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**An Integrative Approach to the Analysis of the Late Preclassic
Ceramics at Lamanai, Belize**

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**An Integrative Approach to the Analysis of the Late Preclassic
Ceramics at Lamanai, Belize**

by

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Dedication

This dissertation is dedicated to the memory of my grandmother, Laura B. Campbell. Although she is not here to see me graduate, I know she'd be proud.

Acknowledgements

In the summer of 1988, I participated in an archaeological field school in the country of Belize, Central America. The experience had a profound affect on my life and has led me to where I am today. Getting to this point in my career has had its ups and downs, but I believe, in the end, it has been worthwhile. I have learned many things from many different people and this dissertation would not have been completed without their help, support, and encouragement.

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**An Integrative Approach to the Analysis of the Late Preclassic
Ceramics at Lamanai, Belize**

Publication No. _____

Terry George Powis, Ph.D.
The University of Texas at Austin, 2002

Supervisor: Fred Valdez, Jr.

This dissertation presents results from the analysis of the Late Preclassic ceramics at the Maya site of Lamanai, located in northern Belize, Central America. The collection analyzed dates from ca. 400 B.C. to A.D. 250 and consists of two functionally complete complexes (Lag and Zotz). Three temporal divisions are determined (the Lag Ceramic Complex and the early and late facets of the Zotz Ceramic Complex), and are identified within what is called the Chicanel Ceramic Sphere. The methodology employed on this collection of 140 whole and complete vessels is the type:variety-mode system. Although the methodology is based on the basic tenets of this taxonomic system, a new presentation format is used for the ceramic type descriptions which involve a

focus on the intra-site location (i.e., context) of each vessel or set of vessels. In this way, the contextual units maintain or preserve the groupings of vessels that had meaning to the Maya at the time of deposition.

In this study, an integrative approach is used which combines a number of different analytical techniques, including taxonomic, modal, contextual, functional, and technological. The first three techniques are used to classify and describe the pottery. Vessel function is another critical aspect of the research. Vessel forms identified at Lamanai such as bowls, dishes, plates, jars, buckets, and vases had a number of uses and they included cooking, food preparation, food serving and eating, liquid storage, liquid transport, and ritual. Using archaeological, ethnographical, and ethnoarchaeological studies, an examination was made of how different segments of Lamanai's population (elites and commoners) used their pottery in daily social and ritual activities. A technological (petrographic) analysis was also conducted on a limited number of vessels. The analysis is a preliminary step toward understanding changes, at both the local and nonlocal level, that took place with regard to source clay, paste recipe, and slip technology.

Taken in concert, these different approaches provide a better reconstruction of both ceramic and cultural developments during the Late Preclassic period. The culture-historical interpretations are not only Lamanai-specific, but can be applied to other sites in the region and elsewhere in the Maya lowlands.

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CHAPTER 1:

INTRODUCTION

Unless ceramic studies lead to a better understanding of the cultural context in which the objects were made and used, they form a sterile record of limited worth (Matson 1965:202).

BACKGROUND

This dissertation presents the results of a material culture analysis of the Late Preclassic (400 B.C. -A.D. 250) ceramic assemblage from the Maya site of Lamanai, located in northern Belize, Central America. Specifically, it is concerned with classification and data presentation, as well as contextual, functional, and technological analyses. At present, there are a number of analytical approaches employed to study ancient Maya ceramics, including the type:variety-mode system (taxonomic analysis), modal analysis, Neutron Activation Analysis (NAA), petrography (thin section analysis), iconography, and chemical fingerprinting. Each technique serves as a tool designed to answer certain questions of chronology, economic interaction, political spheres, and definition of vessel function (Valdez et al. 1999:1). Ceramicists working throughout the Maya region and across Mesoamerica have made attempts to use several techniques because multiple approaches strengthen the interpretations that can be made when reconstructing ancient Maya systems. A combination of techniques along with a contextual analysis of the ceramic material plays a critical role for understanding the development of the social, political, and economic institutions of Maya society.

Archaeological investigations conducted at a number of sites in northern Belize have revealed that this region supported continuous occupation of Maya-speaking inhabitants from at least the early Middle Preclassic (900-600 B.C.) through the Historic (A.D. 1550-1700) period (Chase and Chase 1988; Hammond 1991; Hester et al. 1994; McAnany and Lopez Varela 1999; Meskill 1992; Pendergast 1979, 1981a, 1982a, 1990a; Pring 1977a, 1977b; Robertson and Freidel 1986; Sidrys 1983; Thompson 1939;

Valdez 1987). Analysis of early assemblages from Altun Ha, Cerros, Colha, Cuello, K'axob, Kichpanha, San Jose, and Santa Rita reveals ceramics dating to both the Middle Preclassic (900-400 B.C.) and Late Preclassic (400 B.C. - A.D. 250) periods. Prior to this undertaking, the site of Lamanai, situated amongst these other excavated sites (Figures 1 and 2), lacked a formal analysis conducted on its earliest pottery assemblages.

Lamanai is one of the few sites in the Maya area with continuous occupation from Preclassic through Historic times (Graham 1987, 1998; Graham et al. 1989; Pendergast 1981a, 1985, 1986, 1991, 1993, 1998). In addition to its long history of occupation, Lamanai was the largest in area and among the more populous of sites in northern Belize in prehistoric times. This implies that the stylistic modes represented on its pottery would presumably have had more impact on neighboring sites than would those of a smaller site. An understanding of the ceramics of Lamanai is important not only from an intra-site perspective, but also as a yardstick for comparative studies because of its long, uninterrupted, stratified sequence of occupation.

Four different kinds of ceramic analysis have been applied to the Late Preclassic (400 B.C. – A.D. 250) ceramic collection at Lamanai: taxonomic, modal, contextual, and petrographic analysis. All contribute to different degrees in classification based on form, style, or function, and in the determination of inter-community relationships and economic interaction between Lamanai and other communities.

The type:variety-mode system and the ware system of ceramic classification are combined for this study of the Lamanai pottery. Although both of these systems are employed, the type:variety-mode concept constitutes the core of the analysis. However, I have emphasized the modal level of analysis to a greater degree than is standard with type-variety systematics. Using both systems is designed to offset the spatial and temporal problems (e.g., lumping of modes) often associated with modal analysis, and to prevent the overclassification of types (e.g., splitting of types) often associated with the type:variety-mode system. Combined with contextual analysis, this integrative

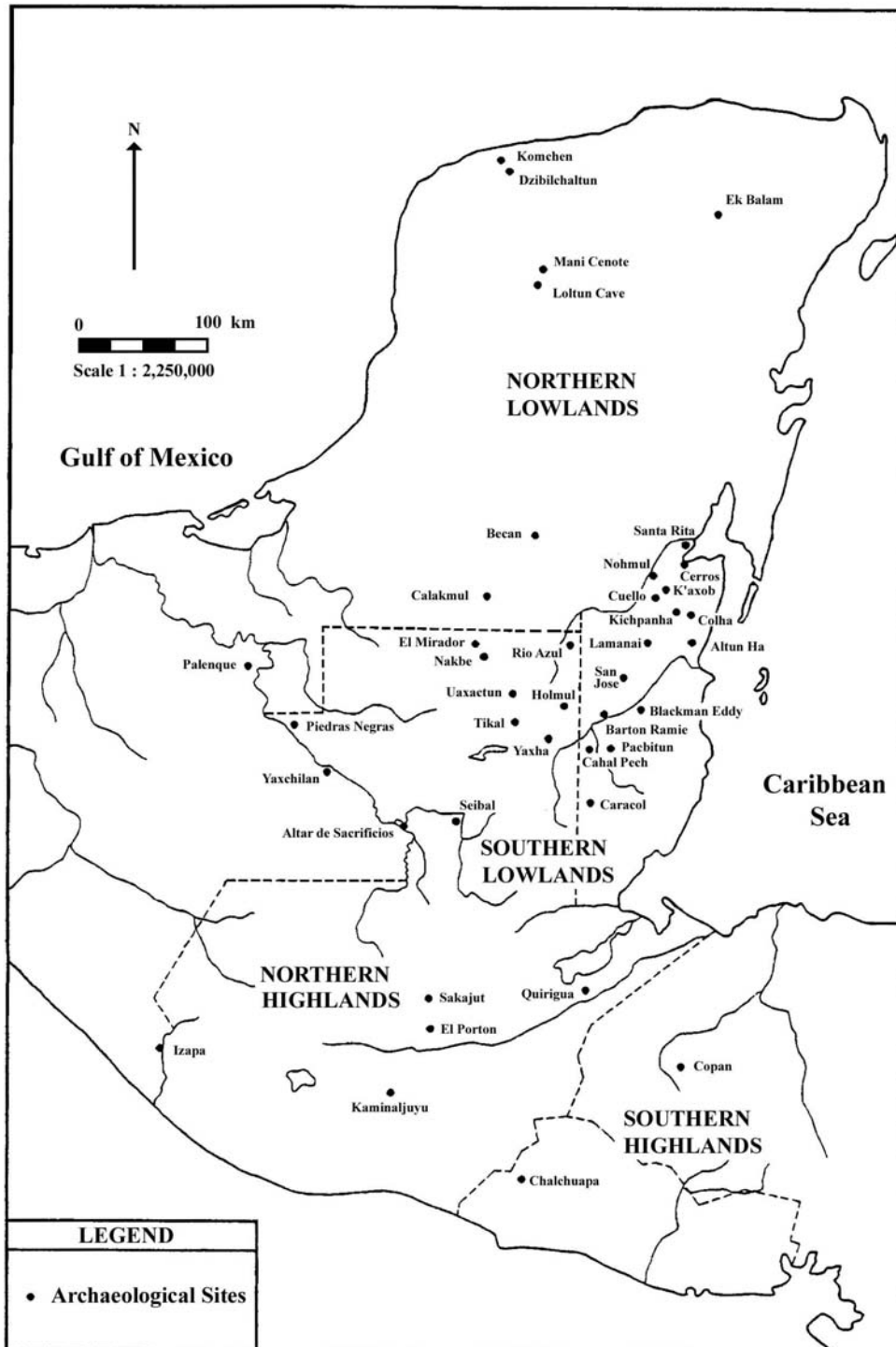


Figure 1: Map of the Maya area showing selected archaeological sites and regional divisions (modified from Awe 1992; Figure 1).

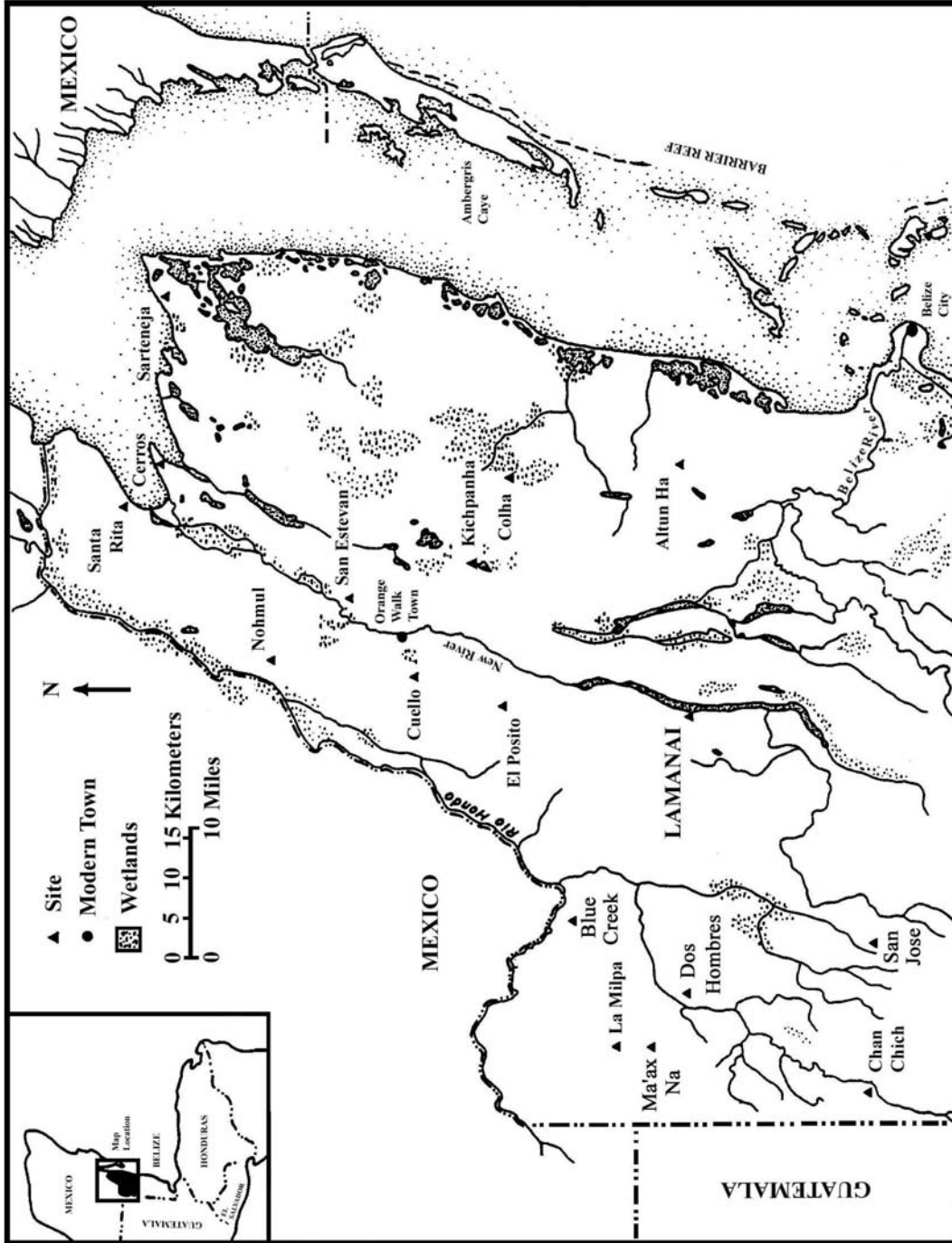


Figure 2: Map of Northern Belize with location of Lamanai indicated (after McDow 1997:Figure 1).

approach should provide a better understanding of culture-historical developments at the site. In addition to using multiple systems of analysis, the ceramic data are also presented in a different style or format than is typically used in Maya ceramic publications (Adams 1971; Forsyth 1989; Gifford 1976; Graham 1994; Kosakowsky 1987; Lopez Varela 1996; McDow 1997; Sabloff 1975; Valdez 1987). I emphasize, however, that the main difference between my study and others is not in the methodology of the type:variety-mode system, but in the application and presentation of the data (see Chapters 2 and 5).

