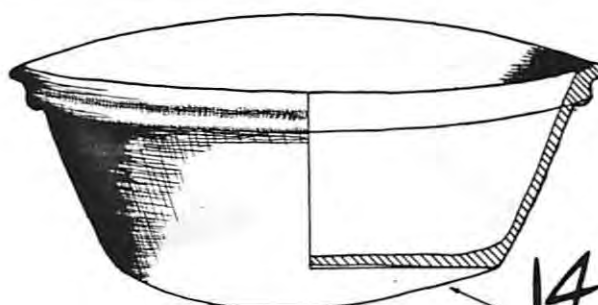
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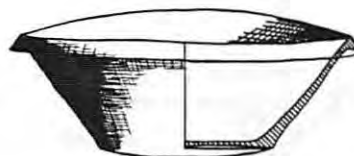
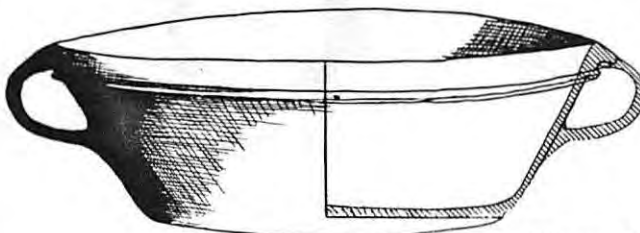
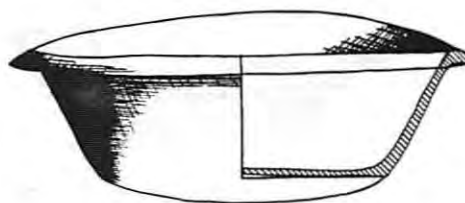
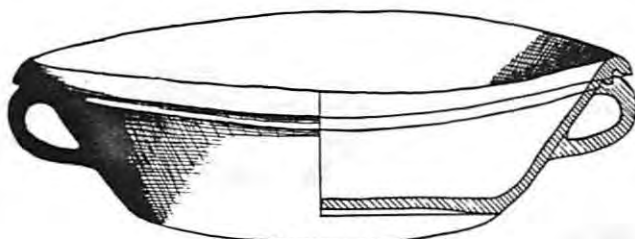
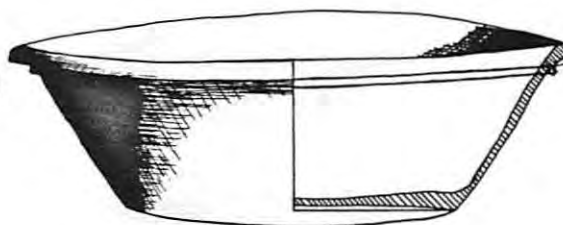
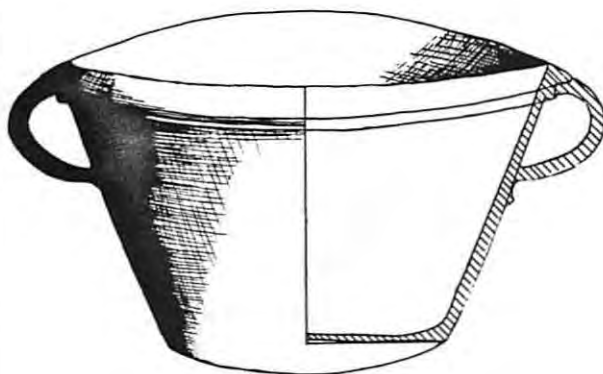
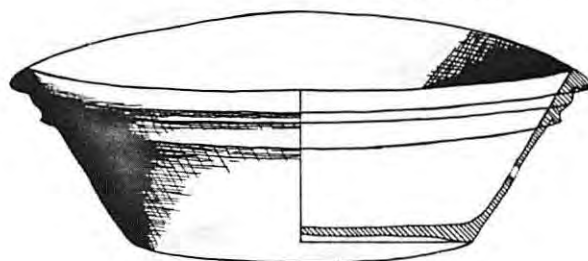
CANDLE HOLDER



