

13. Ceramics

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Over one million sherds from the Chalcatzingo excavations were analyzed in the project laboratory in Cuautla, Morelos. The descriptive typology which follows is based upon this lengthy analysis. The temporal ranges of types and forms derive from the sherds from the thirty-eight Selected Stratigraphic Units (see Chapter 5 and Appendix B), where dating to subphase was most secure.

The principal goals of the ceramic analysis were (1) to devise classificatory units (types) for describing the artifacts, and (2) to determine which ceramic attributes could be used as chronological markers. Surface treatment and paste were the major criteria for defining the types. Vessel form proved to be the most useful attribute for determining change through time. The form analysis was organized so that this attribute could be handled either independently or in conjunction with the descriptive typology.

Sherds were analyzed by catalogued provenience units. In the analysis of each sherd the following information was recorded.

1. Surface treatment:

a. Color, designated in the Munsell Soil Color System (Munsell 1971).

b. Luster, designated as highly polished, poorly polished, "stick" polished, matte, smoothed, or roughened.

c. The presence or absence of slip.

d. The presence or absence of painting.

e. The presence or absence of fire-clouding.

2. Paste characteristics:

a. Color, designated in the Munsell Soil Color System.

b. Presence or absence of a grey or black (reduced) core.

c. Kind, size, and abundance of temper.

d. Fracture, designated as sharp, medium, or crumbly.

e. Wall thickness.

3. Form.

4. Plastic decoration.

The analysis of form involved the construction of rim and body form charts (Appendix D) in which all known forms within Chalcatzingo's Formative period ceramics have been accommodated and coded. The following categories were used: bowls (RB), ollas (RO), dishes or plates (RD), bases (various codes), supports (S), handles (H), and *cantaritos* (C). Braziers constitute special cases which do not fit in well with the established categories due to their generally eroded state. Brazier forms are discussed in detail later in this chapter.

In the type descriptions, forms are given for each subphase, noting diagnostic and common forms. Forms possibly having chronological significance are marked with an asterisk (*).

Categories were also devised for the different kinds of plastic decoration. The resulting design codes (DC) are based on the design or form of decoration, pottery type, and in some cases vessel form. These categories are defined and illustrated in Appendix D. Decoration proved to be an important temporal marker for some, but not all types.

Following the creation of the descriptive typology, I conducted, under the supervision of Fernando Ortega at UNAM, a petrographic analysis using thin sections of the major types. The results of fifty-three thin section samples are given in Table 13.1, and a general summary of the analysis is provided in the type descriptions. This analysis greatly aided in distinguishing ceramics local to the Chalcatzingo area (those having temper derived from local volcanic tuffs) from imported types.

The bulk of the Chalcatzingo ceramics show the same petrographic character.

The use of volcanic tuff as tempering material was continuous through the Early and Middle Formative. Petrographic comparisons of sherd samples with volcanic tuff from Chalcatzingo itself show the similarity of constituents. Although the distribution of tuffs is widespread in Mexico, the high frequency of these ceramics in the Chalcatzingo assemblage probably indicates their local character. Two major types shown by the petrographic analysis to be non-local imports are Del Prado Pink and Pavón Fine Grey.

The ceramic type descriptions are presented here generally in chronological rather than alphabetical order, beginning with the major types of the Amate phase. The descriptions include temporal range (when it could be determined), surface treatment, paste and temper characteristics, forms occurring in each subphase, and plastic decoration. Following the description is a discussion of comparisons of the type to Formative ceramics from other sites in Mesoamerica. A glossary is provided at the end of the chapter for defining the more technical terms associated with ceramic description.

Summary data derived from the Selected Stratigraphic Units are provided in Tables 13.2, 13.3, and 13.4.* These data will give the reader a better understanding of changes in ceramic attributes through time, and can be used for serializing these attributes. However, it should be remembered that the ceramic analysis as a whole was derived from all of the excavations and not just these selected units.

* Editor's note: These tables are syntheses of lengthy, detailed appendices submitted by the author to supplement this chapter. Unfortunately, space considerations did not permit their publication. The editor takes responsibility for any inaccuracies in these summary tables.

Table 13.1. Petrographic Analysis of Thin Sections

TYPE	MINERALS										ROCK FRAGMENTS					
	Plg	An	Opy	Hbl	Cpy	Qtz	Musc	CorP	AlkF		And	Dac	Qtz	MicS	SS	RhyR
Amatzinac White	1	30	2	3	4						+	+	X			
Amatzinac White	1	25	2	3							+	+				
Amatzinac White	1	28	2	3	3						+	+				
Amatzinac White	1	28	2	3	4	X					+					
Amatzinac White	1	27	2	3				X			+	+				
A.W. Ext. White, Int. Plain	1	34	2	3	4						+					
A.W. Paste Variant	1	28	2	2	4						+					
A.W. Ruddy Paste Variant	1	33	2	3							+					
A.W. Surface Treatment Var.	1	30	2	2	4						+					
Amayuca Ruddy	1	28	2	3	4						+				X	
Arboleda Coarse	1	26	2	2												
Arboleda Coarse	1	26	2	2	3						+				X	
Atoyac Unslipped Pol. I	1	28	2	2							+					
Atoyac Unslipped Pol. I	1	29	2	2	4						+				X	
Atoyac Unslipped Pol. II	1	27	2	2	3											+
Atoyac Unslipped Pol. II	1	28	2	3							+				X	
Brazier, Type I	1	26	3	2	4				X				X			
Brown-Slipped, Streaky	1	31	2	3							+					
Carrales Coarse Grey	1	28	2	3	4						+	+				
Carrales Coarse Grey	1	26	2	3	4						+	+				
Carrales Coarse Grey	1	30	2	4	3						+					
Carrales Coarse Grey	1	31	2	3	3						+	+				
Carved Grey	1	28	2	3							+					
Cuautla Brown	1	30	2	3				X			+					
Cuautla Brown	1	31	2	3				X			+					
Cuautla Red-Slipped	1	29	2	3				X			+	+	+			
Cuautla Red-Slipped	1	29	2	3	4			X			+					
Del Prado Pink						2							1	1		
Del Prado Pink													2	1		
Kaolin					1								2			
Laca	1	30	2	3	4						+					
Laca	1	32	2	3	3						+	+				
Laca	1	29	2	3	3						+	+				
Laca, Imitation	1	28	3	2							+					
Manantial Orange-on-White	1	27	2	3	4											
Mingo Fine Brown	1	30	2	2								+				
Pavón Fine Grey	X							Altered					X			
Pavón Fine Grey								Altered					1			
Pavón Fine Grey	X							Altered					1			
Peralta Orange	1	31	2	3	4						+	+				
Peralta Orange	1	30	2	2		X					+	+				
Peralta Orange	1	26	2	3		X						+				
Peralta Orange	1	28	2	3							+	+				
Santa Clara Orange	1	28	2	3	3						+					
Tadeo Coarse	1	26	2	3	4										X	
Tadeo Coarse	1	26	2	3	4						+					
Tenango Brown	1	27	2	2								+				
Tenango Brown	1	25	2	3	4						+	+				
White-on-Red	1	28	2	2	4			X			+					
White-Rimmed Black	1	30	2	3							+					
White-Rimmed Black	1	33	2	2	3						+					
Xochitengo Polychrome	1	22	2	3	3						+					
Xochitengo Polychrome	1	30	2	3							+					

MINERALS

Plg: plagioclase.

An: anorthite.

Opy: orthopyroxene.

Hbl: hornblende.

Cpy: clinopyroxene.

Qtz: quartz.

Musc: muscovite.

CorP: corroded plagioclase.

AlkF: alkaline feldspar.

ROCKS

And: andesite.

Dac: dacite.

Qtz: quartzite.

MicS: micaceous schist.

SS: sandstone.

RhyR: rhyolitic rock.

The numbers 1–4 represent the order of frequency of the minerals, with 1 being the highest order (Sánchez-Rubio 1977).

The An (anorthite) numbers represent the composition of the plagioclase, forming a series ranging from sodic to calcic (albite to anorthite).

X is equivalent to a trace (one or two grains).

+ indicates presence ranging from 1 to 10 percent.

Table 13.2. Selected Stratigraphic Units: Distribution of Types by Subphase (Sherd Counts)

Type	EA	LA	EB	Subphase		EC	LC
				MB	LB		
Cuautla Brown	151	2,819	18	86	485	913	760
Cuautla Red-Slipped	52	888	12	21	186	304	173
Atoyac Unslipped	155	2,817	133	108	772	873	2,046
Polished *							
Arboleda Coarse	159	2,361	39	41	153	65	86
Del Prado Pink		148	2	8	23	18	15
Tadeo Coarse	2	173	3	15	96	107	352
Carved Grey		6			4	4	10
Kaolin		2		1	18	6	4
Manantial Orange-on-White			1	14	51	18	32
Amatzinac White	3	111	247	493	3,560	5,941	16,056
Variants:							
Red Paste		1	2	3	32	12	72
Ruddy Paste					1	1	5
Surface Treatment		3	1		1	1	10
Paste		5		1		4	
Exterior White-Slipped, Interior Plain		2					6
Laca		10	56	135	862	872	1,248
Imitation Laca	1	1		3	5	26	39
Tenango Brown	22	848	395	998	6,487	7,320	13,257
White-Rimmed Black	4	64	35	89	614	753	788
Peralta Orange	5	123	248	300	2,463	3,824	12,316
Pavón Fine Grey		1	7	9	66	131	326
Carrales Coarse Grey		25	2	13	80	237	2,534
Xochitengo Polychromes		2			9	61	169
Amayuca Ruddy		1			12		138
Mingo Fine Brown				2	3	13	157
Santa Clara Orange					1		13
Atotonilco Black	1	50	3	9	58	56	86
Brown-Slipped Streaky			1		2		2
White-on-Red						2	
Totals	555	10,461	1,205	2,349	16,044	21,562	50,700

Subphases: EA, Early Amate; LA, Late Amate; EB, Early Barranca; MB, Middle Barranca; LB, Late Barranca; EC, Early Cantera; LC, Late Cantera.

* Data not separated by I, II, or III.

The chapter concludes with some comments and comparisons to Gulf Coast Formative ceramics. At the time of the laboratory analysis it was difficult to compare the Chalcatzingo ceramics with those from major Gulf Coast centers, since the San Lorenzo data were still in preparation, and the descriptions from La Venta (P. Drucker 1952; P. Drucker, Heizer, and Squier 1959) and Tres Zapotes (P. Drucker 1943a; Weiant 1943) were either too brief or for other reasons incompatible with our analysis.

Nevertheless, because such comparisons could be of value, travel funds were acquired in 1977 from a private donor in

order to make an inspection of the various collections. The La Venta and Tres Zapotes ceramics at the Smithsonian Institution (see Fig. D.6) and the San Lorenzo ceramics at Yale University were briefly studied. The analysis of these artifacts provided a clearer idea of general and temporal relationships between Chalcatzingo's ceramics and those of Gulf Coast sites as well as relationships between the ceramics of the Gulf Coast centers.

TYPE DESCRIPTIONS

Cuautla Brown

Temporal Range: Cuautla Brown was abundant in the Early and Late Amate subphases, began to diminish in the Early Barranca, and was present in the later subphases only in minute quantities.

Surface Treatment: Vessel surfaces tend to be well polished; occasional "stick" polishing is evident. Surface color is variable: 2.5 YR 3-5/4-6, 3-5/2, 3/0; 5 YR 2.5/2, 3-4/1-2, 3-5/3-4; 10 YR 2.5-3/1, 5/1-2, 4-5/3; 7.5 YR 2/0, 4/0, 3-6/2, 4/4.

Paste and Temper: The paste is fine particled and has a sharp fracture. The paste color range is 2.5 YR 4-5/4, 3-5/2, 3-5/6, 3/0; 5 YR 3/1-2, 3-5/4, 3-5/6; 10 R 2.5-3/1-2.

No more than 9 percent of the paste volume is aplastics. Plagioclase (An 30-31) is the most frequently occurring mineral, 5 percent of the total volume, and grains range in size from 80 to 580 microns. Many plagioclase grains present evidence of magmatic corrosion. Orthopyroxene composes 1-3 percent of the volume, and grains measure 120-800 microns. Some of the orthopyroxenes are poikilitic. Less than 1 percent of the volume is hornblende, whose grain size is 160-700 microns. Basaltic andesite, iron stains, and leucoxene are present.

Forms (Figs. 13.1, 13.2):

Early Amate subphase

Outslanting wall bowls (RB-17)

Outcurving wall bowls (RB-25)

Flaring neck ollas (RO-12, 15)

Flat bases predominate

Late Amate subphase

Diagnostic phase markers

Beveled rim ollas (RO-8)

Bottles (RO-35)

High shoulders (Base M)

Common forms

Hemispherical bowls (RB-7)

Outslanting wall bowls (RB-17, 18)

Shallow bowls (RB-41)

Other forms

Hemispherical bowls (RB-66, 93)

Outslanting wall bowls (RB-19)

Cylindrical bowls (RB-14) *

Beveled rim bowls (RB-37) *

Tecomates (RB-1)

Incurved rim bowls (RB-3)

Outcurving wall bowls (RB-23, 25)

Flaring wall bowls (RB-26)

Highly outcurved bowls (RB-76)

Flaring neck ollas (RO-5, 12)

Flaring neck ollas with drooping rims (RO-9)

Super flaring neck ollas (RO-17)

Collared ollas (RO-2)

Flat and rounded bases

While Cuautla Brown ollas (RO-35; Fig. 13.1v-jj) ended with the Late Amate subphase, some Late Amate forms continued into the Early Barranca. From the Middle Barranca through the Late Cantera, Cuautla Brown declined markedly as an important type, and may be in our sample only as "float" material.

Plastic Decoration: Exterior incising on *tecomate* forms, incurved rim bowls, and hemispherical bowls often takes the form of the "Tlatilco panel" (Paul Tolstoy, personal communication; see Fig. 13.1g and 13.2). Gadrooning and finger impressions occur as olla decorative techniques. Grooving is present on the exteriors of both ollas and bowls (Fig. 13.1hh). One incised line was often executed immediately below the rims of bowls.

Comparisons: Café Rojizo, Bayo, and Café Oscuro types from Piña Chan's Chalcatzingo excavations (1955: Figs. 4t, 9ñ, o, t-x, 18f, j) are similar to Cuautla Brown. Café Oscuro and Café Claro from Atlahuayan, Morelos, and Café Rojizo o Bayo and Café Claro from Tlatilco have hemispherical bowls with the Tlatilco panel incised motif (Piña Chan and López González 1952: Fig. 1; Piña Chan 1958: Figs. 10i, j, 39o-q, 45p, q). Brown ware flaring wall bowls, everted rim bowls, and globular bottles are typical of the Early Nexpa phase of the Río Cuautla area, while during the Late Nexpa phase, cylindrical bowls appear (Grove 1974b: 30, 77-78). Tlatilco panel motifs, along with gadrooning and ledged bottle necks, are present on Incised Brown and Black ware and Brown bottles from Gualupita (Vaillant and Vaillant 1934: Figs. 20-22). At Iglesia Vieja, Morelos, globular bottle forms and the Tlatilco panel design are present in La Manuela subphase (Grennes-Ravitz 1974: 102). The Tlatilco panel design on hemispherical bowls apparently is a decorative motif restricted to the central highlands, principally in the Valley of Mexico and Morelos. Gadrooned brown vessels are present during the Bajío phase at San Lorenzo (Coe 1970: 24).

Cuautla Red-Slipped

Temporal Range: Cuautla Red-Slipped began in the Early Amate subphase, was abundant in the Late Amate, and diminished in the Early Barranca.

Table 13.3. Selected Stratigraphic Units: Distribution of Forms by Subphase (Sherd Counts)

Form	Subphase						
	EA	LA	EB	MB	LB	EC	LC
RB-1		19	2	5	15	14	64
RB-3	1	44	5	19	82	121	172
RB-6		2					5
RB-7	4	75	19	40	252	289	655
RB-14	1	30	2	1	45	53	98
RB-16			6	18	50	33	96
RB-17	6	112	11	36	185	275	616
RB-18	2	111	15	34	205	484	632
RB-19		36	12	21	171	253	768
RB-20				1	25	16	27
RB-21		1		2	19	20	26
RB-22				1	5	5	16
RB-23	8	66	8	19	152	288	768
RB-25	4	39	9	43	228	410	1,353
RB-26		7	11	26	147	119	202
RB-30			8	17	125	103	234
RB-31		1			7	14	63
RB-35		10			11	14	19
RB-37	1	65	3	3	29	40	71
RB-38		6	1		14	19	16
RB-41	7	61	9	24	279	382	811
RB-45			1	1	5	28	226
RB-60		6			3	10	11
RB-62				9	19	26	70
RB-65		1					2
RB-66		7				2	8
RB-67	1	2			6	20	413
RB-70		1			3	12	118
RB-71						9	52
RB-74					1		3
RB-75		1			4	4	6
RB-76		1		2	7	14	48
RB-77		1	3	3	27	57	77
RB-78					1		4
RB-79						1	2
RB-80						5	2
RB-81							1
RB-85						1	6
RB-88					5	1	3
RB-89						2	65
RB-90		3	1	2	38	14	511
RB-91		6				1	8
RB-93		2	1		3	1	4
RB-99				1	2		5
RB-100				1	6	11	20
RB-101		2	1		6	7	74
RB-102					1		22
RB-109							1
RB-115		2		1	2	6	5
RB-116							5
RB-117							1
RB-119							1
RB-120							2
RB-121							2
RB-122					1		
RB-123							2
RB-125					1	4	1
RB-128							1
RB-130							1
RB-131						1	1
RB-132						2	
RB-133		1					

Table 13.3 (continued)

Form	Subphase						LC
	EA	LA	EB	MB	LB	EC	
RB-134							1
RB-135							1
RB-137					1		
RO-1	1	3	1	5	18	30	30
RO-2						5	8
RO-3					1		
RO-5	6	81	10	12	64	129	203
RO-8	2	60		6	29	37	39
RO-9		8			14	23	17
RO-11		2			4	5	7
RO-12	1	33	6	3	48	87	259
RO-15	1	1			2	8	17
RO-16		1			2		1
RO-17		18	3	6	27	34	44
RO-25		1				3	19
RO-26							1
RO-27						2	40
RO-28			1		4	9	16
RO-29		2			2	2	48
RO-30						5	22
RO-31		1			1	1	19
RO-32							2
RO-33							1
RO-34							1
RO-35		6			3	1	
Flat base	1	39	12	41	258	273	422
Rounded base	3	25	47	54	457	723	1,515
Base M	1	18		1	10	38	312
RD-1		1			9	1	7
RD-2		2		1	8	6	27
RD-3				1	10	16	24
RD-4			1	2	22	15	36
RD-5				2	10	5	1
RD-7					1	1	3
RD-8			2	4	24	20	23
RD-9					3	1	35
RD-10				1			1
H-1		3			12	22	128
H-4					3		19
S-1						1	4
S-2					1	1	2
S-3-4					1		2
S-6		1				1	
S-7		17		1	5	1	9
C		2			3	2	14
Totals	51	1,046	211	470	3,244	4,699	11,876

Subphases: EA, Early Amate; LA, Late Amate; EB, Early Barranca; MB, Middle Barranca; LB, Late Barranca; EC, Early Cantera; LC, Late Cantera.

Surface Treatment: The interiors of bowls may be entirely slipped in red, the rims of vessels may be painted red, or the exteriors of vessels may be painted with horizontal or vertical bands of red slip over a beige-brown background (Fig. 13.3a-c). Ollas characteristically have zoned red painting. Surfaces are well polished except for grater vessels, whose interior bases are unfinished. The color range for the red slip is 7.5 YR 3/4-6, 3-4/6-8; 10 R 3/6, 5/6. The background color is variable: 7.5 YR 6-7/4, 4-5/2; 10 YR 6-7/2-4; 5 YR 5/6, 4/2; 2.5 YR 5/6, 3/2-4, 3/0.

Paste and Temper: The paste is fine particled and has a sharp fracture. The paste color range is 2.5 YR 4-5/4, 3-5/2, 3-5/6, 3/0; 5 YR 3/1-2, 3-5/4, 3-5/6; 10 R 2.5-3/1-2.

Aplastics do not exceed 15 percent of the paste volume. Plagioclase (An 29) is the abundant mineral, 5-8 percent of the volume. The range of grain size is 80-600 microns. Magmatically corroded plagioclase reaches a maximum frequency of 1 percent in one sample. Orthopyroxenes constitute 3-5 percent of the paste volume, and grains measure 100-700 microns. A few grains of clinopyroxene are present in one sample. Hornblende is present in proportions of less than 1 percent of the volume, and the grain size range is 120-500 microns. Iron stains and leucoxene are present in addition to dacite and basaltic andesite.

Forms:

Early Amate subphase (Figs. 13.3, 13.4a-d)

Cylindrical bowls (RB-14) *

Hemispherical bowls (RB-7)

Outslanting wall bowls (RB-17, 18)

Beveled rim bowls (RB-37)

Rounded bases

High shoulders (Base M)

Late Amate subphase (Fig. 13.4i-l)

Diagnostic phase markers

Beveled rim ollas (RO-8)

Bottles (RO-35)

High shoulders (Base M)

Common forms

Outcurving wall bowls (RB-23)

Outslanting wall bowls (RB-17, 18)

Other forms

Outcurving wall bowls (RB-25)

Outslanting wall bowls (RB-19)

Everted rim bowls (RB-35) *

Beveled rim bowls (RB-37) *

Cylindrical bowls (RB-14) *

Tecomates (RB-1)

Incurved rim bowls (RB-3, 6)

Shallow bowls (RB-41)



Figure 13.1. Cuautla Brown: a–u, Early and Late Amate subphase bowls; v–jj, Early and Late Amate subphase ollas.

Hemispherical bowls (RB-7, 66)
 Globular bowls (RB-60)
 Flaring neck ollas (RO-5, 12)
 Flaring neck ollas with drooping
 rims (RO-9)

Flat and rounded bases

Many of the Early Amate forms continue into the Late Amate subphase as well. While some Late Amate forms continue into the following Early Barranca subphase, there is a distinct decrease in the quantity of Cuautla Red-Slipped ceramics.

Plastic Decoration: Decorative techniques on this type are the same as those of Cuautla Brown: gadrooning, grooving, finger impressions, and incising (Figs. 13.3c, 13.4a–b, 11). Bowl shapes with true interior grater bottoms created by deep, crude incising or punctation on unsmoothed interiors also occur (Figs. 13.3d, 13.4c–d).

Comparisons: Cuautla Red-Slipped corresponds to Rojo sobre Café as defined by Román Piña Chan at Chalcatzingo (1955:60), Mapache Borde Rojo and Ventana Rojo sobre Bayo of the Nevada phase at Zohapilco (Niederberger 1976:Pls. 37, no. 6, 38 nos. 1–4), and to Pilli Rojo sobre Bayo of the Nevada-Ayotla phases at that same site (Niederberger 1976:Pl. 40). It is common at Tlatilco (Piña Chan 1958:85, Figs. 15a, b, 40, 41). Along the Río Cuautla, in Morelos, red-slipped ceramics are present in the Middle Nexpa phase (Grove 1974b:32). It may also be similar to Coatepec Red-on-Buff of the Late Ajalpan phase of the Tehuacan Valley (MacNeish, Peterson, and Flannery 1970:47).

More tenuous similarities are with Fidencio Coarse from Fábrica San José, Oaxaca (Drennan 1976). Red rim bands and vertical striping are found in the Tierras Largas and San José phases of the Valley of Oaxaca (Kent V. Flannery, personal communication). These Oaxacan examples lack the exotic bottle forms found in central Mexico. San Lorenzo, Veracruz, has red-on-buff *tecomates* with red rims and red striping during the Ojochi phase, and Tatagapa Red of the Chicharras phase has red-slipped *tecomates* with parallel-line incising, cross-hatching, and false rocker-stamping (Coe 1970:25).

At Altamira, Chiapas, Tusta Red is common to the Barra phase, and Mendez Red-Rimmed to the Cuadros phase (Green and Lowe 1967:104). Mendez Red-Rimmed is known from Izapa during the Cuadros phase (S. Ekholm 1969:

Table 13.4. Selected Stratigraphic Units: Distribution of Design Motifs by Subphase (Sherd Counts)

Design Code	Subphase					
	LA	EB	MB	LB	EC	LC
DC-1		2		4	14	76
DC-2		6	4	36	33	67
DC-3		5	5	45	93	186
DC-4		1	1	3	3	3
DC-5				1		1
DC-6				3	3	5
DC-7				5	8	6
DC-8				3		
DC-9			2	28	40	60
DC-10				7	1	4
DC-11			1		58	588
DC-12				1	1	
DC-13				4	9	55
DC-14				2		
DC-15				2	20	121
DC-16		15	30	280	352	542
DC-17			1	5	6	2
DC-18		6	29	159	124	168
DC-19			1	5	7	5
DC-20	1	4	26	163	107	128
DC-21		1	4	28	10	15
DC-22	1	7	15	66	106	84
DC-23						22
DC-24					1	5
DC-25						2
DC-26			1		1	76
DC-27					1	7
DC-28						2
DC-29						4
DC-30					7	134
DC-31						1
DC-32				2	4	10
DC-33		1			1	4
DC-34				1		2
DC-35			1	2	5	11
DC-36					2	56
DC-37					2	21
DC-38						6
Totals	2	48	121	855	1,019	2,479

Subphases: LA, Late Amate; EB, Early Barranca; MB, Middle Barranca; LB, Late Barranca; EC, Early Cantera; LC, Late Cantera.

41). At Santa Cruz, Burrero Red of the Burrero phase follows the same pattern (Sanders 1961:17). Finally, in the Ocos phase at La Victoria, Guatemala, vessels with vertical red stripes are present (Coe 1961:Fig. 20).

Red-slipped buff or brown ceramics appear quite common throughout much of central Mesoamerica during the Early Formative. What distinguishes different regions is the complex of vessel forms. *Tecomates* and bowls seem far more common in the southern tropical areas, while exotic bottle forms are more common in central Mexico.

Figure 13.4. Cuautla Red-Slipped: a–b, Early and Late Amate subphase bowls; c–d, Early and Late Amate subphase bowls with true grater incised interiors; e–h, Early and Late Amate subphase ollas; i–k, Late Amate subphase bottle rims; l, bottle body (hatched area indicates red).

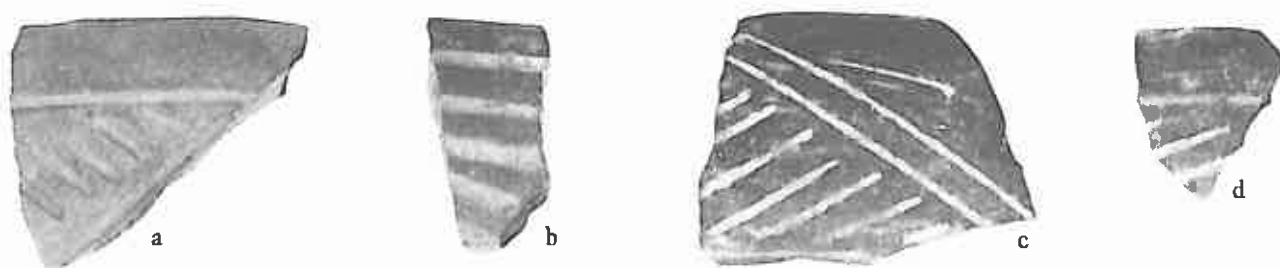


Figure 13.2. Cuautla Brown, Early and Late Amate subphase hemispherical bowls with exterior incising.

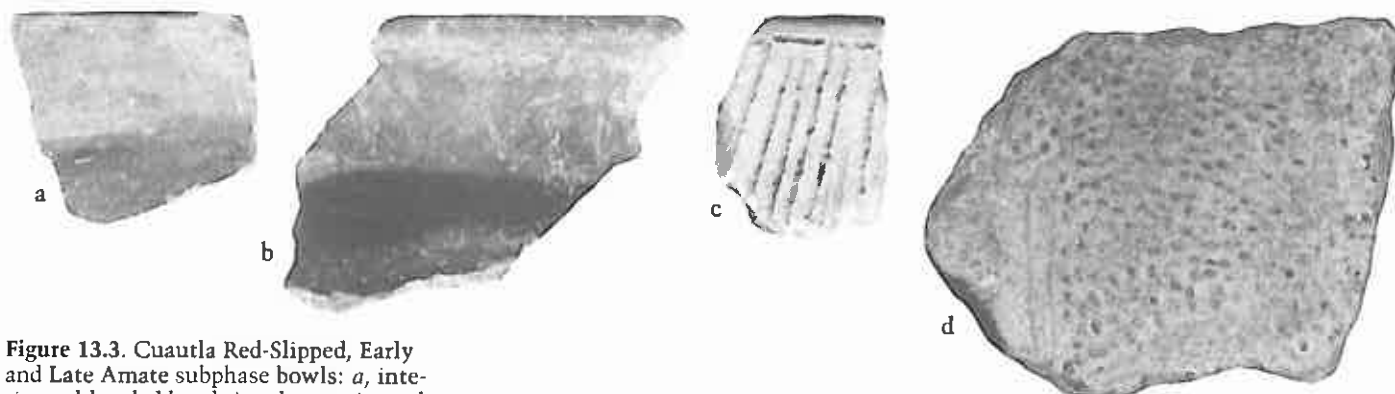
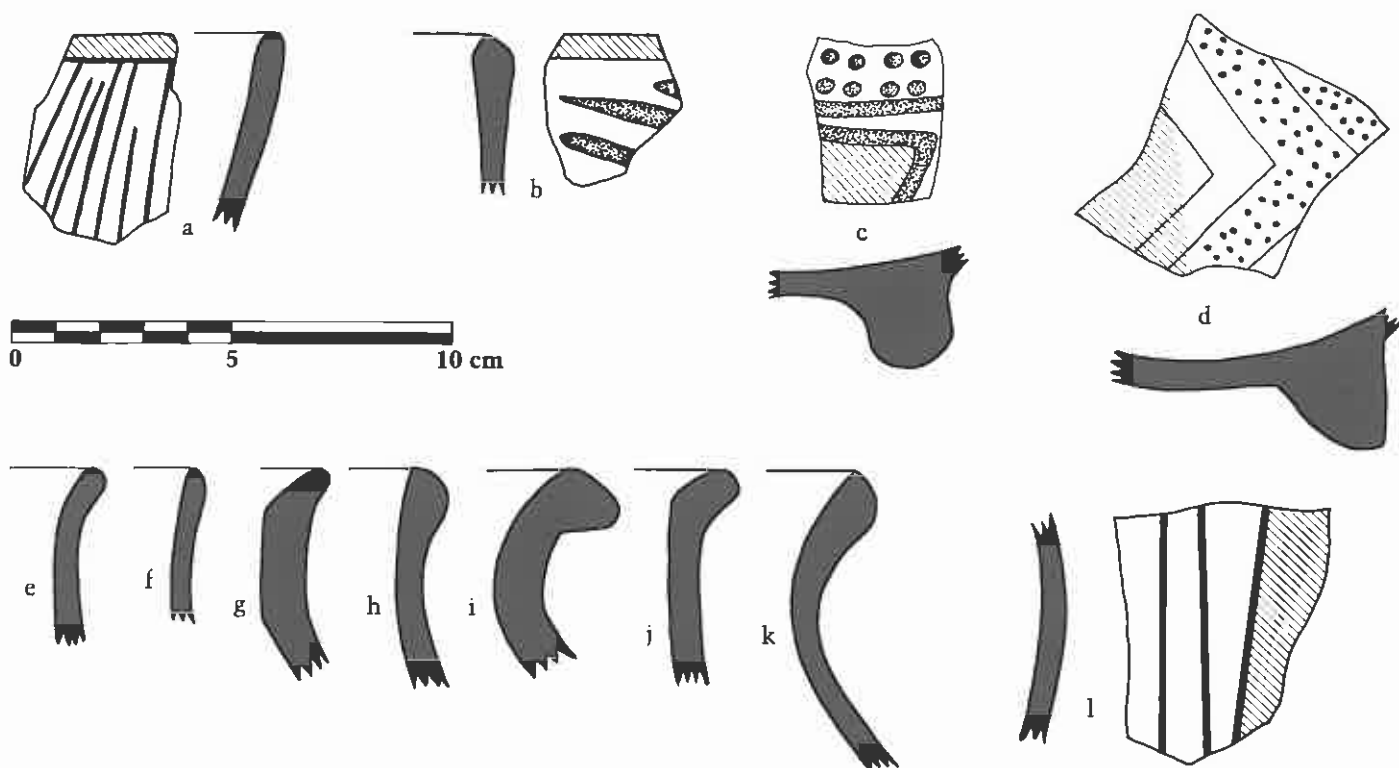


Figure 13.3. Cuautla Red-Slipped, Early and Late Amate subphase bowls: *a*, interior red-banded bowl rim; *b*, exterior red-banded bowl rim; *c*, red-rimmed bowl with interior incising; *d*, true grater incised interior bowl base.



Both Cuautla Brown and Cuautla Red-Slipped, two major forms of the Amate phase, contain magmatically corroded plagioclase. This plagioclase is typical of these types and is not consistently present in other types of the phase or other phases. Its seemingly restricted presence in Amate phase types could suggest the possibility of a different center of manufacture for these two types. However, since igneous terrain, from which corroded plagioclase derives, is characteristically heterogeneous, a single formation could feasibly contain both corroded and noncorroded plagioclase. Nonetheless, the possibility exists that the specific quarry containing the corroded plagioclase was exploited only during the Early Formative Amate phase.

Atoyac Unslipped Polished III

Temporal Range: Atoyac Unslipped Polished III was typical of the Early and Late Amate subphases.

Surface Treatment: Although unslipped, the highly polished surface of these ceramics often gives the illusion of a slip. The surface color is distinct, usually having ruddy brown tones: 2.5 YR 3-5/4, 3-5/6, 4/2; 5 YR 4/1, 3-5/3-4, 3-4/2, 4-5/6; 7.5 YR 3/2, 6-7/2-4, 5/1; 10 YR 3/1, 6-7/2-4, 5/1; 10 R 4/6-8.

Paste and Temper: The paste is identical to that of Cuautla Brown. Wall thickness varies with the size of the vessel, reaching a maximum thickness of 1.5 cm.

Forms (Fig. 13.5):

Early and Late Amate subphases

Diagnostic phase markers

Incurved rim bowls (RB-3)

Hemispherical bowls (RB-7)

Beveled rim bowls (RB-37)

Beveled rim ollas (RO-8)

Flaring neck ollas (RO-15)

Flaring neck ollas with drooping rims (RO-9)

Plastic Decoration: Incising and grooving were popular decorative techniques (Fig. 13.5b). One example of zoned punctation was noted.

Comparisons: None.

Arboleda Coarse

Temporal Range: Arboleda Coarse spanned Early Amate, Late Amate, and Early Barranca subphases.

Surface Treatment: The surfaces of this utilitarian ware are unslipped and poorly finished, being only slightly smoothed. Surface color varies from brown to grey due to irregular firing and conditions of usage: 5 YR 4-6/1-3, 5-7/3-4, 3/1-2,

7/6, 2.5/2, 7/2, 5/6, 5/2, 4/4; 7.5 YR 2-4/0-2, 4-5/2-4, 7/2-3, 3/0, 5-6/2, 6/4; 10 YR 3/1, 7/2; 2.5 YR 5-6/6, 3-4/2.