RESEARCH DESIGN

Between 1974 and 1986, the site of Lamanai was the focus of intensive archaeological excavations directed by David M. Pendergast and supported by the Social Sciences and Humanities Research Council (SSHRC) of Canada and the Royal Ontario Museum. The project had as its primary goal the “elucidation of the prehistory of a Maya center that appeared to have seen longer occupation than most others centers in the Central Lowlands” (Pendergast 1981a:29). His investigations revealed that the occupation at Lamanai spanned over 3,000 years, dating from 1500 B.C. to the early 17th century. Understanding how and why this site survived such a long period of occupation when other sites in the region and elsewhere did not have been enduring questions for Pendergast and his colleagues.

Although Pendergast focused the bulk of his investigations on the central precinct of the site during the early years of the project, he expanded to areas farther north and south in the late 1970s and early 1980s. Both ceremonial and residential buildings were extensively and intensively excavated, and the architectural and ceramic data recovered revealed Preclassic to Historic period occupation, although some areas seem to have experienced more intensive occupation during particular time periods. The bulk of Middle and Late Preclassic material results from the excavation of structures and structure groups that lie to the north of the central precinct. Work in the north also involved the full excavation of a large three-chamber chultun (Feature P8-2), which yielded masses of Protoclassic period pottery.

The project directed by Pendergast ended in 1986. In 1997, Elizabeth Graham began a second phase of excavation, as the Lamanai Archaeological Project (LAP). Graham had worked with Pendergast from 1982 until 1986, particularly in the areas of Postclassic and Historic period settlement. Her investigations were focused on clarifying the periods of transition as well as focusing on laboratory analyses of the material recovered through Pendergast's earlier excavations. My focus on the Late Preclassic ceramic assemblage at Lamanai is intended to help fulfill one of the goals of the Lamanai Archaeological Project, which is clarification of the foundations of Lamanai's long-lived success as a flourishing community. Since the Late Preclassic ceramic assemblage has already been excavated and is stored in the on-site museum and bodegas at Lamanai, my research consisted entirely of laboratory analyses.

NATURE OF THE CERAMIC SAMPLE

Lamanai's survival of the Classic collapse and its contact with Europeans has resulted in greater attention being given to the site's later pottery. However, Pendergast had written a brief descriptive analysis for many of the Preclassic vessels during the years of his investigations at Lamanai. In the summer of 1998, I began examining the entire Preclassic assemblage as well as reading the descriptions provided by Pendergast. By the end of the field season in 2000, both the Middle Preclassic (n=4) and Late Preclassic (n=140) ceramic assemblages had been observed, described, tabulated, and classified according to the type:variety-mode system. The bulk of the Middle and Late Preclassic material comprises whole and complete vessels, with only a few vessels lacking rim-to-base profiles. The vessels were recovered from primary contexts (e.g., burials, caches, and primary middens) located throughout the site. Pottery dating to the Middle Preclassic (900-400 B.C.) period was identified, but the assemblage was too small to conduct an adequate ceramic analysis. However, the vessels recovered from this earliest period of occupation will be referred to throughout the study to increase understanding of cultural developments through time (e.g., the Middle-Late Preclassic transition) at Lamanai and elsewhere in the region.

RESEARCH OBJECTIVES

There are three major goals of the study of the Late Preclassic ceramics from Lamanai. These are: 1) to produce a ceramic typology based on stylistic and contextual analyses (i.e., associated ceramics recovered from primary deposits) in order to define in detail the spatial and temporal variability within the assemblage; 2) to refine the ceramic chronology, the outline of which has been drawn on the basis of stratigraphy, for the Late Preclassic period at Lamanai and, by extension, northern Belize; and 3) to identify ways in which Lamanai's population utilized their pottery from a functional perspective.

First Goal: Producing a Ceramic Typology

The first goal was more easily achieved by using multiple approaches, including the type:variety-mode system of analysis. For the past two to three decades, ceramicists working throughout the Maya area have adapted the type:variety-mode system to suit particular circumstances because of both personal preferences and site-specific needs (Valdez 1987:33). Similarly, at Lamanai, I modified the type:variety-mode system to include other appropriate and useful techniques, such as modal and contextual analyses (Powis 2000b). In fact, the analysis of the Lamanai material follows the recent approaches by Chase (1994), Culbert (1993), and Pendergast (1979, 1982a, 1990a). In keeping with the format devised by these researchers, the ceramics from contextual units at Lamanai are illustrated together, not split apart as is frequently done in ceramic reports which utilize the type:variety-mode concept. In this way, the contextual units provide the ceramicist with groupings that had meaning to the ancient Maya, and at the same time also provide the ceramicist with a way to relate their own material and its contexts to the Lamanai collection. In other words, one of the main goals of this research was to ensure that the Lamanai pottery remained comparable, on an inter-site level, to pottery analyzed now and long into the future by ceramicists throughout northern Belize and across the Maya area. By utilizing the type:variety-mode

framework I have guaranteed sufficient uniformity with the structure of ceramic reports in order to facilitate general comparison and synthesis.

Second Goal: Refining the Ceramic Chronology

In analyzing this assemblage, I have been able to identify two separate, functionally complete complexes (Lag and Zotz); the Zotz Complex is divided into an early and late facet, both correspond to the Protoclassic/Floral Park Ceramic Complex. The Lag Ceramic Complex is a long, relatively homogeneous one followed by two shorter, more variable, later facets of the Zotz Complex. The identification of the early and late facet of the Zotz Complex is based on the addition of a few new ceramic types to the earlier Lag Complex, as well as on the appearance of new modes. The existence of two complexes which form the Late Preclassic period at Lamanai is based on stratigraphy, modal comparisons, technological development, and relative cross-dating with other northern Belize sites. The processing of radiocarbon samples obtained from Preclassic deposits during Pendergast's excavations will help to refine or bracket these complexes of the Late Preclassic period, but to date the samples have not been analyzed. Therefore, my proposed dates and the duration of the ceramic phases should be considered tentative.

Third Goal: Functional Analysis

A functional approach is designed to reveal which types of pottery were being used by different segments of the Late Preclassic community at the site. It can therefore provide information on the differential accumulation and display of wealth items from successive contexts associated with single structures, or among contexts from different structures. Functional studies of Preclassic ceramic assemblages are rarely performed owing to the small samples recovered from Maya sites (see Chase 1983:8; Hester et al. 1983:13; Powis 1999:1; Robertson 1983:108). At Lamanai, the large sample size of whole and complete vessels and the primary contexts of the excavated material provide a unique opportunity to explore intra-site relationships, specifically how elites and commoners used pottery in their daily social and/or ritual activities.

Petrographic analysis was performed by Linda Howie-Langs on a small number of the vessels (n=16) in the assemblage to aid not only with determination of vessel function, but also to help define the nature of the ‘consumed’ assemblage. This refers to the pottery in terms of the critical features that led to its acquisition and eventual consumption, and is based on identification of compositional attributes that allow us to propose pottery sources, such as whether the pottery originates within the local sphere or from further away. In order to define the range of vessels being consumed, three variables were considered: the functional categories of the vessels; the stylistic types that are represented; and the production technologies associated with the vessels (Howie-Langs 1999:10-12; Powis et al. 2002).

ORGANIZATION OF THE DISSERTATION

Chapter 1 is designed to provide background information on the kinds of ceramic approaches used. It also outlines the research design and research objectives utilized by the Royal Ontario Museum Lamanai Project and the subsequent Lamanai Archaeological Project. Much of this section is based on material presented in the prospectus for this dissertation (Powis 2000a).

Chapter 2 provides the theoretical background of the classification of Maya pottery. It is divided into four sections. An historical perspective of ceramic studies in the Maya area is followed by descriptions of the various techniques employed by ceramicists to analyze their pottery. The next section examines ceramic research performed in northern Belize over the past 25 years. The last section of this chapter focuses on the approach I take with the analysis of the Lamanai collection. I present the method and theory behind my ‘integrative approach’ and I discuss the advantages and disadvantages of using multiple systems of analysis.

Chapter 3 describes the region of northern Belize, including its biogeographical and climatic setting. The area immediately surrounding Lamanai is described in detail. The last two sections highlight both the cultural development and history of investigations at the site.

Chapters 4-6 are closely integrated and focus on methodology and data presentation. In Chapter 4, both the field and laboratory procedures are outlined and a detailed examination of sample size, context, and dating techniques is carried out. Chapter 5 provides the methodological background for how the ceramic types were classified. The ceramic types are also presented in a number of tables by group, complex, and decorative name for convenience. Chapter 6 reports the contextual units and provides type descriptions for the Late Preclassic ceramic collection.

Chapter 7 begins with a review of previous research on vessel function in the Maya area. The bulk of the chapter describes my functional classification. This is followed by three sections which focus on the identification and comparison of ceramic types found in both commoner and elite contexts. The chapter concludes with a discussion regarding the social functions of the ceramic types.

Finally, Chapter 8 summarizes the data and allows for some interpretations to be proffered about Lamanai and its role in the Late Preclassic/Protoclassic period in northern Belize and across the Maya area. Three appendices are included in my dissertation. Appendix A provides a comprehensive list of ceramic groups, types, and varieties presented in the traditional format of the type:variety-mode system. For example, all type names belonging to the Sierra Group are shown together with illustrations accompanying each of them. Appendix B lists each ceramic type with their hypothesized vessel function. Appendix C presents each ceramic type with their associated context by ceramic complex.

CHAPTER 2:

AN APPROACH TO CERAMIC ANALYSIS

INTRODUCTION TO THE CLASSIFICATORY APPROACH

The theoretical foundations for this dissertation are based on numerous studies of Maya ceramics (Adams 1971; Ball 1977; Case 1982; Chase 1994; Culbert 1965; Forsyth 1983, 1989; Gifford 1960, 1976; Graham 1994; Kosakowsky 1987; Lopez Varela 1996; Matheny 1970; Pendergast 1979; Reents 1980; Rice 1976; Robertson-Freidel 1980; Sabloff 1975; Sabloff and Smith 1969, 1970; Smith 1955; Smith et al. 1960; Thompson 1939; Valdez 1987; Willey et al. 1967). Ceramic research in the Maya area has evolved tremendously over the past 75 years as ceramicists have developed, combined, adapted, and modified a number of analytical techniques to classify and interpret their pottery. Before I discuss the approach used on the Late Preclassic ceramic assemblage from Lamanai, I will review the different ways in which ceramicists have classified Maya pottery since the 1930s. An historical review of the literature is followed by recent approaches utilized in northern Belize. The application of different systems of classification in this region has guided me toward the approach I use in the analysis of the Lamanai material.

AN HISTORICAL PERSPECTIVE TO THE CLASSIFICATORY APPROACH

The Ware and Modal Approaches

The classification of pottery in the Maya area has undergone major changes in recent decades (Chase 1994; Gifford 1960, 1976; Haberland 1968; Phillips 1958; Sabloff and Smith 1969, 1972; Smith et al. 1960; Wheat et al. 1958; Willey et al. 1967). Intensive analysis of Maya ceramics did not begin until George Vaillant's 1927 doctoral dissertation, which attempted to order Maya ceramics chronologically and typologically. He asserted that "the backbone of most of the New World chronologies is

variation in pottery types and that the arrangement of a tribal ceramic into chronological divisions is not only very technical but also highly interpretive and impressionistic” (Vaillant 1930:9).

In the late 1920s, fairly complex and elaborate systems for ceramic organization and analysis were developing in the archaeology of the southwestern United States. The 1927 Pecos Conference in New Mexico was organized to standardize Southwestern pottery types. At the conference, types were defined as “the totality of characteristics which make a given ceramic group different from all others” (Rice 1987a:282). Although the definition of what exactly constituted a type would eventually change for the purposes of the type:variety-mode system developed in the late 1950s, the binomial system for nomenclature of types by a geographical place name paired with a technical description of surface treatment, established at the Pecos Conference, became a standard. Lyndon Hargrave (1932) furthered the classification of pottery types in the Southwest using such attributes as paste, temper, and surface treatment. In the late 1930s, Colton and Hargrave (1937) organized the study of Northern Arizona ceramics based on the ware classification system.