STAND LAMP



INCISED ON BASE



MILK PANS

Figure 3

PANS

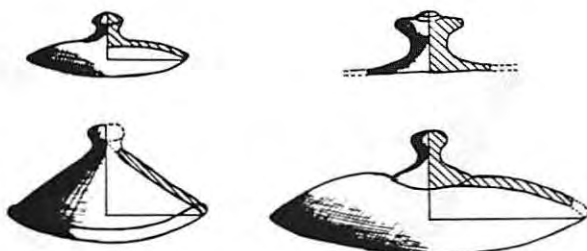
The Ceramic Forms of GOTTFRIED AUST

MADE AT BETHABARA FROM 1755 TO 1771

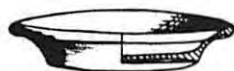
Stanley South, ARCHAEOLOGIST

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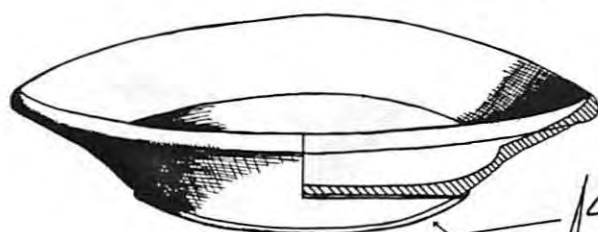
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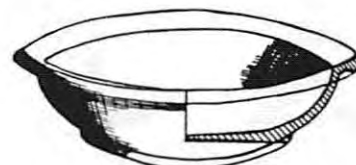


INCISED ON BASE

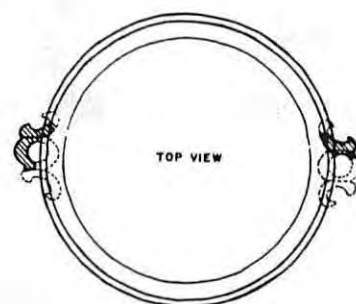


PLATES

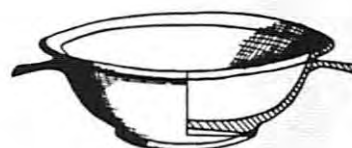
INCISED ON BASE



BOWL



TOP VIEW



PORRINGER



PINT CUPS

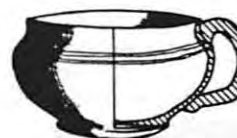


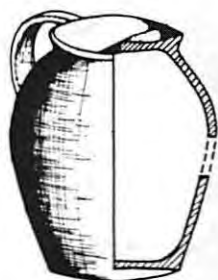
Figure 4

The Ceramic Forms of GOTTFRIED AUST

MADE AT BETHABARA FROM 1755 TO 1771
Stanley South, ARCHAEOLOGIST

Scale 0 1 2 3 4 5 6 inches

DEMME FEB. 1966



TOP VIEW SHOWING PARTITION
CLOSING HALF THE NECK OPENING

HONEY JUG



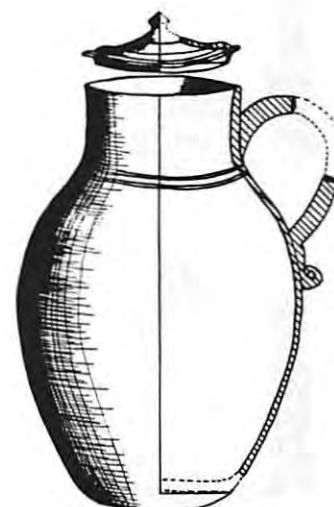
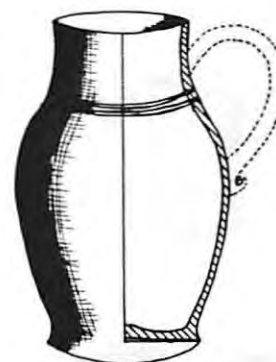
JUG



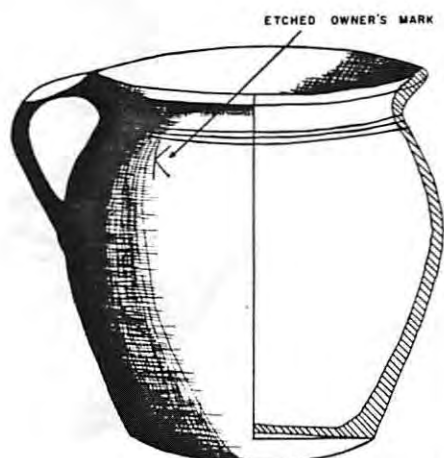
BLUE AND GRAY STONEWARE
EUROPEAN CREAMER
FROM THE AUST WASTER DUMP



CREAMERS



WATER JUGS



MILK JUG

Figure 5

The Ceramic Forms of GOTTFRIED AUST

MADE AT BETHABARA FROM 1755 TO 1771

Stanley South, ARCHAEOLOGIST

Scale 0 1 2 3 4 5 6 inches

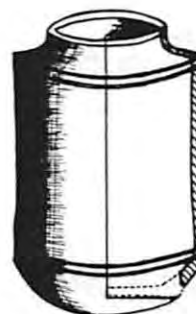
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TEACUPS