Paste and Temper: The paste is fine particled and has a sharp fracture. The range of paste color is 5 YR 5/6, 5/8, 4/3, 6/6, 4/6; 7.5 YR 5-6/4, 3/0, 7/6, 4/4, 2/0, 6/6; 10 YR 7/3.

The proportion of aplastics in the total paste volume is 10 percent. The principal aplastic constituent is plagioclase (An 26) at 8 percent, ranging in grain size from 100 to 600 microns. Less than 1 percent of orthopyroxene and hornblende is present. Hornblende grain size is 80-260 microns; orthopyroxenes range from 200 to 360 microns. An occasional clinopyroxene, sometimes twinned, is evident. Basaltic andesite, iron stains, and occasionally sandstone and leucoxene are evident. These minerals are typical of the area's volcanic tuffs.

Forms:

Early Amate subphase

Common forms

Flaring neck ollas (RO-5)

Other forms

Outcurving wall bowls (RB-23)

Shallow bowls (RB-41)

Late Amate subphase (Fig. 13.6)

Common forms

Outslanting wall bowls (RB-17, 18)

Outcurving wall bowls (RB-23)

Flaring neck ollas (RO-5)

Spider-leg supports (S-7)

Other forms

Outslanting wall bowls (RB-19)

Outcurving wall bowls (RB-25)

Flaring neck ollas (RO-12, 16)

Everted rim bowls (RB-35)*

Cylindrical bowls (RB-14)*

Heavy everted rim bowls (RB-38)*

Beveled rim ollas (RO-8)*

Bottles (RO-35)*

Plate with roughened exterior (RD-2)

Nub supports (S-2)

Flat bases

Tecomates (RB-1)

Beveled rim bowls (RB-37)

Shallow bowls (RB-41)

Hemispherical bowls (RB-7)

Flaring wall bowls (RB-26, 75)

Highly outcurved bowls (RB-90)

Incurved rim bowls (RB-3)

Globular bowls (RB-60)

Super flaring neck ollas (RO-17)

Collared ollas (RO-1)

High shoulders (Base M)

The same Late Amate forms continued through to the Late Barranca subphase even as the type decreased in importance.

Plastic Decoration: Single incised lines along the interior or exterior rims and incised pseudo-grater designs in bowls constitute the occasional decorative aspect of Arboleda Coarse.

Comparisons: None.

Del Prado Pink

Temporal Range: Del Prado Pink was present in the Late Amate and Early Barranca subphases. Its appearance in the stratigraphic record during the Late Amate is one distinguishing trait between the Early and Late Amate subphases.

Surface Treatment: Both slipped and unslipped surfaces are only slightly smoothed. Surface color is quite variable, but usually has a pinkish tinge: 10 R 6/6; 2.5 YR 5-6/6, 4/4; 5 YR 4-5/1-3, 5-6/4, 5-7/6; 7.5 YR 3-6/2, 5-6/4. **Paste and Temper:** Temper composed of large angular crystals is diagnostic in the identification of this type. Large flakes of mica are often obvious without the use of a hand lens. Fracture is very jagged due to the temper size. The paste color range is 2.5 YR 4-5/6, 4/4; 10 R 6/6; 5 YR 6/6, 5/1.

Muscovitic mica, possibly originating in a plutonic terrain, constitutes 3-5 percent of the paste volume. The range of grain size is 400 microns to 1.6 mm. Quartzite comprises 8-10 percent of the volume with a grain size ranging from 320 microns to 2.8 mm. Micaceous (sericitic) schist is found to reach a frequency of 10-15 percent. Grains range in size from 700 microns to 1.8 mm. The mineral inclusions are markedly different from the local volcanic tuffs and indicate a metamorphic source area. Petrographic comparison with similar sherds from Las Bocas, Puebla, indicates a high degree of similarity, and Las Bocas is located very close to a metamorphic terrain which could be the source of these minerals.

Forms (Fig. 13.7):

Late Amate subphase

Outslanting wall bowls (RB-17, * 18*)

Outcurving wall bowls (RB-25)*

Flaring neck ollas (RO-5)*

Shallow bowls (RB-41)

Everted rim bowls (RB-35)

Rounded bases

Early Barranca subphase

Incurved rim bowls (RB-3)

Hemispherical bowls (RB-7)

Outslanting wall bowls (RB-17, 18)

Outcurving wall bowls (RB-23, 25)

Shallow bowls (RB-41)

Plastic Decoration: None of the sherds had plastic decoration.

Comparisons: The most important similarity occurs between Del Prado Pink and virtually identical ceramics from the surface of Las Bocas, Puebla. The forms and paste appear identical. Another pottery, possibly similar to Del Prado Pink, is Río Salado Coarse of the Early Santa María phase of the Tehuacan Valley. The heavy temper, including mica, and the surface color range are like Del Prado Pink, but Río Salado Coarse is usually very thick (MacNeish, Peterson, and Flannery 1970:76–78). The metamorphic nature of the temper indicates that this type is an import into the Río Amatzinac Valley–Chalcatzingo area.

Tadeo Coarse

Temporal Range: Tadeo Coarse was typical of the Early and Late Amate subphases, and continued in minor amounts through the Late Cantera.

Surface Treatment: The surface of this utilitarian pottery is poorly smoothed and unslipped. Surface color is variable, brown to grey, due to firing and use conditions: 2.5 YR 3–5/4, 3–6/6, 4–5/8; 5 YR 4–5/4, 4/6, 4/2, 3/2; 7.5 YR 6/3.5–4; 10 YR 4–5/1–2.

Paste and Temper: Tadeo Coarse is differentiated from Arboleda Coarse on the basis of paste. The paste of Tadeo Coarse is softer with a more crumbly texture. The fracture is jagged as a result of the texture and abundant temper. Wall thickness range is 0.8–1.9 cm. The paste color range is 2.5 YR 3–5/4, 3–6/6, 4–5/8; 5 YR 4–5/4, 4/6, 4/2, 3/2; 7.5 YR 6/3.5–4; 10 YR 4–5/1–2.

The total volume of aplastics is 9 percent. Plagioclase (An 26) makes up 4–6 percent of the paste volume, and its grains range in size from 80 to 600 microns. Orthopyroxenes constitute 2–4 percent of the total volume, present some twinned examples, and range in size from 160 to 240 microns. Hornblende or clinopyroxene is present in less than 1 percent. Hornblende has a range of size from 80 to 440 microns; clinopyroxenes from 260 to 300 microns. Basaltic andesite, sandstone, and iron stains are present. The mineral inclusions show similarities to mineral fragments found in the volcanic tuff of the area.

Forms: The Early Amate subphase forms are not known.

Late Amate subphase

Beveled rim bowls (RB-37)*

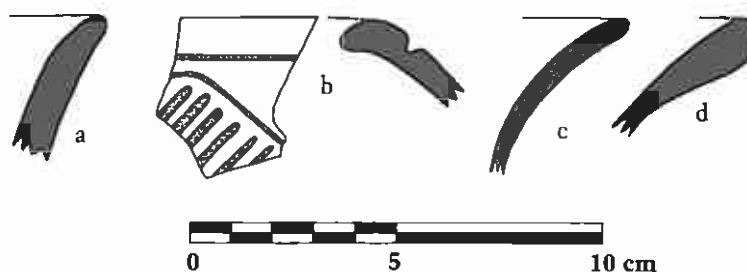


Figure 13.5. Atoyac Unslipped Polished III: a–b, Early and Late Amate subphase bowls; c–d, Early and Late Amate subphase ollas.

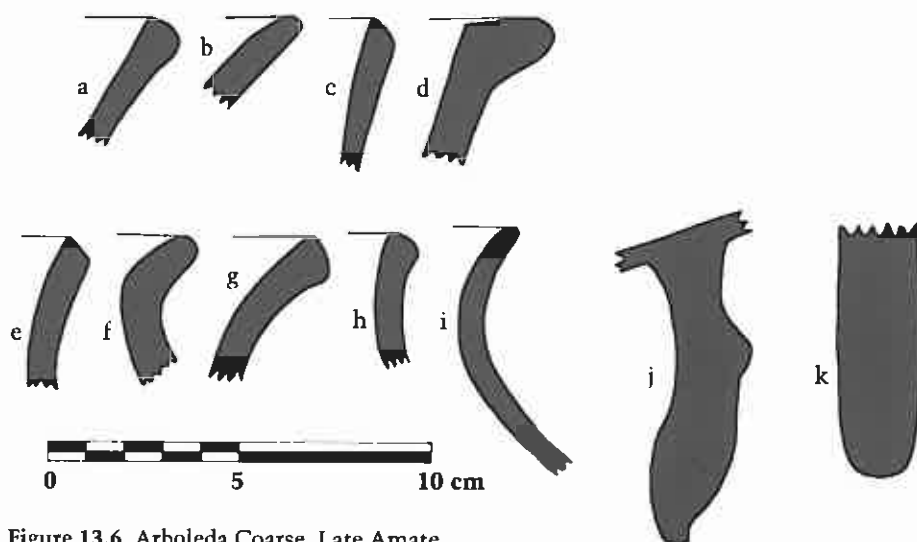


Figure 13.6. Arboleda Coarse, Late Amate subphase: a–d, bowls; e–i, ollas; j–k, spider-leg supports.

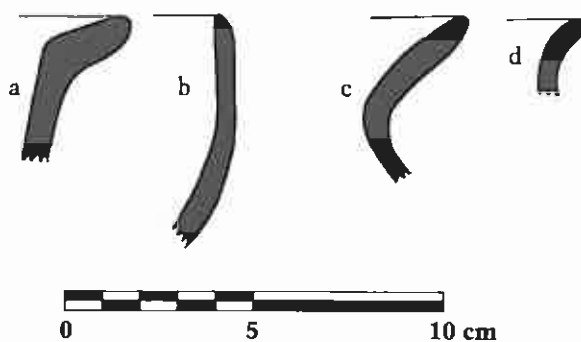


Figure 13.7. Del Prado Pink, Late Amate and Early Barranca subphases: a–b, bowls; c–d, ollas.

High shoulders (Base M)*
 Outslanting wall bowls (RB-18)
 Outcurving wall bowls (RB-25)
 Flaring wall bowls (RB-26)
 Shallow bowls (RB-41)
 Super flaring neck ollas (RO-17)
 Flaring neck ollas (RO-5)
 Flat and rounded bases

The sample of Tadeo Coarse in Early Barranca levels is small, with the only recognized form being outslanting wall bowls (RB-18).

Middle Barranca subphase
 Incurved rim bowls (RB-3)
 Plate forms with roughened exteriors (RD-2, 3, 5, 7, 8)
 Flat bases

Late Barranca subphase
 Common forms
 Shallow bowls (RB-41)
 Outcurving wall bowls (RB-23, 25)
 Other forms
 Everted rim bowls (RB-30)*
 Collared ollas (RO-1)*
 Outslanting wall bowls (RB-18, 19)
 Highly outcurved bowls (RB-90)
 Hemispherical bowls (RB-7)
 Flaring wall bowls (RB-26)
 Braziers, annular based (RB-100)
 Incurved rim bowls (RB-3)
 Plate form with roughened exterior (RD-4)
 Flat and rounded bases

Early Cantera subphase
 Common forms
 Outcurving wall bowls (RB-23, 25)
 Small shallow bowls (RB-70)*
 Plate form with roughened exterior (RD-4)
 Other forms
 Plate form with roughened exterior (RD-2)
 Flower pot bowls (RB-62)*
 Highly outcurved bowls (RB-90)*
 Outslanting wall bowls (RB-18)
 Shallow bowls (RB-41)
 Double-loop handle censer (RB-101)
 Flat and rounded bases

Late Cantera subphase
 Common forms
 Outcurving wall bowls (RB-23, 25)
 Shallow bowls (RB-41)
 Other forms
 Braziers (RB-99)*
 Small shallow bowls (RB-70)*
 Double-loop handle censers (RB-101)*
 Highly outcurved bowls (RB-90)*
 Flaring mouth ollas (RO-28)*
 Plate form with roughened exterior (RD-3,* 8,* 1, 2, 4)
 Spouted tray (RD-9)*

Regular handles (H-1)
 Flat and rounded bases
 Cylindrical bowls (RB-14)
 Heavy shallow bowls (RB-115)
 Incurved rim bowls (RB-3, 128)
 Outslanting wall bowls (RB-17, 18, 19)
 Flaring wall bowls (RB-26)
 Everted rim bowls (RB-30)
 Braziers, annular based (RB-100)
 Flaring neck ollas (RO-5, 12)
 Super flaring neck ollas (RO-17)

Plastic Decoration: No examples of plastic decoration were noted.

Comparisons: None.

Carved Grey

Temporal Range: Carved Grey first appeared in Late Amate subphase levels.

Surface Treatment: Surfaces are unslipped and well polished. Due to firing clouds, the surface color is variable: 5 YR 5-6/1; 10 YR 4/1, 5/3, 7/3, 7-8/1-2.
Paste and Temper: The soft paste has a jagged, crumbly fracture. The color range is 5 YR 5-6/1; 10 YR 4/1, 5-6/1; 7.5 YR 6/6, 5-6/2.

Approximately 7 percent of the volume of the paste is aplastics. Plagioclase (An 28) is the most frequently occurring mineral, 5 percent of the volume, and ranges in grain size from 80 to 540 microns. Orthopyroxenes compose 1 percent of the volume and range in size from 140 to 400 microns. The common amphibole, hornblende, constitutes less than 1 percent of the paste volume; grain size ranges from 200 to 320 microns. Basaltic andesite is present. The mineral inclusions show similarities to mineral fragments found in the volcanic tuff of the area.

Forms (Fig. 13.8):

Late Amate subphase contexts
 Outslanting wall bowls (RB-18)
 Outcurving wall bowls (RB-23)
 Shallow bowls (RB-41)

Other known forms

Diagnostic phase marker
 Everted rim bowls (RB-35)
 Other forms
 Hemispherical bowls (RB-7)
 Incurved rim bowls (RB-3)
 Heavy everted rim bowls (RB-38)

Plastic Decoration: The most notable characteristic of Carved Grey is the deep, wide, incised decoration, often depicting crossed bands (Fig. 13.8a). Red pigment was sometimes rubbed into the incised areas. Excision also occurs occasionally.
Comparisons: Carved Grey is similar to certain examples of Café Negruzco and

Negro Pulido defined by Piña Chan at Chalcatzingo (1955: Figs. 3g, 8ñ-q). Chalcatzingo's Carved Grey is closely parallel in form, decoration, and color to Calzadas Carved of the San Lorenzo A phase of San Lorenzo. In the central highlands of Mexico, similar pottery types have a wide spatial distribution but do not occur in abundance at any one site. In Morelos it is reported from the Río Cuautla area during the Late Nexpa (San Pablo B) phase (Grove 1974b: 33), from Cerro Chacaltepec (Grove 1968b: 68-69, Fig. 64), from Atlahuayan (Iglesia Vieja) as Café Negruzco in the Olmeca-Arcaico complex (Piña Chan and López González 1952: Fig. 1), and in El Zarco subphase (Grennes-Ravitz 1974). Similar grey wares are found in the San José phase of the Valley of Oaxaca (Flannery 1968: 82-83), in the Moyotzingo A phase of Moyotzingo, Puebla (Aufdermauer 1973: 12), and at Ayotla in the Valley of Mexico during the Ayotla and Justo phases (Tolstoy and Paradis 1970: 347). At Tlatilco, some examples of Café Negruzco and Café Oscuro are like Chalcatzingo's Carved Grey (Piña Chan 1958: Figs. 34h, 37m).

From the Middle Grijalva region, flat-bottomed everted rim bowls are known from the Bombana phase, but the carved designs do not appear until the Cocahuano phase (Lee 1974: 5-7). At Altamira, Chiapas, Pampas Black and White of the Cuadros phase includes both white-rimmed black pottery and everted rim bowls with carved designs (Green and Lowe 1967: 108-109). Coapa Black of the Cuadros phase of Izapa evidences everted rim bowls and excised motifs (S. Ekholm 1969: 45). Burrero Grey of the Burrero phase of Santa Cruz, Chiapas, has the typical flat based everted rim bowls, but there is no mention of carved or excised designs (Sanders 1961).

Kaolin

Temporal Range: The exact temporal placement of Kaolin pottery at Chalcatzingo is unknown. Its earliest occurrence is in a Late Amate subphase level. Several Kaolin sherds occurred in Middle Barranca levels, and others in Cantera phase levels. Since only small amounts of Kaolin ceramics are present at Chalcatzingo, and in contexts which are temporally scattered, an exact temporal placement will not be attempted.

Surface Treatment: The unslipped, well-polished surfaces are distinguished by their stark white color.

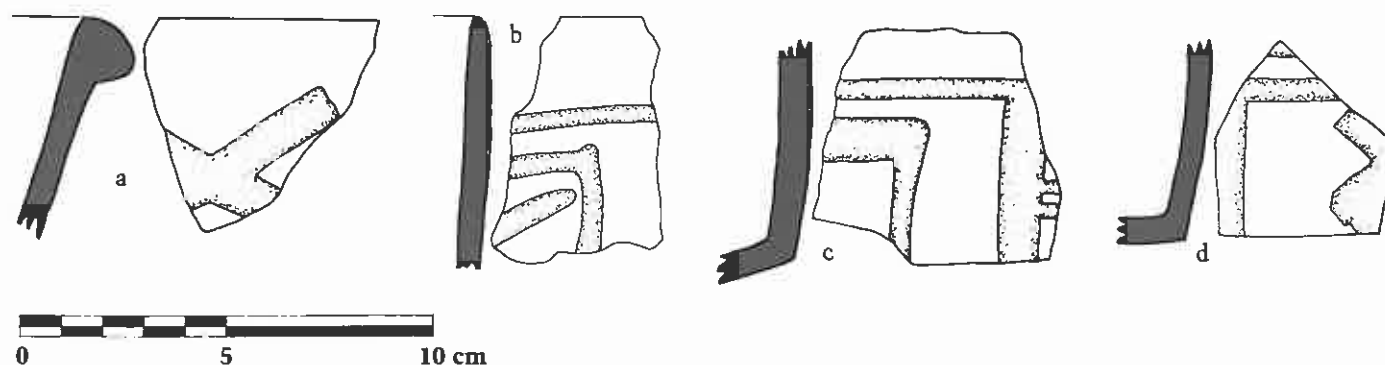


Figure 13.8. Carved Grey, Late Amate sub-phase bowls.

Paste and Temper: Cross-sections of sherds show a completely white core. There is little or no temper. The fracture is generally sharp. Wall thickness is extremely thin, ca. 0.3 cm.

Less than 2 percent of the total paste volume is aplastics. Quartz comprises 1 percent of the paste volume, its grains measuring 140–600 microns. A trace of plagioclase, a few grains of quartzite, and iron stains were noted.

Forms (Fig. 13.9): The small quantity of sherds in our sample are all irregularly shaped or warped forms and do not fit within our established categories.

Plastic Decoration: Rippled surfaces of some sherds in our sample probably represent a decorative technique.

Comparisons: Kaolin pottery called Xochiltepec White is present beginning with the Chicharras phase at San Lorenzo (Coe 1970:25). Hollow figurines made of kaolin are known from La Venta (museum collection of the Museo Nacional de Antropología, Mexico City). Porous White Ware from Tres Zapotes may be similar to Kaolin (Weiant 1943:17). Kaolin sherds are present in the San Pablo B phase of the Río Cuautla region (Grove 1974b) and at Iglesia Vieja, Morelos, during the El Zarco subphase (Grennes-Ravitz 1974). Kaolin ceramics occur as burial furniture at Tlatilco (Piña Chan 1958:91).

The petrographic analysis of Kaolin ceramics should not be expected to correspond to that of other types. Kaolin ceramics represent a special case, as aplastics were apparently not added during the manufacturing. Chalcatzingo is located near a kaolin source (see Chapter 23), although at this time we have not

completed trace analyses of this source and therefore cannot ascertain whether the Kaolin ceramics present in our samples were locally manufactured or imported. Their small quantity suggests that they may not have been locally manufactured.

Manantial Orange-on-White

Temporal Range: Manantial Orange-on-White appeared during the Middle Barranca subphase and was also present in small quantities into the Cantera phase. Its true chronological position is probably within the Middle to Late Barranca subphases.

Surface Treatment: The often polished surface is slipped with painted bands of orange or sometimes red on the exterior. The painted bands are usually delimited by incising (Figs. 13.10, 13.11e–f). The color range of the white background is 10 YR 8/1–4, 7/1–2. The orange slip has a range of 5 YR 4–6/6.

Paste and Temper: The paste is like that of Amatzinac White. Probably as a function of the extraordinary thickness of the vessel walls (over 2 cm), the paste usually contains abundant inclusions. The paste color range is 7.5 YR 6/4, 5–7/4–6.

The total frequency of aplastics in the paste is 8–9 percent. As in most samples with volcanic tuff temper, plagioclase (An 27) is the major mineral, constituting 5 percent of the volume. Grain size range is 100–600 microns. Orthopyroxenes compose 1–2 percent of the volume, with a grain size range of 180–260 microns. Some twinned examples of orthopyroxenes are present. Basaltic andesite, iron stains, and leucoxene are

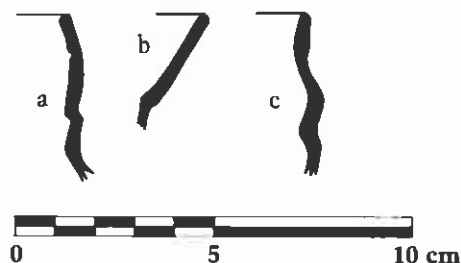


Figure 13.9. Kaolin rims.

present, while a trace of clinopyroxene is noted.

Forms (Figs. 13.10, 13.11): Large heavy everted rim bowls (RB-38; Fig. 13.11d) and flower pot bowls (RB-62) are typical. *Plastic Decoration:* Incising to outline the orange-painted areas is common (Figs. 13.10, 13.11e–f).

Comparisons: Aguatepec Thick of the San Lorenzo phase of San Lorenzo has identical thick, heavy RD-38 forms (Coe, personal communication).

Amatzinac White

Temporal Range: Amatzinac White was present in minute quantities in the Late Amate subphase. It became a major part of the Chalcatzingo ceramic assemblage at the beginning of the Early Barranca and continued in that role through the Late Cantera.

Surface Treatment: Vessel surfaces are slipped with a thick slip which varies in color from a stark white to a creamy or greyish white: 10 YR 7–8/1–4. During the Barranca phase, this type is generally well polished, and the slip is durable. During the Cantera phase, however, the slip is of a poorer quality and tends to wear off (fugitive white). Hemispherical bowls and incurved rim bowls are always slipped white on both interior and exterior surfaces. During the Barranca phase,

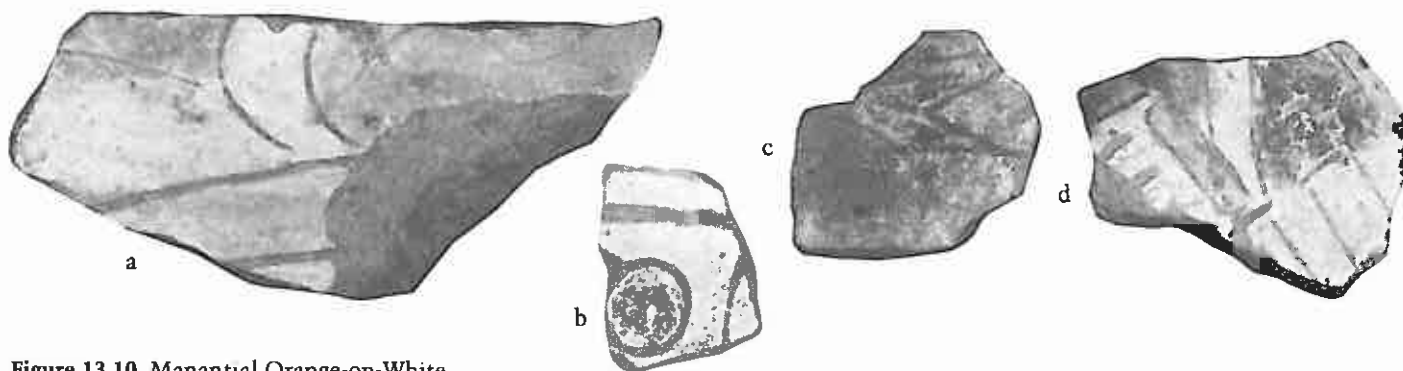


Figure 13.10. Manantial Orange-on-White bowl sherds with zoned painting.

some outcurving wall and everted rim vessels are unslipped on the exterior. Almost all Amatzinac White vessels during the Cantera phase are slipped on the exteriors as well as interiors.

Paste and Temper: The paste is crumbly and has a jagged fracture. The paste color range is 7.5 YR 6/4, 5-7/4-6, 3-5/0; 10 YR 6-7/3-4. A brown and dark grey sandwiched core is typical of Amatzinac White.

The total volume of aplastics is approximately 20 percent. Plagioclase (An 25, 27, 28, 30) occurs most frequently, as 10 percent of the total paste volume. Grain size is 100 microns to 1.0 mm. Orthopyroxenes constitute 2-5 percent of the volume, and grains measure 100 microns to 1.3 mm. Hornblende may be the second most abundant mineral, never more than 1 percent of the volume, or may be equaled in proportion by clinopyroxene. Some grains of clinopyroxene are twinned. Clinopyroxenes measure from 100 to 400 microns; hornblende grains range from 140 to 640 microns. Basaltic andesite, dacite, iron stains, leucoxene, and opaque iron-titanium ores are observed. Occasional grains of quartzite and poikilitic plagioclase are present. The mineral inclusions show similarities to mineral fragments found in the volcanic tuff of the area.

Forms:

Late Amate subphase

- Cylindrical bowls (RB-14)
- Outcurving wall bowls (RB-23)
- Outslanting wall bowls (RB-17)
- Everted rim bowls (RB-35)
- Flat and rounded bases

Early Barranca subphase (Figs.

13.12a-g, 13.13, 13.14, 13.15a-j)

Common forms

- Hemispherical bowls (RB-7)

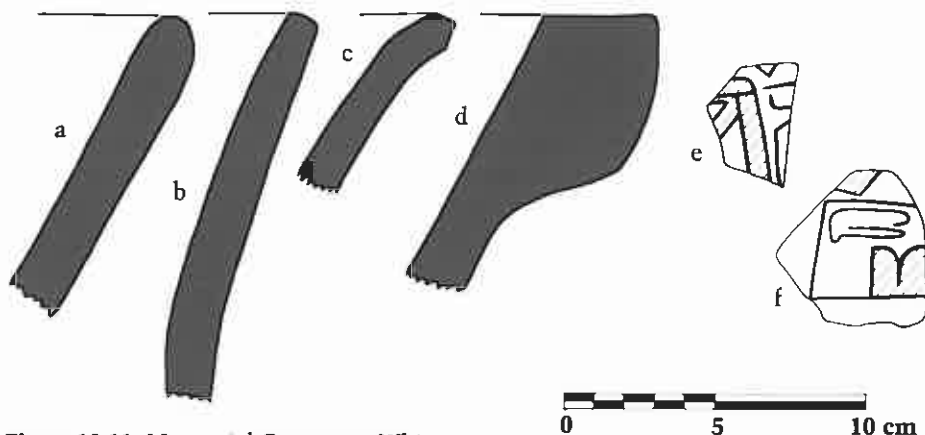


Figure 13.11. Manantial Orange-on-White: a-d, bowl rims; e-f, bowl sherds with zoned painting (hatched area indicates orange).

Outslanting wall bowls (RB-17, 18, 19)

Flaring wall bowls (RB-26)

Slightly everted rim bowls (RB-77)

Other forms

Ovate bowls (RB-16)*

Everted rim bowls (RB-30, * 35*)

Outcurving wall bowls (RB-23, 25)

Shallow bowls (RB-41)

Flat and rounded bases, with a higher frequency of flat bases

Infrequent and sporadic forms

Highly outcurved bowls (RB-76)

Composite silhouette bowls (RB-45)

Super flaring neck ollas (RO-17)

Middle Barranca subphase (Figs.

13.12h-k, 13.13, 13.14, 13.15a-j)

Common forms

Outcurving wall bowls (RB-25)

Outslanting wall bowls (RB-18)

Flaring wall bowls (RB-26)

Hemispherical bowls (RB-7)

Everted rim bowls (RB-30)*

Other forms

Outcurving wall bowls (RB-23)

Outslanting wall bowls (RB-17, 19)

Ovate bowls (RB-16)*

Flower pot bowls (RB-62)*

Slightly everted rim bowls (RB-77)*

Incurved rim bowls (RB-3)

Shallow bowls (RB-41)

Outslanting, slightly everted rim bowls (RB-20)

Highly outcurved bowls (RB-76)

Fragment of a possible cloverleaf-shaped bowl

Flat and rounded bases

Late Barranca subphase (Figs. 13.12h-j, 1-p, 13.16-13.18)

Common forms

Outcurving wall bowls (RB-25)*

Outslanting wall bowls (RB-18)*

Flaring wall bowls (RB-26)

Everted rim bowls (RB-30)*

Other forms

Outcurving wall bowls (RB-23)*

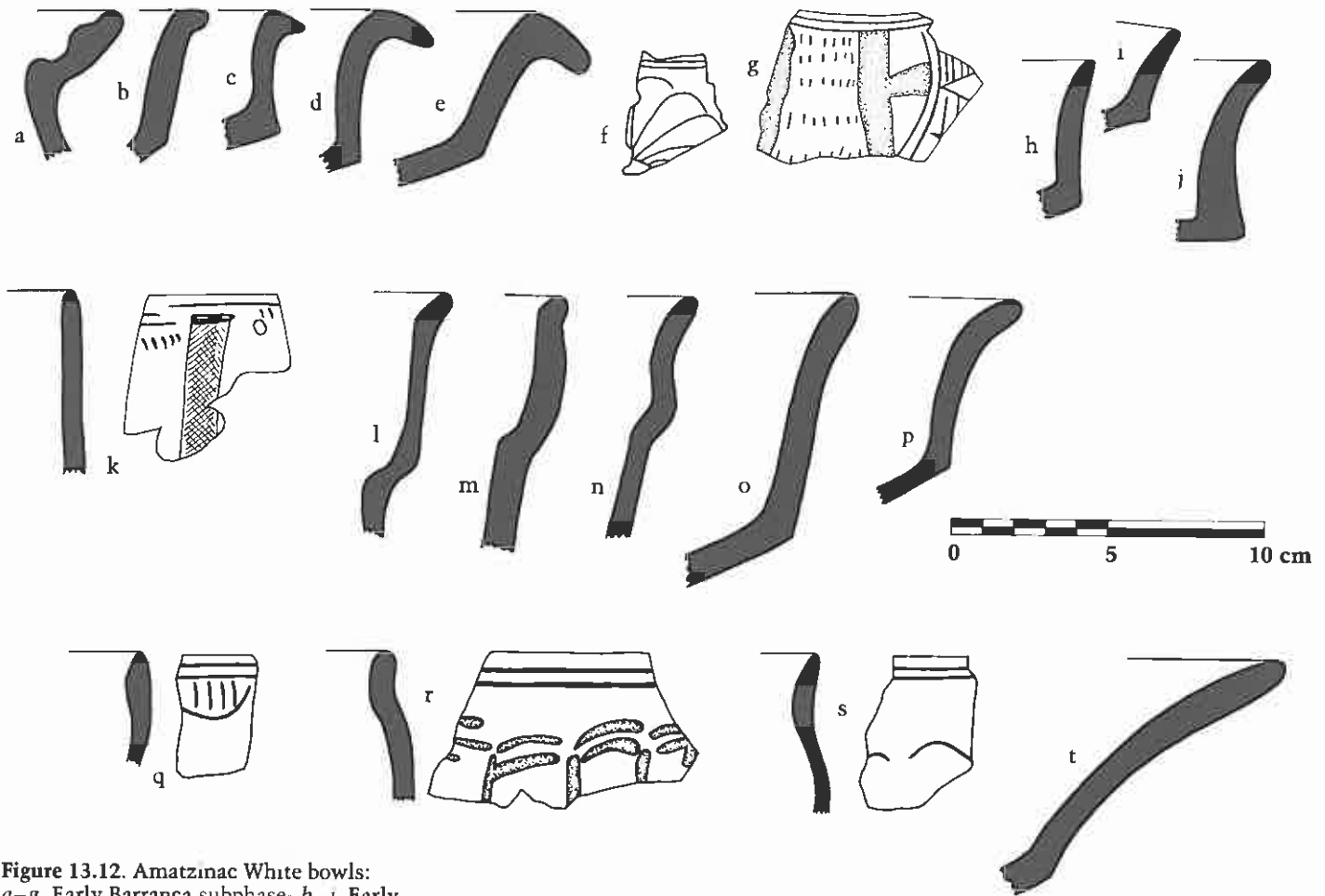


Figure 13.12. Amatzinac White bowls: *a–g*, Early Barranca subphase; *h–j*, Early to Late Barranca; *k*, Middle Barranca; *l–p*, Late Barranca; *q–s*, Early Cantera; *t*, Early to Late Cantera.

Outslanting wall bowls (RB-17, * 19*)
 Everted rim bowls (RB-35, 125)
 Double-loop handle censer (RB-101)
 Flower pot bowls (RB-62)
 Slightly everted rim bowls (RB-77)*
 Highly outcurved bowls (RB-76, * 90*)
 Ovate bowls (RB-16)*
 Small shallow bowls (RB-67, 70*)
 Direct rim composite silhouette bowls (RB-31)*
 Hemispherical bowls (RB-93, * 7)
 Spouted trays (RD-9)*
 Incurved rim bowls (RB-3)
 Outslanting, slightly everted rim bowls (RB-20, 21)
 Shallow bowls (RB-41)
 Beveled rim bowls (RB-37)
 Cylindrical bowls (RB-14)
 Heavy shallow bowls (RB-115)
 Composite silhouette bowls (RB-45)
Tecomates (RB-1)

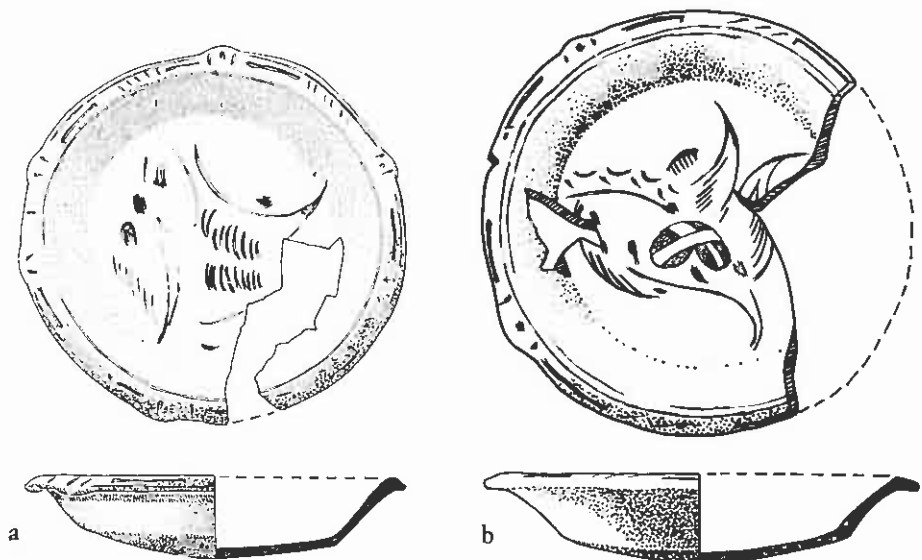


Figure 13.13. Amatzinac White, Early and Middle Barranca subphase bowls with interior pseudo-grater bottom incising.