Theory and Application

In the 1920s and 1930s, Maya archaeologists were primarily interested in ceremonial architecture, sculpture, texts, and discovering spectacular tombs. Chronology was considered either incidental or implicit. Vaillant’s ceramic research, which was influenced by ware studies being conducted in the American Southwest, attempted to integrate a large amount of varied and scattered material. Three ceramic sequences served as the basis for his chronological conclusions: his own series from the stratigraphic excavations at Chichen Itza, Mexico; the collection of pottery caches located beneath the stelae at Copan, Honduras; and the vessels recovered from several tombs in superimposed structures at Holmul, Guatemala. He had already set up regional chronologies based on large ware groups (e.g., High Polished Wares, Dull Polished Wares, Dull Wares, Lacquer Wares) that focused on gross decorative and technological

features (Vaillant 1927:21-188). He established a foundation for utilizing a comparative system of ceramic classes. His ware approach was influential on later ceramic analyses.

Between the time of Vaillant's recognition of the chronological value in organizing ceramics into typologies and the concept of the type:variety-mode system in the late 1950s, Maya ceramicists continued to focus their analytical procedures on establishing broad classificatory units or wares (Brainerd 1958; Butler 1935, 1940; Longyear 1952; Merwin and Vaillant 1932; Rands 1954; Smith and Kidder 1951; Thompson 1939, 1940). For example, the Carnegie Institution's excavations at the site of Uaxactun, located in the Peten of Guatemala, employed a similar approach to that of Vaillant. Edith Ricketson used the ware system in the 1930s and Robert E. Smith later used it in the 1950s at the site. Ricketson's report on the pottery from Group E at Uaxactun identified three phases: Uaxactun I, II, and III, dating to the Preclassic and Classic periods (Ricketson and Ricketson 1937:223-284). Her analysis provided some of the first evidence that Uaxactun, and more specifically the Peten, had been occupied before the Classic (A.D. 250-900) period. Only the Holmul material and a few unprovenienced ceramic pieces found in various museums were known from the region when investigations at Uaxactun were begun in 1926. Smith's (1955) Uaxactun report also employed the ware concept, but he added a finer analytical unit to the classificatory system, namely the "type". His analysis comprised an exhaustive study of attributes namely vessel shape or form, color, paste and temper, and decorative motifs and techniques.

Using the ware approach, Smith (1955:3) was able to identify four major developmental phases at Uaxactun with two phases dating to the Preclassic (Mamom and Chicanel) period and two phases dating to the Classic (Tzakol and Tepeu) period. The dating of the pottery was based on stratigraphy, epigraphy, and stylistic and formal attributes. Epigraphic information was assembled using dated stelae, following the Goodman-Martinez-Thompson correlation of the Maya and Christian calendars. For example, pottery recovered from construction phases associated with the erection of stelae could be dated accordingly. Dates of 8.12.0.0.0 and 9.8.0.0.0 would refer to A.D.

278 and 593, respectively. Finally, phases and subphases were marked by the introduction of new vessel shapes and new styles of decoration although coarse wares (utilitarian wares like ollas) remained largely unchanged throughout each major phase.

The Type:Variety-Mode or Taxonomic Approach

During his analysis and writing of the ceramic sequence at Uaxactun, a few of Smith's contemporaries began reviewing and criticizing the various typological and classificatory systems being used by American archaeologists. During the late 1940s and early 1950s, Brew (1946), Taylor (1948) and Ford (1954), among others, stressed the fact that too many researchers had focused on description and superficial quantification of material culture and not on interpretation and synthesis. In particular, Taylor (1948:114) stated that "the empirical facts which have been produced by the archaeologist's spade and the affinities or close relationships between them must be interpreted in a cultural sense and combined into a cultural context." Ford (1954:51) wanted to extend the use of typology beyond morphological descriptive mechanisms. He also felt that establishing functional definition in concert with these morphological attributes in a societal context would better facilitate cross-cultural comparisons.

By the mid-1950s, the descriptive approach, such as that used by Smith (1955) and many others before him, was becoming increasingly marginalized as archaeologists began moving away from empirical categories and into cultural ones in order to make explicit hypotheses and inferences. Not only were ceramic studies limited to description, categorization, and presentation, but another problem with the ware system, as Taylor and Ford saw it, was that a set of procedures for analysis had not been standardized, and utilization of it had differed greatly from study to study. In the late 1950s, an alternative method was proposed.

The type:variety-mode approach was initiated by Wheat et al. (1958) in the American Southwest. At this time, Wheat et al. (1958:34) made a move to "crystallize certain taxonomic concepts into a framework to serve present needs for classification of prehistoric pottery." While recognizing the importance of existing concepts, they called

for the implementation of a uniform definition of certain concepts in order that they might be utilized by any researcher universally. They believed that in order to make new strides in the area of ceramic analysis, it was necessary to refine and standardize definitions and applications of the existing analytic system, such as type, ware, sequence, and series. Wheat et al. (1958:34) recognized that the concept of 'type' was fundamental to their taxonomy and did not make a distinction from the previous definition of type as proposed by Colton (1953:51) and other Southwestern archaeologists. They believed that the term 'type' had too much meaning within the taxonomic system to attempt to alter or change it. According to Wheat et al. (1958:34), the term "type" was defined as "recognizably distinct in terms of certain visual or tactile characteristics, and has explicit temporal and areal associations." The addition of the variety was the biggest advantage to their method and largest difference from the previous method of classifying pottery.

Wheat et al. (1958) acknowledged that the accepted form of taxonomic classification of the day allowed many named pottery types to differ from other types in only very minor ways. This practice gave each type equal status and often resulted in the attachment of too much significance on the variation. There was no immediate way to indicate the relationship of one type to another from the type name. The variety should function together with the type as a taxonomic tool which would account for minute variations that should be noted, but which are not significantly different to warrant a new type name. A variety differs from the type to which it is related in minor ways. It has the same geographic distribution and time span of the type, but is generally more restricted areally. A variety is something that "differs from the type only in such lesser technological or aesthetic features as may indicate a minor regional or temporal departure from the standard" (Wheat et al. 1958:36).

The application of the type:variety-mode system was most useful when the attributes were classified and arranged according to the smallest possible units of analysis, which could then be arranged into larger, more general, cohesive groups at a later time. This flexibility and fluidity gave the ceramicist freedom to apply the method

in any number of ways, depending on the specific research question. Attention to detail was imperative to this system of analysis. This was important because individual artisans create slight variations which might be classified as distinct varieties within the larger established type. According to Wheat et al. (1958:36), there were three general ways to understand differences in variety and they included: 1) technology or style; 2) area or geography; and 3) time. These differences allow for multiple interpretations from any given set of data.

Theory and Application

The type:variety-mode concept emerged as a combination of an existing definition of type (Colton 1953), and the Wheat-Gifford-Wasley (1958) concept of ceramic variety. Remarks made by Phillips (1958) and Rouse (1960) on the nature of the type were also integral to this methodological approach (see also Sears 1960). However, Gifford (1960) presented the logic driving the type:variety-mode method of ceramic analysis (Figure 3). In his analysis, the type:variety-mode approach provided a means to define the importance of variation and regularity manifest in human societies. Drawing from the theories of Leslie White and Alfred Kroeber, Gifford (1960:341) stated that the organization of ceramics in this manner is based upon the basic anthropological assumption that human behavior is not random but that regularities can be discerned and described from what may initially appear to be a mass of variation. Similarly, it is also assumed that pottery types have a cultural basis and that they may be regarded as reflections of human behavior and aesthetic values as they change through time.

Gifford (1960:345) was primarily concerned with how stability (marked by persistence in ceramic types through time) and change (marked by variation and flux) could be seen in the distribution and concentration of ceramic types and varieties. He examined the effect of cultural affiliation in the expression of ceramic production, which is subject to the values and ideals of the group. Ceramic types represent cultural

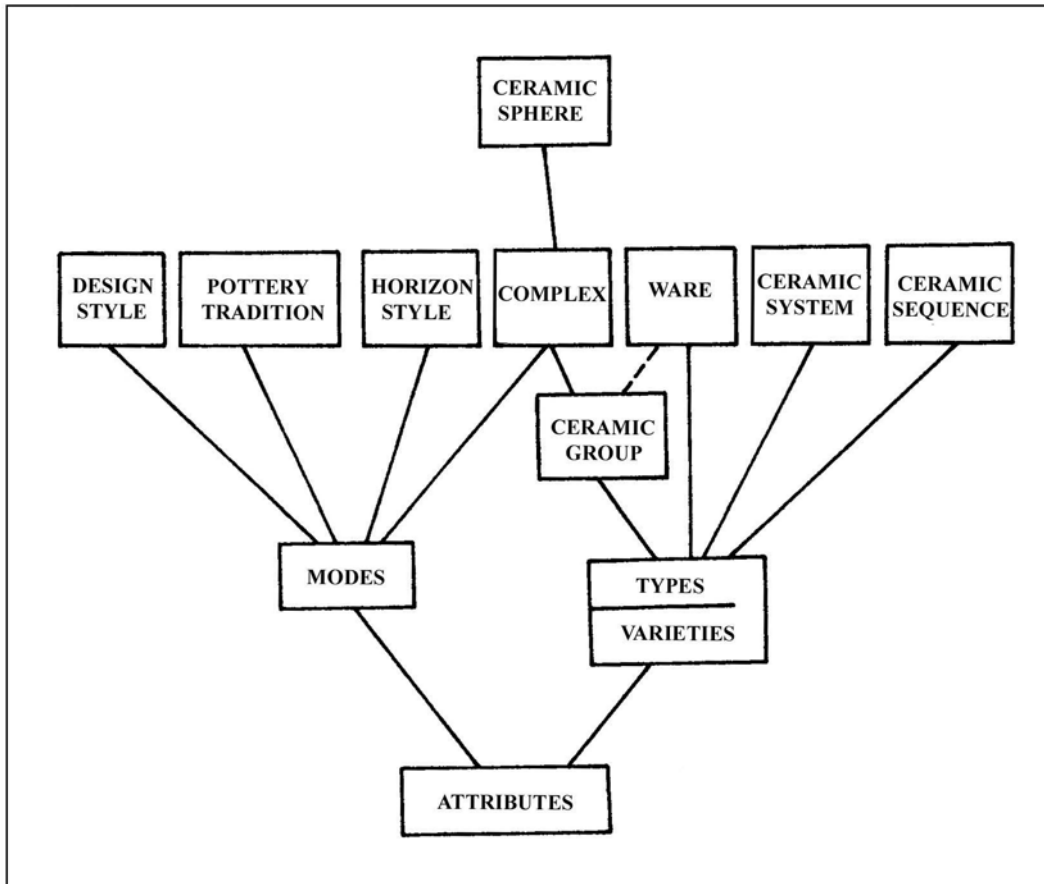


Figure 3: Schematic representation of the Type:Variety-Mode approach (after Gifford 1976:Figure 1).

phenomena and can be applied toward understanding general behavior and ideology in society. The distribution of ceramics might be interpreted as either cultural diffusion, relations of power, economic relationships, or mark the extent of cultural assimilation by and integration into a dominant group. For these reasons, types and varieties are understood not as static or fixed, but as flexible in allowing the researcher to adapt types and varieties to suit the specific needs of the project and the researcher.

The type:variety-mode approach is a methodological framework that can be applied to Maya ceramics in order to understand cultural changes and innovations in time and space. Some ceramicists noted the necessity to analyze smaller Maya settlements using pottery as a more refined tool for defining culture history and for the dating of phases. According to Smith et al. (1960:330), the most accurate way to obtain relative dates for a Maya house sequence was to organize diagnostic pottery types and varieties into ceramic complexes within specific phases. To do so, a system, like type:variety-mode, was necessary whereby occupation periods could be assigned approximate dates. In order to use pottery as a dating device, both in cross-cultural comparisons and as a unit of synthesis and interpretation, consistency within the classificatory units was essential. The type:variety-mode system supplied such a systematic framework, and also one which “...recognizes ceramic units which approximate those in vogue among prehistoric populations under study” (Smith et al. 1960:331).

During the past few decades, most Maya scholars have come to agree on the utility of the type:variety-mode system, which makes it useful for cultural interpretation and for providing insight regarding the daily activities and aesthetic ideals of the ancient Maya. It is assumed that material culture is crafted by individual artisans who adhere to cultural norms, but have the potential to embellish the established norms in order to create new types and varieties of ceramics altogether. Advocates of the type:variety-mode approach agree that the application of this method is a highly flexible endeavor. The definitions of types and varieties are considered fluid in that they allow for multiple interpretations from any set of data. As a result, most ceramicists working

in the Maya area over the past 30 years have employed the type:variety-mode approach, albeit with minor changes, at such sites as: Aguacatal (Matheny 1970), Altar de Sacrificios (Adams 1971); Barton Ramie (Gifford 1976; Willey et al. 1965); Becan (Ball 1977); Cerros (Robertson-Freidel 1980); Chalchuapa (Sharer 1978); Colha (Valdez 1987); Cuello (Kosakowsky 1987; Pring 1977a); Edzna (Forsyth 1983); Ek Balam (Bey et al. 1998); El Mirador (Forsyth 1989); El Pozito (Case 1982); Kaminaljuyu (Wetherington 1978); K'axob (Lopez Varela 1996); Kichpanha (McDow 1997; Meskill 1992; Reese and Valdez 1985); Komchen (Andrews 1988); Macanche Island (Rice 1987b); Mayapan (Smith 1971); Santa Rita Corozal (Chase and Chase 1988); Seibal (Sabloff 1975); Tikal (Culbert 1993; Laporte and Fialko 1993); Xunantunich (LeCount 1996); Yaxha-Sacnab (Rice 1979); and Yaxuna (Suhler et al. 1998).

Definitions

A number of terms are used in the type:variety-mode system. The definitions presented below have appeared in several publications on this classificatory system (Adams 1971; Gifford 1960, 1976; Sabloff 1975; Smith et al. 1960; Valdez 1987; Willey et al. 1967).