BEAKER



TEA CAN



SAUCERS



EGG CUP



SALTS

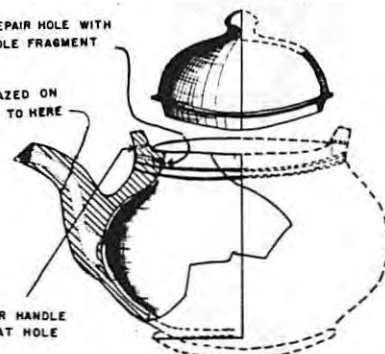


MUGS

DRILLED REPAIR HOLE WITH
WIRE HANDLE FRAGMENT

SPOUT GLAZED ON
EXTERIOR TO HERE

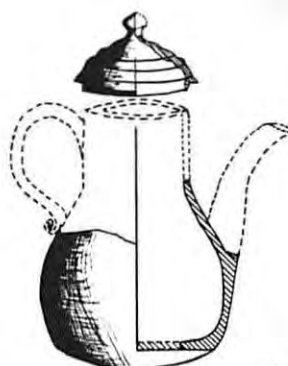
HOLE FOR HANDLE
BROKEN AT HOLE



TEA KETTLE



TEAPOT



COFFEE POT

Figure 6

The Ceramic Forms of GOTTFRIED AUST

MADE AT BETHABARA FROM 1755 TO 1771

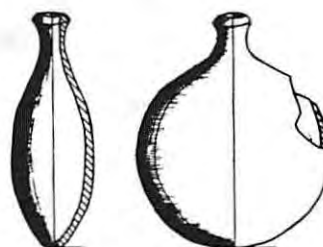
Stanley South, ARCHAEOLOGIST

Scale 0 1 2 3 4 5 6 inches

DEMMEY FEB. 1966



SIDE VIEW



FLASK

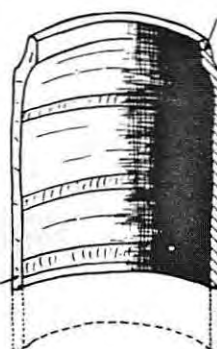


POTTER'S MARK INCISED ON BASE



APOTHECARY JARS

CUT FACE



ROOF RIDGE TILE

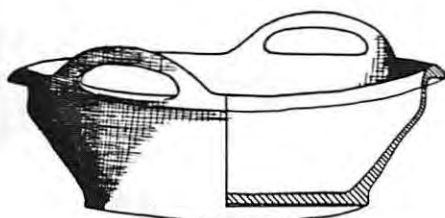
BOTTOM FACE



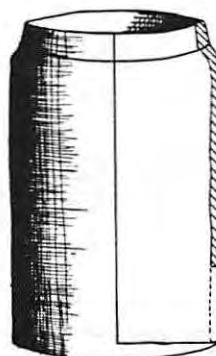
ROOF TILE SHINGLE



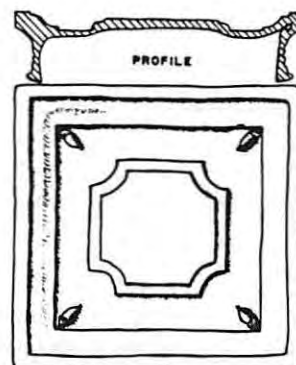
CHAMBER POT



HAND BASIN



STOVE PIPE THIMBLE



ACORN STOVE TILE

Figure 7

The Ceramic Forms of GOTTFRIED AUST

MADE AT BETHABARA FROM 1755 TO 1771

Stanley South, ARCHAEOLOGIST

Scale 0 1 2 3 4 5 6 inches

DEMME FEB. 1966

BONE SPOUT FOR SLIP CUP
FOR DECORATING SLIPWARE

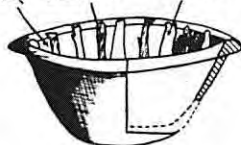


SLIP CUP

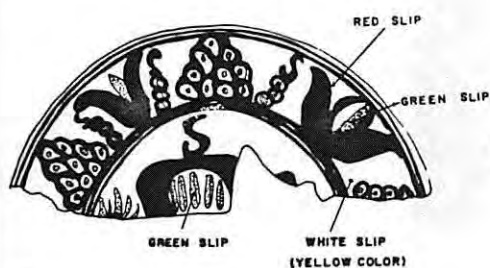
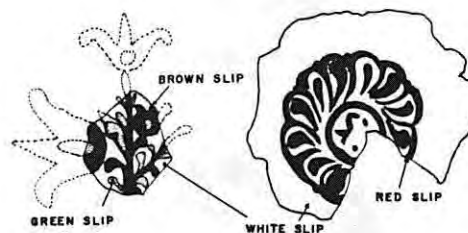


SLIPWARE MOTIFS USED BY GOTTFRIED AUST BETWEEN 1755 AND 1771

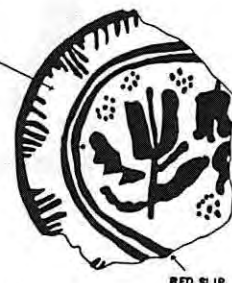
RED PASTE GREEN SLIP WHITE SLIP



POLYCHROME SLIPWARE
DECORATED BOWL



Glazed Sherd



Bisque Sherds

POLYCHROME SLIPWARE DECORATED PLATE FRAGMENTS

ETCHED OWNER'S MARK
(HANS KALBERLAHN?)