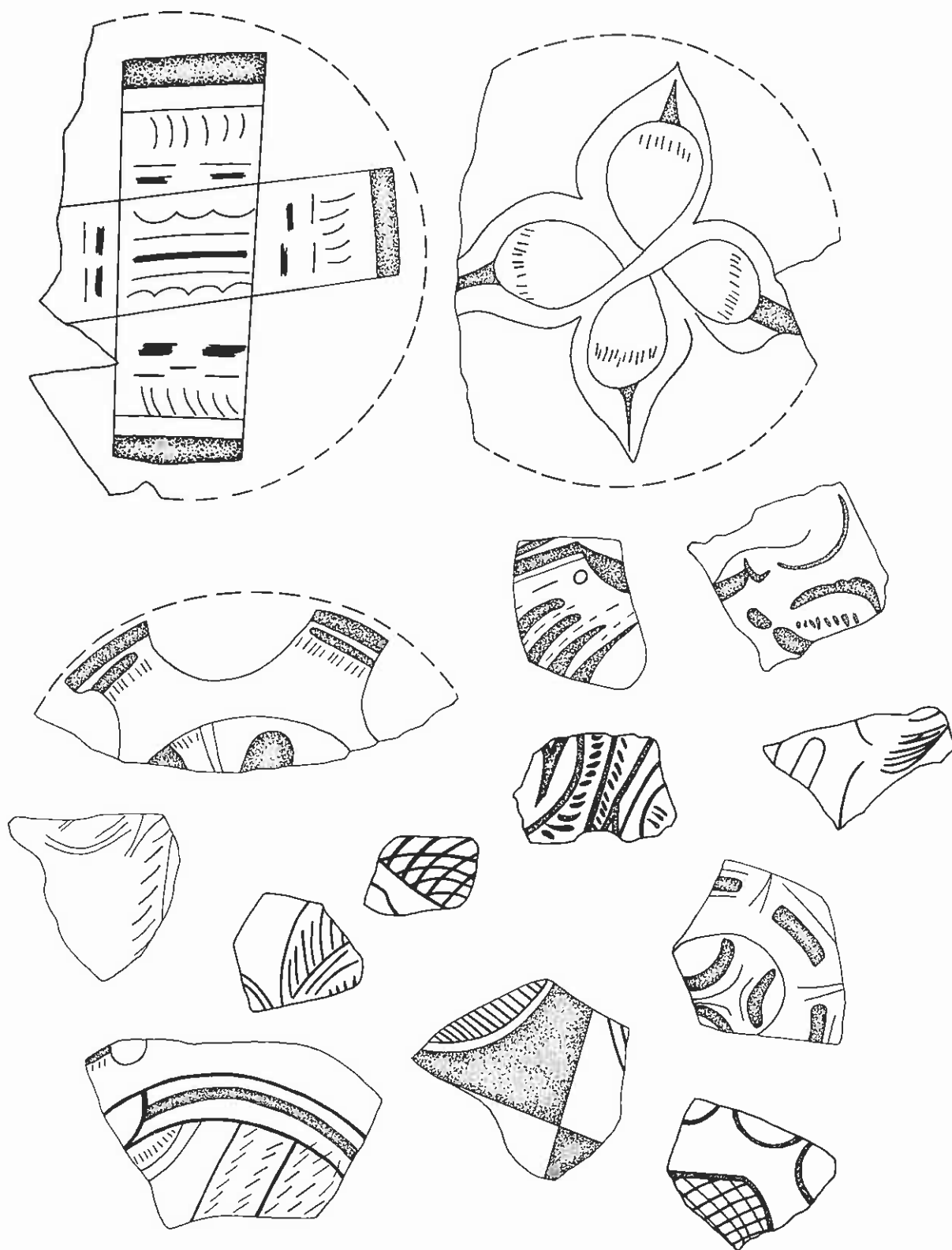


Figure 13.14. Amatzinac White, Early and Middle Barranca subphase pseudo-grater bottom bowl incised designs.

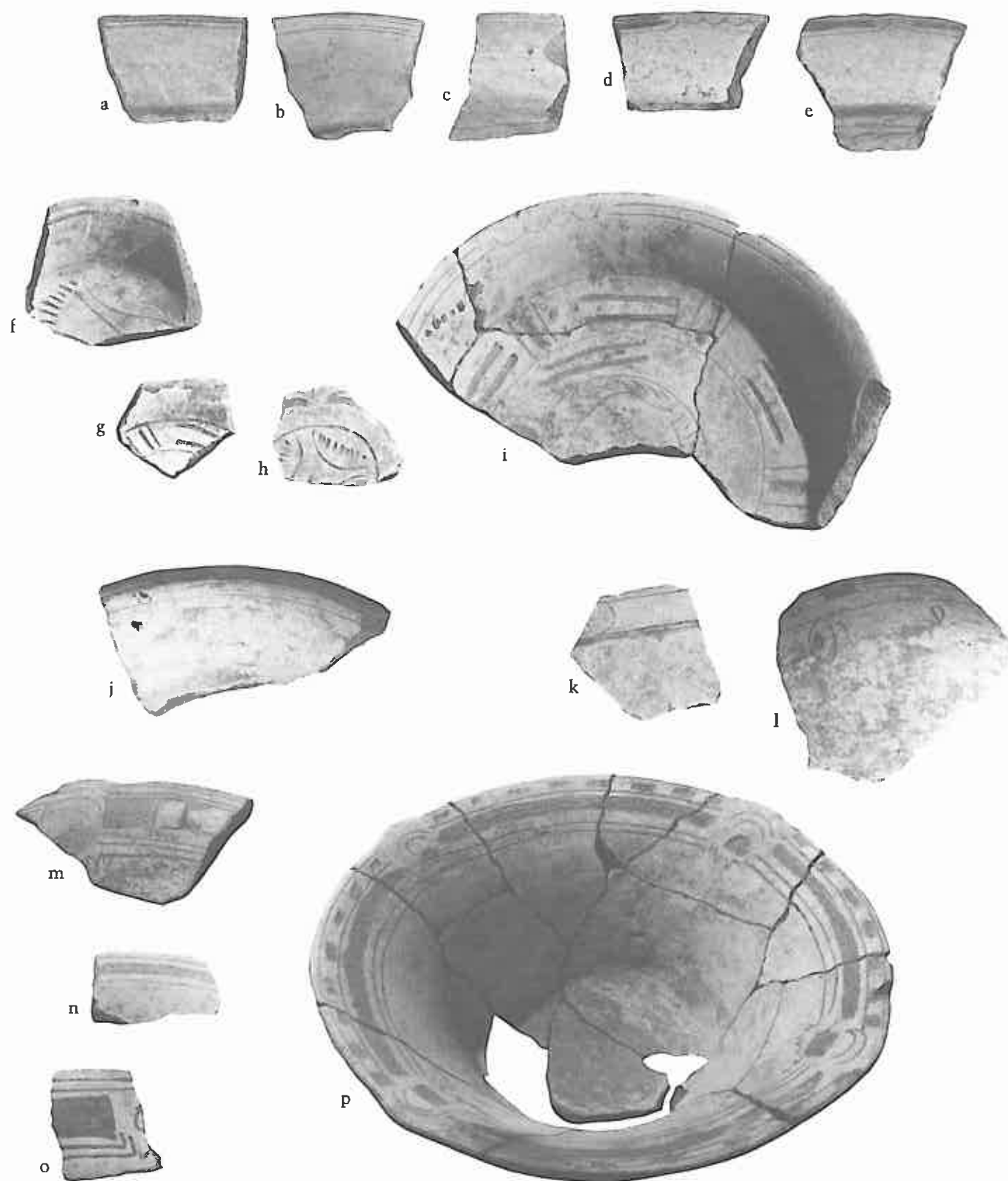


Figure 13.15. Amatzinac White bowls: *a–e*, Early and Middle Barranca subphase outslanting and outcurving walls; *f–i*, Early and Middle Barranca subphase pseudo-grater bottoms; *j*, Early and Middle Barranca subphase everted rim; *k–l*, Early

and Late Cantera subphase hemispherical bowls; *m–o*, Early and Late Cantera subphase *raspada*-decorated bowls; *p*, Early and Late Cantera subphase highly outcurving wall bowl with *raspada* decoration.

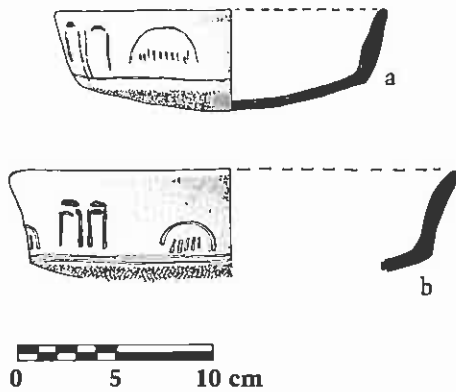


Figure 13.16. Amatzinac White, Late Baranca subphase bowls with exterior incising.

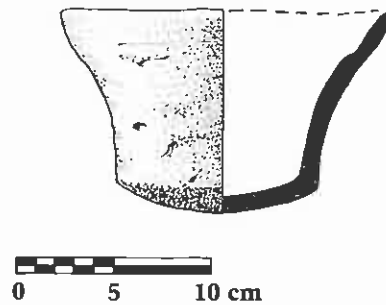


Figure 13.17. Amatzinac White, Late Baranca subphase bowl.

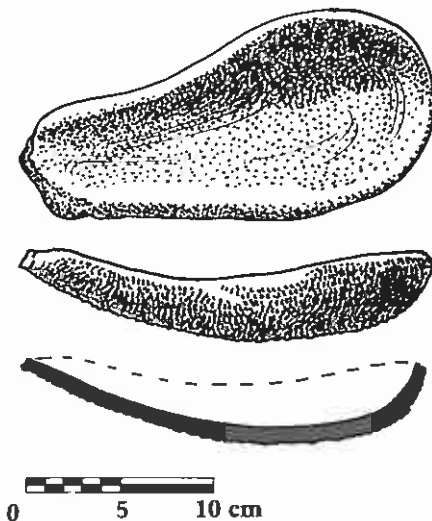


Figure 13.18. Amatzinac White, Late Baranca to Late Cantera subphase ladle.

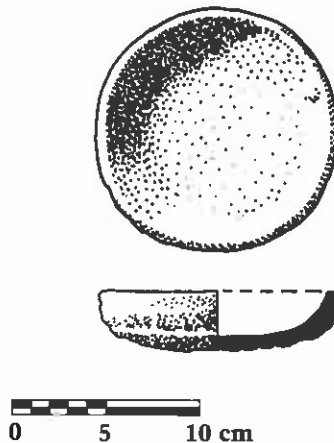


Figure 13.19. Amatzinac White, Early and Late Cantera subphase small bowl.

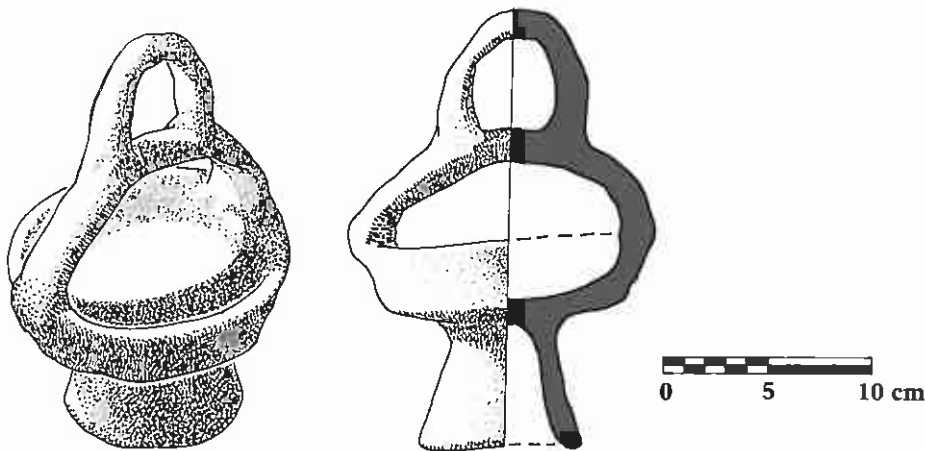


Figure 13.20. Amatzinac White, Early and Late Cantera subphase double-loop handle censer.

Globular bowls (RB-60)
High shoulders (Base M)
Flat or slightly rounded bases

The Cantera phase continued many Baranca phase forms, but new ceramic forms also appeared. Many of the Cantera phase Amatzinac White vessels occurred as burial offerings, and it should be remembered that most Formative period burials recovered by our project date to the Cantera phase, so our burial furniture is strongly biased to this phase. In our sample, the basket censer with the double-loop handle (RB-101; Fig. 13.20) and small shallow bowls (RB-70; Fig. 13.19) appear in significant numbers for the Early Cantera phase. Both were important as burial furniture.

Early Cantera subphase (Figs. 13.12q-t, 13.15k-p, 13.18-13.22, 13.25-13.26)

Diagnostic phase markers

Highly outcurved bowls (RB-90)

Common forms

Outcurving wall bowls (RB-23, * 25*)

Outslanting wall bowls (RB-17, * 18*)

Other forms

Outslanting wall bowls (RB-19)*

Highly outcurved bowls (RB-76)*

Globular bowls (RB-60, * 79*)

Spouted trays (RD-9)*

Flower pot bowls (RB-62)*

Direct rim composite silhouette bowls (RB-71)*

Braziers annular base (RB-100)*

High shoulders (Base M)*

Incurved rim bowls (RB-3)

Hemispherical bowls (RB-7, 93)

Shallow bowls (RB-41)

Cylindrical bowls (RB-14)

Tecomates (RB-1)

Flaring wall bowls (RB-26)

Everted rim bowls (RB-30, 35, 125)

Outslanting, slightly everted rim bowls (RB-20, 21, 22)

Ovate bowls (RB-16)

Slightly everted rim bowls (RB-77)

Beveled rim bowls (RB-37)

Small shallow bowls (RB-67)

Plate form with roughened exterior (RD-4)

Flat or rounded bases

Supports infrequent

The Late Cantera subphase assemblage is practically identical to that of the Early Cantera subphase, with frequency changes being the most notable characteristic. RB-79, present in the Early Cantera subphase, does not carry over into Late Cantera.

Late Cantera subphase (Figs. 13.12t,

13.15*k-p*, 13.18–13.22, 13.25–13.26)

Common forms

Outcurving wall bowls (RB-23, 25)

Outslanting wall bowls (RB-17, 18, 19)

Hemispherical bowls (RB-7)

Other forms

Shallow bowls (RB-121)

Heavy everted rim bowls (RB-38)

Flaring wall bowls (RB-75)

Direct rim composite silhouette bowls (RB-31)

Incurved rim bowls (RB-6, 123)

Composite silhouette bowls (RB-45)

Globular bowls (RB-60)

Flanged shoulder bowls (RB-89)

Exotic forms (RB-91, 88)

Ridged composite bowls (RB-85)

Supports infrequent

Plastic Decoration: Our classification and analysis of design motifs (see Table D.4, Fig. D.5) has yielded a sequence of appearance of designs. Design motifs were generally not restricted to particular subphases but continued for quite a while after their appearance. During the Early Barranca subphase, a thin “*raspada*” incising composed of a wide, shallow band incised through the white slip and bordered on either side by single incised lines (Design Code [DC]-1) appeared. This design occurred on many vessel forms but was most common on direct rim outslanting or outcurving wall bowls (RB-17, 18, 19, 23, 25).

On everted rim bowls (RB-77, 30), incised designs composed of several incised lines and shallow, round, or elongated punctates are present on the upper surface of the everted rim (DC-2; Fig. 13.13). A variation of the double-line-break motif began during the Early Barranca subphase. This usually consists of two or three lines incised around the interior rim, where the lines terminate, a series of scallops are introduced (DC-3; Fig. 13.23). These motifs carried over into other subphases. A new incised design, termed the “rainbow” motif, appeared during Middle Barranca (DC-9; Fig. 13.16). Unusually elaborate designs are found on cylindrical bowl forms (Fig. 13.24).

The Late Barranca subphase is characterized by several innovations in design. The “falling raindrop” motif (DC-6) usually occurs on the exterior of outslanting wall bowls. The use of cross-hatch incising on the interior rim of vessels (DC-7) began in this phase. Commonly this cross-hatching occurs on everted rim bowls. The pennant motif

(DC-8) consists of incised lines delimiting a pennant form which has been incised through the slip. Interior pseudo-graters attained their greatest frequencies during the Barranca and Early Cantera phases (Figs. 13.13, 13.14). Modeled everted rim bowls with deep punctation (DC-12) are a good marker for the Late Barranca subphase.

Hemispherical bowls of the Early and Late Cantera subphases are typified by exterior rim incising with the “egg” motif (DC-13; Fig. 13.25). A sloppy style of incising, which we term “wide *raspada*” (DC-11; Fig. 13.26), began during the Early Cantera subphase. The common form associated with “wide *raspada*” is the highly outcurved bowl (RB-90), which has the design along the interior rim. This form never has pseudo-grater incising in its interior but is usually incised on the exterior (DC-15; Figs. 13.21, 13.22, 13.26). Other incised rim designs are found on Amatzinac White as well as Laca and Carrales Coarse Grey types (Fig. 13.27).

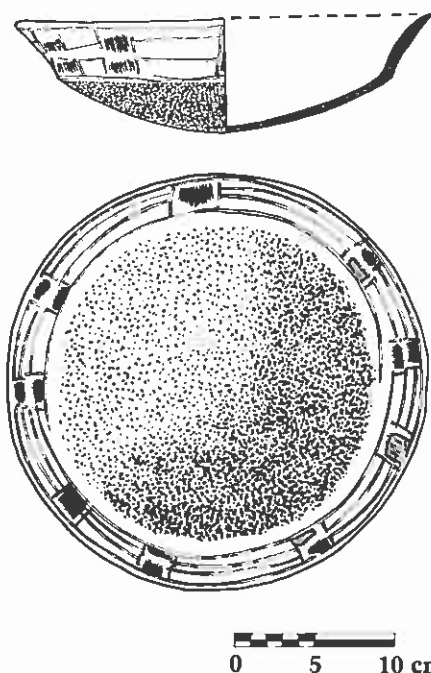


Figure 13.21. Amatzinac White, Early and Late Cantera subphase bowl with exterior incising and interior *raspada* designs.

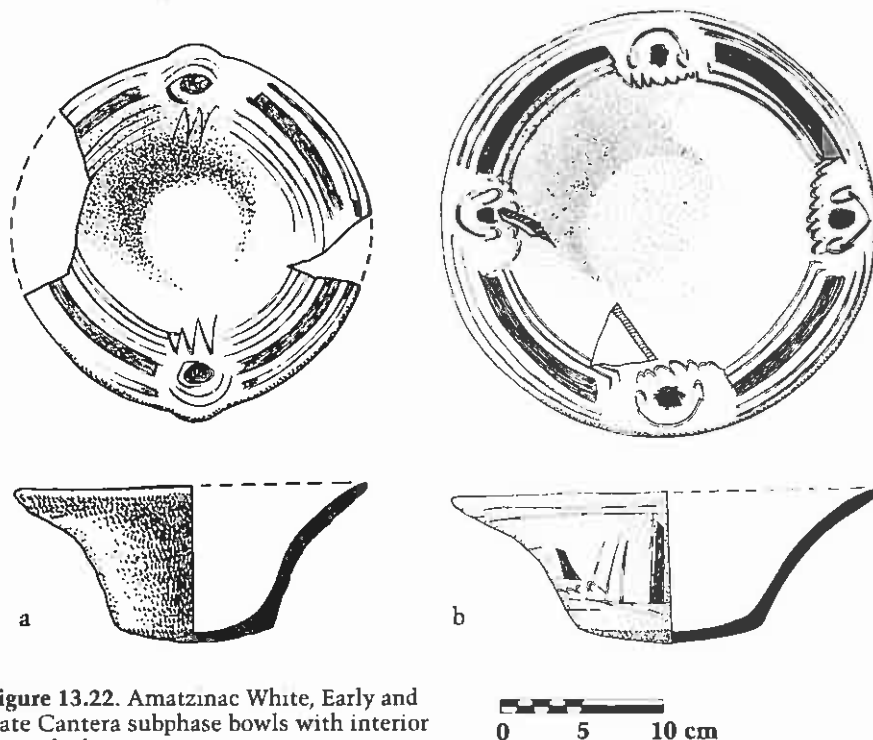


Figure 13.22. Amatzinac White, Early and Late Cantera subphase bowls with interior *raspada* design.

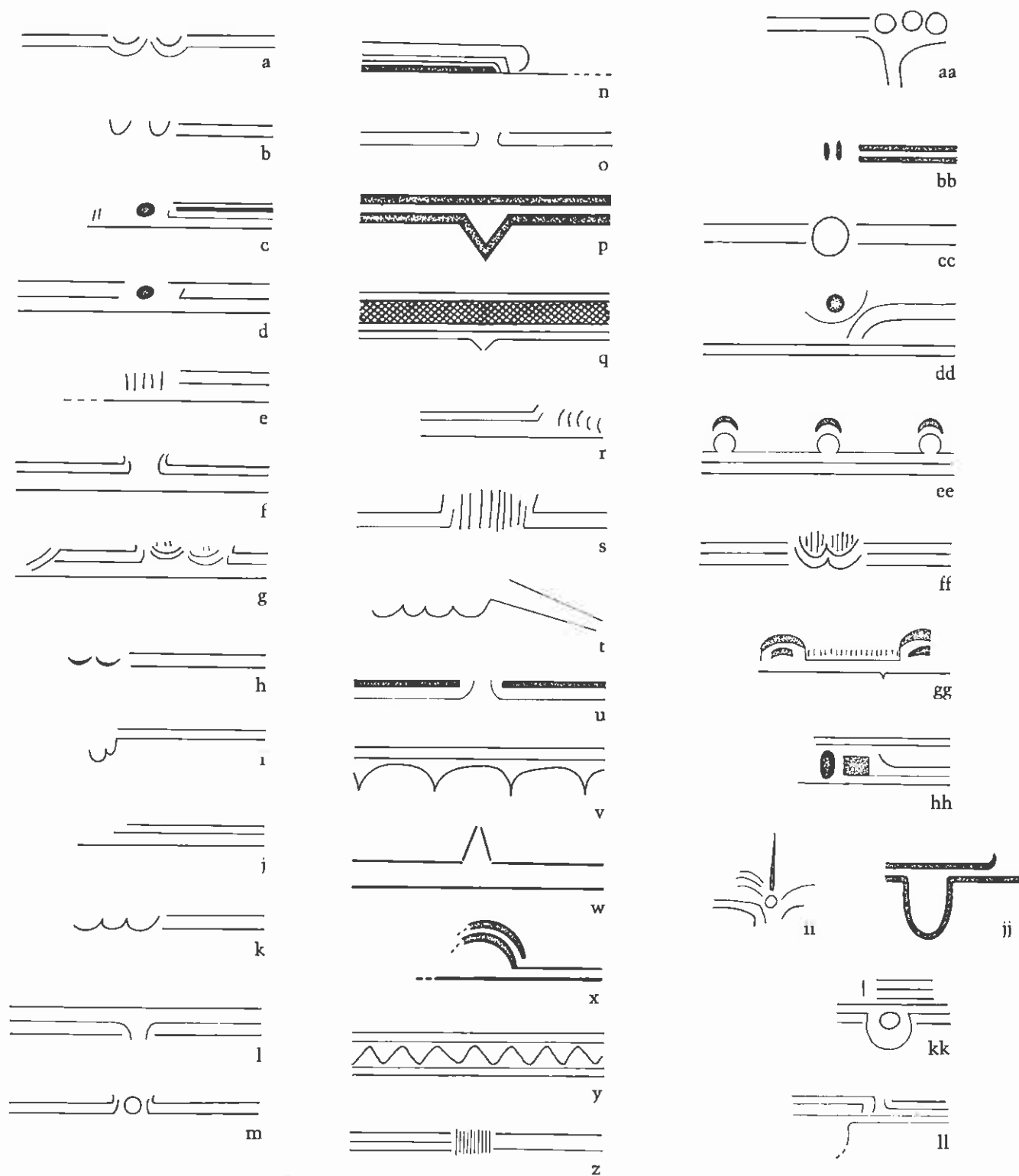


Figure 13.23. Amatzinac White variations of double- and triple-line-break motifs.

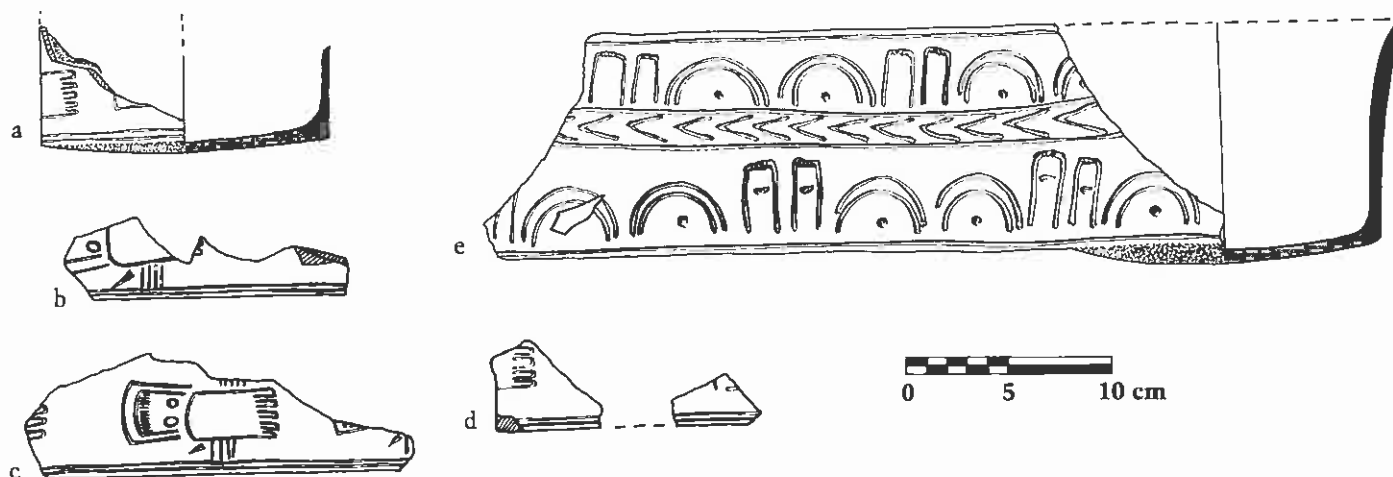


Figure 13.24. Amatzinac White cylindrical bowls with elaborate exterior incised designs.

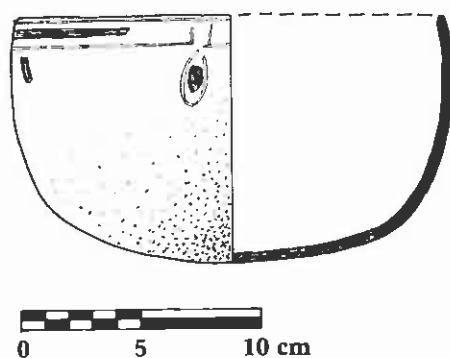


Figure 13.25. Amatzinac White, Early and Late Cantera subphase bowl with exterior "egg" motif incising.

Comparisons: Amatzinac White correlates with Blanco Pulido and Blanco Laca in Piña Chan's classification of Chalcatzingo ceramics (1955: Figs. 5–7, 15–17). In the Valley of Mexico, at El Arbolillo East, the rainbow motif on white-slipped pottery was present in La Pastora phase (Tolstoy and Paradis 1970: 345). Pseudo-grater interiors were present at El Arbolillo during El Arbolillo subphase and at Ayotla during the Bomba subphase (ibid.: 347). White basket censers and ovate bowls were recovered by George C. Vaillant at Zacatenco (1930: Pl. IVm, p), and thus are similar to Cantera phase Amatzinac White vessels. Manantial phase Cesto Blanco ceramics from Zohapilco are similar to the Barranca phase Amatzinac White pottery, but Cesto Blanco Tardío from the Zacatenco phase at that site shows no resemblance in form or decoration (Niederberger 1976: 132–135, Pls. 50–52). Blanco Pulido from Middle Formative contexts at Tlatilco (Piña Chan 1958: Figs. 11–12) is typified by outflaring and outcurving wall bowls with single-line, double-line, and scallop incised motifs. Basket censers of the same type are illustrated. The Blanco Pulido at Atlahuayan (Piña Chan and López González 1952: Fig. 1) is also comparable to Amatzinac White, as are Las Juntas White and Grey White from Cerro Chalcatpec in south-central Morelos (Grove 1968b: 71–73, Figs. 59–61).

Early Santa María phase Canoas White of the Tehuacan Valley has flaring wall bowls with flat and rounded bases, sim-

ple double-line-break incising, pseudo-graters, and everted rim bowls similar to Amatzinac White of the Barranca phase (MacNeish, Peterson, and Flannery 1970: 59–68). White Cerámica Olmeca Tardía of the Moyotzingo B phase (Aufdermauer 1973) is similar and includes the flower pot bowl (RB-62). Similar pseudo-grater designs and rainbow motifs are present. In Oaxaca, white-slipped pottery vessels with outslanting walls and flat bases are reported from the Guadalupe and Rosario phases of San José Mogote (Flannery 1968: 82; personal communication). This is presumably like Atoyac Yellow-White from Fábrica San José (Drennan 1976). From the Panuco region, white-slipped pottery with pseudo-grater designs is reported from the Pavón site (G. Ekholm 1944). Progreso White of the Pavón and Ponce phases includes flaring wall bowls, pseudo-graters, and flat bases (MacNeish 1954: 566). Cerámica Blanca is reported from Chalahuite and El Trapiche also (García Payón 1966).

At La Venta, Coarse Buff is probably similar to Amatzinac White in style, although no pseudo-graters are present there (P. Drucker 1952: 85–87). San Lorenzo's La Mina White of the San Lorenzo A subphase (Coe 1970) is similar to Amatzinac White in the hemispherical bowl form (RB-93), which is present in Amatzinac White during the Late Barranca subphase. White-slipped ceramics are reported from Tres Zapotes A phase (Weiant 1943: 17). The Cream-White pottery from Tres Zapotes is a fine-paste, thin pottery whose forms include flat

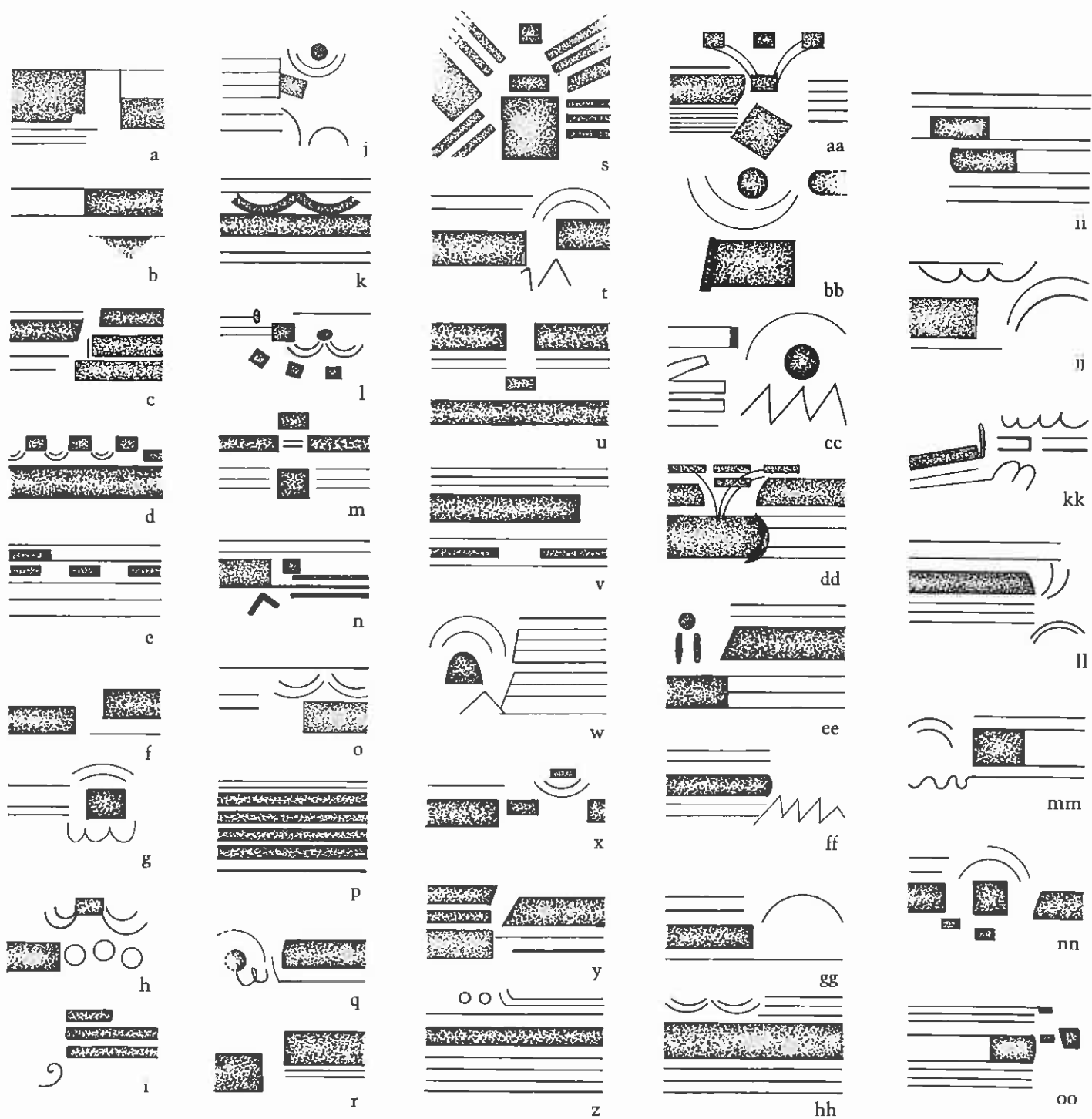
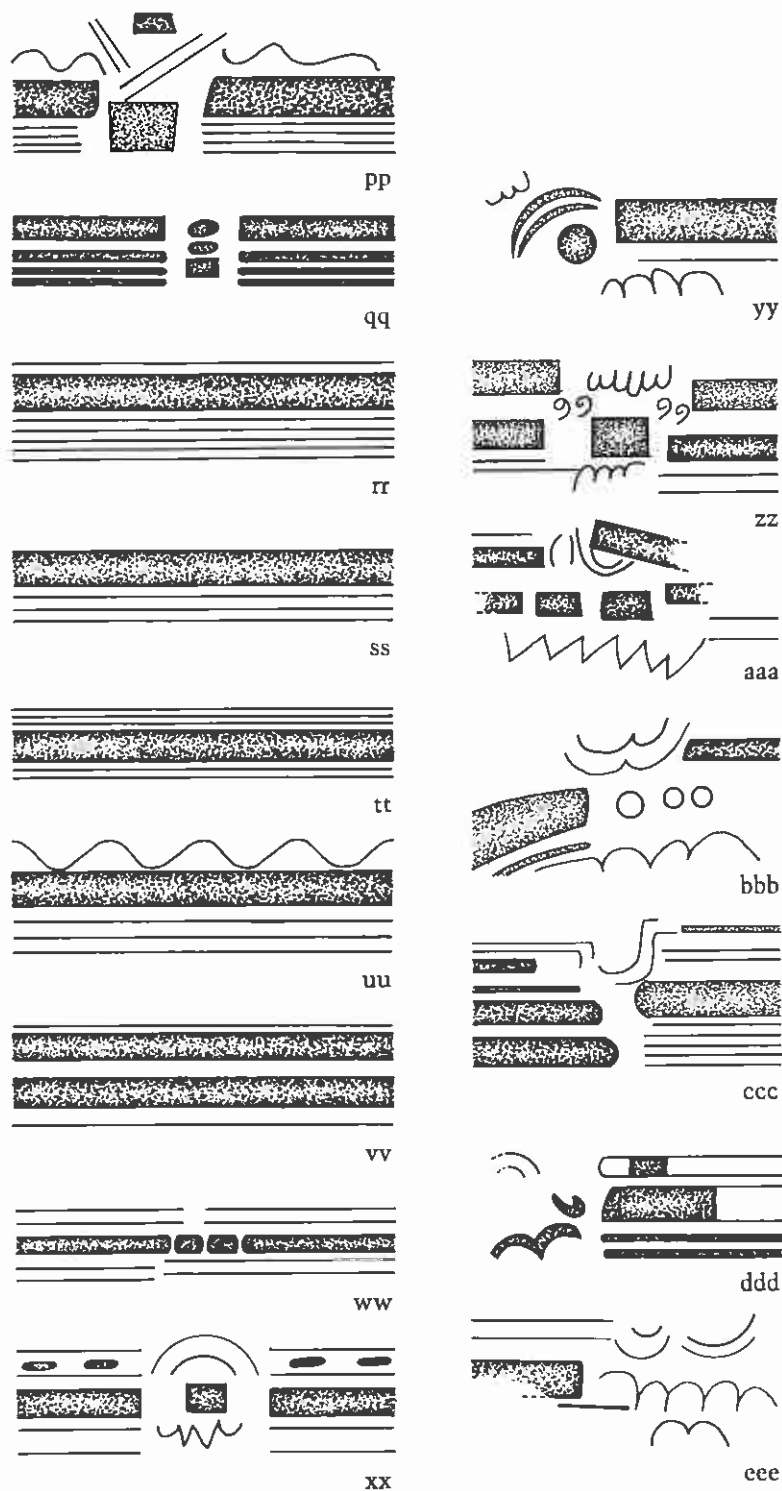


Figure 13.26. Amatzinac White, Early and Late Cantera subphase variations of wide *raspada* interior rim incising.



base flaring wall bowls, everted rim bowls, and hemispherical bowls (Drucker 1943a:38). The white-slipped pottery in the Smithsonian collection (Fig. D.6) has a hard brown paste, and vessel form is mainly ollas and hemispherical bowls with little or no incising.