Type. A type is defined as “distinct by visual or tactile characteristics, and has explicit temporal and areal associations” (Wheat et al. 1958:34). One or more varieties are contained within a type (Valdez 1987:32).

Variety. The ceramic variety “differs from the type only in such lesser technological or aesthetic features as may indicate a minor regional or temporal departure from the standard” (Wheat et al. 1958:36).

Type Cluster. A type and the varieties associated with it together form the type cluster (Wheat et al. 1958:38-39).

Group. A ceramic group is “a set of closely related and very similar pottery types that demonstrate a distinctive homogeneity in range of variation concerning form, base color, technological, and other allied attributes” (Gifford 1976:17).

Ceramic System. A ceramic system represents a larger group, the basic elements of which are formed by individual type clusters. The assumption is that all type clusters within a ceramic system are more or less contemporary. Further, they possess in common vessel shapes, methods of manufacture, surface treatment and type of decoration.

Ware. A ware is composed of a large number of ceramic types all having a group of similar technological attributes. There is no direct spatial or temporal limits, but internal continuity must be demonstrated in both respects (see Willey et al. 1967).

Mode. The ceramic mode is an attribute or a combination of attributes that has temporal, spatial and/or cultural significance so much that it can cross-cut types or varieties, e.g. the basal flange or the mammiform foot (Valdez 1987:33).

Attributes. Attributes are observable traits that are consistently represented, e.g. temper, rim profile, surface color, etc.

Complex. A ceramic complex is defined by the ordering of types and varieties forming clusters from a certain geographical setting and during a particular time period (Gifford 1976:11)

Subcomplex. A subcomplex is “a subdivision of a complex that has significance in cultural interpretation other than that of chronological differentiation

(Adams 1971:3). The Floral Park or Protoclassic subcomplex likely represents an elite class phenomenon within the Chicanel Sphere complex (Valdez 1987:33)

Facet. The facet is a temporal divider in a ceramic complex. It usually includes the terms “Early”, “Middle”, and “Late”.

Sphere. The ceramic sphere contains two or more complexes that share a majority of types (Valdez 1987:33), and is the total of all types and modes present within the constituent complexes (Willey et al. 1967).

Series. A series is a group of types which belong within the same ware but are found only in a smaller, well-defined, and restricted area. Within a series, it is important to remember that the manner of decoration is always the same, e.g. red-on-orange.

Sequence. A sequence groups together vessels that have the same method of decoration or of surface treatment, but which can belong to several different wares (and hence also to several series).

Technological Analyses

In 1939, Thompson published a report on the San Jose site, located in northern Belize. In his excavations he used stratigraphic controls to develop a ceramic sequence. As an appendix to his ceramic study, Thompson included a technological analysis by Anna O. Shepard (1939:251-277). Her work focused on the microscopic examination of sherds to identify local and regional production technologies and to trace their distribution over both time and space. Shepard’s petrographic study helped to identify tempering agents, types of clays used, and paste texture, among other attributes. In the decades that followed, few petrographic studies were performed in the Maya area with the notable exception of the works by Rands and Rands (1957) at Palenque and Harbottle and Sayre (1975) at Altar de Sacrificios and Seibal.

Over the past twenty years there has been a shift away from technological aspects of local ceramic production to one delineating regional patterns of distribution across the lowlands. The identification of paste compositional groups at the regional and inter-regional level allowed analysts to construct models of exchange (Bishop 1994; Jones 1986; Rands and Bishop 1980). With a particular focus on regional patterns of ceramic production and distribution, few attempts were made to study intra-site patterns. In recent years, studies have come full circle with an increasing focus on local models of ceramic production and consumption (Angelini 1998; Bartlett et al. 2000; Howie-Langs 1999:11; Iceland and Goldberg 1999; Jones 1986; Meskill 1992:24-30; Powis et al. 2002; Reese-Taylor et. 1993).

CERAMIC RESEARCH IN NORTHERN BELIZE

Over the past three decades, the type:variety-mode approach has overwhelmingly been employed to study Maya ceramics in northern Belize, resulting in a number of site sequences (Table 1). In fact, with the exception of Pendergast's (1979, 1982a, 1990a) modal approach to the analysis of the ceramics at Altun Ha, the majority of researchers in this region employ the type:variety-mode system. Within a context-established framework, Pendergast (1979:33) examined aspects of shape, color, and surface treatment with a view to ascertaining similarities and differences among the various vessels at Altun Ha.

The researchers who use the type:variety-mode system apply it in slightly different ways, thus demonstrating the flexibility and fluidity of it (Ball 1979:831; Gifford 1976:6). Because the present study focuses on the analysis of the Late Preclassic pottery from Lamanai, it is necessary to describe briefly how some of the scholars working in northern Belize have used the type:variety-mode concept in their work. It is also important to note that some ceramic studies have recently incorporated material science approaches (i.e., chemical and petrographic analyses) to ascertain production technology and resource use in ceramics manufacture at the sites of Altun

Table 1: The Lamanai Ceramic Complexes with comparative site sequences from Uaxactun (Smith 1955), San Jose (Thompson 1939), Colha (Valdez 1987), Cuello (Kosakowsky 1987; Kosakowsky and Pring 1998), Barton Ramie (Gifford 1976), and Altar de Sacrificios (Adams 1971).

Time	Major Periods	Uaxactun	San Jose	Lamanai	Colha	Cuello	Barton Ramie	Altar de Sacrificios
1500				YGLESIAS				
1400	Late				RANAS			
1300	POST-CLASSIC			CIB			NEW TOWN	
1200		Middle			CANOS			
1100		Early			BUK	YALAM		LF EF
1000								JIMBA
900	Terminal	3	SAN JOSE V	TERCLERP				LF EF
800	CLASSIC	2	SAN JOSE IV		MASSON		SPANISH LOOKOUT	BOCA LF EF
700		Late		TZUNUN				LF EF
600		Early	1	SAN JOSE III	SHEL	BOMBA	TIGER RUN	CHIXOY
500		3						VEREMOS LF EF
400		2			COBWEB		HERMITAGE	AYN LF EF
300		1	SAN JOSE II	SAC				SALINAS
200	PROTO-CLASSIC				LF EF		COBOS CHICANEL	
100				ZOTZ	BLOSSOM BANK			FLORAL PARK
AD 1								LF EF
BC 1		CHICANEL					MOUNT HOPE	PLANCHA
100	Late						BARTON CREEK	
200	PRECLASSIC			LAG	ONECIMO			
300								
400			MAMOM	SAN JOSE I		CHIWA LF EF	LOPEZ MAMOM	SAN FELIX LF EF
500								
600	Middle			MESH LF EF			LF EF	
700					BOLAY	BLADEN	JENNY CREEK	XE
800								
900						SWASEY		
1000	Early							
1100								
1200								

Ha (Howie-Langs 1999), K'axob (Angelini 1998), Kichpanha (Iceland and Goldberg 1999), and Lamanai (Howie-Langs 2002). These technological analyses, with the exception of Howie-Langs, are based on typological descriptions.

Adaptation of the Type:Variety-Mode System in the Region

Between 1973 and 1983, the Corozal Project, directed by Norman Hammond, investigated the prehistory and human ecology of northern Belize (Hammond 1975, 1977). Approximately 60 sites were located and a regional sequence, dating from the Middle Preclassic to the Last Postclassic, was established using the type:variety-mode system of classification. In 1974, excavations were centered on the site of Nohmul. Pring (1977a) analyzed the ceramic material with a particular focus on elucidating culture-historical processes on a regional scale, using comparative data from as many of the 60 sites surveyed as possible (see also Hammond et al. 1985:182).

Archaeological investigations at Cuello between 1975 and 1990 revealed a long, continuous sequence of Preclassic occupation (Hammond 1974, 1991; Hammond et al. 1995; Kosakowsky 1983, 1987; Kosakowsky and Pring 1998; Pring 1977a, 1977b). The type:variety-mode system of classification was employed at Cuello and, according to Kosakowsky and Pring (1998:55), the ceramic analysis “provided a framework for both a regional ceramic chronology (Pring 1977a) and a site-specific one (Kosakowsky 1983, 1987).” Kosakowsky (1983, 1987) reanalyzed the ceramic material and redefined the Preclassic sequence of Pring’s (1977a) original work. Although both ceramicists differed in the identification of minor ceramic types and varieties, they shared a common reconstruction of the Preclassic sequence at the site. In addition to reevaluating the early Cuello pottery, Kosakowsky (1983:1) also examined the “distribution of vessel form classes within the site of Cuello in order to understand functional differences throughout different contexts in both time and space.”

Robertson-Freidel (1980) examined the Late Preclassic pottery at Cerros. Her two main goals were to divide and refine the chronology for this time period as well as to identify the ways in which the inhabitants of the site utilized their pottery. Three

functionally complete ceramic complexes were defined and within each of them Robertson-Freidel (1980:4) recognized functional classes of pottery that were isolated “not only to domestic or ceremonial use but to status differentiation as well.”

At Pulltrouser Swamp, Fry (1983) followed the traditional type:variety-mode approach, in part, because it was useful in reconstructing the cultural-historical sequence and determining external contacts. He was also interested in using this classificatory scheme because his ceramic material was not well-preserved and, therefore, he had to rely on other more established sequences in the region for comparing his types and varieties. Given the limited sampling of contexts and small sample size, Fry (1983:194) did not conduct an attribute analysis of the ceramic material but he did perform a limited petrographic analysis (see also Fry 2000:23-26).

The type:variety-mode approach was also used at the site of Santa Rita Corozal (Chase 1983; Chase and Chase 1987, 1988). The Chases’ goals were to describe the pottery, construct a chronological sequence for the site, and to explain the behavior behind the pottery (Chase and Chase 1987:47). In their analysis, the most useful way to derive behavior from the archaeological record and to facilitate meaningful comparisons among sites was by using the concept of the subcomplex (comprising caches, burials, etc.) and not the ceramic sphere (see also Gifford 1976:11). According to Chase and Chase (1987:48), “subcomplexes allow the definition of units meaningful to the Maya and a possible interpretation of these Maya behaviors; by their very nature, subcomplexes permit more accurate inter-site comparisons.”

The ceramics at Colha were also analyzed using the type:variety system (Adams and Valdez 1979; Valdez 1987, 1988). However, Valdez (1987) adapted the method of analysis to suit local conditions and also to reflect the problem-specific research being conducted at the site. His method of defining ceramic types involved sorting excavation columns into types from which varieties were identified. According to Valdez (1987:37), the analysis of the Colha material fell into three categories: full analysis, summary analysis, and scan analysis. This approach helped to streamline his field analysis. Like other ceramicists working in the region, Valdez’s (1987:39) use of the

type:variety-mode approach facilitated regional comparison because he continued the practice of applying previously established type and variety names to the Colha material wherever applicable. A separate study was also conducted on the Protoclassic material from Colha and its relatedness to a similar assemblage isolated at the nearby site of Kichpanha (Meskill 1992). Meskill's research focused on the Protoclassic pottery recovered from elite contexts in order to provide information on the evolving social complexity during this period of cultural development.

The site of Kichpanha has undergone three independent ceramic analyses (Reese and Valdez 1987; Meskill 1992; McDow 1997). All of these analyses have been guided by the type:variety-mode classificatory scheme. Reese and Valdez (1987) initially developed the chronological framework of ceramic complexes at Kichpanha. The dates of occupation span the Middle Preclassic through Terminal Classic with a hiatus during the Early Classic period. In order to help refine the dates of each complex, McDow (1997) provided chronologically useful type descriptions of the whole vessels. It was hoped that this body of information would aid in inter-site comparisons. Additionally, Meskill (1992) performed a problem-specific study describing a functionally complete Protoclassic ceramic complex at the site. Her analysis of the Protoclassic assemblage allowed for a refinement of this period into three separate facets. The three-facet Protoclassic phase is compared to the nearby site of Colha and then "tied to the broader framework of culture-historical trends for the Maya Protoclassic" (Meskill 1992:153).

Lopez Varela's (1996) analysis of the Preclassic pottery at K'axob was also based on the type:variety-mode system. Using this approach, she attempted to provide a chronological framework, give distribution evidence of pottery in time and space, and determine the functional aspects of the ceramics (Lopez Varela 1996:42). This analysis was complemented by the petrographic analysis conducted by Angelini (1998).

At Chan Chich, Valdez (1998) and Valdez and Houk (2000) evaluated the ceramic collection using the type:variety-mode system of analysis. According to Valdez (1998:73), the primary task of the ceramic research at Chan Chich "required ceramic type descriptions that lead to the grouping of typological units which may then be

defined into chronologically significant segments.” A total of six functionally complete ceramic complexes were represented at the site dating from the Middle Preclassic through the Late Classic. There were three main objectives to studying the pottery at Chan Chich and they included: 1) to establish a chronological sequence; 2) to determine internal site ceramic patterns which may provide insights into levels of social, political, and economic interaction; and 3) to document patterns of external interaction (i.e., trade, exchange, and communication).

Within the past decade, the sites of Dos Hombres, La Milpa, and Las Abejas have been excavated by The Programme for Belize Archaeological Project (PfbAP) (Adams and Valdez 1993, 1995; Brown 1995; Hammond et al. 1996; Hammond et al. 1998; Houk 1996; Lewis 1995; Lohse 2001; Sullivan 1996; Tourtellot et al. 1994). This project, located in the Rio Bravo area of northwestern Belize, is a long-term regional effort which is looking at a number of issues related to Maya social, political, and economic relationships among sites of different sizes. The ceramics recovered from the excavations have been subjected to the traditional type:variety-mode system of analysis. Valdez et al. (1993:35) have stated that “the goals guiding the general ceramic studies include: 1) beginning site specific chronologies and a “regional” chronology for temporal control within and between sites; 2) separating type materials for comparative studies concerning inter- and intra-regional exchange; and 3) considering how the ceramic collections might best be studied for securing data involving settlement studies, land and water use, and aspects of cultural evolutionary implications.”