* HK

2 3 4 5 6 7 8 11 14 15

INCISED DESIGN

Figure 8

INCISED MARKS ON POTTERY FROM THE AUST KILN WASTER DUMPS

The Ceramic Forms of GOTTFRIED AUST

MADE AT BETHABARA FROM 1755 TO 1771

Stanley South, ARCHAEOLOGIST

Scale 0 1 2 3 4 5 6 inches

DEMME FEB 1966

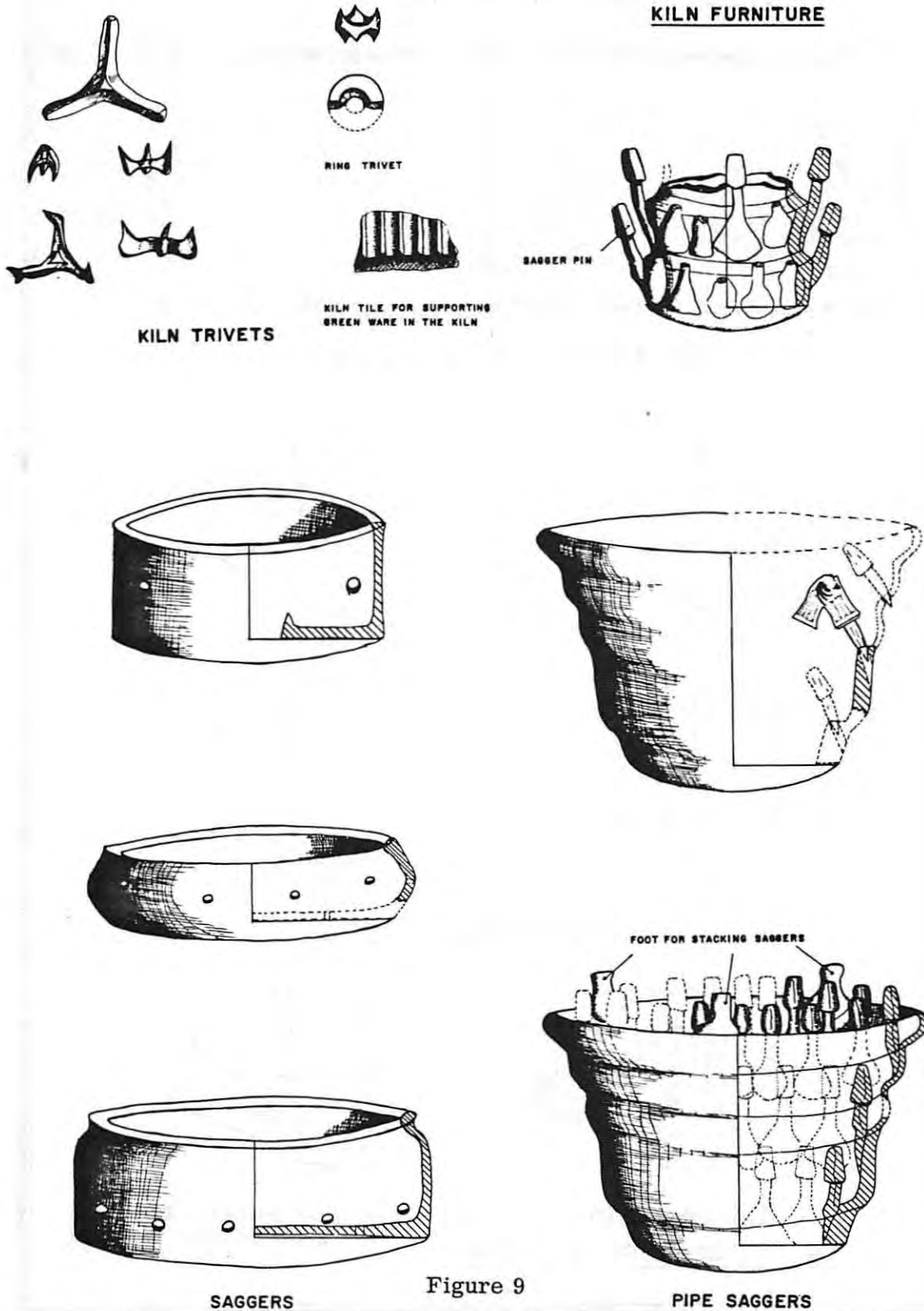


Figure 9

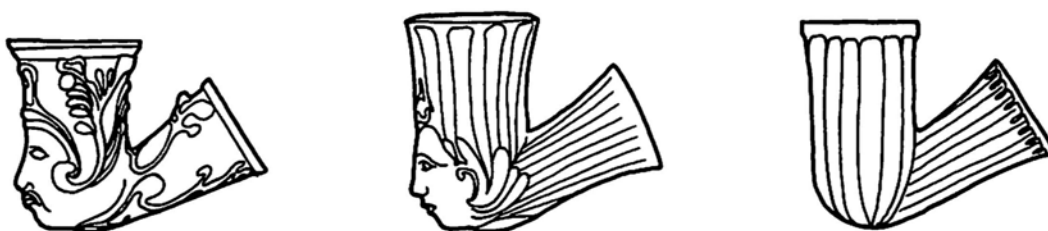
18th CENTURY CLAY TOBACCO PIPES

Made at Bethabara

Scale 
0 1 2
inches

Stanley South, ARCHAEOLOGIST

demmy 2-23-66



1. ANTHROPOMORPHIC ROCOCO 2. ANTHROPOMORPHIC FLUTED 3. FLUTED

Aust's Decorated Types



4.



6.



5.

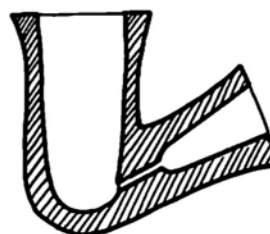


7.

Aust's Plain Types



8. ANTHROPOMORPHIC FLUTED
A Christ-Krause Type



SECTION SHOWING BOWL
AND STEM MANDREL PROFILES

EIGHTEENTH CENTURY CLAY PIPES FROM THE KILN WASTER DUMPS IN THE MORAVIAN TOWN OF BETHABARA, NORTH CAROLINA

Notes from Records of the Moravians in North Carolina