A notable form at Chalcatzingo is the spouted tray [or ladle; RD-9] often found in burial context (but also found in midden context). Ladles are reported from Santa Cruz, Chiapas, by Sanders (1961), but those ladles have a very elongated spout or handle. Ladles (*charolas*) from Monte Albán are reported by Caso, Bernal, and Acosta (1967:253, Fig. 231). Only eight examples were noted from Monte Albán in K.19 type paste. They were reported as "offerings," but no other context is given.

Amatillo White of the Cuadros phase of Altamira, Chiapas, is similar in form and decoration to Barranca phase Amatzinac White (Green and Lowe 1967:110). Tacana Incised White of the Late Jocotal phase has similar design motifs (ibid.:118). Amatillo White of the Cuadros phase, and Siltepec White and Tacana Incised of the Jocotal phase of Izapa follow the same style. Outslanting wall bowls with the double-line-break, flaring wall bowls, and cylindrical bowls were popular during those phases (S. Ekholm 1969:48, 51, 65-66). White Monochrome from Chiapa de Corzo has everted rim bowls with the interior rim cross-hatch design similar to Late Barranca Amatzinac White (Dixon 1959:26, Fig. 27a). Smudged White of the Mirador II phase from Mirador, Chiapas, is typified by flaring wall bowls with flat and rounded bases and decorated with the double-line-break motif (Peterson 1963:8, Fig. 9). Conchas White-to-Buff of the Conchas phase of La Victoria, Guatemala, follows the same pattern of style in white-slipped pottery (Coe 1961:Figs. 25-27). Salinas La Blanca has a complex similar to that of La Victoria (Coe and Flannery 1967). In the coastal regions of Guatemala and Chiapas, pottery forms are different from the highland ones due to different functions and traditions. *Tecomates*, for example, were not a common form in the highlands but were very popular in the coastal lowlands. Huetché White of the Xe complex of Altar de Sacrificios, Guatemala, is described as similar to Teopisca White: Teopisca Variety of Chiapa IV-V, and to Vergel White-to-Buff: Tzutzuculi Variety of Chiapa III (Adams 1971).

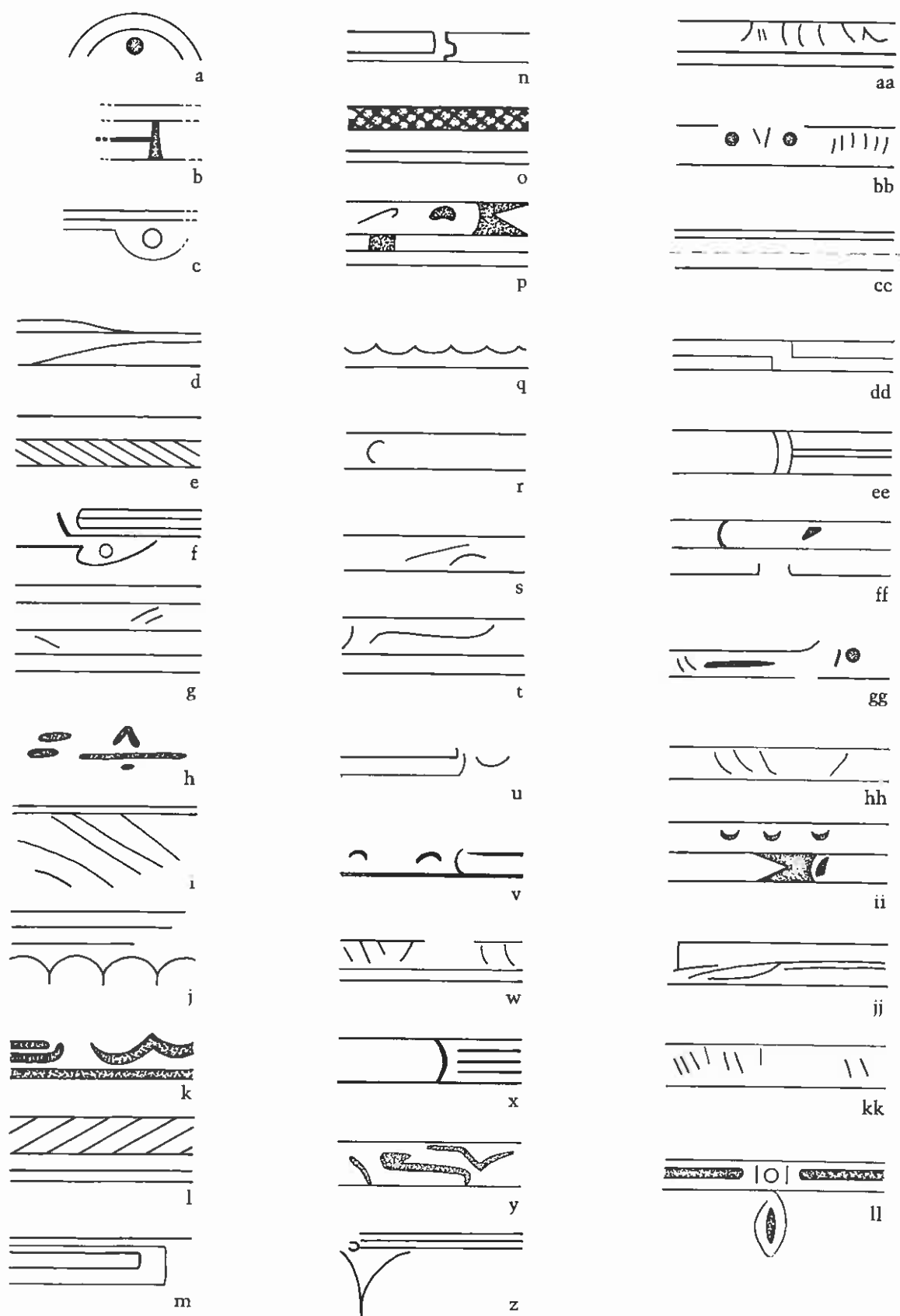


Figure 13.27. Examples of incised rim designs of Amatzinac White, Laca, and Carrales Coarse Grey.

It is important to point out that "wide *raspada*" decoration is known only at Chalcatzingo.

Amatzinac White, Red Paste Variant

Surface Treatment: Surface treatment is identical to that of Amatzinac White.

Paste and Temper: The paste differs from the normal Amatzinac White paste in that it is a bright orange-red color: 7.5 R 4/8; 2.5 YR 5/8, 4/6; 10 R 4/6–8, 6/6, 5/8. Because the paste is like Amatzinac White in all except color, this variant could represent only a difference in firing atmosphere.

Forms: Outflaring wall bowls and everted rim bowls are present.

Plastic Decoration: See Amatzinac White.

Amatzinac White, Ruddy Paste Variant

Surface Treatment: The interiors of the vessels are unslipped and highly polished. The exteriors are slipped white and highly polished. The color range is 2.5 YR 4/8 (interior) and 5 YR 8/1 (exterior).

Paste and Temper: The paste is compact and the fracture sharp. Paste color is 2.5 YR 4/8. There is little or no temper.

The principal mineral constituent is plagioclase (An 33), 5 percent of the total paste volume. Grain size range is 120–600 microns. Orthopyroxene is observed as comprising not more than 1 percent of the volume and having a grain size range of 120–280 microns. Horneblende is present in frequencies of less than 1 percent. Its range of grain size is 100–120 microns. Iron stains, andesite, and leucoxene were observed. These inclusions show similarities to mineral inclusions found in the volcanic tuff of the region.

Forms: The exact bowl forms are unknown.

Plastic Decoration: None.

Amatzinac White, Surface Treatment Variant

Surface Treatment: The white-slipped surfaces are very highly polished and are quite compact. Surface color is distinct from that of Amatzinac White: 10 YR 5/1–2, 6/4. The surface is streaky due to uneven application of slip.

Paste and Temper: The paste is similar to that of Amatzinac White. It has a moderate amount of temper, and the fracture is jagged. Paste color range is 7.5 YR 5/4; 5 YR 3/4.

The principal mineral constituent is plagioclase (An 30), forming 5 percent of

the paste volume and having a range of grain size of 100–600 microns. Orthopyroxene and horneblende each comprise less than 1 percent of the volume. Orthopyroxene ranges in grain size from 200–400 microns; horneblende ranges from 140–220 microns. Only a trace of clinopyroxene is noted. Andesite is present. These inclusions show similarity to the mineral inclusions of the volcanic tuff of the region.

Forms:

Outslanting wall bowls (RB-17, 18, 19)

Flaring wall bowls (RB-26)

Direct rim composite silhouette bowls (RB-31)

Ollas (unknown form)

Plastic Decoration: Shallow exterior grooving, fine-line incising, and patterned "stick" polishing were noted.

Amatzinac White, Paste Variant

Surface Treatment: The surface treatment is similar to that of Amatzinac White. Color range is 10 YR 6/4, 6/2, 7/2; 7.5 YR 6/4, 8/2; 5 YR 7/2.

Paste and Temper: The paste has little temper and is very compact. The fracture is very sharp and even. Paste color is diagnostic: 2.5 YR 3/2, 3–4/6; 5 YR 5/3–4, 4/6.

Plagioclase (An 28) forms 6 percent of the paste volume, and its grains measure 180–840 microns. Horneblende and orthopyroxene each constitute less than 1 percent of the volume. Horneblende has a range of grain size of 200–420 microns. One grain of clinopyroxene was noted. Andesite and iron stains are present. These inclusions show similarities to those of the volcanic tuff of the region.

Forms:

Flaring wall bowls (RB-26)

Hemispherical bowls (RB-7)

Ollas (unknown forms)

Plastic Decoration: Fine-line incising is the only decorative technique present.

Amatzinac White, Exterior White-Slipped, Interior Plain Variant

Surface Treatment: The interiors of the vessels are unslipped and polished. Interior color range is 5 YR 3–4/1, 4/4; 7.5 YR 4/2. The exteriors are white-slipped and polished. Color range is 7.5 YR 8/2.

Paste and Temper: The paste is similar to Amatzinac White. Plagioclase (An 34) constitutes 5 percent of the paste volume. Grains range in size from 180 to 380 microns. Orthopyroxene is the sec-

ond most abundant mineral, 1 percent of the volume. Grains range in size from 140 to 440 microns. Horneblende is present, but forms less than 1 percent of the paste volume. Grains measure 300–540 microns. One twinned example was observed. One grain of clinopyroxene was noted. Iron stains, andesite, and leucoxene are present. These inclusions show similarities to mineral inclusions in the volcanic tuff of the region.

Forms: Bowl body sherds are present, but rim forms are not known.

Plastic Decoration: Punctuation, patterned "stick" polishing, and incising occur.

Laca

Temporal Range: Laca appeared in significant quantities at the beginning of the Early Barranca subphase and was typical of the ceramic assemblage during the Early, Middle, and Late Barranca and Early Cantera subphases. During the Late Barranca, it began to diminish in popularity.

Surface Treatment: Vessel surfaces first received a white slip and then an orange-red colored wash over the white slip. The transparency of the colored wash gives the impression of lacquer technique, although this pottery is not a true lacquer (*laca*) ware. Laca shows varying degrees of polishing, from highly to poorly polished, often dependent upon conditions of preservation. Due to firing conditions, surface colors vary from bright orange to yellow and sometimes brown: 2.5 YR 3–6/6–8, 3/2; 5 YR 4–6/6, 5–7/8, 7/6–8, 3–4/2–3, 3–5/4–5, 3/1, 5/6–8; 10 YR 4–5/4, 7/5, 7/8; 2.5 YR 3/2–4, 4–5/8; 7.5 YR 6–8/6, 5–7/8. Piña Chan (1955: 19–20, Fig. 14a–j) originally divided Chalcatzingo Lacas into two subgroups on the basis of color: Amarillenta and Naranja. Grove (1968b: 76–79) created orange, yellow, and brown Laca types for Cerro Chacaltepec.

Hemispherical, incurved, and shallow bowls invariably have the slip and colored wash on both interior and exterior surfaces. Some outcurving and outslanting wall bowls during the Early and Late Barranca subphases tend to be slipped only on interiors. Occasionally everted rim bowls were left with a white rim when the colored wash did not extend to the lip of the vessel. During the Cantera phase, bowls were slipped and decorated on the exteriors.

Paste and Temper: The paste is crumbly and has a jagged fracture. Paste color

range is 7.5 YR 6/4, 5-7/4-6, 3-5/0; 10 YR 6-7/3-4. A reduced black or grey sandwiched core is common.

The maximum frequency of aplastics is 19 percent of the total paste volume. The most frequently occurring mineral is plagioclase (An 29-32), as 5-8 percent of the total volume. The range of grain size is 140-400 microns. Orthopyroxene grains measure 100-500 microns and constitute 3-4 percent of the volume. Clinopyroxene grains, ranging in size from 200 to 340 microns, are less than 1 percent of the volume. Hornblende never exceeds 1 percent of the volume, and the grains have a size range of 160-360 microns. Basaltic andesite, dacite, iron stains, and occasional leucoxene are present. Opaque iron-titanium ores reach a maximum of 5 percent of the total volume. The mineral inclusions show similarities to the mineral fragments found in the volcanic tuff of the area.

Forms:

Late Amate subphase contexts

- Shallow bowls (RB-41)
- Outslanting wall bowls (RB-17, 18)
- Outcurving wall bowls (RB-23)
- Rounded bases

Early Barranca subphase (Fig. 13.30a-e, i-k)

- Hemispherical bowls (RB-7)
- Outslanting wall bowls (RB-17, 18, 19) with flat and rounded bases
- Shallow bowls (RB-41)
- Cylindrical bowls (RB-14)

The Early Barranca forms continued into the Middle Barranca.

Middle Barranca subphase (Figs.

13.28a-g, 13.30a-e, i-k)

Common forms

- Incurved rim bowls (RB-3)
- Outslanting wall bowls (RB-19)
- Outcurving wall bowls (RB-25)

Other forms

- Outcurving wall bowls (RB-23)
- Everted rim bowls (RB-30)*
- Ovate bowls (RB-16)
- Outslanting, slightly everted rim bowls (RB-21, 22)

Early and Middle Barranca forms continued into the Late Barranca.

Late Barranca subphase (Figs. 13.28h-o, 13.29, 13.30)

- Diagnostic phase markers
- Everted rim bowls (RB-30)
- Flower pot bowls (RB-62)

Common forms

- Outslanting wall bowls (RB-17, 18, 19)
- Outcurving wall bowls (RB-25)

Other forms

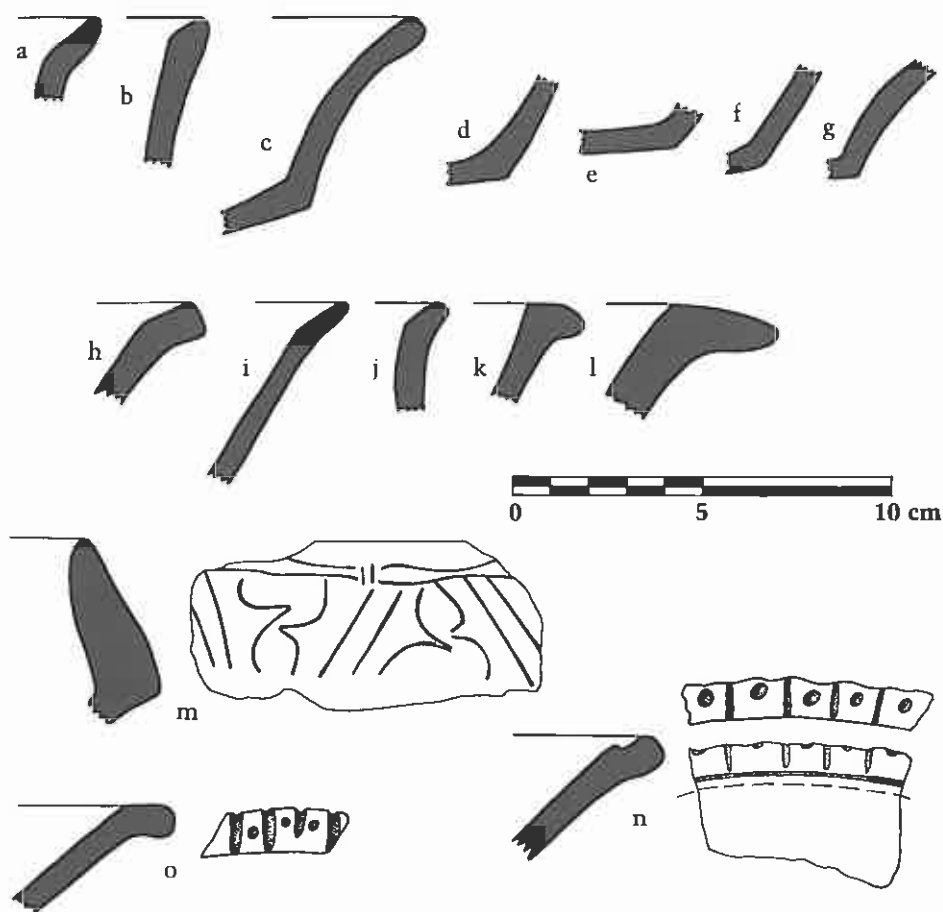


Figure 13.28. Laca: a-c, Middle Barranca subphase bowls; d-g, Middle Barranca subphase bases; h-o, Late Barranca subphase bowls.

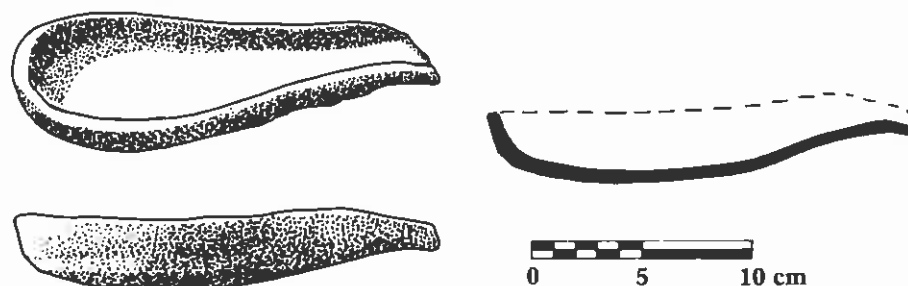


Figure 13.29. Laca, Late Barranca to Late Cantera subphase ladle.

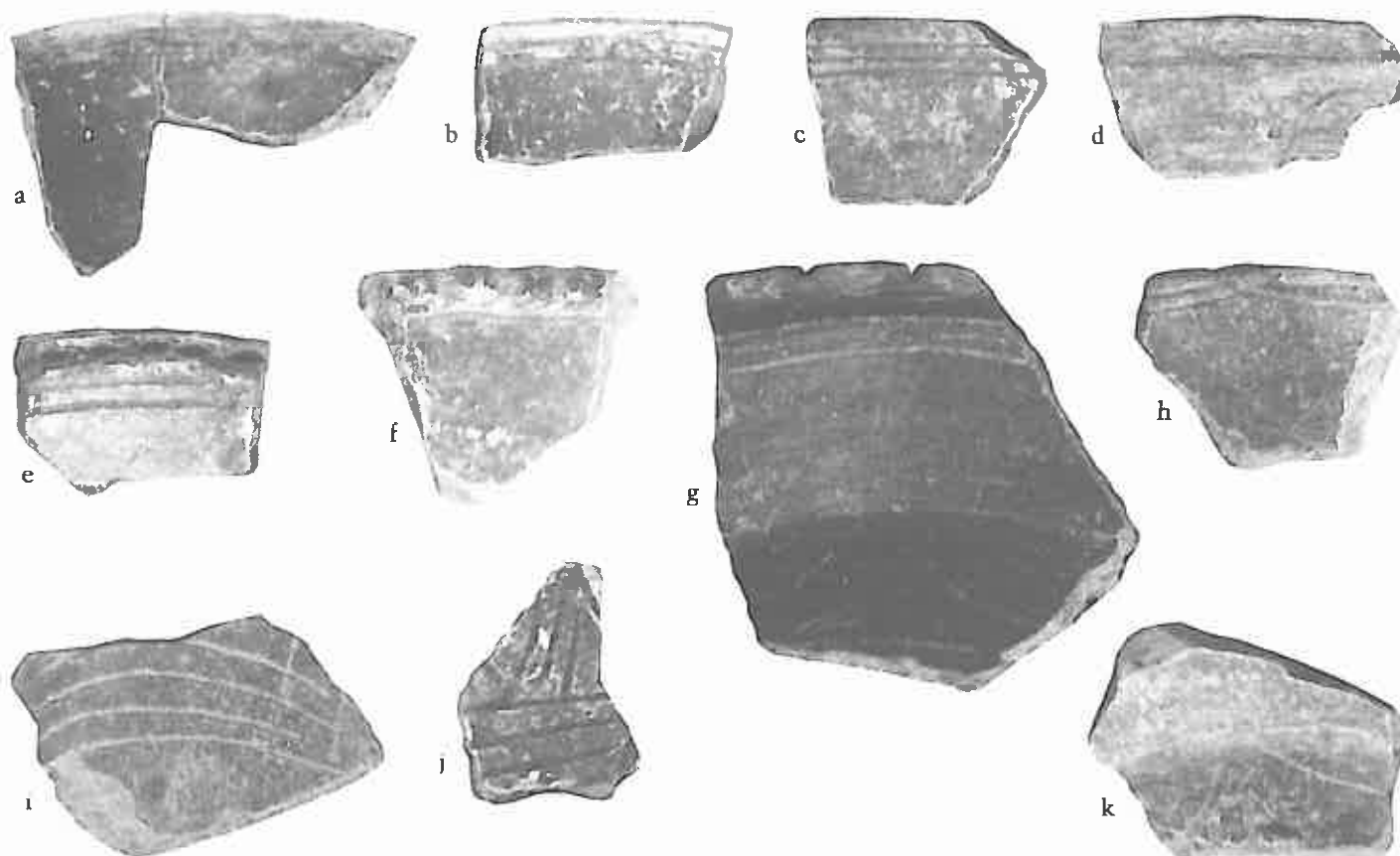


Figure 13.30. Laca: *a–e*, Early to Late Barranca subphase outslanting wall bowls with rim incising; *f–h*, Late Barranca subphase modeled and punctated everted rim bowls; *i–k*, Early to Late Barranca subphase pseudo-grater bowl interiors.

Spouted tray (RB-9)*
 Direct rim composite silhouette bowls (RB-31)*
Tecomates (RB-1)
 Outslanting, slightly everted rim bowls (RB-20)
 Flaring wall bowls (RB-26)
 Highly outcurved bowls (RB-90)
 Globular bowls (RB-60)
 Beveled rim bowls (RB-37)
 Everted rim bowls (RB-35)
 Heavy shallow bowls (RB-115)
 High shoulders (Base M)

Laca diminished in popularity during the Early and Late Cantera subphases; interestingly, while frequency decreased, the variety of forms increased. The forms of previous phases continued.

Cantera phase

Common forms

Outslanting wall bowls (RB-17, 18)

Shallow bowls (RB-41)

Hemispherical bowls (RB-7)

Other forms

Direct rim composite silhouette bowls (RB-71)

Composite silhouette bowls (RB-45)

Heavy everted rim bowls (RB-38)

Flaring wall bowls (RB-75)

Highly outcurved bowls (RB-76)

Some Amatzinac White forms are paralleled, such as RB-90 and RB-71. Peralta Orange forms are also imitated, particularly RB-45.

Plastic Decoration: Interior and exterior rim incising with the single-line, double-line, triple-line, double-line-break, or triple-line-break motifs is common (Fig. 13.30*a–e*). Pseudo-grater interiors were more common during the Barranca phase than in the Cantera phase (Figs. 13.30*i–k*, 13.31). Modeling of everted

rim during the process of manufacturing with deep punctation into the tops of these rims is a good marker for the Late Barranca subphase (Figs. 13.28*n–o*, 13.30*f–h*).

Otherwise, there seems to be little temporal significance to Laca designs, although occasionally a copy of an Amatzinac White design will appear and can be temporally correlated within that sequence (DC-18–20).

Comparisons: This pottery type appears in greatest quantities in Morelos and apparently is present in only minor amounts in the Valley of Mexico and the Valley of Toluca (Yoko Sugiura, personal communication). In Morelos it has been reported by Grove (1968:76–79, Figs. 67–68) at Cerro Chacaltepec and by Piña Chan and López González (1952:Fig. 1) for Atlahuayan. It is an important type at

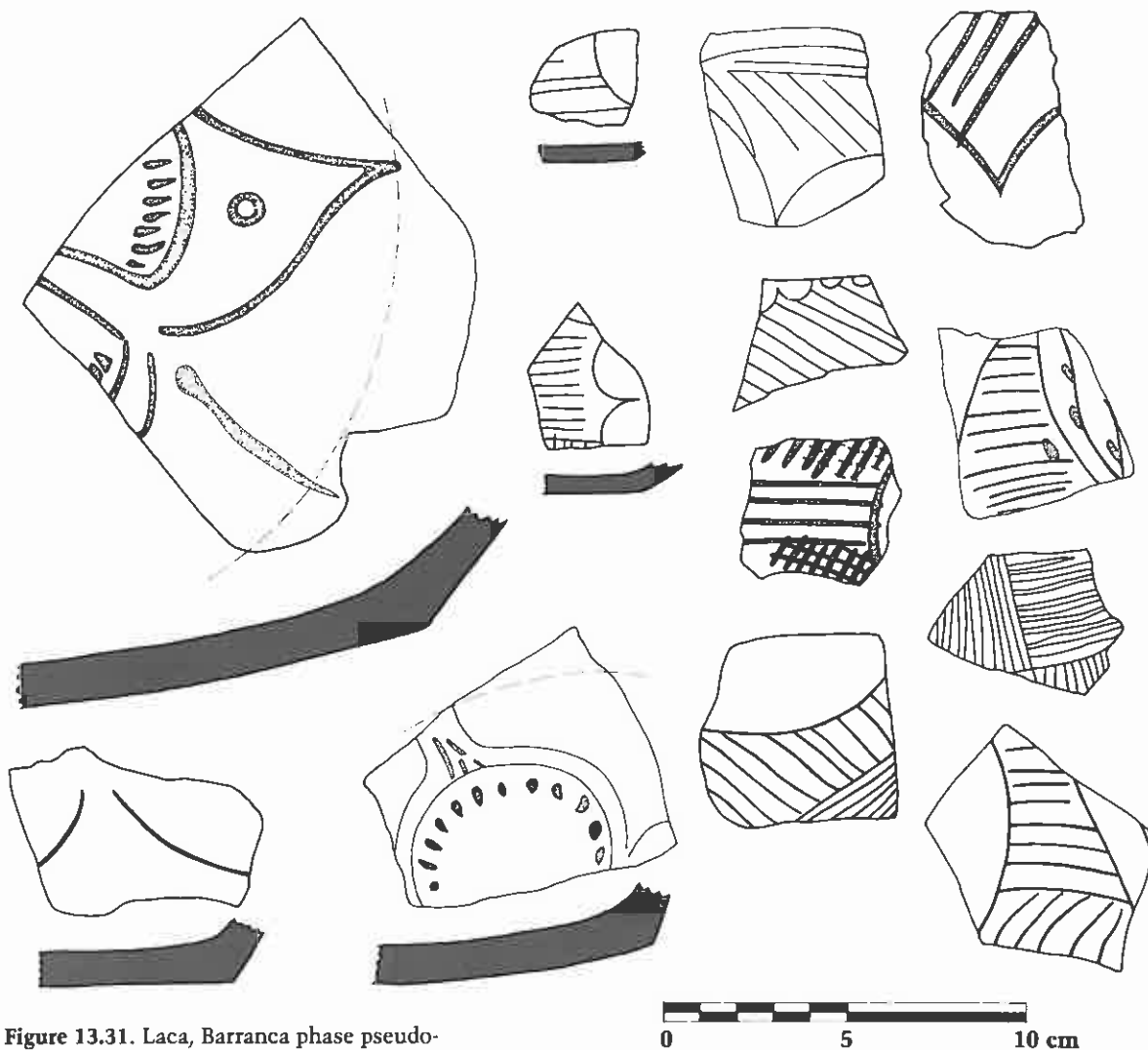


Figure 13.31. Laca, Barranca phase pseudo-grater bottom designs.

Chalcatzingo, and it is possible that the Río Amatzinac Valley area is its major focus (as is also the case with Peralta Orange). Further analyses are necessary to determine whether when present at Valley of Mexico sites it was locally manufactured or represented a Morelos "export" ware.

Imitation Laca

Temporal Range: This pottery occurred during the Middle and Late Barranca and Early Cantera subphases.

Surface Treatment: Imitation Laca looks nearly identical to Laca but lacks the white-slipped base. The thin colored wash was applied directly to the light buff ceramic body, and then the surface was polished. This wash appears identical to that applied to Laca sherds. Surface color range is 2.5 YR 3–5/6–8, 3/2;

10 R 4–5/8, 3/6; 5 YR 4/6–8, 6/6; 7.5 YR 6/6.

Paste and Temper: The paste is identical to that of Laca sherds. Plagioclase is the most frequently occurring mineral, comprising 4–5 percent of the paste volume. Its grains range in size from 100 to 800 microns. Hornblende constitutes 1–2 percent of the paste volume, and its grains measure 80–400 microns. Orthopyroxene is present in frequencies of less than 1 percent of the paste volume. Andesite is observed. These inclusions probably originate from volcanic tuff.

Forms:

Outcurving wall bowls (RB-23, 25) with rounded bases

Flaring neck ollas (RO-15)

Plastic Decoration: None of the decorations found on Laca are known to occur on Imitation Laca.

Comparisons: Imitation Laca may be similar to Santa María Orange which Grove (1968b:80) recovered in minor quantities at Cerro Chacaltepec.

Tenango Brown

Temporal Range: Although Tenango Brown was present as early as the Early Amate subphase, it was overshadowed in quantity by Cuautla Brown, Arboleda Coarse, Tadeo Coarse, and Atoyac Unslipped Polished III, the major plain wares of the Amate phase. Tenango Brown became a major part of the assemblage during the Early Barranca subphase and continued into the Late Cantera, although its quantities diminished when Peralta Orange gained popularity during the Early Cantera.

Surface Treatment: The surface finish varies from well polished to streaky and

poorly finished. Surface color range is 5 YR 1–5/2–6. For the Early, Middle, and Late Barranca subphases, Tenango Brown and Peralta Orange show similar Munsell color ranges along with similar form assemblages. However, by the Early Cantera subphase, there is a distinct difference between Tenango Brown and Peralta Orange on the basis of both surface color and form.

Paste and Temper: The paste has a crumbly texture, and the fracture is jagged. The paste color range is 7.5 YR 6/4, 6/6; 5 YR 5–6/6, 7/4, 3–4/1, 5–6/4. Core section has the typical dark grey center and lighter outer layers.

The aplastics constitute 1 percent of the paste volume. Plagioclase (An 25, 27) constitutes 5–7 percent of the total volume as the most abundant mineral inclusion. Grain size ranges from 100 microns to 1.8 mm. Orthopyroxenes are present in equal proportions with hornblende in one sample, and reached 2 percent of the total volume in another. Grains measure 80–240 microns. Hornblende occurs as less than 1 percent of the total volume, and the grain size range is 80–440 microns. Basaltic andesite, dacite, iron stains, and leucoxene are present. Occasional grains of clinopyroxene and sandstone are observed. The mineral inclusions show similarities to mineral fragments found in the volcanic tuff of the area.