At La Milpa, Kosakowsky and Sagebiel (1999:131) have not only employed the traditional application of the type:variety-mode approach, as have other researchers working on the Programme for Belize Archaeological Project, but they coupled it with an intensive modal examination of vessel forms across contexts. It is believed that the use of these methods would “yield maximum information for both chronological and inter-site and regional comparisons” (Kosakowsky and Sagebiel 1999:131).

A similar study is being conducted at the site of Blue Creek, located not far from the Program for Belize lands. A total of eight ceramic complexes have been identified,

dating from the early Middle Preclassic to the Late Classic period. At the site, Kosakowsky (personal communication, 2001) is combining a standard type:variety-mode analysis with Neutron Activation Analysis (NAA) (see also Williams-Beck 1997).

AN INTEGRATIVE APPROACH TO THE ANALYSIS OF THE LAMANAI CERAMICS

In northern Belize, researchers have wholeheartedly adopted the type:variety-mode system of classificatory procedures and nomenclature, although some have made modifications to it based on either personal or site-specific needs. However, there is a minority of researchers working in northern Belize and elsewhere in the Maya lowlands who have opted not to use this system in favor of other approaches, including modal analysis (Pendergast 1979) and attribute and modal analysis (Graham 1987, 1994). The advantages and disadvantages of using type and/or modal analyses are presented below. It is followed by the approach I have chosen for the analysis of the Late Preclassic ceramics at Lamanai.

Problems with Existing Analytical Techniques

For the advocates of modal analysis, it is considered consistent, invariable, accurate, and clearly shows the continuity of ceramic trends through time (Wright 1967:99). Modal analyses help to preserve ceramic data by presenting descriptions on a more basic level of analysis than type:variety-mode descriptions. Since modal analysis uses individual modes or a certain limited class of modes (specifically form modes), it is easier working with eroded sherds because even eroded pieces have individual modes, which can be used for comparative studies, or for classification (Sabloff 1975:4). A modal study can more easily be coded for computer analysis than the type:variety-mode system, because individual attributes or modes are coded and can give more useful information through significant clustering than can analyses run on performed attribute clusters. Another advantage to the modal approach is that it has not

become complicated with the influx of hundreds of named types and varieties. A “basal break” or “restricted orifice” is not subject to new names at different sites. The creation of so many names creates difficulties among sites in different regions of the lowlands because each site has its own set of ceramic complexes, phases, types, varieties, etc. There appears to be a tendency to overclassify one’s assemblage by splitting it into too many varieties.

One critic remains unconvinced that the type:variety-mode approach is any more rigorous or scientific than descriptions unencumbered with masses of unwieldy nomenclature (Pendergast 1979:33; see also Pendergast 1969:12, 1971:23). He states that:

If we could be sure that the type-variety system brings us closer to cultural realities as they were apparent to the ancient Maya, or even as they might have been apparent to an ethnographer at work in a 7th century Maya community, there would be every reason to employ it, despite its cumbersome nature. It is my feeling, however, that the system brings us no closer to such realities, and may in fact widen the gulf that separates us from the people whose culture we are studying (Pendergast 1979:33).

There are a number of disadvantages to using the modal approach, however. Briefly stated, using the modal approach makes it difficult to provide tight inter-site comparisons, although it can provide small-scale intra-site or inter-site time distinctions (Sabloff 1975:4). For example, individual modes can have long time spans, which lessen the temporal strength of comparisons. Modal analyses can also make the formation of refined site chronologies more difficult, since one mode may remain constant while mode clusters, of which it is a part, change. In other words, the modal system has a problem in that modes are lumped together, sometimes masking chronological variations. Furthermore, at sites, which have a paucity of whole vessels or even large sherds, an analysis which relies heavily on form modes may not be entirely feasible.

It was the accumulation of these problems with the modal approach that led to the development of the type:variety-mode system. The type:variety-mode system affords a new way of mass-handling ceramic data in order to effect chronological series and to organize series into categories that can be interpreted according to cultural-social significance, such as determining function, production, residence patterns, socioeconomic relations, etc. More importantly, the type:variety-mode approach permits definition of a pattern that might be widespread within a site and, especially significant, organizes data so as to be comparable from site to site and from area to area. The modal system is not as good for inter-site comparisons and regional studies because it does not facilitate quick and easy comparisons of pottery from a number of sites. With this mind, Smith helped to reshape his own 1955 Uaxactun monograph by incorporating types and varieties in order to accommodate specialists using the type:variety-mode approach (Smith and Gifford 1966). Since inter-site comparisons are necessary in the effort to understand the underpinnings of Maya social, economic, and political organization, any method which hinders comparison can be harmful. Thus, with the increasing complexity of Maya ceramics, the type:variety-mode system "...provided taxonomic units of comparable quality and a language of easy communication among analysts" (Willey et al. 1967:290).

Although the modal approach has been generally replaced with the type:variety-mode approach as the most effective way to classify and describe pottery in the Maya area, some researchers still believe it is not the only system for classifying Maya pottery (Forsyth 1983:241; Willey 1970:315). Others have recognized difficulties and deficiencies with the methodology and application of the type:variety-mode system (Ball 1979:829; Dunnell 1971; Ford et al. 1992; Forsyth 1983:229-241; Graham 1994; Hammond 1972; Matheny 1970:144-146; Pendergast 1979; Pring 1977a:14-20; Rice 1976; Smith 1979; Wright 1967). At times, analysts have created varieties for the subtlest of changes in decoration, or no longer use names based on places or geographic location in the area of study. For Adams (1996:7), there are some misunderstanding of

the type:variety-mode system which has “resulted in a few defective or misaligned analyses.” As an example, Adams (1996:7) states that:

Most of these difficulties result from not adhering to the basic recognition of ceramic types on the basis of type-classes. A number of these problematic units are now in the literature and are clearly erroneous. “Colander” or “thin-tecomate” type-classes, for example, appear to confuse functional interpretation with analytical categories.

Theory and Application of the “Integrative Approach” at Lamanai

Some of the criticisms center around the fact that the type:variety-mode system alone is not sufficient to answer many questions researchers now hope to answer. However, ceramicists and archaeologists discontent with the type:variety-mode system of analysis have not provided an alternative form of analysis or data presentation for general communication. While no substitute has been found, more researchers are combining approaches (e.g., modal and taxonomic) when analyzing Maya pottery (Forsyth 1983; Fry 1987; Graham 1986, 1994; Matheny 1970; Sharer 1978; Smith 1971). In fact, every ceramicist, whether knowingly or not, uses modal analysis at a basic level when they are describing each sherd or pot before it is classified according to a higher level of abstraction (that of the taxonomic level) used in the type:variety-mode system. I believe that modal analysis used alone does have merit today in light of the advantages of the type:variety-mode system. In fact, Smith et al. (1960:331) have pointed out that the “type:variety-mode system should be integrated with the mode study and neither should be considered or set forth in a mutually exclusive manner.” Gifford (1960, 1976) and Sabloff and Smith (1969) also thought that multiple approaches could produce useful cultural information, but especially so if correlated with the taxonomic approach (Figure 4). In a few published ceramic reports, modal studies are occasionally used for the solutions of specific problems that the type:variety-mode system cannot resolve on its own. For example, Culbert’s (1965) work in the highlands of Chiapas, Mexico involved ceramics that were either plain or redwares. He

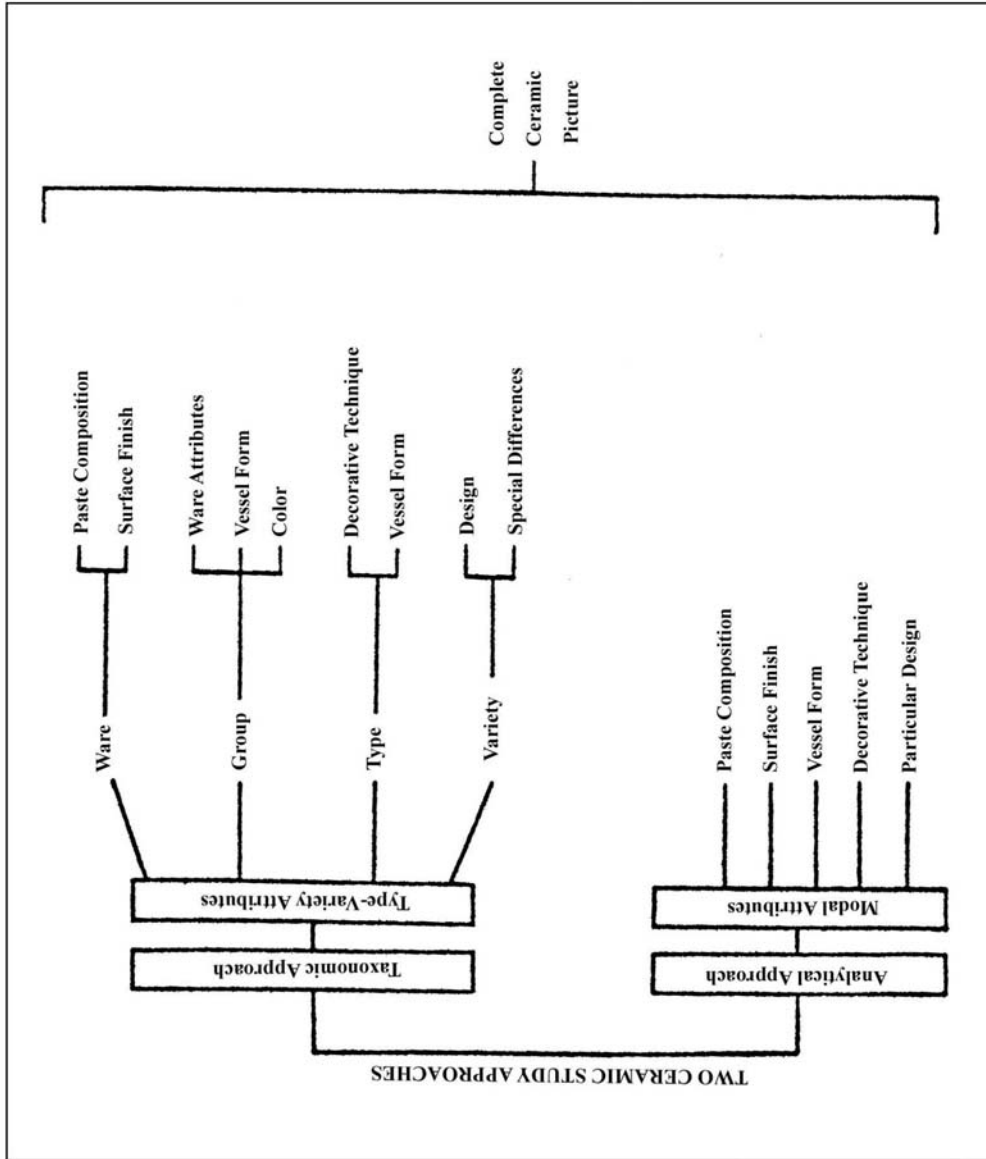


Figure 4: Attributes can serve two complementary approaches to the study of ceramics (after Sabloff and Smith 1970:Figure 1).

had to depend on changes in paste and temper to type his material, and relied more on technological aspects of the material rather than on surface color and decoration (Culbert 1965:49).

My approach to the analysis of the Late Preclassic ceramic collection at Lamanai is based on how well the ceramics ‘fit’ with other previously established site sequences in northern Belize. It was also centered on an examination of the approaches taken by other researchers in the area. Every ceramic collection analyzed at a site possesses its own set of problems and it is only when these have been recognized that progress can be made (see Hirth et al. 1989:207). Therefore, it seems sensible to understand why some researchers used certain techniques while others chose different ones. It is not a case of which methodological approach is better, but rather what questions are being asked and what kinds of classifications are necessary to answer them. As mentioned before, every northern Belize site sequence within recent years has been subjected to some adaptation of the type:variety-mode approach, with the exception of Altun Ha (Pendergast 1979, 1982a, 1990a) and Lamanai (Graham 1987) where both modal and contextual analyses were employed. Based on my initial assessment, it appeared that each of these three approaches (modal, contextual, and taxonomic) could offer valuable information toward an understanding of the Lamanai collection at both an intra-site and inter-site level. Therefore, I decided that multiple systems of analysis would be used on the Late Preclassic material at Lamanai.

My analysis involves four separate, but interrelated approaches: 1) a standard type:variety-mode method; 2) a modal analysis; 3) a contextual analysis; and 4) a technological (petrographic) analysis. These approaches and the degrees of success of each, in view of the aims and purposes of the analysis, will be discussed below.

For classificatory procedures and nomenclature I am following the basic tenets of the type:variety-mode system. Conceptually, the type:variety-mode approach is based on whole vessels as opposed to sherd material. According to Gifford (1976:6), “Theoretical implications adduced from varieties and types are founded on the realization that the production of whole vessels was the intent of the prehistoric

pottery.” However, in most cases, sherd material is often what is encountered in archaeological situations. At times, mistakes are made based on highly fragmented and weathered sherds where rims and bodies are set apart that in reality were portions of the same vessel. The Lamanai material is different from the majority of assemblages excavated in northern Belize because it focuses primarily on whole and complete vessels. My examination of these vessels is therefore based on the premise that they comprise the variety, type, and mode units that had the most meaningful interpretative significance to the potters themselves and to the community as a whole (see Gifford 1976:6).