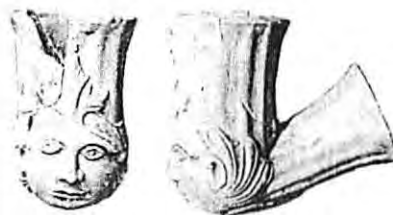
51A

BETHABARA

- December 1, 1755 "Br. Augst dug clay and made pottery, for which the people were eager; he also began to make clay pipes."
- May 25, 1756 "We gave them [Cherokee Indians] a few clay pipes, for which they were grateful..."
- June 17, 1771 "Br. Aust took down the addition to the potter's shop, in order to move the woodwork to Salem this week."

SALEM

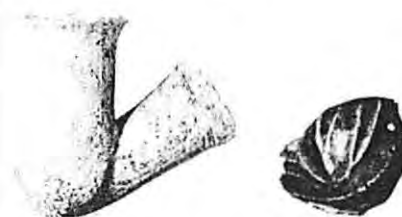
- January 7, 1783 "Br. Aust is willing to employ Br. Tycho Niessen in making clay pipes, which can be burned and sold in the pottery."
- January 13, 1789 "We wish the demand for clay pipes could be increased by shipments to Petersburg or in some other way so that [Br. Tycho Nissen] could have more of that work."
- April 30, 1790 Inventory, "16 dz glazed Pipes ... 100 dz unglazed Pipes"
- April 30, 1797 Inventory, "200 dz glazed Pipe Heads ... 1000 dz unglazed Pipe Heads."