Forms:

Late Amate subphase

Common forms

- Hemispherical bowls (RB-7)
- Outslanting wall bowls (RB-17, 18)
- Flaring neck ollas (RO-5)

Other forms

- Hemispherical bowls (RB-93)
- Outslanting wall bowls (RB-19)
- Flaring neck ollas (RO-12, 11)
- Outcurving wall bowls (RB-25)
- Flaring wall bowls (RB-26)
- Cylindrical bowls (RB-14)
- Beveled rim bowls (RB-37)
- Tecomates* (RB-1)
- Incurved rim bowls (RB-3)
- Shallow bowls (RB-41)
- Heavy everted rim bowls (RB-38)
- Super flaring neck ollas (RO-17)
- Flat and rounded bases
- High shoulders (Base M)

Early Barranca subphase (Fig. 13.32a–i)

Diagnostic phase marker

- Collared ollas (RB-1)

Common forms

- Incurved rim bowls (RB-3)
- Plates with roughened exteriors (RD-8)*

Other forms

- Tecomates* (RB-1)
- Hemispherical bowls (RB-7)
- Outcurving wall bowls (RB-25)
- Flaring wall bowls (RB-26)
- Flaring neck ollas (RO-5)
- Flat and rounded bases

Middle Barranca subphase forms are identical to those of Early Barranca, and a number of new forms were introduced.

Middle Barranca subphase (Fig. 13.32a–j)

Common forms

- Beveled rim ollas (RO-8)
- Collared ollas (RO-1)

Other forms

- Outcurving wall bowls (RB-23)
- Outslanting wall bowls (RB-17, 18, 19)
- Highly outcurved bowls (RB-90)
- Shallow bowls (RB-41)
- Heavy everted rim bowls (RB-38)
- Ovate bowls (RB-16)
- Flaring neck ollas (RO-12)
- Super flaring neck ollas (RO-17)
- Plates with roughened exteriors (RD-4, 5)

Early and Middle Barranca forms continued into the Late Barranca subphase, and again new forms came into use.

Late Barranca subphase (Fig. 13.32j–q):

Common forms

- Hemispherical bowls (RB-7)
- Shallow bowls (RB-41)
- Flaring neck ollas (RO-5, 12)

Other forms

- Flaring neck ollas (RO-9, 15, 11)
- Collared ollas (RO-1, * 2)
- Basins* (Fig. 13.32m–n)
- Braziers, annular based (RB-100)
- Cylindrical bowls (RB-14)
- Outslanting wall bowls (RB-17, 18, 19)
- Outslanting slightly everted rim bowls (RB-20)
- Everted rim bowls (RB-30, 35)
- Beveled rim bowls (RB-37)
- Heavy everted rim bowls (RB-38)
- Composite silhouette bowls (RB-45, 132)
- Flower pot bowls (RB-62)
- Highly outcurved bowls (RB-90)
- Slightly everted rim bowls (RB-77)
- Beveled rim ollas (RO-8)
- Super flaring neck ollas (RO-17)
- Plates with roughened exteriors (RD-1, 2, 3, * 4, 5, 8*)
- Regular handles (H-1)
- Rolled-lip ollas (RO-30)
- Direct rim composite silhouette bowls (RB-127)
- Flaring wall bowls (RB-75)

Except for RB-90, RB-16, RB-75, and H-1, these forms continued into the Early Cantera subphase.

Early Cantera subphase (Fig. 13.32q–z)

Diagnostic phase markers

- Rolled-lip, short-neck ollas (RO-27)
- Rolled-lip ollas (RO-30)
- Short-necked ollas (RO-29)
- Flaring mouth ollas (RO-28)

Common forms

- Flaring neck ollas (RO-5)
- Shallow bowls (RB-41)
- Outslanting wall bowls (RB-18)
- Hemispherical bowls (RB-7)

Other forms

- Tecomates* (RB-131)
- Globular bowls (RB-60)
- Direct rim composite silhouette bowls (RB-31)
- Incurved rim bowls (RB-133)
- Small shallow bowls (RB-67)
- Composite silhouette bowls (RB-132)
- Collared ollas (RO-2)
- Plates with roughened exteriors (RD-1, 2)

The Late Cantera subphase forms include all previous forms except for RB-75 and RD-5.

Late Cantera subphase (Fig. 13.32t–cc)

Diagnostic phase markers

- Twisted handles (H-4)
- Ridged-neck ollas (RO-25)

Common forms

- Flaring neck ollas (RO-12, 5)
- Outslanting wall bowls (RB-17, 19)
- Hemispherical bowls (RB-7)

Other forms

- Flaring neck ollas (RO-11)
- Small shallow bowls (RB-67)
- Incurved rim bowls (RB-66, 6)
- Outslanting, slightly everted rim bowls (RB-21, 22)
- Highly outcurved bowls (RB-76)
- Ridged composite bowls (RB-85)
- Heavy shallow bowls (RB-115)
- Beveled rim bowls (RB-120)
- Plates with roughened exteriors (RD-1)

Composite silhouette bowls (RB-45) and rolled-lip short-necked ollas (RO-27) reached their peak of popularity during the Late Cantera subphase.

Plastic Decoration: Tenango Brown vessels are usually undecorated. Punctuation along the shoulders of composite silhouette bowls (RB-45) occurred during the Cantera phase in imitation of Peralta Orange. Twisted handles (H-4) sometimes have incisions near the top of the handles or in rows on the twisted sections (Fig. 13.32z). Body incising on all

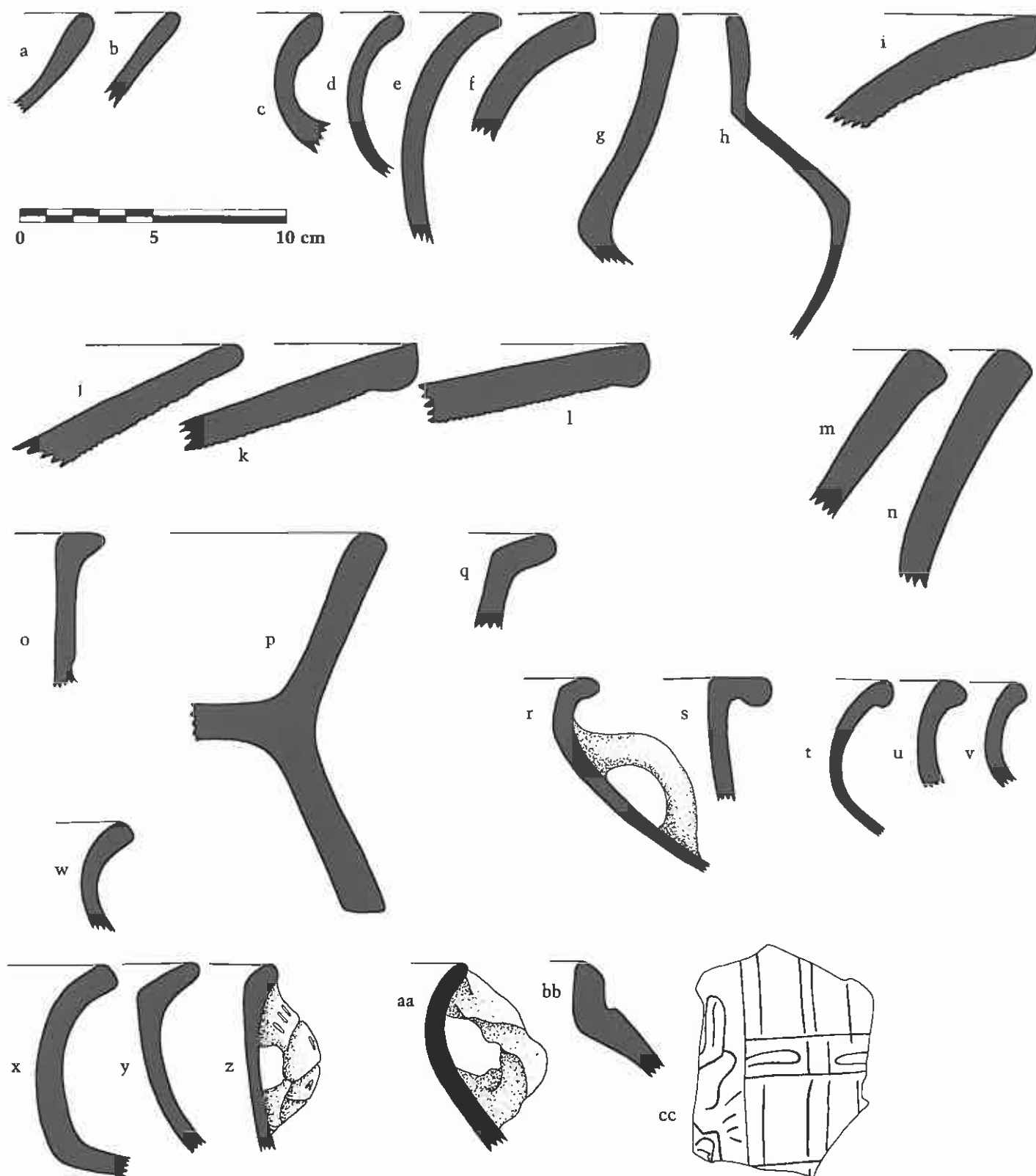


Figure 13.32. Tenango Brown. Early and Middle Barranca subphase: *a–b*, bowls; *c–h*, ollas; *i*, plate. Late Barranca subphase: *j–l*, plates; *m–n*, basins; *o*, collared olla; *p*, annular base brazier. Late Barranca to Cantera subphase: *q*, olla.

Early Cantera subphase: *r–s*, ollas. Early and Late Cantera subphase: *t–z*, ollas. Late Cantera Subphase: *aa–bb*, ollas; *cc*, exterior incising.

forms is rare (Fig. 13.32cc).

Comparisons: Tenango Brown appears similar to Café Claro and Bayo defined by Piña Chan at Chalcatzingo (1955: Figs. 1, 9).

Tenango Brown is a local utilitarian ware. Because utilitarian wares tend to be more regionally restricted than decorated wares, there are few comparisons to be made with other regions. The only important comparison to be made here is with the collared olla (RO-1). This form was present at San Lorenzo beginning with the Chicharras phase (Coe, personal communication). It was also found with Quachilco Mica ceramics during the Late Santa María phase at Tehuacan (MacNeish, Peterson, and Flannery 1970: Fig. 65, row 3), but this context is later than its presence at Chalcatzingo.

White-Rimmed Black

Temporal Range: White-Rimmed Black began in small quantities in the Late Amate subphase, became common during the Barranca phase, and began to diminish in popularity in the latter part of the Early Cantera subphase.

Surface Treatment: The exterior and/or interior rim surfaces are a beige-to-cream color while the rest of the vessel is black (Fig. 13.33). This pottery is unslipped, but the high polish gives the impression of a slip. Rim color is in the 10 YR 7/2–3 range; the black surface is invariably 7.5 YR 2.5/0. In the Late Amate subphase, the technique of differential

firing, a resist technique, was imperfect, and most pieces were irregularly clouded. During the Barranca phase, occasional imitations of White-Rimmed Black were manufactured using white-slipped rims.

Paste and Temper: The paste is crumbly and has abundant temper. Wall thickness is always less than 1 cm. The black part of the core profile has a Munsell color of 7.5 YR 2.5/0. The lighter sections range 10 YR 7/2–3.

The maximum frequency of aplastics in the total paste volume is 15 percent. Plagioclase (An 30, 33) is the principal aplastic, constituting 8–10 percent of the total paste volume. Grains range in size from 120 to 500 microns. Orthopyroxenes compose 5 percent of the volume in one section, less than 1 percent in another. Grain size range is 140–300 microns. Horneblende never exceeds 1 percent of the total volume, and grains measure 100–460 microns. Clinopyroxenes, sometimes twinned, may be present but in less than 1 percent of the volume. Basaltic andesite, iron stains, opaque iron-titanium ores, and leucoxene are present. The mineral inclusions show similarities to mineral fragments found in the volcanic tuff of the area.

Forms (Figs. 13.33, 13.34): There is no regular change in forms through time in White-Rimmed Black. Variability between the subphases is therefore probably a function of sample size.

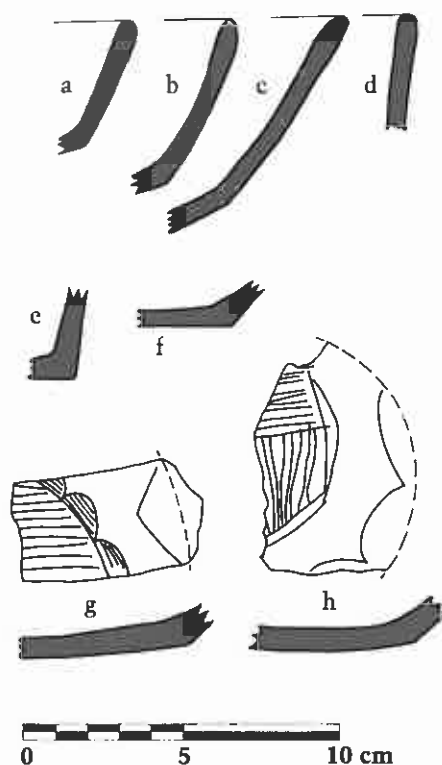


Figure 13.34. White-Rimmed Black, Early to Late Barranca subphase bowls.

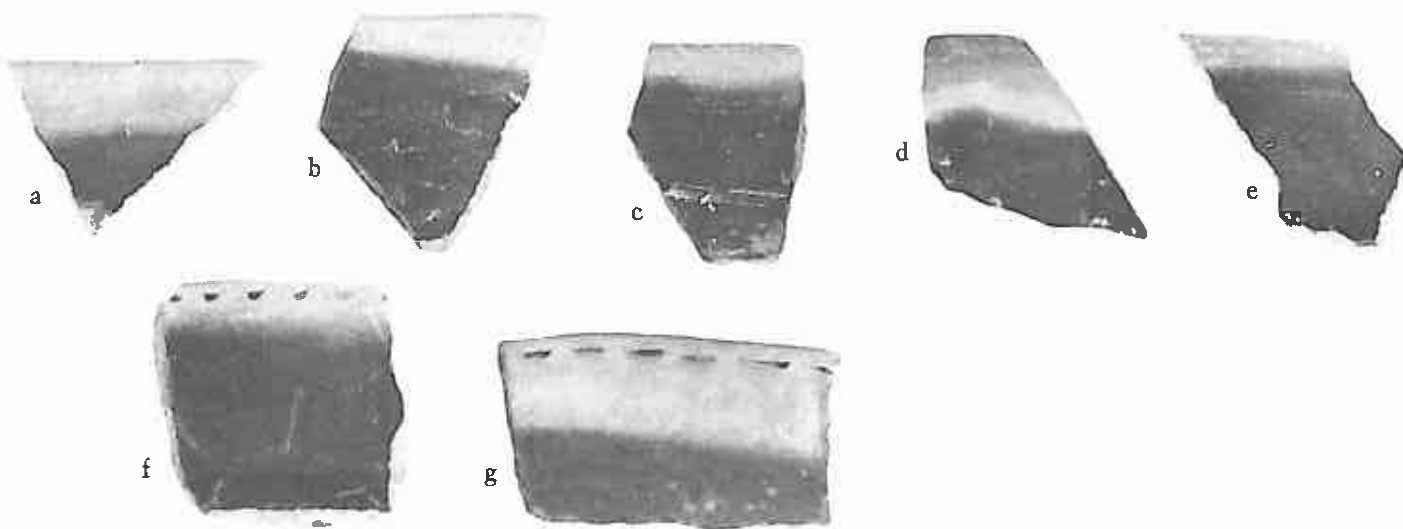


Figure 13.33. White-Rimmed Black: a–e, bowl rims; f–g, interior rim punctation.

Amate phase**Common forms**

Shallow bowls (RB-41)

Other forms

Hemispherical bowls (RB-7)

Beveled rim bowls (RB-37)

Everted rim bowls (RB-35)

Outslanting wall bowls (RB-17)

Rounded bases

Early Barranca subphase**Common forms**

Shallow bowls (RB-41)

Other forms

Heavy everted rim bowls (RB-38)

Flat and rounded bases

Middle Barranca subphase**Common forms**

Shallow bowls (RB-41)

Other forms

Outcurving wall bowls (RB-23, 25)

Incurved rim bowls (RB-3)

Ovate bowls (RB-16)

Outcurving wall bowls (RB-17, 18, 19)

Hemispherical bowls (RB-7)

Cylindrical bowls (RB-14)

Flat and rounded bases

Late Barranca subphase**Common forms**

Shallow bowls (RB-41)

Hemispherical bowls (RB-7)

Other forms

Outslanting wall bowls (RB-17, 18, 19)

Cylindrical bowls (RB-14)

Beveled rim bowls (RB-37)

Outcurving wall bowls (RB-23, 25)

Incurved rim bowls (RB-3)

Everted rim bowls (RB-35)

Flaring wall bowls (RB-26)

Flat and rounded bases

Early Cantera subphase**Common forms**

Shallow bowls (RB-41)

Hemispherical bowls (RB-7)

Other forms

Outslanting wall bowls (RB-17, 18, 19)

Beveled rim bowls (RB-37)

Cylindrical bowls (RB-14)

Outcurving wall bowls (RB-25)

Incurved rim bowls (RB-3)

Flat and rounded bases

Late Cantera subphase**Common forms**

Shallow bowls (RB-41)

Hemispherical bowls (RB-7)

Other forms

Flower pot bowls (RB-62)*

Incurved rim bowls (RB-3)

Beveled rim bowls (RB-37)

Outslanting wall bowls (RB-17, 18, 19)

Outcurving wall bowls (RB-23)

Outslanting, slightly everted rim bowls (RB-20, 21, 22)

Small shallow bowls (RB-67)

Flat and rounded bases

Plastic Decoration: Interior pseudo-grater bottom incising is common, especially during the Barranca phase. The designs are usually stiffly geometric (Fig. 13.34g–h). Single or double incised lines along the interior or exterior rims or exterior incising are present but not common. The most common decorative technique consists of a double row of elongated punctates on the interior rim (Fig. 13.33f–g).

Comparisons: White-Rimmed Black pottery is another widespread ceramic style of the Middle Formative period. Local variations from region to region are noted. As one example, the rim punctates on the Chalcatzingo type seem unique to the region around Chalcatzingo.

In Morelos, white-rimmed black pottery is reported from Iglesia Vieja in El Zarco subphase (Grennes-Ravitz 1974). In the Valley of Mexico, it was present in the Nevada, Ayotla, Manantial, and Zacatenco phases at Zohapilco (Niederberger 1976: 127–128, Pl. 45). At Ayotla, white-rimmed black pottery was common during the Ayotla and Justo phases, and then declined in popularity during the Bomba phase (Tolstoy and Paradis 1970:347). In the Tehuacan Valley, Puebla, Coatepec White-Rim Black of the Late Santa María phase has a greater variety of forms than at Chalcatzingo but follows the same style (MacNeish, Peterson, and Flannery 1970: 108–110, Fig. 64).

Differentially fired ceramics began in the Bajío phase at San Lorenzo, but white-rimmed black ware was present predominantly in the Chicarras and San Lorenzo phases (Coe 1968b:46; 1970:24–27). It is present at La Venta (P. Drucker 1952: 92), and at Tres Zapotes it occurred during the Middle Tres Zapotes A phase (Weiant 1943).

In the Middle Grijalva region of Chiapas, White-Rim Black was prevalent in the Cacahuano phase (Lee 1974: 6–7). At Altamira and Izapa, Pampas Black and White was present in the Cuadros phase (Green and Lowe 1967: 108–109; S. Ekholm 1969:39). Smudged Black and White-Rim Black of the Mirador IV phase of Mirador exhibit shallow bowls with flat bases (Peterson 1963:9, Fig. 10a–d). A white-rimmed black pottery

was present in the Cuadros and Jocotal phases at Salinas La Blanca (Coe and Flannery 1967:33). An unnamed white-rimmed black pottery is present in the Xe complex at Altar de Sacrificios (Adams 1971:27).

Atoyac Unslipped Polished II

Temporal Range: Atoyac Unslipped Polished II was typical of the Early, Middle, and late Barranca subphases, although it began as early as the Late Amate subphase.

Surface Treatment: The unslipped surface has been evenly polished in most cases, although occasional "stick" polishing is evident. Surface color is variable from grey to brown: 2.5 YR 6/6; 5 YR 4–6/6, 5/3, 4/1; 7.5 YR 5–6/4, 4/4; 10 YR 6/2, 5/3, 4/3–4, 3/3.

Paste and Temper: The paste is coarse with a crumbly, jagged fracture. Paste color range is 10 YR 6/5, 3/2–3, 7/3; 7.5 YR 6/6, 6/4, 4/4; 2.5 YR 3/0; 5 YR 5/6, 4/4, 5/8. A grey sandwiched core in the section is common.

Mineral grains form 10–11 percent of the total paste volume. Plagioclase (An 27–28) comprises 8 percent of the volume, ranges in grain size from 80–880 microns, and is the most frequently occurring mineral. Orthopyroxene is usually the second most frequent mineral but constitutes less than 1 percent of the total volume. Grain size ranges from 100 to 680 microns. Hornblende is consistently present but never exceeds 1 percent of the total volume. It ranges in grain size from 100 to 400 microns. Occasional clinopyroxenes, sandstone, rhyolitic rocks, iron stains, and leucoxene are present. The mineral inclusions show similarities to mineral fragments found in the volcanic tuff of the area.

Forms (Figs. 13.35, 13.36): The range of forms for Atoyac Unslipped Polished II follows that of Tenango Brown.

Barranca phase**Diagnostic phase markers**

Collared ollas (RO-1)

Plate forms (RD-2)

Other forms

Tecomates (RB-1)

Outslanting wall bowls (RB-17)

Outcurving wall bowls (RB-23, 25)

Everted rim bowls (RB-30)

Shallow bowls (RB-41)

Flaring neck ollas (RO-5)

Plastic Decoration: In the Late Amate subphase, rocker-stamped pseudo-grater incising occurred on the interior of flat-bottomed flaring wall bowls (Fig. 13.37).

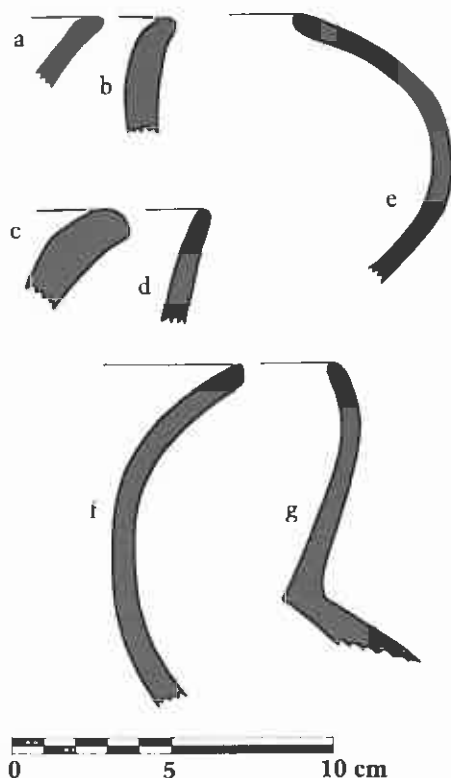


Figure 13.35. Atoyac Unslipped Polished II, Barranca phase: a–e, bowls; f–g, ollas.

Present in the Late Barranca subphase were modeled, punctated everted rims and pseudo-grater incising (Fig. 13.36; see also Laca, Fig. 13.28n–o). Comparisons: None.

Peralta Orange

Temporal Range: Peralta Orange was present in the Amate phase in minute quantities. There was a considerable increase in the proportion of Peralta Orange in the Early Barranca subphase, and it continued to be a major type through the Cantera phase.

Surface Treatment: For the Barranca phase, the surface color of Peralta Orange tended to be in the brown range, and at this time the color and form differences between Peralta Orange and Tenango Brown were minimal. To determine any shift in color emphasis, the distinction between the two types was maintained artificially in our analysis by using defined Munsell color ranges. Because of the overlap in form and color between the two types during the Barranca phase, they should be considered as one classificatory unit for that phase. Better control of firing conditions apparently enabled the Cantera phase potters to

produce a clear, bright orange-slipped pottery. The well-polished vessel surfaces are generally an even, bright color though occasionally marred by tiny, possibly intentional, firing clouds. Range of surface color is 2.5 YR 4–5/4–8, 3/4–6, 3–4/2–4; 5 YR 6–7/6–8, 4–5/6–8. Red painting, in bands on exterior surfaces, has been noted, but its temporal position is unclear.

Paste and Temper: The typical core section of this pottery shows a grey sandwiched center. Paste color range is 7.5 YR 6–7/4, 4–5/2, 4/0; 10 YR 5–7/4–3. Fracture is jagged.

Plagioclase (An 26–28, 30–31) is the most abundant mineral, 5–8 percent of the volume, and ranges in grain size from 60 to 800 microns. Orthopyroxenes constitute 1–2 percent of the volume, and grains measure 100–600 microns. Hornblende is present in proportions of usually less than 1 percent, and the grain size ranges from 160 to 860 microns. A trace of clinopyroxene was observed in two samples. Basaltic andesite, dacite, iron stains, and leucoxene are present. Occasional quartz grains are noted. Opaque iron-titanium ores were observed in one of the samples. Possible microcline was present in one sample. The mineral inclusions show similarities to mineral fragments found in the volcanic tuff of the area.

Vessel wall thickness varies with the size of the vessels; thus, there are thin as well as very thick vessels.

Forms:

Late Amate subphase

- Flaring wall bowls (RB-26)
- Heavy everted rim bowls (RB-38)
- Cylindrical bowls (RB-14)
- Outcurving wall bowls (RB-25)
- Flaring neck (RO-12, 15)
- Short-necked ollas (RO-29)
- Flat and rounded bases

Early Barranca subphase (Fig. 13.38a–k)

Common forms

- Flaring neck ollas (RO-5)

Other forms

- Flaring neck ollas (RO-12)
- Incurved rim bowls (RB-3)
- Hemispherical bowls (RB-7, 93)
- Outslanting wall bowls (RB-17, 18, 19)
- Outcurving wall bowls (RB-25)
- Beveled rim ollas (RO-8)
- Super flaring neck ollas (RO-17)
- Plate forms with roughened exteriors (RD-4)
- Rounded bases
- High shoulders (Base M)

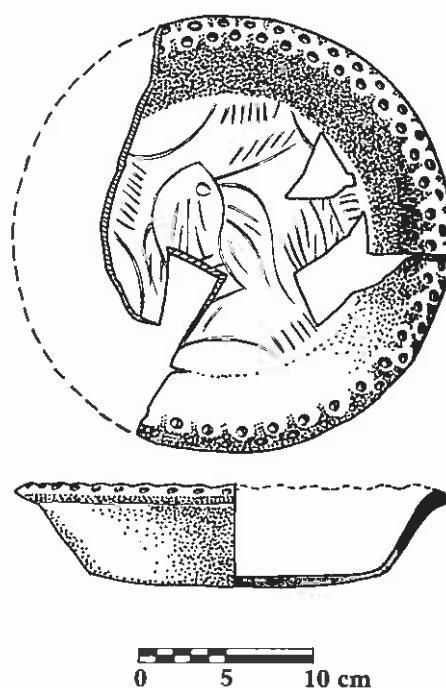


Figure 13.36. Atoyac Unslipped Polished II, Late Barranca subphase bowl with modeled punctate rim and pseudo-grater bottom incising.

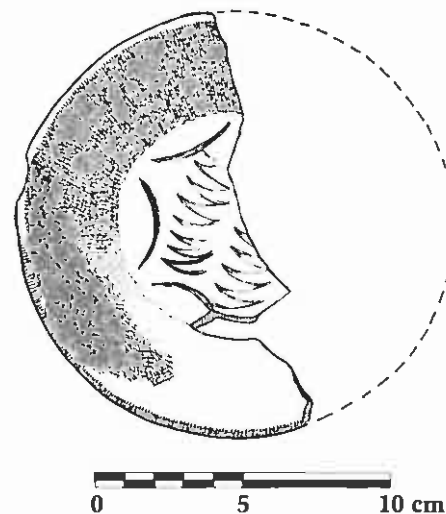


Figure 13.37. Atoyac Unslipped Polished II, Late Amate subphase bowl with interior rocker-stamping.

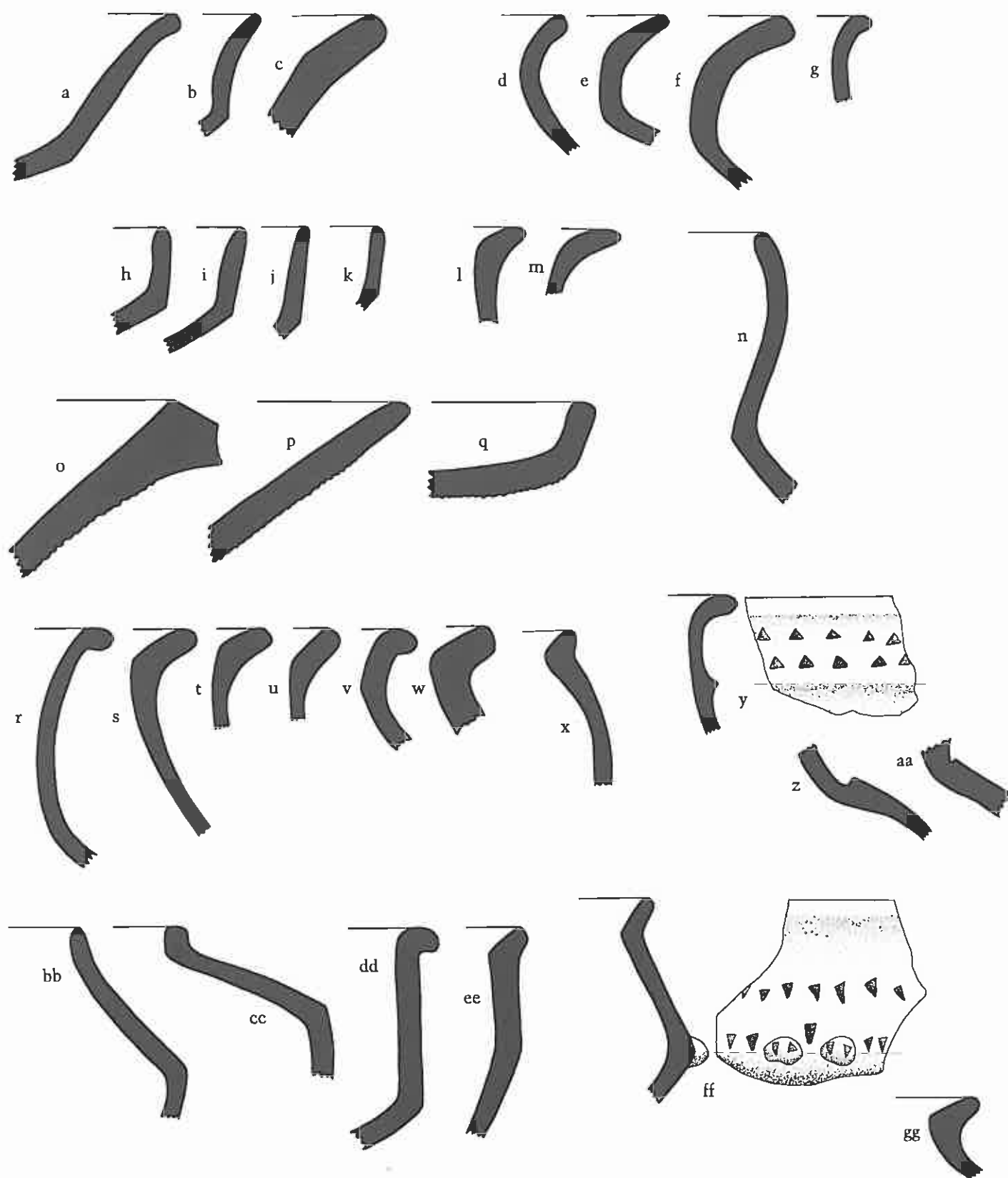


Figure 13.38. Peralta Orange. Early and Middle Barranca subphase: *a–c*, bowls; *d–g*, ollas. Early to Late Barranca subphase: *h–k*, bowls. Late Barranca subphase: *l–m*, ollas. Late Barranca to Late

Cantera subphase: *n*, olla. Early Cantera subphase: *o–q*, plates; *r–w*, ollas. Early and Late Cantera subphase: *x*, bowl; *y–aa*, ollas and olla necks. Late Cantera subphase: *bb–ff*, bowls; *gg*, olla.

0 5 10 cm

Middle Barranca subphase (Fig. 13.38a–k)

Common forms

- Outcurving wall bowls (RB-25)
- Flaring neck ollas (RO-12)

Other forms

- Outcurving wall bowls (RB-23)
- Flaring neck ollas (RO-5, 16)
- Plate forms with roughened exteriors (RD-8)*
- Brazier forms (RB-99, * 100*)
- Outslanting wall bowls (RB-17, 18, 19)
- Heavy shallow bowls (RB-115)
- Composite silhouette bowls (RB-45)
- Shallow bowls (RB-41)
- Hemispherical bowls (RB-7)
- Heavy everted rim bowls (RB-38)
- Beveled rim ollas (RO-8)
- Super flaring neck ollas (RO-17)
- Flaring neck ollas with drooping rims (RO-9)
- Plate forms with roughened exteriors (RD-4)
- Flat and rounded bases

There was an expansion of the form assemblage during the Late Barranca subphase. This is another indication of the increasing popularity of Peralta Orange. Forms of the Middle Barranca subphase continued.

Late Barranca subphase (Fig. 13.38h–n)

Common forms

- Flared neck ollas (RO-5, 12)
- Outcurving wall bowls (RB-25)
- Hemispherical bowls (RB-7)

Other forms

- Flaring neck ollas (RO-11)
- Flower pot bowls (RB-62)*
- Collared ollas (RO-1)
- Deep basins*
- Spouted trays (RD-9)*
- Tecomates* (RB-1, 131)
- Cylindrical bowls (RB-14)
- Outslanting, slightly everted rim bowls (RB-20, 21, 22)
- Flaring wall bowls (RB-26)
- Everted rim bowls (RB-30, 35)
- Globular bowls (RB-60)
- Slightly everted rim bowls (RB-77)
- Highly outcurved rim bowls (RB-90)
- Flaring neck ollas (RO-15)
- Flaring mouth ollas (RO-28, 31)
- Short-necked ollas (RO-29)
- Incurved rim bowls (RB-3)
- Beveled rim bowls (RB-37)
- Direct rim composite silhouette bowls (RB-31)
- Rolled-lip ollas (RO-30)
- Plate forms with roughened exteriors (RD-3, 5, 7)
- Flat and rounded bases

High shoulders (Base M)

Early Cantera subphase (Figs.

13.38n–aa, 13.39, 13.40, 13.42)

Diagnostic phase markers

- Composite silhouette bowls (RB-45)
- Rolled-lip, short-necked ollas (RO-27)
- Rolled-lip ollas (RO-30)
- Ridge-necked ollas (RO-25)
- Short-necked ollas (RO-29)
- Flaring mouth ollas (RO-31)
- Twisted handles (H-4)

Common forms

- Outcurving wall bowls (RB-23, 25)
- Composite silhouette bowls (RB-45)
- Flaring neck ollas (RO-5, 12)
- Super flaring neck ollas (RO-17)

Other forms

- Flaring neck ollas (RO-15, 11)
- Flaring mouth ollas (RO-28)
- Braziers, annular based (RB-100)
- Plate forms with roughened exteriors (RD-8, * 2, 3, 4, 5, 7)
- Highly outcurved bowls (RB-90)
- Hemispherical bowls (RB-7)
- Outslanting wall bowls (RB-17, 18, 19)

Tecomates (RB-1)

- Flaring wall bowls (RB-26, 75)

Direct rim composite silhouette bowls (RB-31)

- Incurved rim bowls (RB-3, 66)
- Shallow bowls (RB-41)
- Cylindrical bowls (RB-14)
- Outslanting, slightly everted rim bowls (RB-20, 21)
- Small shallow bowls (RB-67)
- Everted rim bowls (RB-30)
- Heavy shallow bowls (RB-115)
- Double-loop handle censors (RB-101)
- Beveled rim ollas (RO-8)
- Flaring neck ollas with drooping rims (RO-9)
- Collared ollas (RO-1, 2, 3)
- Regular handles (H-1)

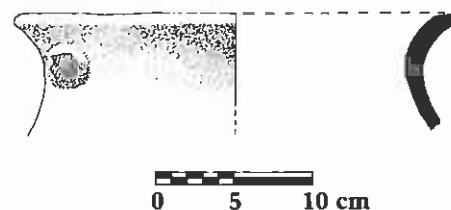


Figure 13.39. Peralta Orange, Early and Late Cantera subphase olla with handle attachment.