Modal analysis is also performed on the assemblage. Following Sabloff (1975), a listing of Principal Identifying Modes will be presented in my ceramic type descriptions. My mode descriptions are based on a number of studies which have integrated both modal and taxonomic analyses: Forsyth (1983) at Edzna; Graham (1994) at sites in the Stann Creek District of Belize; Matheny (1970) at Aguacatal; Sabloff (1975) at Seibal; Sharer (1978) at Chalchuapa; and Smith (1971) at Mayapan. In effect, the modes are the principal criteria on which different varieties are based. In the majority of cases, types are given priority but, at times, individual modes are recognized and elevated to equal status (see Graham 1994:135; Sabloff 1975:3). As mentioned previously, a mode is an attribute or a combination of attributes that has temporal, spatial and/or cultural significance so much that it can cross-cut types or varieties, e.g. the mammiform foot (Valdez 1987:33). At Lamanai, this mode, among others, is temporally sensitive and occurs only during the Protoclassic (A.D. 150-250) period, a subcomplex representing an elite class phenomenon within the Late Preclassic period. Within the Protoclassic, a single mode or a combination of them on a vessel, or a set of vessels, can aid in determining temporal divisions. For example, by employing a modal examination it is possible to identify two distinct complexes within the Protoclassic period.

Although I am employing the type:variety-mode approach to the Late Preclassic ceramics at Lamanai, I will present the data in a different format. One of the biggest

problems with the type:variety-mode approach is that contextual units are removed in the data presentation section (see Ford et al. 1992:25). When ceramic reports are published using the type:variety-mode approach, little attention is paid to intra-site locations other than listing where particular types and varieties were recovered across a particular site. For example, Gifford (1976:63) lists the number of mounds and flat tests where more than 4,000 sherds belonging to the Jocote Group were derived at Barton Ramie, but it is impossible to determine which types and varieties of Jocote came from which mound or flat test. To put it another way, the context for each Jocote Orange-brown, Chacchinic Red-on-orange-brown, and Palma Daub type and variety is lacking from this kind of data presentation. How does one sort out the contexts and frequencies for each of the types and varieties when their intra-site locations are lumped together under such general headings as Mounds 10 and 18 and Flat Tests 2, 3, 5, and 6? There is no way to understand how many Jocote Orange-brown: Jocote Variety sherds and/or restorable vessels came from which contextual unit (e.g., burial, cache, midden). The problem is that context or intra-site location is identified only at the ceramic group level. Consequently, no information is given about where specific types and varieties are found around the site. In my view, it becomes difficult and confusing to compare pottery from one context with another, or compare one site with another using this commonly followed format.

A potential solution to this problem, at least for the Late Preclassic ceramics at Lamanai, is to present the data in a slightly different way. While maintaining the general format of the type:variety-mode system (e.g., type name, variety, group, ware, ceramic complex, identifying attributes, paste and firing, surface finish and decoration, forms and dimensions, etc.), the contextual units will be presented and illustrated together. This format is loosely based on that employed by Chase (1994) at Caracol, Culbert (1993) at Tikal, and Pendergast (1979) at Altun Ha. In each of these cases, the analyst decided to use an approach that grouped and illustrated pottery based on context and association. In this way, the pottery recovered from a burial or cache is presented in

accord with deposition by the Maya, rather than in analytical units (as in Gifford (1976) created by the ceramicist.

A contextual analysis (i.e., associated whole and/or complete vessels recovered from primary contexts) is also performed along with modal and taxonomic analyses. Contextual analysis is used in order to place aspects of the Lamanai ceramics within the broader archaeological picture of the site and region. The use of contextual units for comparisons fulfills the type:variety-mode system's goal of enabling "an archaeologist working at another site to recognize, without too much difficulty, whether or not the described types are present or absent at his site" (Sabloff 1975:3). The determination of where a pottery vessel was found, which vessels were associated with it, and how it related to other material provides the ceramicist with groupings of vessels that had meaning to the Maya. The Maya used various combinations of ceramics over both the short- and long-term, and they clearly recognized functional groupings of vessels and often purposefully left such groupings in the archaeological record (cf. Chase 1994:181). By determining what and how vessels co-occur, in conjunction with other archaeological data, insights will be obtained into the Maya economic system, socio-political structure, and ritual patterns that once operated across the Maya area.

In my integrative approach, the method of data presentation will prevent ceramic groups, types, and varieties from being presented together as is traditionally done in the type:variety-mode system. Consequently, an appendix (Appendix A) will contain this information, whereby each ceramic group (e.g., Sierra Group) and associated type and variety (e.g., Sierra Red: Sierra Red Variety, Sierra Red: Varieties Unspecified) are formatted in a comprehensive manner with illustrations for quick and easy reference. In this way, any analyst can look at the ceramic groups and types in the appendix and correlate them with the material at their site.

Finally, petrographic analysis is performed on a small portion of the Late Preclassic collection (16 out of 140 vessels, or 11.5% of the total) at Lamanai to reveal specific information about vessel function and pottery consumption among different segments of the Lamanai community. The use of petrographic analysis in this research

is designed to complement the stylistic analysis presented in the type:variety-mode approach. This technological approach is considered a preliminary step toward understanding changes, at both the local and non-local level, that took place with regard to temper and paste characteristics, firing techniques, and slip technology during the Late Preclassic and Protoclassic periods (Howie-Langs 2002a; Powis et al. 2002). The preliminary results for each of the 16 vessels are presented in Chapter 6 with a discussion of the results provided in Chapters 7 and 8.

CHAPTER 3:

THE STUDY AREA

INTRODUCTION

The Maya area is regarded as a major cultural and environmental division within the broader Mesoamerican entity. The Maya area as it is defined today by geopolitical units encompasses the southeastern extremity of Mexico, including the whole of the Yucatan Peninsula and most of the modern states of Chiapas and Tabasco, the nations of Belize and Guatemala, and the western parts of Honduras and El Salvador. Traditionally, the Maya region has been divided into two broad zones, the lowlands in the north and the highlands in the south. They are arbitrarily separated geographically by the 1000 meter elevation contour and by cultural traits specific to the Classic (A.D. 250-900) period. All lowland Maya sites lie between latitude 15° and 22° north and between longitude 87° and 93° west, an area wholly within the tropics and measuring about 850 kilometers north-south and about 550 kilometers from Comalcalco, Mexico to the coast of Belize (Hammond and Ashmore 1981:20). Within this 350,000 square kilometer area the landscape is considered to have a relatively similar geological composition, but the physiographic and biotic characteristics vary greatly. Given the diversity of environmental settings in this tropical lowland zone, the ancient Maya gained access to and used a wide range of local resources, including arable soils, different types of construction materials, raw stone for tool making, terrestrial and aquatic biota, and water for consumption and agriculture.

In this chapter, I present a brief overview of the cultural setting of the Maya lowlands followed by a description of the geographical and environmental context of the study area. In terms of geography, there is a section on the Maya lowlands with a concentration on Belize. The major subdivisions include the physiography, climate, regional geology, and flora and fauna of the lowland area. Another section narrows in scope considerably to northern Belize, specifically on the site of Lamanai. A brief

discussion of the environmental zone surrounding Lamanai is presented. This is followed by a description of the site and a summary of archaeological investigations conducted over the past 25 years by David Pendergast and Elizabeth Graham.

THE CULTURAL SETTING

In Mesoamerica, the time period between initial occupation by Holocene hunters and gatherers and the arrival of the Spanish has traditionally been divided into five periods or stages: Paleoindian/Lithic (ca. 10000-7000 B.C.), Archaic (ca. 7000-2000 B.C.), Preclassic/Formative (ca. 2000 B.C. - A.D. 250), Classic (A.D. 250-900), and Postclassic (A.D. 900-1500) (Sharer 1994:45-48). Whereas some regions in Mesoamerica are known to have been occupied during the Paleoindian and Archaic periods, there is limited evidence for this early occupation in the Maya lowlands. In particular, very few Paleoindian sites have been found in Belize (Hester et al. 1981), but there is significantly more data from the Archaic period, especially from northern Belize, where a number of projects have isolated these early deposits (Hester et al. 1980, 1996; Iceland 1997; Jacob 1995; Jones 1991, 1994; Kelly 1980, 1993; Lohse 1993; MacNeish and Nelken-Turner 1983; MacNeish et al. 1980; Pendergast 1981a; Pohl et al. 1996; Rice 1976; Wilson et al. 1998). Based on these findings, firm evidence now exists for people occupying northern Belize from at least 3500 B.C. onwards. Thus, archaeological investigations in this region have revealed a long chronological sequence extending from the late Archaic period through Historic and modern times.

As in other areas of the Maya lowlands, the principal periods of cultural development in northern Belize follow the Archaic period and include the Preclassic, Classic, and Postclassic periods. Table 1 provides a listing of the major period divisions and several well-established local ceramic sequences in the region and adjacent areas of the lowlands. Of the most interest to the present study is the Preclassic, the first time period during which there is firm evidence of permanent settlements throughout the lowlands. The Preclassic in northern Belize has traditionally been subdivided into four eras: Early Preclassic (2000-1000 B.C.), Middle Preclassic (1000-400 B.C.), Late

Preclassic (400-100 B.C.), and Protoclassic (100 B.C. - A.D. 250). As Table 1 indicates, several of these periods have further been subdivided into two or more facets or phases.

Several local ceramic sequences have been developed for sites in northern Belize, allowing for strong temporal control at the site level and providing a means of comparison among sites in the region. The ceramic sequences from Colha (Valdez 1987), Cuello (Kosakowsky 1987), and San Jose (Thompson 1939) are the most established and utilized sequences in the region; however, additional local sequences have also been constructed for the sites of Altun Ha (Pendergast 1979), Cerros (Robertson-Freidel 1980), Chan Chich (Valdez 1998), K'axob (Lopez Varela 1996), Kichpanha (Reese and Valdez 1987; Meskill 1992), La Milpa (Kosakowsky and Sagebiel 1999), and Santa Rita (Chase and Chase 1988). Despite the differences in geography, the similarities among the local ceramic assemblages indicate a closely-knit regional sequence.

THE NATURAL SETTING

Physiography

The lowlands consist of a large limestone and karst platform, known as the Yucatan platform, which emerged from the sea during the Pleistocene Epoch (West 1964a:70). In Eocene and Miocene times (58-24 million years ago), the Yucatan area, which includes Belize, was tilted and uplifted from a marine environment exposing primarily carbonate and limestone materials (Figures 5 and 6). The Yucatan platform extends north and east of older metamorphic formations containing such minerals as quartz, granite, and porphyrite. These formations, the Maya Mountains predominate among them, along with the limestone platform, have eroded over time, and the ground surface in many areas is now covered by clay, gravel, sands, and alluvial silts (Wright et al. 1959:23). In comparison to Mesoamerica as a whole, the area is relatively flat, but it is variable on a smaller scale due to the presence of the Maya Mountains and Toledo

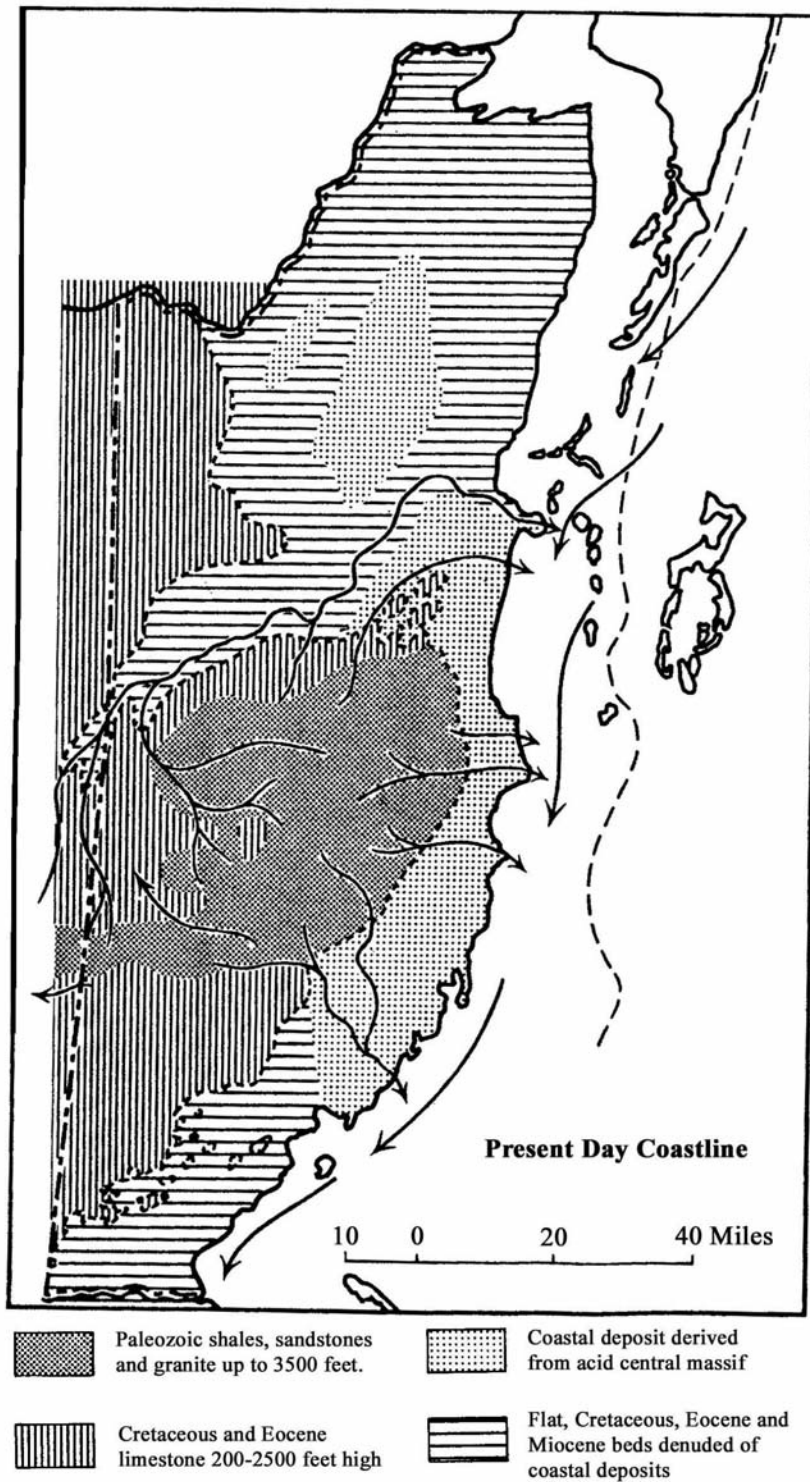


Figure 5: Map of Belize showing geological deposits (after Wright et al. 1959:Figure VI D).