Unglazed Anthropomorphic Fluted
(With Ear)

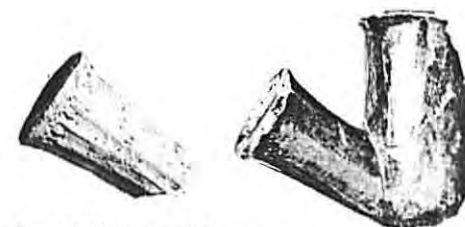


Unglazed Anthropomorphic Rococo



Unglazed Smooth

Green-glazed Fluted



Unglazed Anthropomorphic
Fleur-de-lis on Stem

Brown-glazed Smooth

The Gottfried Aust Kiln Waster Dump

1755 to 1771 Context

(B 4 & B 51)



Unglazed Anthropomorphic Fluted
(No Ear)



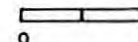
Brown-glazed Anthropomorphic Fluted

The Christ-Krause Kiln Waster Dump

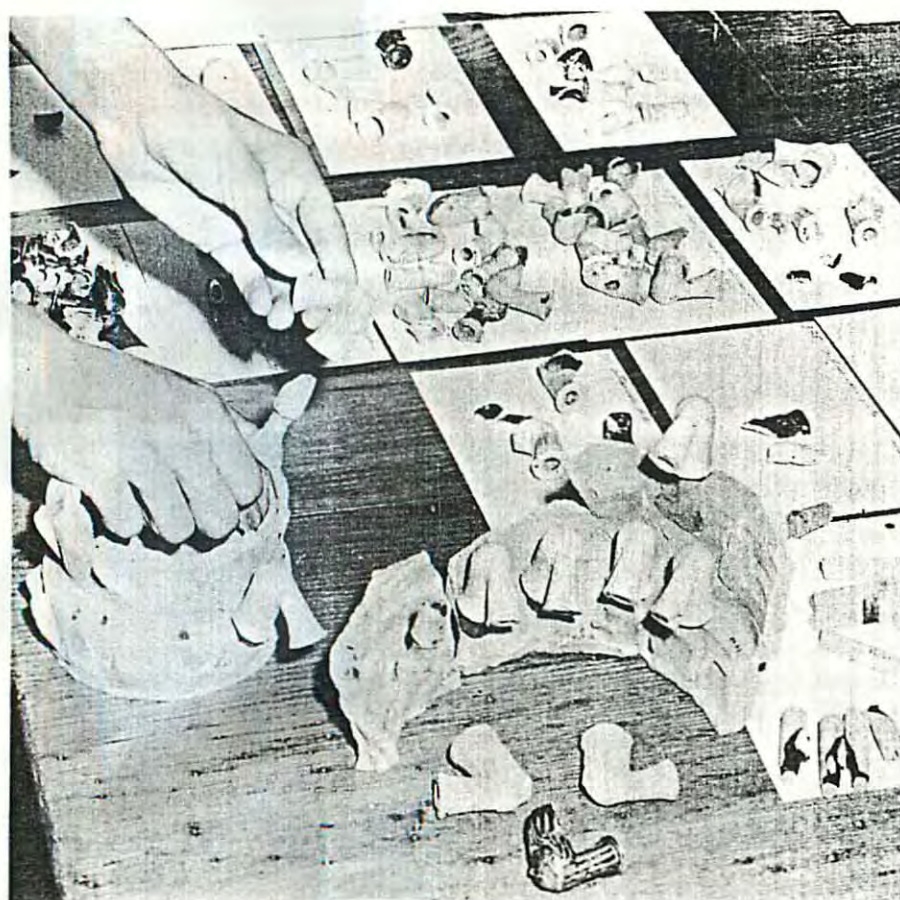
1786 to 1802 Context

(B 45)

Scale:



Two Types of Pipe Sagger's from the Kiln Waster Dumps



Pipe Type Distribution in Three Kiln Waster Dumps

AUST KILN WASTER DUMP # 1

B4

	ANTHROPOMORPHIC			FLUTED	SMOOTH	TOTAL	%
	Fluted	Rococo	Fleur-de-lis				
Unglazed	37	11	2	1	3	54	79.4
Clear-glazed	1	1				2	3.0
Brown-glazed	3				1	4	5.8
Mottled-glazed							
Green-glazed	2	1		3	1	7	10.4
Black-glazed	1					1	1.4
Total	44	13	2	4	5	68	
%	64.7	19.1	3.0	5.8	7.4		100.0