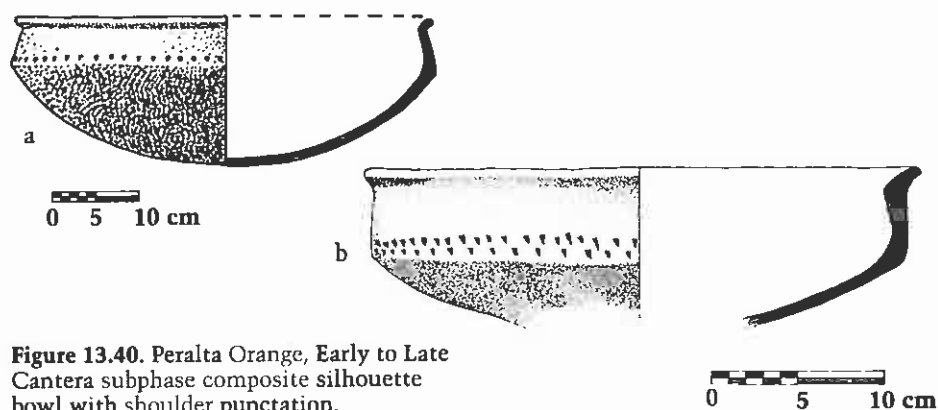


Figure 13.40. Peralta Orange, Early to Late Cantera subphase composite silhouette bowl with shoulder punctation.



Figure 13.41. Peralta Orange, Late Cantera subphase olla with twisted handle.

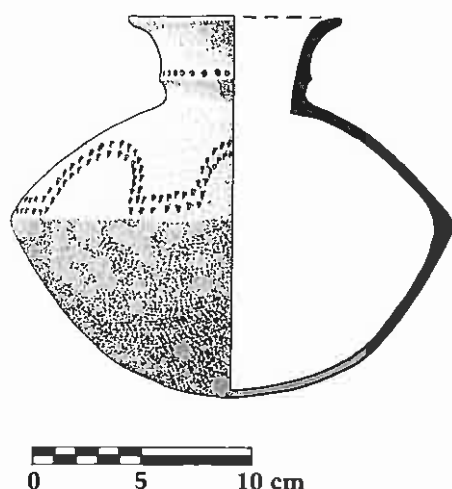


Figure 13.42. Peralta Orange, Early and Late Cantera subphase olla with ridged neck and shoulder punctations.

An occasional *cantarito* was made in Peralta Orange, although this was not common. The Early Cantera forms continued into the Late Cantera with the exception of RB-75, RB-101, and RO-3.

Late Cantera subphase (Figs. 13.38n, x-gg, 13.39–13.42)

Diagnostic phase markers

Composite silhouette bowls (RB-45)

Brazier forms (RB-99)

Sharply outflaring ollas (RO-32)

Common forms

Composite silhouette bowls (RB-45)

Flaring neck ollas (RO-12, 5)

Outcurving wall bowls (RB-25, 23)

Shallow bowls (RB-41)

Hemispherical bowls (RB-7)

Outslanting wall bowls (RB-19)

Other forms

Angular flaring wall bowls (RB-102)*

Direct rim composite silhouette bowls (RB-71)*

Beveled rim bowls (RB-37)

Outslanting, slightly everted rim bowls (RB-22)

Heavy everted rim bowls (RB-38)

Everted rim bowls (RB-35)

Ovate bowls (RB-16)

Flower pot bowls (RB-62)

Incurved rim bowls (RB-6)

Tecomates (RB-131)

Very short-necked ollas (RO-33)

Spider-leg supports (S-7)

Nub supports (S-2) infrequent

Spouted trays (RD-9)

Globular bowls (RB-60)

Flanged shoulder bowls (RB-89)

Composite silhouette bowls (RB-45) were very popular during this subphase and are often found as burial furniture (Figs. 13.38dd–ff, 13.40). Twisted handles (H-4) on ollas were restricted to the Late Cantera subphase (Fig. 13.41). Regular handles (H-1) also became more abundant.

Plastic Decoration: Punctuation along the upper shoulder or along the basal break of composite silhouette bowls (RB-45) began during the Early Cantera subphase and continued during the Late Cantera (Figs. 13.38ff, 13.40). Punctuation along the neck ridge of RO-25 ollas and along the upper shoulder (Base M) was also a common decorative technique of these subphases (Figs. 13.38y, 13.42). Simple incising, such as single or double lines, occurs along the rims or on the exterior bodies.

Comparisons: Peralta Orange corresponds to some examples of Piña Chan's Café Claro and Roja Amarillenta from his 1952 Chalcatzingo excavations (Piña Chan 1955: Figs. 1d–f, 11f–h). It is difficult to draw comparisons to similar types in Mexico's central highlands because we know of none which are closely similar. At Zacatenco, composite silhouette bowls with shoulder punctates and olla handles with incising were reported by Franz Boas (1911–1912: Pls. 38, 40). George C. Vaillant also reported them from Zacatenco (1930: 95, Pl. VIII) and from Ticoman (1931: Pl. LXIX).

Based on the present data, certain vessel forms of Peralta Orange appear to be local, restricted to the Río Amatzinac Valley, and probably closely related to Chalcatzingo's interaction with the Gulf Coast. This statement is made because while Peralta Orange ceramics show no close highland ties, they do exhibit strong similarities to the Gulf Coast and possibly to the lowland Maya area.

The analysis of collections at the Smithsonian Institution (Appendix D) revealed that orange-slipped wares (Red Wares; Weiant 1943: 18) were common at Tres Zapotes during the Middle Tres Zapotes A period. Included in that sample are ridge-necked ollas (RO-25) with neck punctations. The Tres Zapotes ridge-necked ollas often have "faces" created by punctations on the vessel neck (cf. Weiant 1943: Pls. 56, 1–5). These attributes also occur in Chalcatzingo's Peralta Orange ridge-necked ollas and are similar enough to suggest that these similarities are significant and more than fortuitous (see Figs. 13.42, 13.69).

San Lorenzo and La Venta collections at the Smithsonian also contain sherds which have strong similarities to Chalcatzingo's Peralta Orange.

In general terms, Peralta Orange ceramics show strongest affinities not to the central highlands but to southern Mesoamerica. In fact, in terms of basic similarities, they exhibit strong correspondences to Middle Formative orange wares from the Maya area, including Mars Orange from Uaxactun (R. Smith 1955: 110–115), Jovetud Red (Jolote and Mocho varieties) from Altar de Sacrificios and Seibal (Adams 1963: 89; 1971: 20; Sabloff 1975: 61–62), San Agustín Red Polished of San Agustín, Chiapas (Navarrete 1959), Chiapilla Polished Red from Santa Cruz, Chiapas (Sanders 1961: 20–21), and Conchas Orange from Salinas La Blanca (Coe and Flannery 1967: 48), to name a few.

Pavón Fine Grey

Temporal Range: Pavón Fine Grey is a non-local type which began appearing at Chalcatzingo in small quantities during the Early Barranca subphase. The period of greatest frequency of this type is the Late Cantera subphase.

Surface Treatment: The unslipped, well-polished surfaces of Pavón Fine Grey tend to be very compact and dense, with uniform surface color. Surface color is not the most important defining characteristic of this pottery because of the variability of color. Paste is the distinguishing feature between Pavón Fine Grey and Carrales Coarse Grey. The surface color range is 5 YR 6/1; 7.5 YR 4–7/0; 10 YR 7/1; 5 Y 5/1; 2.5 Y 4/0.

Paste and Temper: The fracture of this pottery is sharp and even. In the core section, lenticular holes, where some tempering material has burned or leached out, are visible. Paste color is 5 YR 6/1; 7.5 YR 5–7/0; 10 YR 7/1, 5/1–2. The paste is fine particled and has few inclusions.

No more than 7 percent of the volume is aplastics. Magnetite reaches 5 percent in abundance. Quartzite, never more than 1 percent, ranges in size from 140 microns to 1.3 mm. Altered mica (possibly sericitic) is less than 1 percent of the volume and ranges in size from 120 to 460 microns. Leucoxene, a trace of plagioclase, and possibly alkaline feldspars are present. Paste composition indicates that the source of the aplastics is an area of metamorphism.

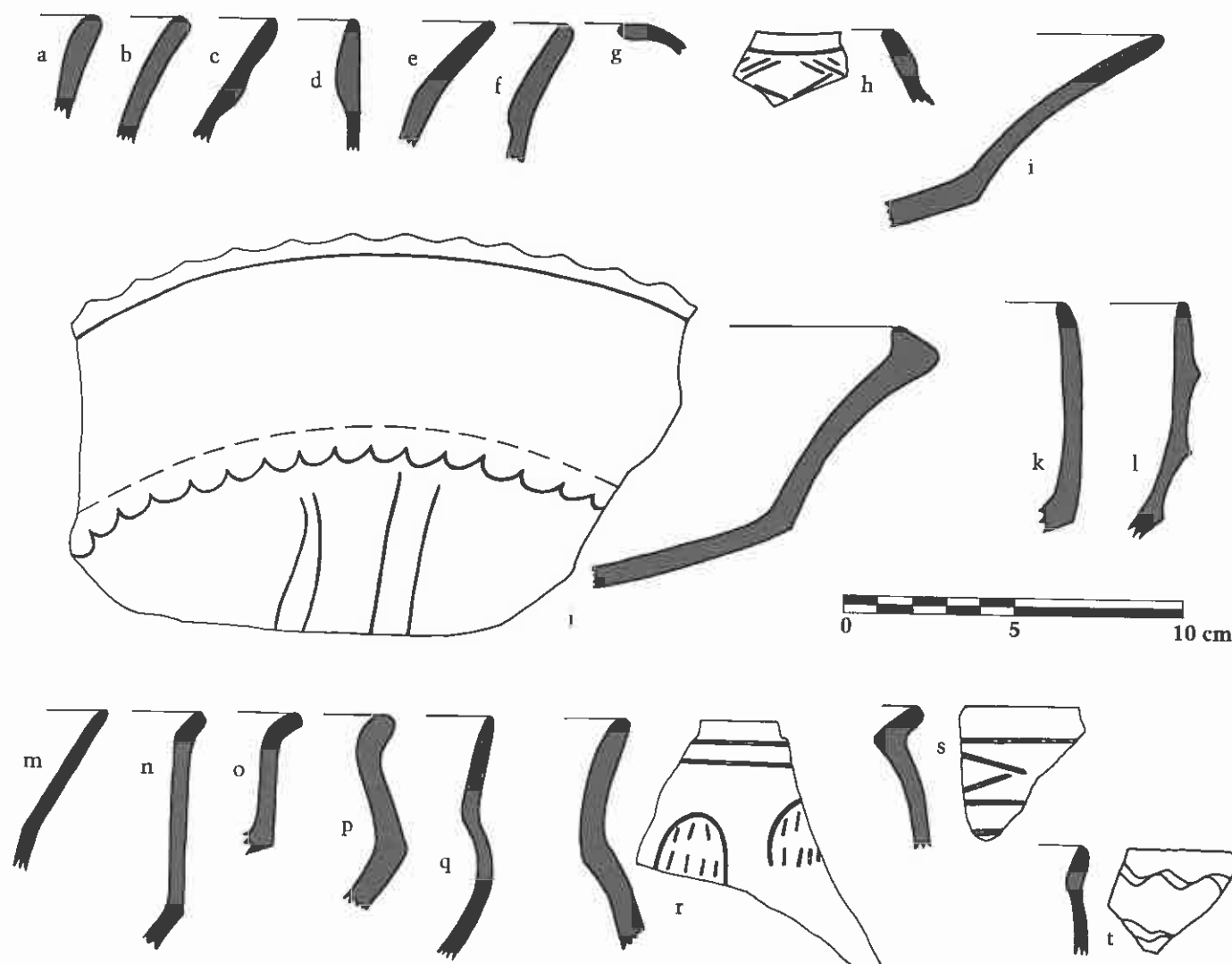


Figure 13.43. Pavón Fine Grey bowls: *a-i*, Early Barranca to Early Cantera subphase; *j-t*, Late Cantera subphase.

Forms:

Barranca phase (Fig. 13.43 *a-i*)

Common forms

Outslanting wall bowls (RB-17)

Other forms

Outcurving wall bowls (RB-18)

Exotic forms (RB-88)*

Globular bowls (RB-78)*

Hemispherical bowls (RB-7)

Ovate bowls (RB-16)

Outcurving wall bowls (RB-23, 25)

Flaring wall bowls (RB-26)

Shallow bowls (RB-41)

Flower pot bowls (RB-62)

Beveled rim bowls (RB-37)

Outslanting, slightly everted rim bowls (RB-21)

Bases tend to be rounded

Barranca phase forms continued into

the Early Cantera subphase except for RB-37, RB-21, and RB-78.

Early Cantera subphase (Figs. 13.43 *a-i*, 13.44)

Diagnostic phase markers

Exotic forms (RB-87)

Flanged shoulder bowls (RB-116)

Common forms

Hemispherical bowls (RB-7)

Ovate bowls (RB-16)

Other forms

Composite silhouette bowls (RB-45)*

Incurved rim bowls (RB-3)

Cylindrical bowls (RB-14)

Outslanting wall bowls (RB-17, 19)

Tecomates (RB-1)

For the Late Cantera subphase, the Early Cantera forms continued except for

RB-87 and RB-116.

Late Cantera subphases (Figs. 13.43 *j-t*, 13.44, 13.45, 13.46)

Common forms

Ovate bowls (RB-16)

Shallow bowls (RB-41)

Outcurving wall bowls (RB-23, 25)

Other forms

Shallow bowls (RB-121)

Ridge composite bowls (RB-85)*

Exotic forms (RB-88, * 91)

Everted rim bowls (RB-35)

Composite silhouette forms (RB-74)

Hemispherical bowls (RB-93)

Collared ollas (RO-2)

Direct rim composite silhouette bowls (RB-31, 71)

Outslanting wall bowls (RB-119)

Super flaring neck ollas (RO-17)

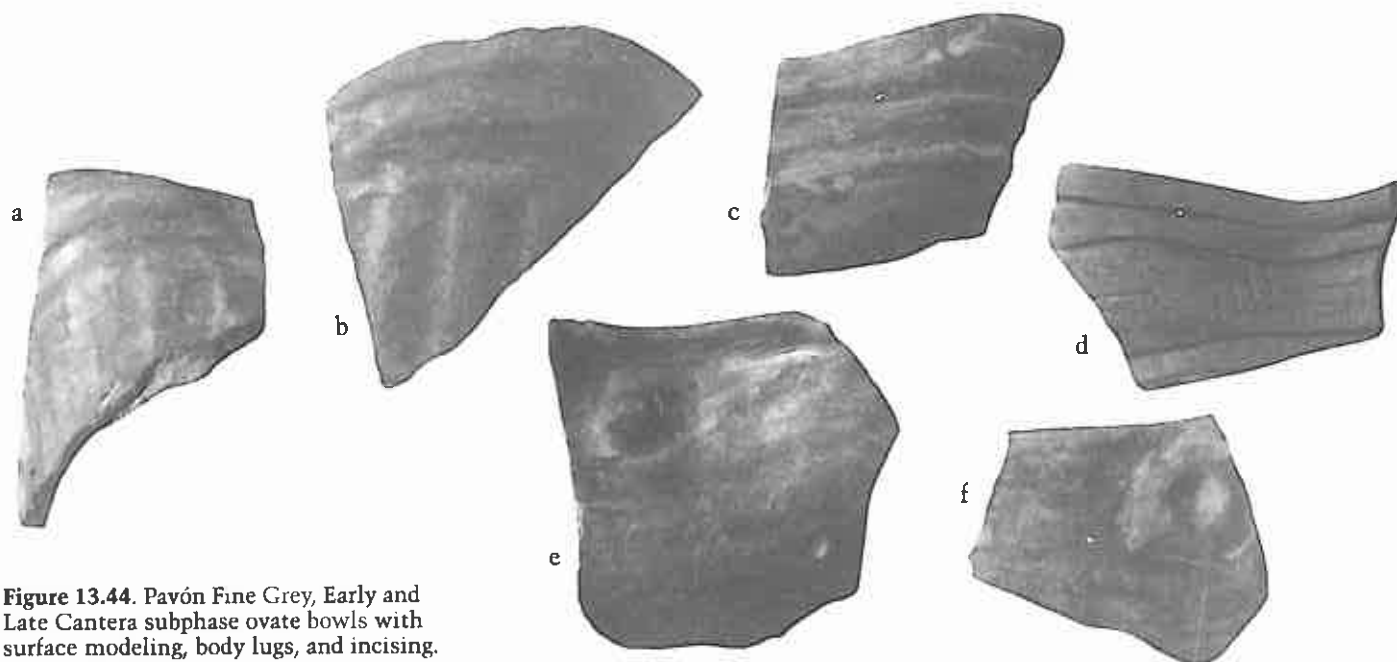


Figure 13.44. Pavón Fine Grey, Early and Late Cantera subphase ovate bowls with surface modeling, body lugs, and incising.

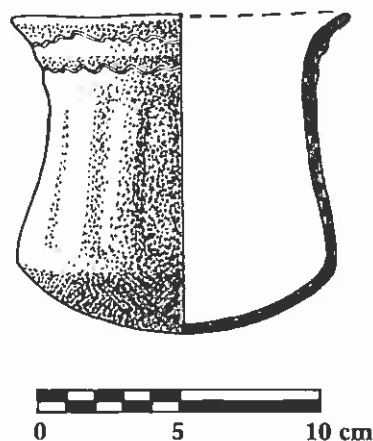
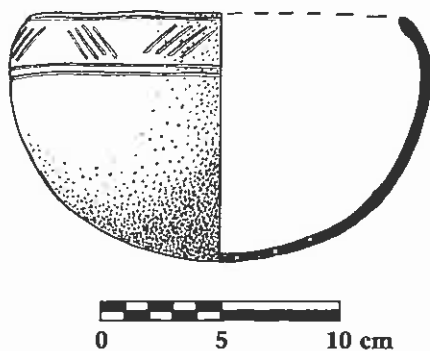


Figure 13.45. Pavón Fine Grey, Late Cantera subphase bowl with rippled walls.



The Late Cantera subphase has the great variety of forms and the maximum frequency of Pavón Fine Grey ceramics.

Plastic Decoration: Double-line and double-line-break motifs and fine-line body incising are typical. Body lugs on ovate forms (RB-16) are present but not common (Fig. 13.44e-f). Surfaces modeled into rippled vessel walls are also present but atypical (Fig. 13.45).

In general Pavón Fine Grey does not show clear temporal changes in terms of decoration except for examples which are decorated like Carrales Coarse Grey (Fig. 13.46).

Comparisons: Pavón Fine Grey was designated Tipo Gris by Piña Chan at Chalcatzingo and was recognized as a non-local pottery (1955: 16, Fig. 11a-c). Petrographic analysis of this fine-paste grey pottery has shown it to be composed of minerals of metamorphic origin, far different from those in the local Chalcatzingo ceramics. Metamorphic minerals and the general style suggest an origin of this pottery somewhere east or southeast of Chalcatzingo. Analyses show that the greatest similarity of Pa-

vón Fine Grey is with the grey wares from sites in the nearby state of Puebla.

Río Salado Grey of the Early Santa María phase at Tehuacan has forms and decoration similar to those of Pavón Fine Grey: ovate bowls, hemispherical bowls, flaring wall bowls, and pseudo-grater interiors. Quachilco Gray of the Late Santa María phase is also similar to Pavón Fine Grey (MacNeish, Peterson, and Flannery 1970: 120-133, Figs. 70-72).

On the Gulf Coast, fine-paste grey wares are present at San Lorenzo during the Palangana and Remplás phases (Coe, personal communication). Philip Drucker's Fine Paste Gray-Black ware from La Venta (1952: 102) and some examples of Cerámica Negra from Chalahuite and El Trapiche, Veracruz (García Payón 1966: 39-45) are similar in paste, form, and decoration to Pavón Fine Grey. The Tres Zapotes collection at the Smithsonian Institution has abundant fine-paste grey wares. Nevertheless, preliminary petrographic analyses of Gulf Coast grey ceramics demonstrate marked differences with Pavón Fine Grey.

During the Guadalupe phase at Fábrica San José, Oaxaca, Socorro Fine Grey was popular and is similar to the grey wares from Monte Albán I (Drennan 1976; see discussion of Carrales Coarse Grey). Grey wares were present in the

Figure 13.46. Pavón Fine Grey, Late Cantera subphase bowl with exterior incising.

Valley of Oaxaca as early as the Tietras Largas phase (Flannery, personal communication).

Pottery comparable to Río Salado Gray of the Tehuacan Valley is found at Salinas La Blanca, Guatemala, beginning in the Jocotal phase, and is called Ocos Grey (Coe and Flannery 1967:46). At Altamira, Chiapas, Culebra Grey is present (Green and Lowe 1967:118–119).

Several duck effigy vessels were excavated as burial offerings at Chalcatzingo. Bird effigy vessels are reported from Monte Albán by Caso, Bernal, and Acosta (1967): turkey effigy (1967:54, Fig. 94b), a bird effigy with its head twisted back (1967:156, Fig. 99), a small ovate bowl with the head facing backward (1967:157, Fig. 101), and a bird effigy from the Museo Nacional de Antropología (1967:201, Fig. 171).

Atoyac Unslipped Polished I

Temporal Range: Atoyac Unslipped Polished I is typical of the Cantera phase.

Surface Treatment: This unslipped pottery is typified by streaky polishing often referred to as "stick" polishing. The type's pale beige to rose color is diagnostic: 2.5 YR 6/6; 5 YR 5/3, 5–8/4, 4–5/1, 6–7/6, 4/2; 7.5 YR 5–7/4, 6–7/2; 10 YR 4/1, 4/6.

Paste and Temper: The paste is fine grained and has a sharp fracture. Wall thickness is always less than 1 cm. Paste color range is 7.5 YR 7/2–4, 6/4, 6–7/2; 5 YR 7/6, 5/4; 2.5 YR 5/6.

From 5–6 percent of the paste volume is aplastics. Plagioclase (An 28–29) is the principal mineral, constitutes 2–3 percent of the volume, and ranges in particle size from 60 to 300 microns. Horneblende and orthopyroxene are the second and third most frequently occurring minerals, but compose less than 1 percent of the total volume. Orthopyroxene ranges in grain size from 100 to 320 microns; horneblende, from 120 to 500 microns. Andesite, iron stains, opaque iron-titanium ores, and leucosene are present. Occasional grains of clinopyroxene are evident. The mineral inclusions show similarities to the mineral fragments found in the volcanic tuff of the area.

Forms (Figs. 13.47–13.49):

Cantera phase

Diagnostic phase markers

Small shallow bowls (RB-67), with a radius of 4–10 cm, most abundant during the Late Cantera subphase

Small shallow bowls (RB-70) *Cantaritos* (C), occur as burial furniture during the Late Cantera subphase

Plastic Decoration: Late Cantera subphase decoration on the small shallow dishes (RB-67) includes stick impressions on the lip (DC-36; Fig. 13.47) and appliqué lugs on the lip (DC-37; Fig. 13.48c). These small bowls often have red pigment stains on the interiors, indicating a possible function as paint dishes.

Incising on the upper shoulders and body lugs on the shoulder breaks of *cantaritos* are typical of the Late Cantera subphase (DC-38, 39; Fig. 13.49b–c).

Comparisons: *Cantarito* vessels at Chalcatzingo occur primarily as burial offerings, yet they are atypical of burial furniture at other central Mexican Formative period sites. The small dishes are also uncommon. However, both have counterparts at Gulf Coast sites. "Small thick-wall jars" were reported at La Venta by Philip Drucker (1952:119), who also mentions "miniature dishes" at Tres Zapotes (1943a:56, Fig. 29). These latter are similar in form to Chalcatzingo bowl forms RB-67 and RB-70.

Carrales Coarse Grey

Temporal Range: Significant quantities of Carrales Coarse Grey appeared during the Late Barranca subphase, and maximum frequency was reached during the Cantera phase.

Surface Treatment: A waxy luster is characteristic of this well-polished unslipped pottery. A typical cloudy film on the sherds may be due to conditions of preservation. Beige, pink, and yellow firing blotches are occasionally present. The surface color is variable: 2.5 YR 4–8/0, 5–6/4–6, 6/7–8; 10 YR 3–6/1, 6/4, 5/3; 7.5 YR 7–8/0, 7/4–6, 6–7/6; 5 YR 4–7/1, 3/1, 5/3; 2.5 YR 5–6/4–6.

Paste and Temper: The core section of this pottery is distinctive, with several alternating layers of dark and light grey. The range of the paste color is 10 YR 6/3–4, 4/1, 6/1, 3/4; 5 YR 6/1; 2.5 YR 7/0. The paste is crumbly, and the fracture is jagged.

The maximum frequency of aplastics is 22 percent. Plagioclase (An 26, 28, 30–31) is the most abundant mineral, making up 10 percent of the total paste volume. Grains measure from 100 microns to 1.5 mm. Orthopyroxenes, constituting 1–3 percent of the volume, range in grain size from 80 to 500 mi-

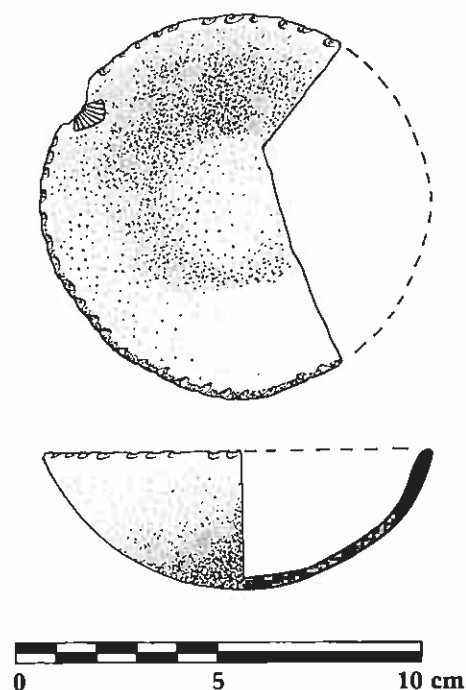


Figure 13.47. Atoyac Unslipped Polished I, Late Cantera subphase small shallow bowl with stick impressions on the lip.

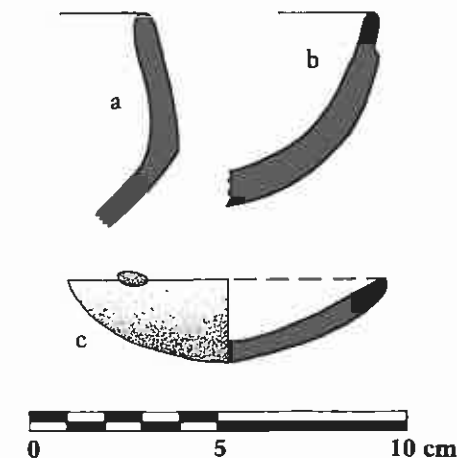


Figure 13.48. Atoyac Unslipped Polished I: a–b, Early and Late Cantera subphase small bowls; c, Late Cantera subphase small shallow bowl with lip lug.

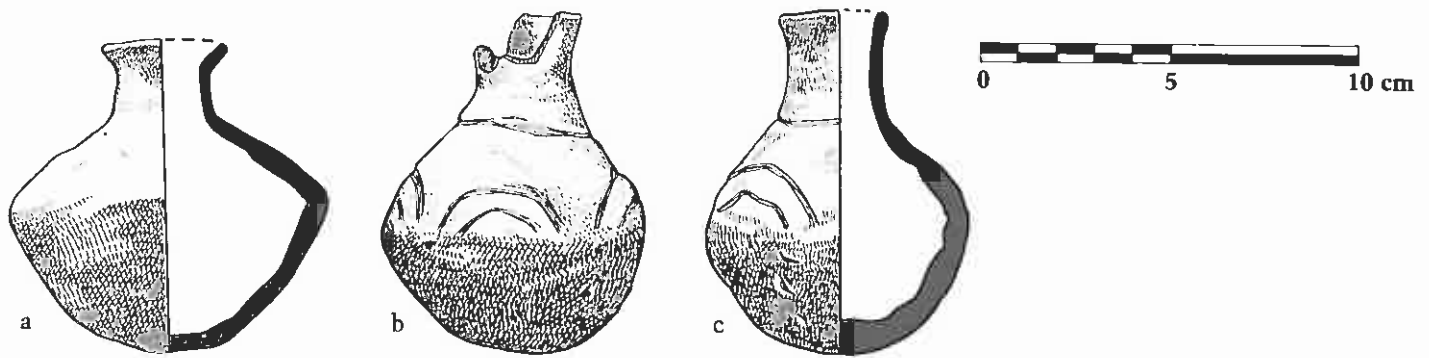


Figure 13.49. Atoyac Unslipped Polished I *cantaritos*: *a*, Early and Late Cantera subphase; *b-c*, Late Cantera subphase with shoulder incising.

crons. Horneblende or clinopyroxene may be the next most abundant mineral. Horneblende never exceeds 1 percent of the paste volume; clinopyroxenes reached a maximum of 2 percent in one sample. Grains of horneblende measure 100–700 microns; those of clinopyroxene, 140–600 microns, and some are twinned. Basaltic andesite, dacite, opaque iron-titanium ores, iron stains, and leucoxene are present. Occasional sherd and sandstone temper are observed. The mineral inclusions show similarities to mineral fragments found in the volcanic tuff of the area.

Forms: Although minor quantities of Carrales Coarse Grey are occasionally present in Middle Barranca levels, the forms present during that subphase are few. Carrales Coarse Grey began to be important during the Late Barranca, and the range of forms in that subphase is broad and clearly parallels those of Amatzinac White.

Middle Barranca subphase

Outslanting wall bowls (RB-17, 19)

Ovate bowls (RB-16)

Late Barranca subphase (Fig. 13.50*a-h*)

Common forms

Hemispherical bowls (RB-7)

Other forms

Exotic forms (RB-88)*

Outslanting wall bowls (RB-17, 18, 19)

Outslanting, slightly everted rim bowls (RB-22)

Outcurving wall bowls (RB-23, 25)

Flaring wall bowls (RB-26)

Everted rim bowls (RB-30)

Shallow bowls (RB-41)

Flower pot bowls (RB-62)

Composite silhouette forms (RB-74)

Cylindrical bowls (RB-14)

Incurved rim bowls (RB-3)

Late Barranca subphase forms continued into the Early Cantera subphase with the exception of RB-22 and RB-88.

Early Cantera subphase (Figs. 13.50*i*, 13.51)

Common forms

Outcurving wall bowls (RB-25)

Hemispherical bowls (RB-7)

Outslanting wall bowls (RB-17, 18)

Shallow bowls (RB-41)

Incurved rim bowls (RB-3)

Other forms

Incurved rim bowls (RB-66)

Direct rim composite silhouette bowls (RB-31, * 71*)

Composite squash-like bowls (RB-80)*

Ridged composite bowls (RB-85)*

Ovate bowls (RB-16)*

Flanged shoulder bowls (RB-89)*

Highly outcurved bowls (RB-90)

Outslanting, slightly everted rim bowls (RB-21)

Flaring neck ollas (RO-12)

Collared ollas (RO-1)

Plate forms with roughened exteriors (RD-4)

Ridged-wall bowls (RB-81)

With the exception of RB-21, the Early Cantera subphase forms continued into the Late Cantera.

Late Cantera subphase (Figs. 13.50*i-bb*, 13.51–13.55)

Diagnostic phase markers

Flanged shoulder bowls (RB-89)

Direct rim composite silhouette bowls (RB-71)

Exotic forms (RB-87, 91)

Common forms

Outcurving wall bowls (RB-25, 23)

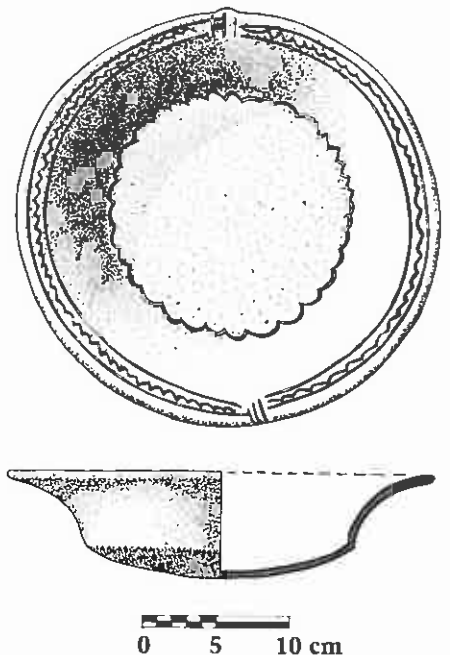


Figure 13.51. Carrales Coarse Grey, Early and Late Cantera subphase bowl with interior rim incising and pseudo-grater bottom incising.