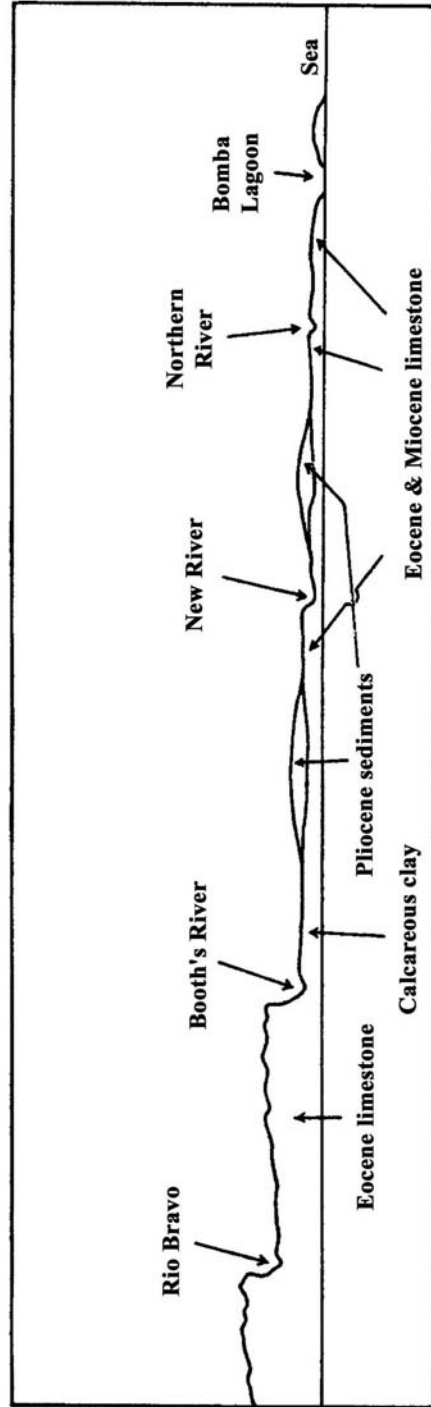


Figure 6: West-East transect showing topographic relief and geological deposits of Northern Belize running from the Guatemalan border to the Caribbean Sea (after Wright et al. 1959:Figure VI).

beds in the south and the general uplifting and erosion of the limestone substrate (West 1964a:71; Wright et al. 1959: Figure 5). The land has little relief in the north, averaging 40 meters in elevation, whereas older limestone formations to the south form low, hilly surfaces with the highest point around 350 meters. The dominant geological feature is the Maya Mountains, located in southern Belize, that reach 1000 meters or more in height (Wright et al. 1959:22-23).

The limestone platform is karstic, which means that it experiences limestone solution (West 1964a:72). In the north, and largely but not entirely north of Belize, sinkholes, or large, circular voids in the limestone called “cenotes” in the Yucatan Peninsula, are common (Tamayo and West 1964:99). Elsewhere limestone solution occurs, but the geology is more complex, so that rivers carry most of the rainwater in the rest of Belize, although smaller sinkholes or underground sources of water are not uncommon. The ancient Maya would have gained access to the water table via sinkholes where other forms of surface water were unavailable. This karstic environment has also been shaped by erosion, slumping, and faulting, which resulted in the formation of three important physiographic features, especially characteristic of northern Belize: escarpments, uplands, and bajos or seasonal swamps.

The dominating geographical features of Belize are its rivers, which provided the major channels of communication in the rainforest environment during prehistoric times. As one moves away from the subsurface water systems of the northern Yucatan Peninsula, drainage becomes increasingly superficial across Belize and the Peten of Guatemala. In Belize there are numerous inland marshes, lagoons, bajos, aguadas, streams, and rivers that drain eastward into the Caribbean Sea. Some rivers move more rapidly than others, depending on topography. The largest river, the Belize River, cuts the country in half and flows largely west to east from various tributary sources in the Peten, Guatemala and western Belize, eventually emptying into the sea at Belize City. In northern Belize, many rivers, including the New River that flows past Lamanai, are sluggish due to extremely low gradients. River flooding occurs annually in Belize with all rivers overflowing in periods of heavy rainfall. Deposition of significant alluvial

deposits onto floodplains occurs mainly from the Belize River south, however. Lamanai's New River is believed to flow along a fault line in the limestone karst, and rapid passage of floodwaters through the porous limestone bedrock leaves little in the way of productive alluvium (Elizabeth Graham, personal communication, 2002). Most prominent flooding occurs in times of severe weather associated with hurricanes (e.g., Hurricane Hattie in 1961 and Hurricane Mitch in 1998).

Climate

The climate of Belize is a function of its tropical latitude, the prevailing winds, the adjacent ocean mass, and the variations in land surface elevation (Johnson 1983:10; Lundell 1937:6-8; Vivo Escoto 1964:188; Wright et al. 1959:15-22). Belize falls in the range generally considered to be a humid tropical climate with an average temperature never falling below 18°C, and an average annual rainfall of over 1,000 mm. In northern Belize, the total annual rainfall is between 1,300 and 2,000 mm, and a pronounced dry season occurs between December and April (Johnson 1983:10). A defined rainy season occurs during the months of May to November. Relative humidity is more than 80 percent throughout the lowlands in both the dry and rainy seasons (Wright et al. 1959:15). In this region, Brokaw and Mallory (1993:12) have stated that from November to January the daytime temperature averages 24°C, and from April to September the daytime temperature averages 26° C. The coldest months are January and February when cold northeasterly winds move down from the Gulf of Mexico. The hottest months are generally April and May at the end of the dry season when daytime highs routinely exceed 32°C. This is a critical period of time for vegetation and animal life in the area because drought and heat reach their maximum intensity (Lundell 1937:16-80, 98-205).

Flora and Fauna

In the Maya lowlands, there are a wide variety of forest communities that grow year round. A number of classification schemes have been established for modern

lowland vegetation (Beard 1955; Ford 1981; Holdridge et al. 1971; Lundell 1937; Rice 1974, 1993; Wagner 1964; West 1964b; Wright et al. 1959). The critical factor in these classification schemes is determined primarily by soil moisture. In Belize, one of the most widely accepted schemes is that by the Land Use Survey Team who identified such categories of vegetation as tropical dry forest, tropical moist forest, and tropical wet forest (Figure 7) (Wright et al. 1959:29). Each of these subtypes has been separated from the dominant vegetation type, the tropical broadleaf forest (Wright et al. 1959:29). The tropical broadleaf forest, with its multi-storied canopy of trees, includes species such as the ceiba (*Ceiba pentandra*), sapote (*Achras chicle*), cohune palm (*Orbignya cohune*), escoba palm (*Crysophilia argentes*), allspice (*Pimenta dioica*), copal (*Protium copal*), ramon or breadnut (*Brosimum alicastrum*), mahogany (*Swietenia macrophylla*), bullet tree (*Bucida buceras*), trumpet tree (*Cecropia peltata*), wild bay cedar (*Guazuama ulmifolia*), spanish cedar (*Cedrela mexicana*), Wild fig (*Ficus* spp.), and sapodilla (*Manilkara zapota*) (Hammond 1982:351; Lundell 1937:49-81, 156-189, 195-204; Pendergast 1979:8; Willey et al. 1965:23; Wright et al. 1959:28-33, Appendix III).

For the coastal plain of northern Belize, Brokaw and Mallory (1993:17-18) have recently classified four categories of vegetation, including upland forest, transition forest, riparian forest, and scrub swamp forest. Combined, these principal vegetation types make up approximately 92% of all vegetation areas present in the region. Other subgroups exist for the region and they are identified as cohune palm forest, marsh, mangrove, palmetto savanna, forest/milpa mosaic, and large milpa.

Variations in topography, geology, pedology, climate, and history of human occupation have influenced the existing pattern of vegetation across the lowlands (Rice 1974:12; Rice and Puleston 1981:122; Wright et al. 1959:29). In prehistoric times, Maya settlement was situated in “areas of limestone geology, free-draining soils, and original broadleaf forest” (Hammond 1982:351). By the Classic period, the character of the tropical broadleaf forest was highly shaped or altered by the Maya through intensive forms of agriculture and other forms of resource procurement, including both

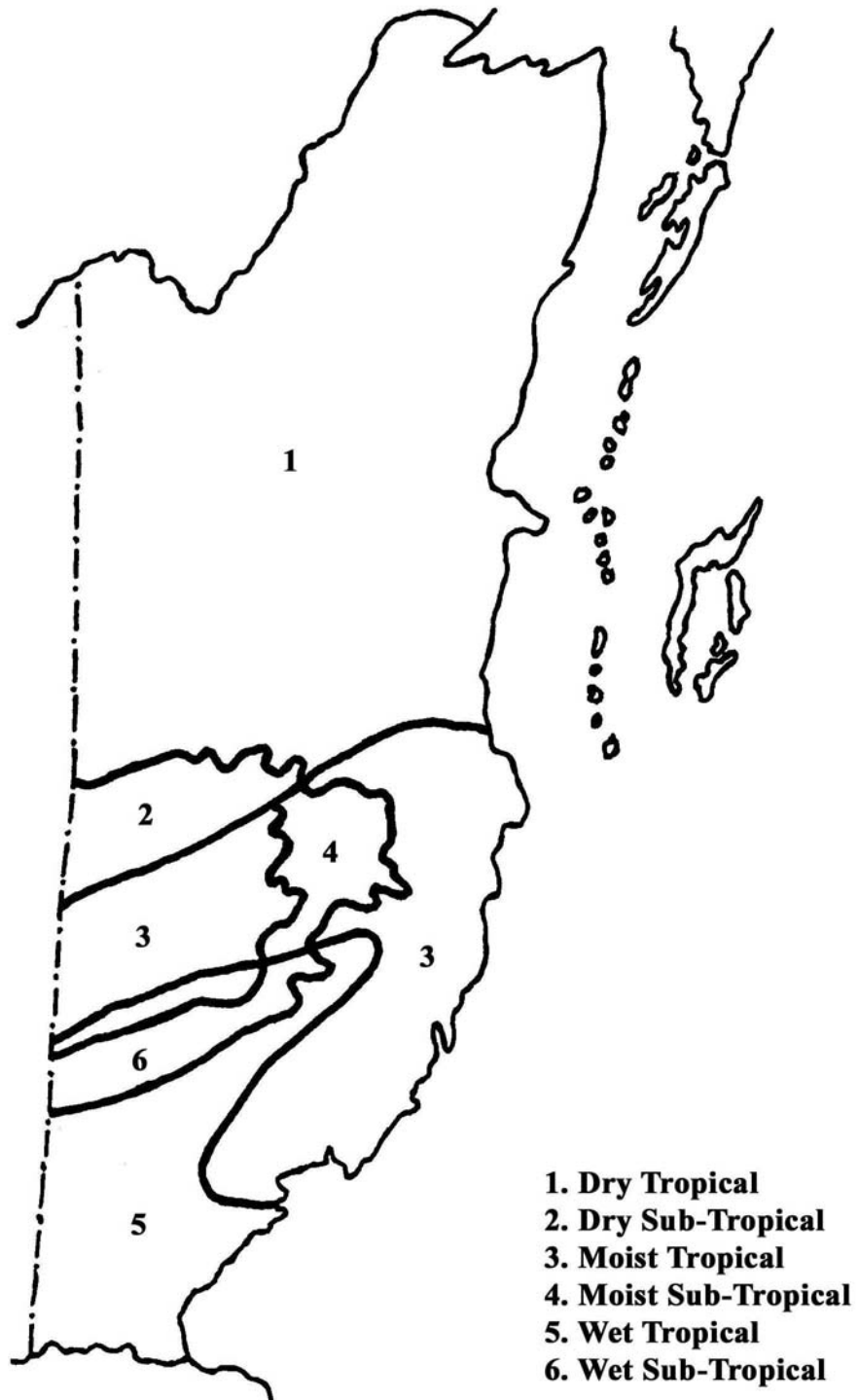


Figure 7: The environmental zones of Belize (after Wright et al. 1959:28).

domesticated and semi-domesticated plant and animal species. Paleoecological data has been interpreted by some to indicate that, by Late Classic times in the central and eastern Peten and northern Belize, the landscape was denuded (Jacob 1995; Jones 1994; Rice 1993). Deforestation, intensive agriculture, field abandonment, and natural succession are suggested by pollen deposition. The practice continues today whereby many areas of the lowlands have been extensively cleared for both commercial plantation and pastoral development. Although this clearing has altered the natural plant distribution and environment of the area, paleoethnobotanical studies have shown that the dominant species in the lowlands today are the same as those which dominated in the past (Lentz et al. 1997:64; Webbeking 2000).