AUST KILN WASTER DUMP # 2

B51

Unglazed	21	2			56	79	73.9
Clear-glazed							
Brown-glazed	2				24	26	24.3
Mottled-glazed							
Green-glazed	1				1	2	1.8
Black-glazed							
Total	24	2			81	107	
%	22.5	1.8			75.7		100.0

CHRIST-KRAUSE KILN WASTER DUMP

B45

Unglazed	25					25	67.6
Clear-glazed							
Brown-glazed	4					4	10.8
Mottled-glazed							
Green-glazed	1					1	2.7
Black-glazed	7					7	18.9
Total	37					37	
%	100.0						100.0

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N.C. DEPT. OF ARCHIVES & HISTORY




The Ceramic Types and Forms of the Master Potter,

Drawing based on material made by Aust from 1756 to 1771 at the Moravian settlement of Bethabara in N
in excavations conducted by the Archaeologist in 1964.

DRAWING OF THE 21 INCH CERAMIC DISH FROM AUST'S SALEM SHOP
AND NOW IN THE WACHOVIA HISTORICAL SOCIETY MUSEUM IN OLD SALEM.

DRAWING OF THE 31 INCH CERAMIC SIGN FROM AUSTY'S RALEN SHOP
AND HOW IN THE WACHOWIA HISTORICAL SOCIETY MUSEUM IN OLD RALEN.



Reference Number

CERAMIC TYPES
(major glaze component)

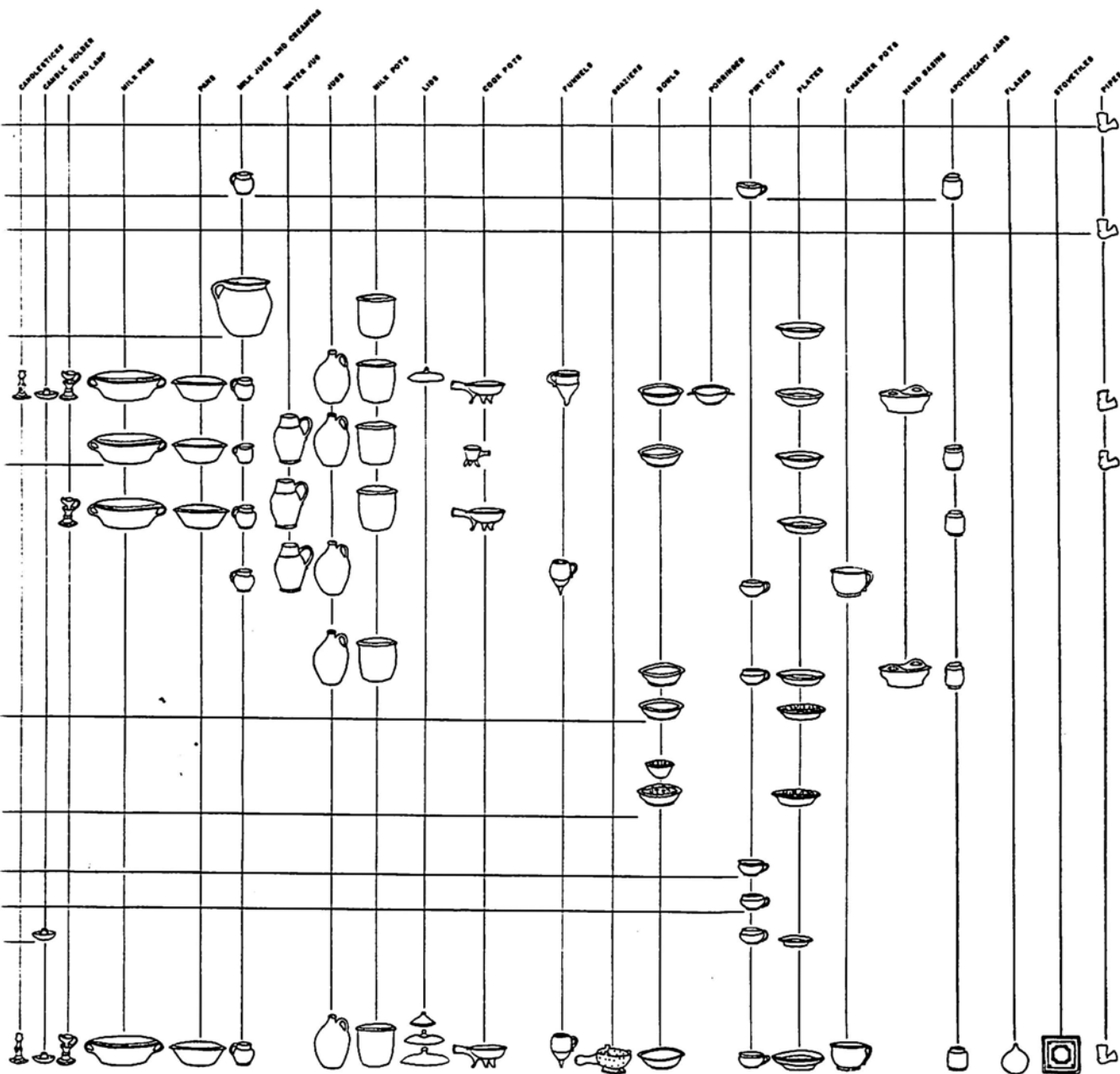
number of sherds recovered
% of total (shown graphically also)