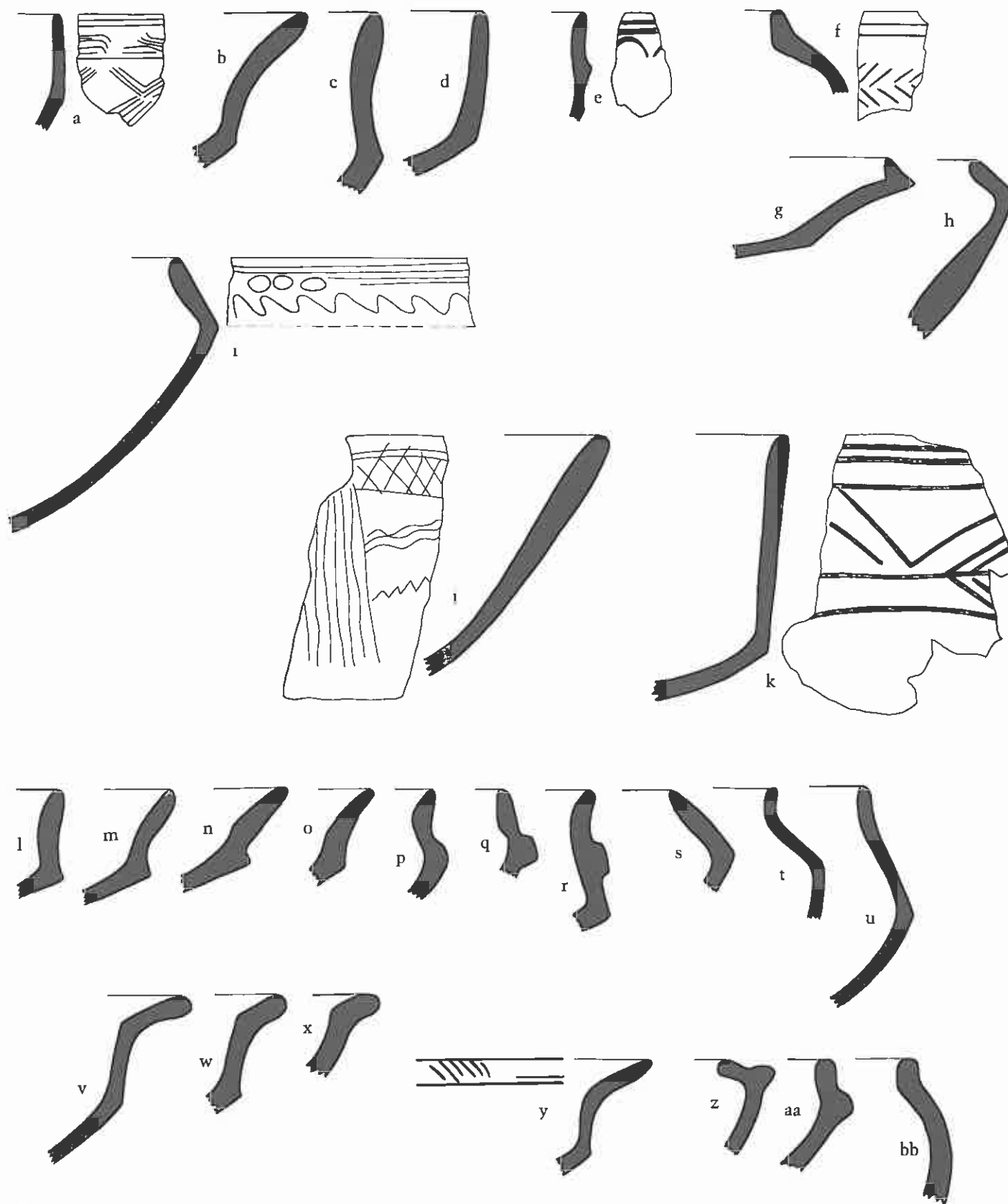
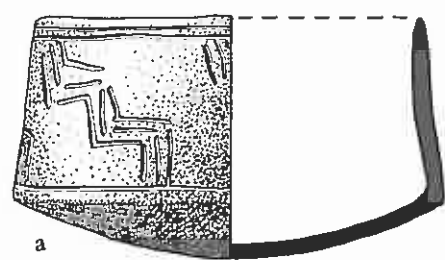
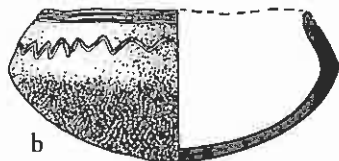


Figure 13.50. Carrales Coarse Grey bowls:
a–h, Late Barranca subphase; *i*, Early
 Cantera subphase; *j–bb*, Late Cantera
 subphase.

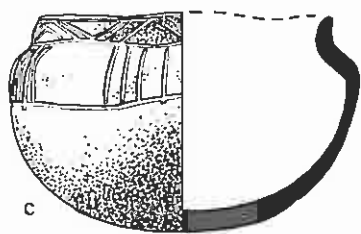
0 5 10 cm



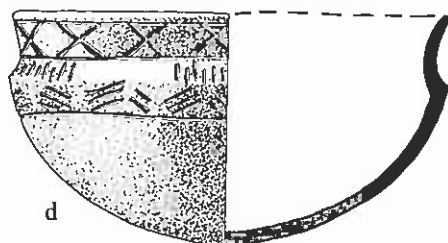
a



b



c



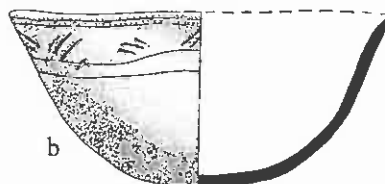
d



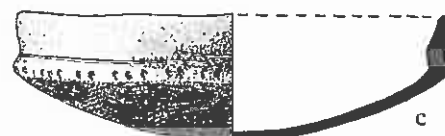
Figure 13.52. Carrales Coarse Grey, Late Cantera subphase bowls with exterior incising.



a



b



c



Figure 13.53. Carrales Coarse Grey, Late Cantera subphase bowls: a, rippled wall and exterior incising; b, ovate bowl with exterior incising; c, bowl with basal flange and punctuation.

Shallow bowls (RB-41)

Flanged shoulder bowls (RB-89; Fig. 13.53c)

Outslanting wall bowls (RB-17)

Hemispherical bowls (RB-7)

Other forms

Flanged shoulder bowls (RB-116)

Outslanting wall bowls (RB-65)

Hemispherical bowls (RB-93)

Direct rim composite silhouette bowls (RB-31)*

Globular bowls (RB-60)*

Angular flaring wall bowls (RB-102)* (parallel to Amayuca Ruddy)

Globular bowls (RB-78)*

High shoulders (Base M)

Composite silhouette bowls (RB-45) (parallel to Peralta Orange)

Beveled rim bowls (RB-37)

Tecomates (RB-1)

Outslanting, slightly everted rim bowls (RB-20, 22)

Small shallow bowls (RB-67)

Heavy shallow bowls (RB-115)

Double bowls (RB-137)

Highly outcurved bowls (RB-76)

Slightly everted rim bowls (RB-77)

Plate forms with roughened exterior (RD-2)

Ovate bowls (RB-16; Fig. 13.55)

Plastic Decoration: Rim incising is often similar to that found on Amatzinac White (Figs. 13.27, 13.56). As Carrales Coarse Grey increased in quantity during the Cantera phase, its forms and decorations increased in variety. The Early Cantera subphase specimens had little elaborate decoration, but during the Late Cantera this type possessed a wide range of decorative styles. Punctations along

the exterior basal ridge of the RB-89 bowls (DC-23; Fig. 13.53c) were typical of the Late Cantera, as was ridging or modeling of the exterior vessel walls (DC-24). Occurring only during this time were body lugs applied to the pinched-in section of ovate bowls (RB-16) (DC-25; Fig. 13.55) and decorative bands of incised stairsteps, slashes, X's, and V's (DC-26–29; Figs. 13.52a, c, d, 13.53a–b).

Comparisons: Grey pottery was almost as widespread as white-slipped pottery during the Middle Formative period. It is yet another pottery style which is indicative of long distance information networks. Grey pottery is classified in a different way by each researcher. It is called black by some and brown by others. Therefore, to get a coherent idea of grey pottery from the literature is extremely difficult unless criteria other than color are used. In this discussion, Munsell color (when available), paste description, and, most important, forms were used as the criteria for identification of grey pottery.

Carrales Coarse Grey shows similarities to some examples of Café Negruzco defined by Piña Chan at Chalcatzingo (1955: Figs. 2j–l, 3a–b). From Zacatenco a black ware vessel with a ridged-rippled wall is designated in the Early Period (Vaillant 1931: Pl. 1b) and is very similar to Figure 13.53a. Boas (1911–1912: Pls. 37, nos. 3, 15; 39, nos. 1, 2; 40, no. 12) reported pottery from Zacatenco with design elements very similar to those of Carrales Coarse Grey, but no temporal placement for these is known.

Río Salado Gray of the Early Santa María phase and Quachilco Brown and

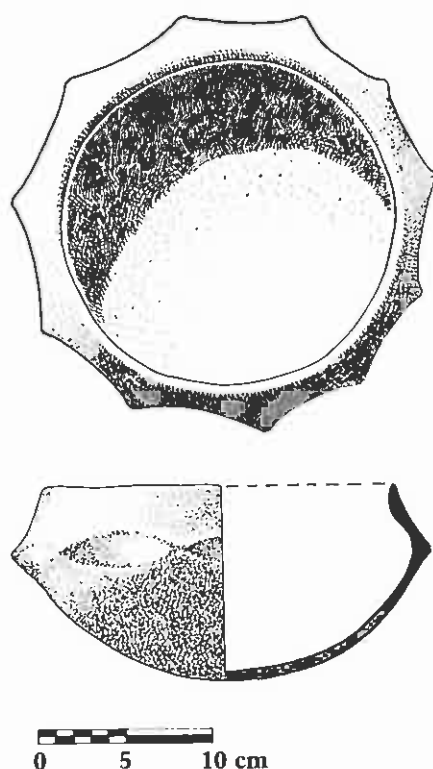


Figure 13.54. Carrales Coarse Grey, Late Cantera subphase bowl.

Quachilco Gray of the Late Santa Maria phase of the Tehuacan Valley (MacNeish, Peterson, and Flannery 1970:117–133) have basal break ridges or flanges, cross-hatch incising, stairstep incising, and basal break punctates that make them similar to Carrales Coarse Grey.

Coarse and fine-paste grey ceramics are found in relative abundance in the Gulf Coast heartland Olmec sites of San Lorenzo, La Venta, and Tres Zapotes. Carrales Coarse Grey is similar in form and decoration to the Palangana phase grey ceramics and to Ixpuchuapa Black Incised of the Remplás phase at San Lorenzo (Coe, personal communication). At Tres Zapotes, Grey Wares were reported from the Middle Tres Zapotes A phase (Weiant 1943:17). An exotic form similar to Chalcatzingo's RB-87 form with basal break punctates was published under "*incensario* wares" from Tres Zapotes (P. Drucker 1943a: Fig. 41f). The collections viewed in the Smithsonian possessed an abundance of coarse grey pottery, often with the basal break ridge, or flange, and zoned incising (slashes, stairsteps). Ceramics known as Coarse Black at La Venta (P. Drucker

1952:90–92) and as Black Ware at Tres Zapotes (P. Drucker 1943a:59–64) may also relate to our grey ware classification.

Several pottery types from Monte Albán, Oaxaca, may be similar to Carrales Coarse Grey and to Pavón Fine Grey. Type G.12 has flaring and outcurving wall bowls with single, double, and triple lines on the rim and slashes and undulating lines. Types G.15 and G.16 of Monte Albán I also exhibit these forms and designs, plus zoned slashes, wavy lines, and cross-hatching (Caso, Bernal, and Acosta 1967).

Culebra Gray of the Jocotal phase of Izapa is typified by plain flaring wall bowls (S. Ekholm 1969:63–65). There are forms similar to Carrales Coarse Grey from Altamira, Chiapas, but in pottery other than grey wares. The Red-on-Orange of the Late Crucero phase has forms like RB-91 and RB-116 (Green and Lowe 1967:120–121, Fig. 92). In Santa Cruz, the same situation exists. Chiapilla Matte Red of the Chiapilla phase has RB-116, RB-91, and RB-87 (Sanders 1961). Flanges, rippled vessel walls, and designs are similar. From La Victoria, Guatemala, Conchas Streaky Brown-

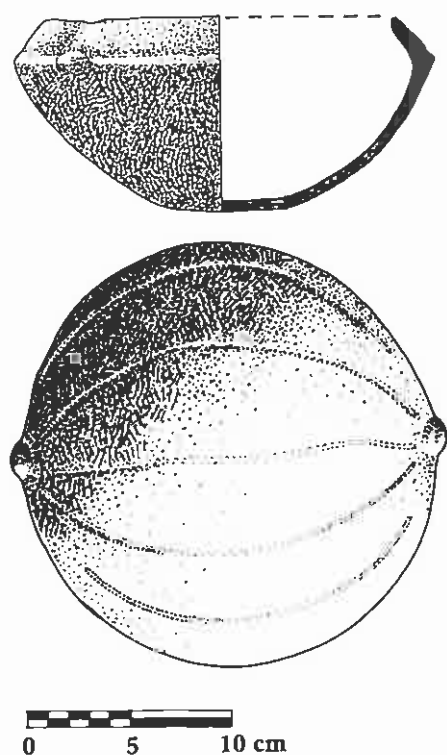


Figure 13.55. Carrales Coarse Grey, Late Cantera subphase bowl with exterior incising and body lugs.

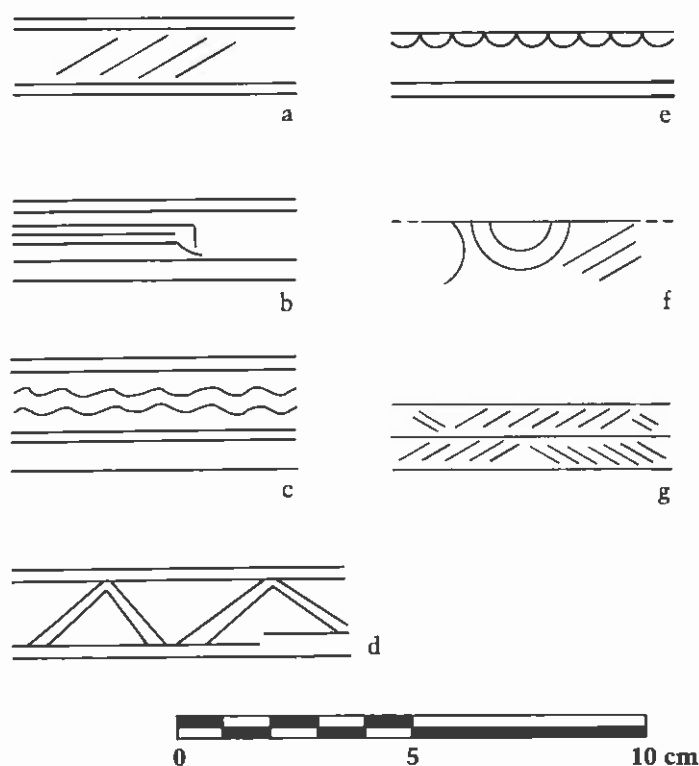


Figure 13.56. Carrales Coarse Grey incised interior rim designs.

Black of the Conchas phase has forms and designs similar to Carrales Coarse Grey such as the composite silhouette bowls with zoned slashes (Coe 1961: Figs. 35, 36). Conchas Orange of the Cru-cero phase exhibits forms similar to RB-74 (Coe 1961: Fig. 36n). Polished Brown from Mirador, Chiapas, has the RB-88 form and the zoned stairstep designs, although the surface color and paste descriptions do not concur with those of Carrales Coarse Grey (Peterson 1963: 12–13).

Bowls with punctated basal ridges or flanges (RB-89) are present at Uaxactun, but the ceramics have red, orange, or black surface finishes (R. Smith 1955: Fig. 77b, nos. 1–3).

Xochitengo Polychromes

Temporal Range: Xochitengo Polychromes were restricted to the Cantera phase.

Surface Treatment: Designs are painted in red, orange, brown, and black slips over a white base slip. Interior and exterior rims are generally painted with a band of red. The remainder of the painting commonly occurs on the exterior of the vessel near the lip (Figs. 13.57–13.59). The Munsell color for the surface slips are as follows:

Red	10 R 3–4/6, 3/4, 4/8
Orange	2.5 YR 3/2, 5–6/8; 5 YR 5/8
Brown-black	5 YR 3/2, 2.5/2
White	10 YR 8/2

Xochitengo Polychromes are frequently highly polished.

Paste and Temper: The paste and temper are identical to those of Amatzinac White. Paste color range is 7.5 YR 6/4, 5–7/4–6, 3–5/0; 10 YR 6–7/3–4.

The volume of aplastics is approximately 16 percent. Plagioclase (An 22, 30) is the most abundant mineral, composing 5–10 percent of the total paste volume. Grain size range is 180–280 microns. Orthopyroxenes, not more than 3 percent of the total volume, have a grain size range of 100–700 microns. Occasionally the grains are twinned. Hornblende is observed as not more than 1 percent of the volume, and the grains measure 120–400 microns. Clinopyroxenes, not invariably present, constitute less than 1 percent of the volume. Grain size is 420–440 microns. Basaltic andesite, opaque iron-titanium ores, and leucoxene are present. The mineral inclusions show similarities to mineral

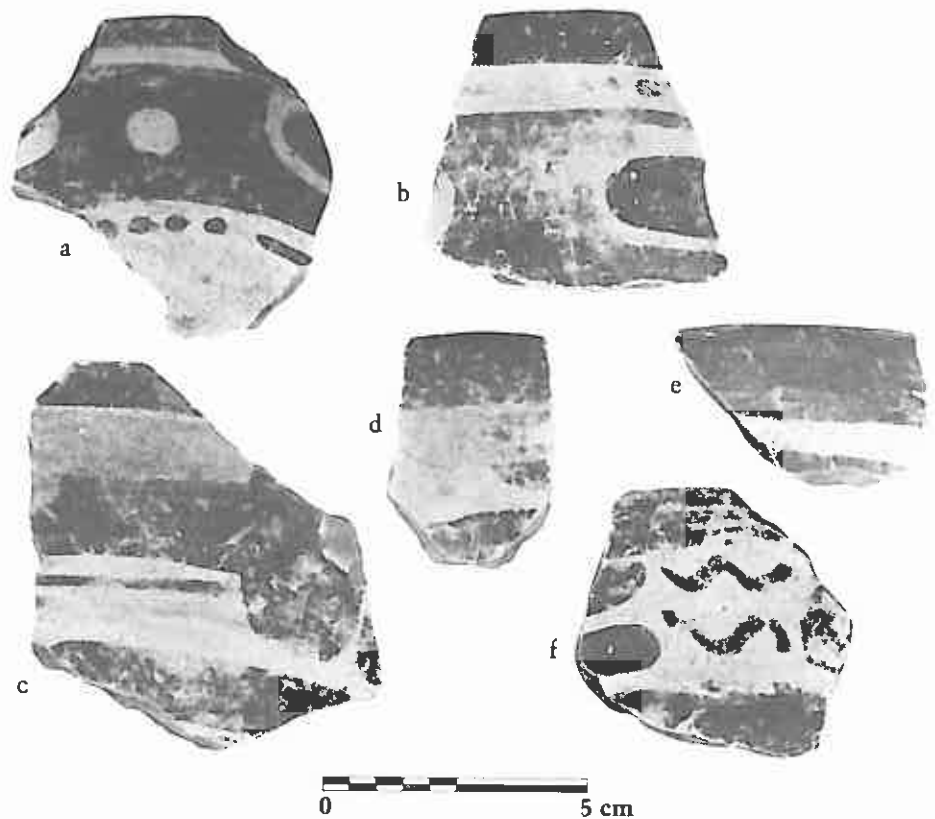


Figure 13.57. Xochitengo Polychrome, Early and Late Cantera subphase hemispherical bowl exteriors.

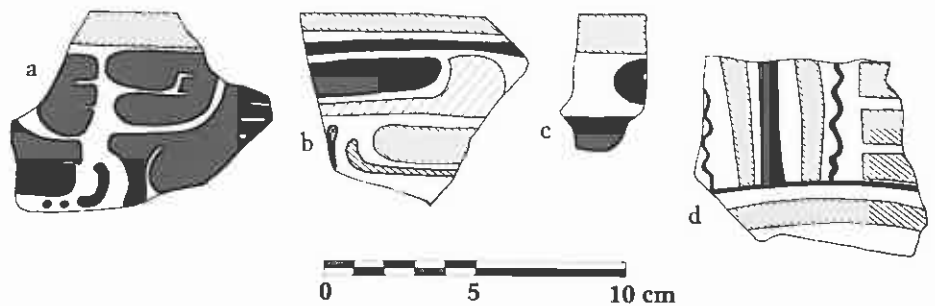


Figure 13.58. Xochitengo Polychrome, Early and Late Cantera subphase bowls.

fragments found in the volcanic tuff of the area.

Forms (Figs. 13.57–13.59):

Cantera phase

Common forms

Hemispherical bowls (RB-7)

Shallow bowls (RB-41)

Other forms

Tecomates (RB-1)

Ovate bowls (RB-16)

Outslanting wall bowls (RB-17, 18, 19)

Flaring wall bowls (RB-26)

Slightly everted rim bowls (RB-77)

Outcurving wall bowls (RB-23, 25)

Incurved rim bowls (RB-3)

Plastic Decoration: None.

Comparisons: The Las Juntas Polychromes from Cerro Chacaltepec in south-central Morelos (Grove 1968b: 74–76, Fig. 62) are identical to the Chalcatzingo polychromes. Bichromes and trichromes are known from the Valley of Mexico, and these provide the closest regional similarities. Red-and-orange-on-white sherds were found in a Totolica level from Atoto (Paul Tolstoy, personal communication to Grove), and red-on-white wares (which we have included within this type) in the Early, Middle, and Late periods at Zacatenco (Vaillant 1930: 83, 89, 96).

On the basis of our current data, Xochitengo Polychrome appears to be a type restricted to Morelos, with a possible center of importance in the Chalcatzingo area. Polychrome ceramics have also been reported from Chalchuapa, El Salvador, where Perulapan Polychrome occurs in minor quantities in the Colos Ceramic complex (900–650 ac) (Sharer 1978: 19, 115; Fig. 9h4–1). However, the similarity to Xochitengo Polychrome lies only in the use of several colored slips. Forms and painted designs are distinct in each case.

Amayuca Ruddy

Temporal Range: Amayuca Ruddy began at the end of the Early Cantera and is a phase marker for the Late Cantera subphase.

Surface Treatment: The surfaces may be slipped with the same clay as the paste. Surfaces are unevenly polished, often with the streaks of the polishing tool evident. Surface color range is 10 R 3/4, 3/6; 5 YR 2.5/1, 4/4, 2.5–3/2–3; 2.5 YR 5/8, 4/6–8, 3–4/4–6, 5/6; 7.5 YR 8/4.

Paste and Temper: The paste is very hard, and the fracture is sharp. The paste color range is 2.5 YR 4–5/6, 6/8, 3/2,

3–4/4–8, 5/6–8; 7.5 R 4/2; 5 YR 4/4, 3/2.

The total volume of aplastics is 9 percent. Plagioclase (An 28) comprises 5 percent of the volume as the principal mineral and ranges in grain size from 180 to 660 microns. Orthopyroxenes constitute 2 percent of the volume and the grain size range is 280–460 microns. Horneblende, less than 1 percent of the volume, ranges from 500 to 540 microns. Grains of clinopyroxene, also less than 1 percent of the volume, measure 260 microns. Basaltic andesite, sandstone, iron stains, and leucoxene are present. The mineral inclusions show similarities to mineral fragments found in the volcanic tuff of the area.

Forms (Fig. 13.60):

Cantera phase

Diagnostic phase markers/common forms

Angular flaring wall bowls (RB-102)

Sharply outflaring ollas (RO-32)

Other forms

Incurved rim bowls (RB-3)

Hemispherical bowls (RB-7)

Cylindrical bowls (RB-14)

Outslanting, slightly everted rim bowls (RB-21)

Outcurving wall bowls (RB-23, 25)

Highly outcurved bowls (RB-76, 90)

Plastic Decoration: Simple incising is occasionally present.

Comparisons: None.

Mingo Fine Brown

Temporal Range: Mingo Fine Brown may have begun in the Early Cantera and was typical of the Late Cantera subphase.

Surface Treatment: The rich, dark brown, slipped surface of this pottery is very highly polished. Surface color range is 10 YR 3/1–2; 5 YR 2.5–3/1–4; 7.5 YR 3/2, 4/2–4, 3/0.

Paste and Temper: The paste is very hard and fine particled, with a sharp fracture. Wall thickness is diagnostic, ranging from 0.3 to 0.6 cm. The color range of the paste is 5 YR 4/2, 5–6/4, 3–4/2; 10 YR 3/1; 7.5 YR 5/4, 3–4/2.

Plagioclase (An 30) is the most abundant mineral, constituting 5 percent of the volume, and grains measure 80–400 microns. Horneblende constitutes less than 1 percent of the volume, and grain size is 120–240 microns. Orthopyroxenes also comprise less than 1 percent of the volume, and the range of grain size is 100–200 microns. Dacite and leucoxene are present. The mineral inclusions show similarities to mineral fragments found

in the volcanic tuff of the area.

Forms (Fig. 13.61):

Cantera phase

Ovate bowls (RB-16)

Highly outcurved bowls (RB-76, * 130)

Incurved rim bowls (RB-3)

Everted rim bowls (RB-35)

Rounded bases

Other forms

Tecomates (RB-1)

Hemispherical bowls (RB-7)

Cylindrical bowls (RB-14)

Outslanting wall bowls (RB-17, 18)

Outslanting, slightly everted rim bowls (RB-21, 22)

Outcurving wall bowls (RB-23)

Flaring wall bowls (RB-26)

Everted rim bowls (RB-30)

Shallow bowls (RB-41)

Globular bowls (RB-79)

Collared ollas (RO-1)

Beveled rim ollas (RO-8)

Short-necked ollas (RO-29)

Flaring neck ollas (RO-34)

High shoulders (Base M)

Plastic Decoration: Fine-line incising is occasionally present (Fig. 13.61o).

Comparisons: None.

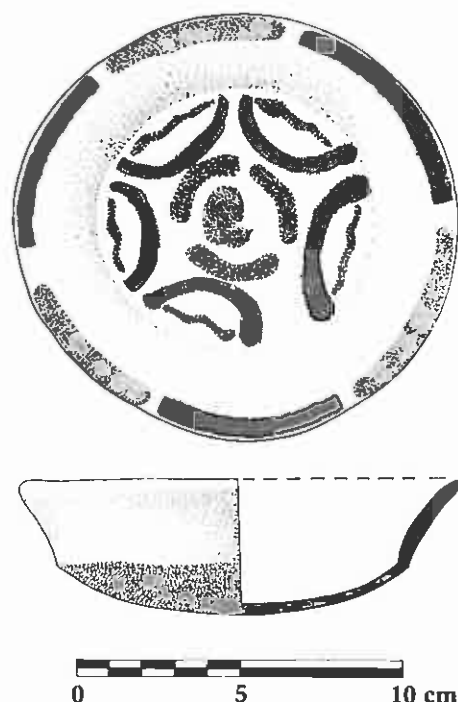


Figure 13.59. Xochitengo Polychrome, Early and Late Cantera subphase bowl.

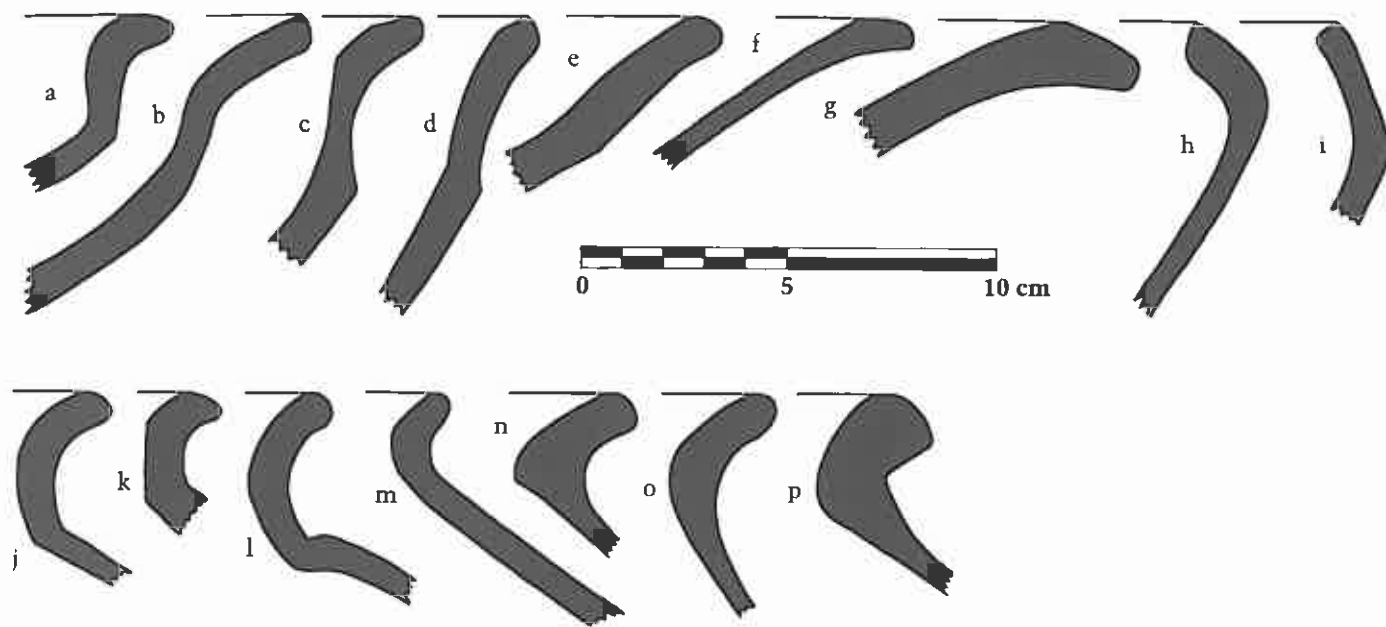


Figure 13.60. Amayuca Ruddy, Late Cantera subphase: *a-i*, bowls; *j-p*, ollas.

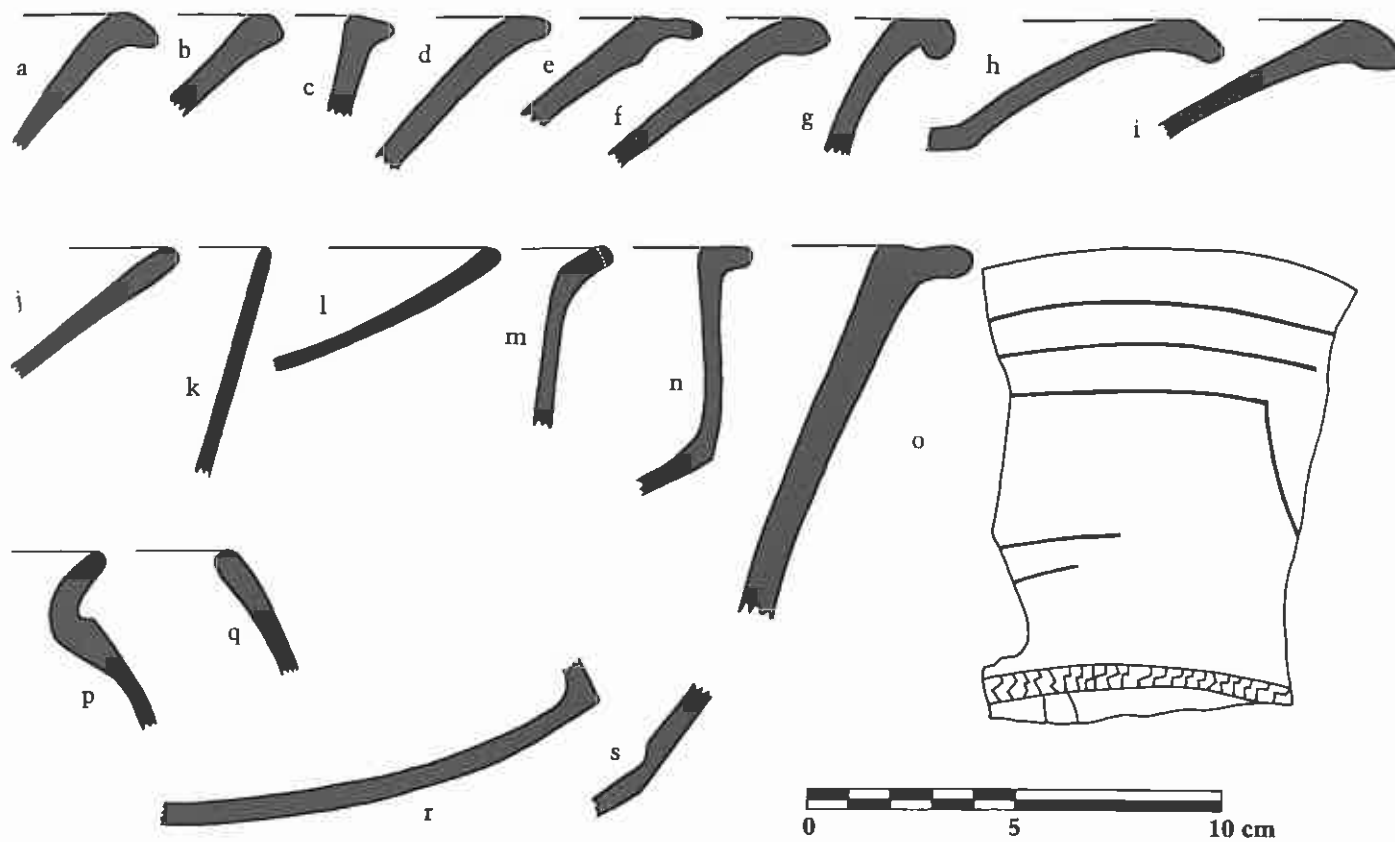


Figure 13.61. Mingo Fine Brown, Late Cantera subphase bowls.

Santa Clara Orange

Temporal Range: Santa Clara Orange was restricted to the Late Cantera sub-phase.

Surface Treatment: A thin, well-polished slip is the trademark of Santa Clara Orange. The color is diagnostic: 2.5 YR 5/8; 7.5 YR 5–6/4. Vessels were often slipped and polished only on the interior, leaving the exterior unslipped and smoothed.

Paste and Temper: The paste has few or no inclusions and is very fine particled, with a sharp fracture. Wall thickness averages 4.5 mm. Paste color is invariable: 7.5 YR 7/6; 5 YR 5–6/6.

Aplastics constitute 13 percent of the paste volume. The most frequently occurring mineral is plagioclase (An 28), comprising 8 percent of the volume. Grain size ranges widely from 80 microns to 1.0 mm. Orthopyroxenes, occasionally twinned, constitute 3 percent of the volume and range in grain size from 120 to 400 microns. Horneblende and clinopyroxene are present in fairly equal proportions, but make up less than 1 percent of the volume. Horneblende ranges in grain size from 220 to 540 microns; clinopyroxene ranges from 220 to 500 microns. Basaltic andesite, iron stains, and some leucoxene are present. The mineral inclusions show similarities to mineral fragments found in the volcanic tuff of the area.

Forms (Fig. 13.62):

Late Cantera subphase

Incurved rim bowls (RB-3)

Ovate bowls (RB-16)

Outcurving wall bowls (RB-23)

Plastic Decoration: None.

Comparisons: None.

Atotonilco Black

Temporal Range: Atotonilco Black spans all the phases, from the Early Amate subphase through the Late Cantera. This classificatory unit, Atotonilco Black, might actually represent a catch-all category for errors in firing.

Surface Treatment: The surfaces are highly polished and lustrous. Because the paste color is also black, it is difficult to discern if this pottery is slipped or not. Surface color range is 5 YR 2.5/1; 7.5 YR 2.5/0.

Paste and Temper: The core section shows complete reduction. The paste has a soft, crumbly fracture. Paste color is 5 YR 2.5/1; 7.5 YR 2.5/0.

Forms (Figs. 13.63, 13.64):

Hemispherical bowls (RB-7)

Cylindrical bowls (RB-14)

Outslanting wall bowls (RB-17, 18, 19)

Everted rim bowls (RB-30)

Shallow bowls (RB-41)

Plastic Decoration: Modeling of rims, incised lines along rims, and pseudo-grater incising are occasional decorative techniques (Fig. 13.64).

Comparisons: Black pottery styles seem to have strong local variations. Our data do not indicate that there was a significant black ware tradition at Chalcatzingo as there seems to have been in the Valley of Mexico. Tlatilco, for example, has scores of black vessels (Piña Chan 1958:74, Fig. 35), and many were reported from Zacatenco and El Arbolillo also (Vaillant 1930:80–87; 1935:223–227).