number of sherds recovered
% of total (shown graphically also)

		Kiln Waste Dump No 1 (B-4)		Kiln Waste Dump No 2 (B-5)		TEACUPS		MUGS		EGG CUP		SALT DISHES		TEAPOTS		TEA KETTLES		COFFEE-POTS		TEA CANS		CANDLESTICKS		CANDLE HOLDERS		STAND LAMP		
		number of sherds recovered	% of total	number of sherds recovered	% of total	number of sherds recovered	% of total	number of sherds recovered	% of total	number of sherds recovered	% of total	number of sherds recovered	% of total	number of sherds recovered	% of total	number of sherds recovered	% of total	number of sherds recovered	% of total	number of sherds recovered	% of total	number of sherds recovered	% of total	number of sherds recovered	% of total	number of sherds recovered	% of total	
EARTHENWARE	Glazed	1. CREAM COLORED WARE (CLEAR LEAD)	84	8	1	1																						
		2. BROWN and YELLOW WARE (LEAD PLUS MANGANESE AND CLEAR LEAD)	188	1.2	40	9																						
		3. GREEN and YELLOW WARE (LEAD PLUS COPPER AND CLEAR LEAD)	12	2	7	1																						
		4. GREEN WARE (LEAD PLUS COPPER)	20	1	1	2																						
	Red	5. REDWARE (CLEAR LEAD)	30	2	16	4																						
		6. RED to BROWN WARE (LEAD PLUS IRON)	8,528	58.6	1,567	38.9																						
		7. BROWN to BLACK WARE (LEAD PLUS MANGANESE AND IRON)	146	1.0	343	8.6																						
		8. DULL BLACK WARE (LEAD PLUS LAMPBLACK)	41	3	180	4.6																						
	Glazed	9. RED and BROWN WARE (CLEAR LEAD AND LEAD PLUS MANGANESE)	275	1.9	189	4.8																						
		Unglazed	10. PLAIN UNGLAZED SLIPWARE	1,981	13.9	90	1.2																					
			11. DECORATED UNGLAZED SLIPWARE	97	7	1	1																					
		Slipped	Decorated	12. DECORATED GLAZED SLIPWARE	13	1	2	1																				
	13. YELLOW and RED WARE (CLEAR LEAD)			45	3																							
	Plain		14. GREEN and RED SLIPWARE (LEAD PLUS COPPER AND CLEAR LEAD)	34	1																							
			15. GREEN-SPOTTED YELLOW SLIPWARE (LEAD PLUS COPPER AND CLEAR LEAD)	70	5																							
	Glazed	16. YELLOW and BROWN SLIPWARE (CLEAR LEAD AND LEAD PLUS MANGANESE)																										
		17. UNGLAZED REDWARE	2,877	200	1,430	404																						
		14,363	1000	4,028	1000																							
STONEWARE	Bethabara	NONE		WHITE SALT-GLAZED																								
	European			SCRATCH-BLUE SALT GLAZED																								
PORCELAIN	Bethabara	NONE		BROWN AND GREY SALT-GLAZED																								
	Oriental			BLUE AND GREY SALT-GLAZED																								
				UNDERGLAZED BLUE																								

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