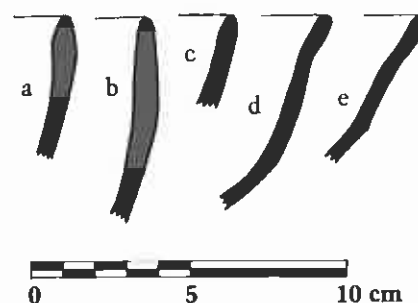


Figure 13.62. Santa Clara Orange, Late Cantera subphase bowls.

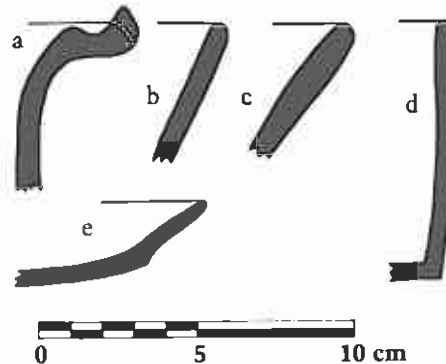


Figure 13.63. Atotonilco Black bowls.

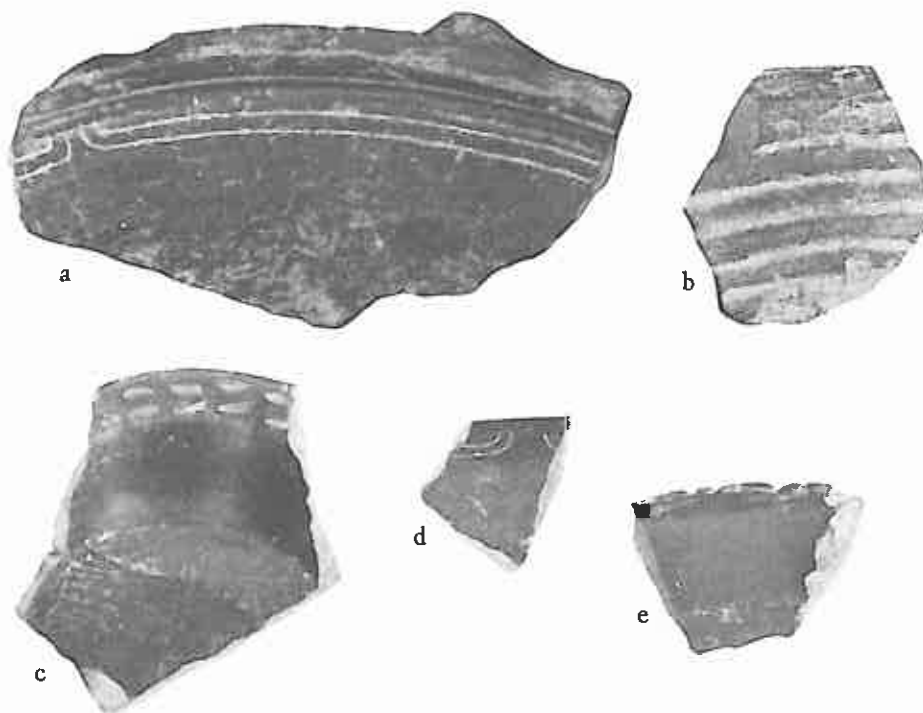


Figure 13.64. Atotonilco Black bowl interiors.

Brown-Slipped, Streaky

Temporal Range: Our sample is too small to determine the temporal range of Brown-Slipped, Streaky.

Surface Treatment: The surfaces are well polished, but the surface slip is very streaky. Surface Munsell color is 7.5 YR 4/4, 5-6/4-6; 5 YR 5/3; 10 YR 6/4. Zoned toning may have been used.

Paste and Temper: The temper is a fine sand, and the fracture is crumbly and jagged. Paste color is 5 YR 5-6/6. Vessel wall thickness is always less than 1 cm.

Plagioclase (An 31) is the most frequently occurring mineral, comprises 5 percent of the paste volume, and has a grain size range of 80-420 microns. Orthopyroxene constitutes 1 percent of the volume, with grains measuring 140-240 microns. Less than 1 percent of the volume is hornblende, measuring 200-260 microns. Andesite and leucoxene are present. The mineral inclusions show similarities to mineral fragments found in the volcanic tuff of the area.

Forms: Highly outcurved bowls (RB-76) and ollas are the only known forms.

Plastic Decoration: None.

Comparisons: None.

White-on-Red

Temporal Range: Our sample is too small to determine the temporal range of White-on-Red.

Surface Treatment: The surface is red-slipped, 10 R 3/6, and has unknown designs painted in white over the red base slip. The surface is evenly polished.

Paste and Temper: The paste is dark grey with a crumbly fracture. Sand temper is abundant.

Plagioclase (An 28) is the predominant mineral, comprising 6 percent of the volume. Grain size ranges from 120 to 480 microns. Orthopyroxenes constitute less than 1 percent of the volume, and the grains range in size from 80 to 180 microns. Hornblende also occurs in frequencies of less than 1 percent of the total paste volume. Its grain size range is 200-300 microns. One grain of poikilitic plagioclase was noted, in addition to a few grains of clinopyroxene. Andesite and leucoxene are present. The mineral inclusions show similarities to mineral inclusions found in the volcanic tuff of the area.

Forms: Olla body sherds were the only examples of this type.

Plastic Decoration: None.

Comparison: White-on-Red ceramics occur at Zacatenco (Vaillant 1930:Pl.

Ilg-o), El Arbolillo (Vaillant 1935:231), and the Middle Formative Atoto area near Tlatilco (Piña Chan 1958:Figs. 28, 29), and are placed within the Early La Pastora phase of the Valley of Mexico by Tolstoy (1979:Fig. 1). Chalcatzingo's White-on-Red ceramics may be compared with the Valley of Mexico types only on the basis of color since the designs and forms are unknown.

Yellow Paste Wares

Temporal Range: The sample is too small to determine the temporal range of Yellow Paste Wares.

Surface Treatment: The surfaces are sometimes slipped in red but are usually brown. The color range is 10 YR 4/6. Surfaces are not well polished.

Paste and Temper: The paste distinguishes these wares from the normal Chalcatzingo pottery. It is a distinctive yellow color: 7.5 YR 7/6. The paste is compact, with fine sand temper, and has a hard, even fracture. This is a minor type, and no thin-section analysis was performed.

Forms: Globular bowls (RB-60) and other indeterminable bowl forms occur.

Plastic Decoration: None.

Comparisons: None.

"Cement" Ware

Temporal Range: The sample is too small to determine the temporal range.

Surface Treatment: The surfaces are poorly polished and are mottled due to fire clouding. The color range is 7.5 YR 6/6; 5 YR 5/6, 4/1.

Paste and Temper: The clay of the paste is fine particled and well fired but contains large, coarse temper grains, which give it the texture of cement. Paste color range is the same as the surface color range. This is a minor type, and no thin-section analysis was performed.

Forms: Forms were indeterminable.

Plastic Decoration: None.

Comparisons: The coarseness of the temper is unlike that of other Chalcatzingo pottery types.

Grey-Slipped, Red Paste

Temporal Range: The sample is too small to determine temporal range.

Surface Treatment: The surfaces are only slightly polished. The grey slip tends to be mottled. Color is 2.5 YR 4-6/0.

Paste and Temper: The paste is a bright red, 2.5 YR 5/8. The temper is abundant, causing a crumbly texture. Petrographic analysis was not conducted.

Forms: Olla and bowl body sherds make up the sample, and precise forms were not determined.

Plastic Decoration: Pseudo-grater incising is present.

Comparisons: None.

BRAZIERS

Four types of braziers are known from Chalcatzingo. All are Formative period in date and are made of the sandy, crumbly paste typical of local ceramic types at the site. Because the majority of brazier sherds in our sample have eroded surfaces, we have been unable to classify most of them within our general ceramic typology, and therefore they are discussed separately by form.

Type I

The first type consists of small, crude, unslipped and unpolished braziers or incense burners with spider-leg supports and small conical nubs on the flat upper surface (Fig. 13.65). Although they definitely date to the Formative period, their exact phase placement cannot be determined because our sample comes from fill or mixed contexts. The spider-leg supports (S-7) suggest they may be Amate phase. Reduced (fire-clouded) areas around the conical nubs suggest that coals or incense were held on the upper surface. (This form is not illustrated in the Appendix D form chart.)

Type II

The heavy, squat hourglass-shaped Type II braziers (RB-100) began in the Middle Barranca subphase and continued through the Late Cantera. They occur with Peralta Orange surface finish and paste and also in an unidentifiable eroded condition. Their form and their blackened interior bases suggest they function as braziers.

Type III

The three-handled braziers (RB-99) composing the third type are only infrequently represented in the Late Barranca and Early Cantera subphase assemblages, but were typical of the Late Cantera subphase. Three openings in the basal wall are common, as are tiny appliqué lugs on the handles (Fig. 13.66). Uneroded identifiable sherds of this brazier type are Tadeo Coarse in paste and finish.

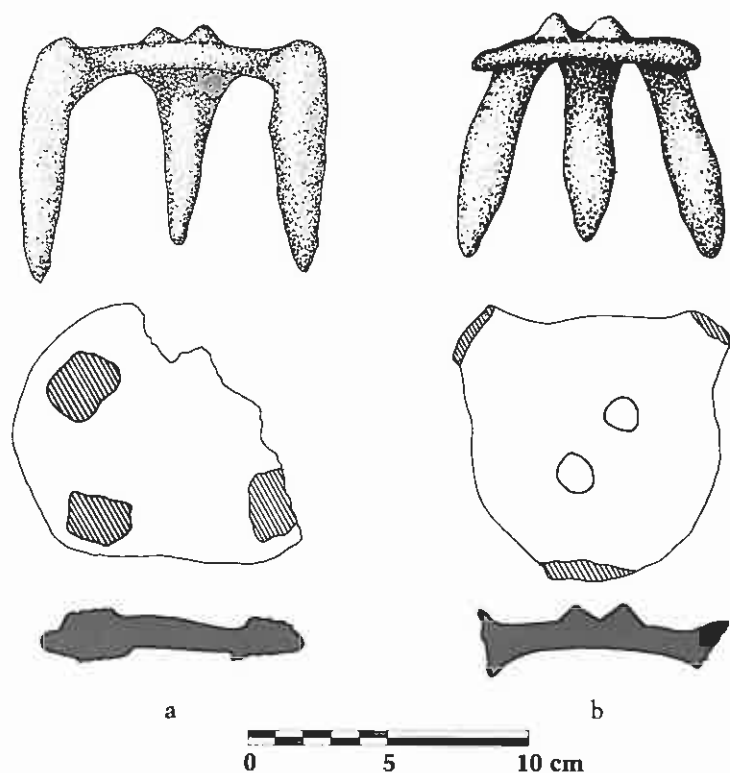


Figure 13.65. Brazier I, possibly Amate phase.

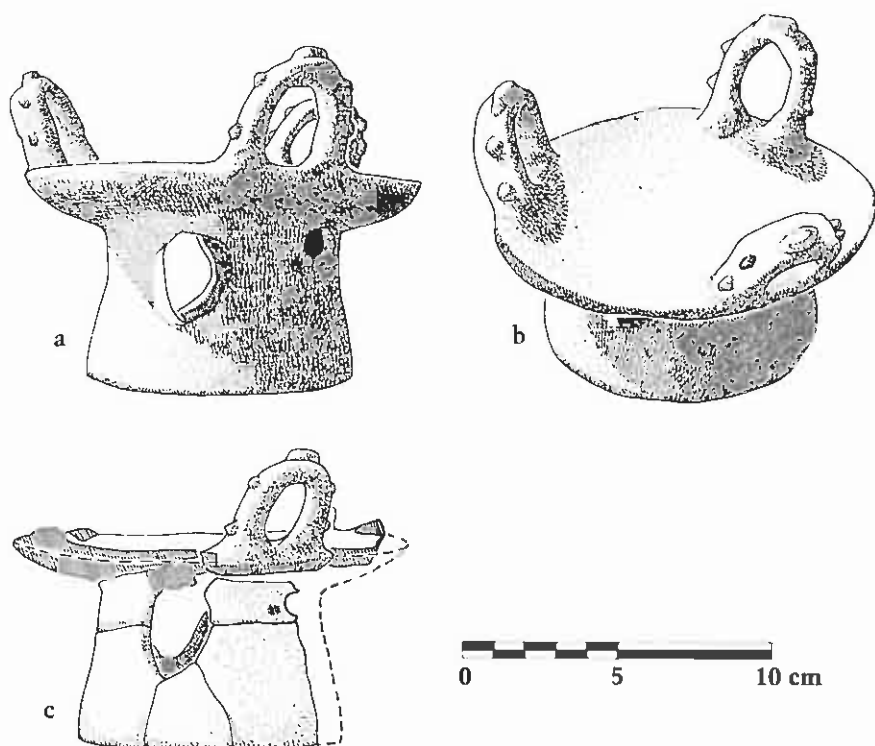


Figure 13.66. Brazier III, Late Cantera subphase.

Type IV

The largest number of brazier fragments recovered at Chalcatzingo belong to three-prong braziers with thick walls. These occurred in greatest frequency during the Late Cantera subphase. An important feature of this type is that the prongs are zoomorphic. No complete braziers were recovered, and the sherds allow two possible reconstructions of the original form—heavy basins or hourglass-shaped. Either form would have had the zoomorphic prongs jutting upward and inward from the rim (Fig. 13.67).

Brazier size varied from about 12 to 53 cm in diameter, although most ranged from 24 to 28 cm. Vessel walls on all brazier sizes were 1–2 cm in thickness, and thickness is unrelated to diameter. While most of the sherds have eroded surfaces, a few have traces of brown or orange slip.

The majority of the zoomorphic prongs are rounded and elongated (Figs. 13.67, 13.68a–c). They show no close resemblance to any specific animals. Other prongs can be identified as canines and peccaries (Fig. 13.68d–f). These prongs vary in length from 4 to 13 cm, and in diameter from 2.5 to 9 cm. The majority of the prongs are hollow, but a few smaller examples are solid. The upper surface of the prongs is normally smudged or blackened, indicating that a cover or vessel rested upon them at times when the brazier was heated.

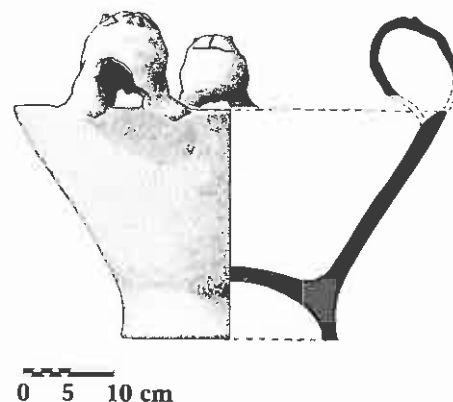


Figure 13.67. Three-pronged brazier reconstruction, Late Cantera subphase.

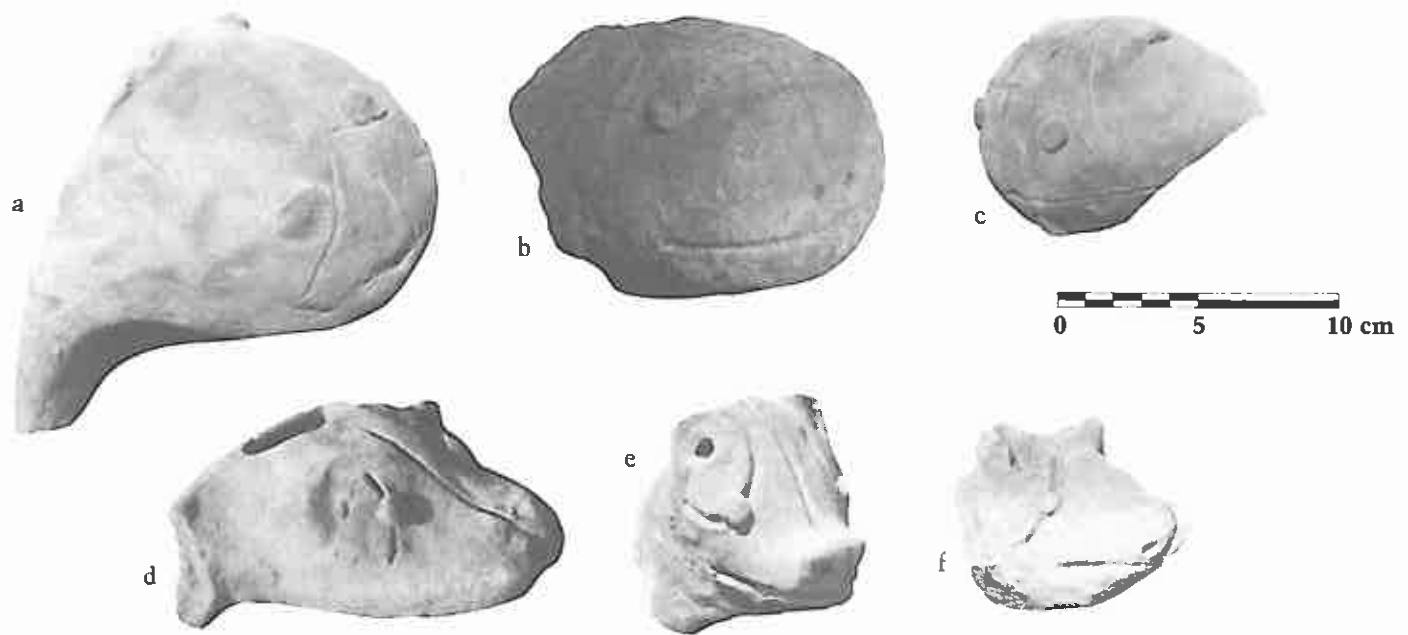


Figure 13.68. Zoomorphic brazier prongs, Late Cantera subphase: *a–c*, “super-natural” heads; *d–f*, dog and peccary heads. Scale is approximate.

Comparisons

Brazier Type I has no counterpart in sites published to date. An Early Formative Chicharras phase brazier from San Lorenzo (Coe 1970:25) shows similarities to Dili-Escalera phase braziers from Chiapas (Lowe 1962:98, Pl. 18*c, g*), but the only similarities of these braziers with Chalcatzingo’s Type I are in the small interior lugs.

Brazier Type II has many more counterparts. Pot rests or *incensarios* are reported from Chiapa de Corzo (Dixon 1959:31, Figs. 37*a–b*, 43*a–b*). Canoas Heavy Plain and Canoas Orange-Brown of the Early Santa María phase of the Tehuacan Valley include an annular base form (MacNeish, Peterson, and Flannery 1970:73, Fig. 40). Similar forms are reported but not illustrated from Oaxaca by Flannery (1968:91) and Drennan (1976:73, Fig. 17). This form occurs at La Victoria on Conchas Red-on-Buff (Coe 1961: Fig. 33). Deep, heavy annular bases are present among the La Venta sherds observed at the Smithsonian Institution.

The only form found similar to Brazier Type III is a fragment from Tres Zapotes (P. Drucker 1943a: Fig. 42*f*) which is identified as a “*comal* with a strap handle.”

The three-prong brazier, Type IV, was a

popular and widespread form during the Cantera phase. A fragment of one of these is present in the La Venta collection, and many occur in the Tres Zapotes collection at the Smithsonian. These latter were published as “effigy handles” of the Middle Tres Zapotes A phase by Weiant (1943: Pl. 54, nos. 1–9), and by Philip Drucker (1943a: 74, Fig. 43*c–d*) as Upper phase “Unslipped Ollas.” At Izapa they are found in the Dili phase (Chiapa II; Lowe 1965: Fig. 2*b*).

Animal head brazier prongs are known from Middle Formative Oaxaca (Marcus Winter, personal communication; Kent V. Flannery, personal communication). A probable prong attachment from Fábrica San José is illustrated and called an “effigy grip” (Drennan 1976:30–31), but no temporal position is defined. At Mirador, Chiapas, attached burner horns with perforations from the exterior into the horn are present (Peterson 1963:68, Fig. 101, no. 2).

Three-prong braziers are known from Las Charcas phase at Kaminaljuyú (Rands and Smith 1965: Fig. 6; M. Weaver 1972: Fig. 5*gg*). It is important to note that three-prong braziers are depicted on stelae from Izapa and Kaminaljuyú: Kaminaljuyú Stela 11 (Norman 1976: 289, Fig. 6.2) and Izapa Stelae 5, 12, 24,

and possibly Stela 18 (Norman 1973: Pls. 9, 10, 23, 24, 27, 28).

GULF COAST CERAMICS

Our excavations and analyses have disclosed several important similarities between the Chalcatzingo and Gulf Coast sites. In order to better understand the affinities among the ceramics of the Gulf Coast, and between the Gulf Coast and Chalcatzingo, I examined Michael Coe’s San Lorenzo collection and the Smithsonian’s La Venta and Tres Zapotes collections to supplement the published data on Gulf Coast ceramics, most of which deal with the Early Formative (whereas Chalcatzingo attained its greatest importance during the late Middle Formative; see Appendix D).

There are a number of ceramic ties among the Gulf Coast Olmec sites, and many of them occur at Chalcatzingo as well. These linking traits are not iconographic, but are far more subtle and relate to vessel forms and types.

Early Formative Ceramics

The Early Formative (pre-Nacaste phase) ceramics of San Lorenzo (Coe 1970:21–28) show several similarities to La Venta and Tres Zapotes sherds in

the Smithsonian collections. San Lorenzo's Aguatepec Thick everted rim bowl form (similar to Chalcatzingo's RB-38) of the San Lorenzo phase is comparable to a form known in La Venta's Coarse Brown Ware (e.g., P. Drucker 1952:92–96) and Chalcatzingo's Manantial Orange-on-White. Similar forms in White-Rimmed Black are found at San Lorenzo, La Venta, and Barranca phase Chalcatzingo. San Lorenzo's white-slipped bowls with pseudo-grater incised interiors have counterparts at La Venta and Tres Zapotes, where this decorative technique occurs on other types of ceramics as well (Ortiz Ceballos 1975: Fig. 36).

The characteristic markers of the San Lorenzo A and B phases, Calzadas Carved and Limón Carved Incised (Coe 1970:26–27) are not present in the Smithsonian collections for La Venta and Tres Zapotes. However, in Ponciano Ortiz Ceballos' study (1975) of *Pozo 3* from Squier's Tres Zapotes excavations, levels 14–11 do contain examples of these types. Although they are dated by Ortiz Ceballos to 800–300 BC, levels 14–11 (Tres Zapotes A and B phases in his chronology; 900–300 BC) should be considered contemporaneous with the San Lorenzo phase at San Lorenzo. Re-examination of his data could push the dating of these phases back to ca. 1100 BC. Tres Zapotes, therefore, contains a San Lorenzo phase occupation, though of unknown size and extent.

Middle and Late Formative Ceramics

In general, fine- and coarse-paste grey-black ceramics are excellent temporal markers for the Middle and Late Formative. Bowls with exterior "ridging" (RB-134), outcurving wall bowls (RB-23, 25, 90), hemispherical bowls (RB-7), and other bowls (RB-31, 71, 78, 79, 80, 85, 87, 89, 91, 116) are common forms throughout much of non-Maya Mesoamerica. At San Lorenzo, a fine-paste grey-black ware is present in the Middle Formative Palangana phase, and Ixpachuapa Black Incised is typical of the Remplás phase, which Coe (1970:30–31) dates as Late Formative. Slight basal ridges on composite silhouette bowls are present at both San Lorenzo and Tres Zapotes but are absent in the sample from La Venta. Punctations infrequently occur on the basal ridge. Decorative motifs of zoned slashes, zoned cross-hatching, and zoned stairsteps are common at La Venta, Tres Zapotes, and during the Palangana and Remplás phases at San Lorenzo. These

various attributes can serve as broad temporal markers between these sites and help identify ties with Chalcatzingo.

Punctuation, particularly in association with orange-slipped ceramics, appears to be an important shared attribute. Ollas with "human" faces created by punctuation (discussed above) are illustrated for Tres Zapotes by Philip Drucker (1943a:Pls. 17*j*, 18*a–b*) and by Bertha Aguayo L. and Ponciano Ortiz Ceballos (1975:304, 308, lower right photo). An olla of this type was uncovered at San Lorenzo in a San Lorenzo phase context (Coe, personal communication), but none were seen in the La Venta collection, nor are they mentioned in that site's reports. A Chalcatzingo example occurs on a Peralta Orange olla (Fig. 13.69).

Also important is the correspondence between Peralta Orange ridged-neck ollas (RO-25, Figs. 13.42, 13.69) with punctations, which are characteristic of the site's Cantera phase, and ridge-necked olla sherds (many with orange slip) in the Tres Zapotes sample. Peralta Orange sherds from composite silhouette bowls (RB-45, Fig. 13.40) with punctations along the shoulder edge are present at Chalcatzingo, and similarly placed punctations are found at La Venta on Coarse Buff sherds (P. Drucker 1952: Fig. 28*d–e*, *g*) and at Tres Zapotes on orange-slipped sherds.

There are similarities in some of the more unusual forms, such as the three-pronged braziers with zoomorphic prongs. One probable brazier fragment is present in the La Venta collection. The Gulf Coast examples are occasionally zoomorphic and sometimes have plain prongs.

Drucker noted the abundance of small ollas at both La Venta and Tres Zapotes. La Venta's "small thick-wall jars" (P. Drucker 1952: 119) and the "toy ollas" from Tres Zapotes (P. Drucker 1943a: 40, Pl. 16*b*, *d–e*, *g*) appear equivalent to Chalcatzingo's *cantaritos* (C-5) which occur with some Cantera phase burials. The Smithsonian's Tres Zapotes collection includes many *cantarito*-like sherds from Trench 20. Tiny bowls or flat-based dishes with low walls were made of Tres Zapotes Brown Ware (P. Drucker 1943a: Fig. 29). Similar small vessels were found at Chalcatzingo. It is possible that at both sites they functioned as paint dishes.

Summary of Comparisons between Chalcatzingo and the Gulf Coast

Chalcatzingo's apogee during the Early and Late Cantera similarities, 700–500 BC, is clearly contemporaneous with the Palangana phase of San Lorenzo and late Middle Formative La Venta and Tres Zapotes. The similarities in ceramics, apart from those in portable art, monumental art, and other artifactual categories, can be summarized as follows:

1. Carrales Coarse Grey and Pavón Fine Grey show form, decoration, and surface color similarities to Gulf Coast pottery. Particularly notable are bowls with basal ridges, punctuation along basal ridges, zoned exterior incising in the form of zoned slashes, stairsteps, and X's, flaring wall bowls, and modeled or ridged composite silhouette bowls.

2. Peralta Orange pottery, typical of the Cantera phase, has composite silhouette bowl forms with punctuation above or on the shoulder and the ridge-necked ollas with punctuation along the ridges. The latter form is similar to the punctate face ollas of Tres Zapotes.

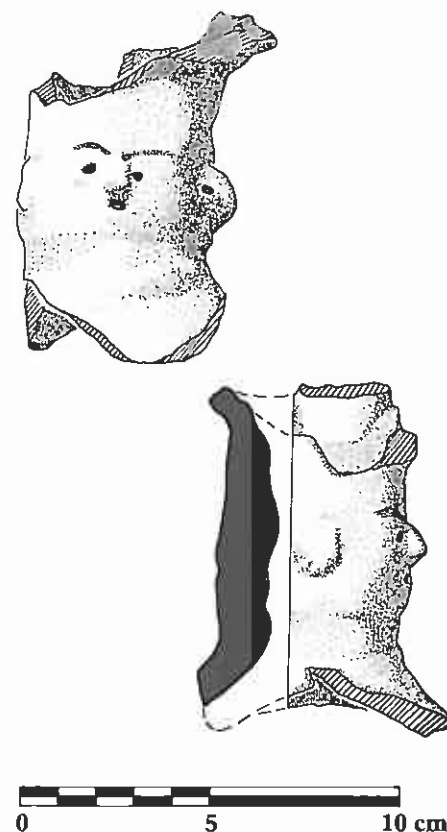


Figure 13.69. Peralta Orange olla neck with human face made by punctuation.

3. Three-prong braziers are found at Tres Zapotes and are common at Chalcatzingo, where they are restricted to the Cantera phase.

4. The small dishes and *cantaritos* of Atoyac Unslipped Polished I at Chalcatzingo are similar to the miniature bowls and ollas from the Gulf Coast sites.

5. White-slipped ceramics and white-rimmed black ceramics have a long temporal span at Chalcatzingo, as they do at most Formative sites. They represent general points of similarity among the assemblages.

GLOSSARY

BASE: the lower part or bottom of a vessel.

BASIN: a deep, wide-mouthed vessel finished on the exterior and interior; in the Chalcatzingo assemblage, it may have a composite silhouette.

BOTTLE: an olla with a globular body and a long, narrow neck (RO-35).

BOWL: a ceramic form with an unrestricted mouth and always finished on the interior.

BRAZIER: a specific function vessel form used for burning.

CANTARITO: a miniature olla or jar form made by hand-modeling or pinching technique.

DOUBLE-LOOP HANDLE CENSER: a specific function ceramic vessel, probably used for burning incense; a low dish form atop an annular or ring base with a double-loop handle (also called basket censer).

ENGRAVING: a post-firing decorative technique involving the scratching or cutting of decorative elements into the hardened surface of the vessel.

EXCISING: a pre-firing decorative technique in which a portion of the surface is cut away to achieve a design in relief.

FLUTING: a technique of modeling used to achieve shallow canals or low ridges on a vessel (Smith and Piña Chan 1962:1).

GADROONING: a technique of modeling used to achieve a lobed or pumpkin-like vessel form.

GROOVING: wide incising; here used to indicate a form of incising slightly deeper and wider than usual.

INCISING: "freehand decoration by pressing or cutting lines" into the leather-hard vessel surface; a pre-firing decorative technique (after Shepard 1963: 195–203).

LUSTER: shine.

MATTE: an unpolished surface.

MODELED: hand manipulation of the vessel while still in a wet, plastic stage (Shepard 1962:55).

OLLA: a ceramic jar form with a defined neck; the neck area is finished on the interior but the interior of the body is unfinished.

PLATE: a low, extended form with a roughened exterior.

POLISH: both a technique and a property; rubbing of a leather-hard clay surface with a tool to achieve luster or shine (often called "burnish").

RASPADA: a technique of wide, shallow incising; at Chalcatzingo, it refers to a specific, sloppy incising which barely removed the slip. It is restricted to specific design motifs.

RIDGING: the formation of elongated, raised areas on either the interior or exterior of a vessel wall without deforming the lateral contour of the vessel.

RIM: vessel mouth or lip.

SHOULDER: that part of a vessel form between the base and the neck where the curvature changes; in the case of a composite form, the shoulder is a sharp angle.

SLIP: a clay in liquid suspension used as a pre-firing paint on vessels (after Nelson 1971:338).

SMOOTHING: a surface finishing technique which leaves no luster.

"STICK" POLISHING: polishing which does not cover the entire surface and produces a streaky luster with the marks of the polishing tool evident; the polishing tool is not necessarily a stick.

TECOMATE: a globular ceramic vessel form with a restricted neckless mouth.

RESUMEN DEL CAPÍTULO 13

La tipología descriptiva para la cerámica tuvo como base más de un millón de tepalcates, con lo cual se produjeron las unidades de clasificación para el análisis de los artefactos así como para determinar que atributos de la cerámica mejor reflejaban los cambios en la secuencia temporal. Los tipos de cerámica resultantes se definen en base al tratamiento de superficie recibido y al de empastado. Se encontró que son las formas el indicador de cambio temporal más sensible. Las fases para los tipos de cerámica y las formas fueron basadas en la derivación obtenida de los tepalcates provenientes de treinta y ocho Unidades Estratigráficas Selectas (SSU). El análisis petrográfico permitió separar los tipos locales de los no locales (importados).

Los objetos utilitarios principales de la fase Amate (Formativo Temprano) son de los materiales pertenecientes a las clasificaciones Cuautla Café, Cuautla Engobe Rojo, Atoyac sin Engobe Pulido III, e Arboleda Burdo. Los tipos secundarios incluyen las diferentes decoraciones y para esta ocupación temprana son Del Prado Rosa (importado), Atotonilco Negro, Gris Esgrafiado, y Kaolin. Las cerámicas Kaolin se consideran generalmente un marcador de la cultura "Olmeca" del Formativo Temprano, pero son muy raras en Chalcatzingo. La mayor afinidad de Chalcatzingo con la cultura mexicana del Formativo se revela por las cerámicas café y rojo sobre café y las formas de botella.

Los restos utilitarios principales de las fases Barranca y Cantera (Formativo Medio) son los que presentan los terminados Tenango Café y Peralta Naranja; los de importancia secundaria presentan el Atoyac sin Engobe Pulido II y el I. El acabado que tipifica los blancos del Formativo Medio es el Amatzinac Blanco, el cual presenta una gran variedad en tratamiento de superficie, pasta, forma, y decoración plástica, incluyendo el marcador del Formativo Medio, el motivo de interrupción de doble línea. Los tipos principales de decoración incluyen el Laca, el Negro con Borde Blanco (representativo del material quemado diferencial típico del Formativo Medio de Chalcatzingo), y el policromo, Xochitengo Policromo. Los acabados grises también característicos del Formativo Medio son el Carrales

Gris Burdo y el Pavón Gris Fino, este último de importación en el Valle del Río Amatzinac. Los tipos secundarios son el Laca Imitación, el Manantial Naranja sobre Blanco, Amayuca Rijizo, Mingo Café Fino, Santa Clara Naranja, Atotonilco Negro, Baño de Café Rayado, y Blanco sobre Rojo.

Los tipos principales claramente indican el alcance de la relación interregional de tradiciones de cerámica en las que Chalcatzingo participó. Las únicas excepciones son los acabados utilitarios, los cuales tienden a ser regionalmente más restringidos que los acabados decorados, y tanto el Peralta Naranja como el Tenango Café entran en esta generalización. De hecho, el Peralta Naranja parece tener sus afines más próximos con los del sur de Mesoamérica. Dos tipos decorados que parecen estar restringidos a Morelos y no tener contrapartes en ningún otro lado son el Laca y el Xochitengo Policromo.

Una categoría cerámica importante, que no fue incluida en la tipología descriptiva, es la de los braceros, la cual generalmente careció de los restos de tratamiento de superficie que son cruciales para su tipificación. Cuatro formas de braceros pudieron distinguirse, siendo la más importante el bracero trípode con podes zoomórficos. Esta forma tiene también afinidades con el sur de Mesoamérica.

Las relaciones de Chalcatzingo con la cultura Olmeca de la costa del Golfo se expresan, no sólo mediante el hecho de compartir las tradiciones de cerámica Panmesoamericanas sino también, por la co-ocurrencia de más atributos específicos en las dos áreas. En particular los sitios de Chalcatzingo y de la costa del Golfo, ambos, se encuentran ligados por la presencia de braceros trípodes, ollas de cuello labiado con "caras" (en el Peralta Naranja de Chalcatzingo), y ciertos tipos de decoración plástica en los materiales grises. De otra manera, la mayoría de las cerámicas de Chalcatzingo parecen ser las más semejantes a las cerámicas del Formativo de Morelos y del Valle de México.