The distribution of fauna in the lowlands is dependent largely on the aforementioned vegetation, climate, and geologic patterns, in that these factors interact to provide for a complex distribution of exploitable niches. The fauna inhabiting northern Belize are both diverse and abundant, and are represented by a number of large and small mammals as well as a variety of colorful birds and reptiles. The coastal plain environment of northern Belize hosts a wide assortment of terrestrial species, including agouti or paca (*Agouti paca*), armadillo (*Tatusia novemcinctus*), red brocket deer (*Mazama americana*), white-tailed deer (*Odocoileus virginianus*), tapir (*Tapirella bairdi*), howler monkeys (*Alouatta palliata*), opossum (*Didelphis marsupialis*), peccary (*Tayassu* sp.), rabbit (*Sylvilagus* sp.), chachalaca (*Ortalis vetula*), and ocellated turkey (*Agriocharis ocellata*). Additionally, a number of aquatic species were available such as catfish (*Siluriformes* sp.), molluscs (*Nephronaias* sp., *Pachychilas* sp., *Pomacea* sp.), turtles (*Chelonia* sp.), and crocodiles (*Crocodylus moreletii*) (Hammond and Ashmore 1981:27; Pendergast 1979:9-12; Rice 1974:18; Stuart 1964; Willey et al. 1965:23; Wright et al. 1959:Appendix IV). The coastal waters of the Caribbean Sea were also the source of marine shellfish (*Strombidae*, *Olivae*, *Cypraeidae*, *Prumun*, *Dentalium*), crustaceans (*Brachyura* sp.), reptiles (*Sauria*), fish (*Lachnolaimus* sp., *Epinephelus* sp., *Sparisoma* sp.), and mammals such as the manatee (*Manatus americanus*).

THE ENVIRONMENTAL AND GEOLOGICAL SETTING OF LAMANAI

The site of Lamanai is located in north central Belize in the Orange Walk District. It is situated on the northwestern edge of the New River Lagoon at the headwaters of the New River. The New River flows northward and empties into Chetumal Bay of the Caribbean Sea. The distance from Lamanai to the sea, via the New River, is roughly 80 kilometers. The elevation of the lagoon measures approximately 1.5 meters above sea level (Powis 2001a.). The lagoon is fed by groundwater from seasonal rainfall as well as a number of natural springs that are located at its southern end.

The site is bounded by the lagoon on the eastern margin and by Barber Creek on the north. Its true western and southern limits are not well defined. The area on the eastern side of the lagoon consists of a savanna environment, called “pine ridge” in Belize, composed of large expanses of scrub vegetation, including pine, palmetto, oak, calabash, craboo or nance trees, and savanna white poisonwood (Lambert and Arnason 1978). Although the pine ridge side of the lagoon is relatively flat and frequently floods, resulting in swamp-like terrain, preliminary geological data indicates that sediment deposition has been minimal in prehistoric and modern times (Salvatore Mazzullo, personal communication, 2001). Additionally, the soils immediately adjacent to the lagoon are part of the Yaxa Suite, which is characterized by sandy (calcareous) clays, derived from Miocene limestone deposits (Emery 1986:33; King et al. 1992:245; Wright et al. 1959:69, Figure VII). Further to the east, the soils of the savanna belong to the Xaibe clays, a subsuite of the Pembroke Suite. It developed from brown limestone soil made up of hard tuffaceous coral gravel and grit (Wright et al. 1959:66, Figure VII). The Xaibe clays are very poor for agricultural production because of the high iron oxide content of the matrix, which produces low crop yields (Wright et al. 1959:66).

On the west side of the lagoon, where the site is located, the ground displays more relief than the pine ridge, and is characterized by gently rolling and undulating hills. The vegetation is also different on the west side of the lagoon and consists of tropical broadleaf forest. The topography results from the erosion of Remate gravel

clay, a subsuite of the Bahia Suite. It is a poorly drained clay made up of coral limestone gravel (Wright et al. 1959:63, Figure VII). Therefore, the setting of Lamanai is one in which access to a diversity of natural resources was facilitated by the existence of a variety of ecozones; this was likely an important factor in initial site selection and long-term settlement success.

The immediate environs of Lamanai are fairly rocky with good, fertile soils located to the west of the site (David Pendergast, personal communication, 1998). There are also many small bajo zones in this area that would have been attractive for agricultural purposes. Although the presence of good agricultural soils may not have been Lamanai's main attractant, its riverine setting provided ready access to rich fish, gastropod, and turtle populations (Emery 1986), and also to an endless supply of water for the community. Perhaps of prime importance was access to water-borne trade, and Lamanai's position at the confluence of the lagoon and the New River suggests strategic motives for site location as well (Elizabeth Graham, personal communication, 2002). Few Maya sites were so well situated as regards water supply as was Lamanai, and there is little doubt that the high ground at a lake margin was about as favorable a location as any ancient Maya group could have found. Despite the attractive setting from a resource use point of view, David Pendergast (personal communication, 1998) has recently suggested that the location of Lamanai was set by political and religious considerations rather than the idea that the physical environment was the main determinant.

ARCHAEOLOGICAL RESEARCH AT THE SITE

Site Description

The site of Lamanai represents an adaptation to a lacustrine environment as indicated by its strip-like settlement layout along the lagoon shore (Figure 8). Given its location, Lamanai has a decidedly non-standard settlement pattern whereby structures

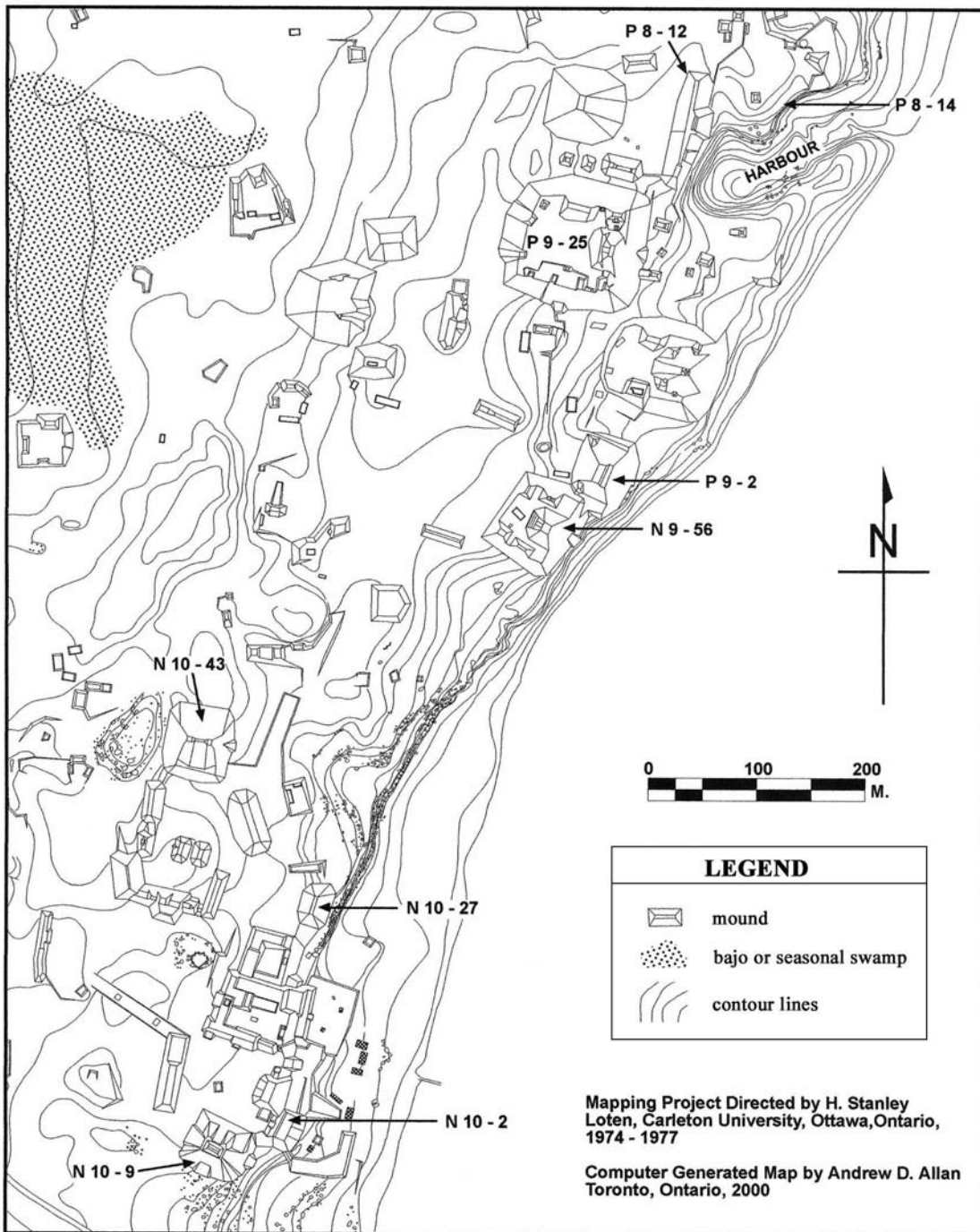


Figure 8: Map of Lamanai showing concentration of structures running along the edge of the New River Lagoon (after Pendergast 1981a:Figure 3).

are spread out along the western margin of the New River Lagoon. Only the site of Barton Ramie, located in the Belize River Valley, has a similar settlement pattern (Willey et al. 1965:561). According to Pendergast (1981a:32), the orientation of Lamanai is one:

in which the usual arrangement of one or more ceremonial precinct plaza groups, surrounded by zones of residential and other small structures, gives way to a sort of massive strip development with not a single ceremonial grouping resembling those generally encountered elsewhere.

The site of Lamanai covers a total of 4.5 square kilometers with eight major plazas or groups of ceremonial structures forming the Central Precinct. A total of 718 structures have been mapped across the entire site, of which 37 were excavated by 1980 (Pendergast 1981a). Primary deposits dating to both the Middle and Late Preclassic periods were exposed in 11 of these sampled structures, about 25% of the total surveyed. Most of the Preclassic settlement is dispersed within a two kilometer strip along the lagoon edge. To date, it appears that the Preclassic central precinct was located in the north (close to the Harbor area), with a shift of the central precinct southward as evidenced by the location of Classic, Postclassic, and Historic site centers. However, Preclassic settlement in general is widespread, extending as far south as the site of Lamanai South, located about three kilometers south of the Spanish churches (Howard and Graham 1998).

The orientation of the site may well reflect the desire for easy access to the traffic going up and down the New River. As noted above, Lamanai's position is clearly strategic with regard to two culturally defined resources: transportation and communication. The inhabitants of Lamanai, as well as those from other communities situated along the waterways of northern Belize, were most likely engaged in the riverine trade of local and nonlocal goods and exchange of information and ideas about markets, resources, and political and social conditions.

History of Investigations

The history of interest in Lamanai has been summarized by Pendergast (1981a). The earliest accounts come from two Spanish Franciscan friars, Fathers Bartolome de Fuensalida and Juan de Orbita, who found their church and other buildings burned and abandoned by rebellious Maya in 1641 (Pendergast 1981a:31; see also Pendergast 1991:346). Between the mid-17th century and the early 20th century, the site remained untouched by archaeologists. Exploratory and sporadic archaeological research at Lamanai began in the early 1900s when Thomas Gann (1926) excavated a stela and a structure adjacent to and north of the historic period church that burned in A.D.1641 (Jones 1989:216, 286-288; Pendergast 1981a:32). Over the next fifty years, brief visits involving limited testing and surface collections were made by a number of archaeologists, including J.E.S. Thompson (1939), William Bullard (1965), and Thomas Lee (see Pendergast 1981a:32).

Between 1974 and 1986, the Royal Ontario Museum (ROM) Lamanai Project, directed by David Pendergast, carried out intensive archaeological investigations at Lamanai. The site was chosen for intensive study based on the presence of the ruins of a sixteenth century Spanish church, which indicated historic occupation (Pendergast 1981a:29). Lamanai was also selected because of the presence of large and complex monumental architecture that suggested an important and sizable community during the Classic period. Therefore, it was expected that excavations would provide information on a long sequence of occupation (Pendergast 1981a:31). Lamanai is also one of few sites in the Maya area for which we have the Precolumbian name, Lama'an/ayin, which translates as "submerged crocodile", and is further verified by saurian imagery found throughout the site and from a variety of different contexts (Jones 1989:286; Pendergast 1981a:32, 38).

The site was mapped from 1974 to 1976 under the direction of H. Stanley Loten of Carleton University, who also served as the project architect. The Lamanai Archaeological Reserve was created in 1976, a 950 acre park protected by the Belizean Government. It is a cultural and natural reserve devoted to conservation, research, and

the protection of both the site and the biota living within its environs. In 1979, Dr. Elizabeth Graham, then Archaeological Commissioner of Belize, joined the project and remained until its termination. By 1986, a number of areas around the site had been intensively excavated as well as major structures stabilized and consolidated (Pendergast 1992). In 1992, the Belizean Government received funds from USAID to initiate a four year program of restoration and development at Lamanai.

In 1995, minor excavations were initiated by Herman Smith at a place called Lamanai South, a residential group located about three kilometers south of the central precinct (Howard and Graham 1998). These excavations were first directed by Herman Smith and Mark McField, and later in 1996 by Laura Howard. The Lamanai South excavations were run as a field school organized by the Lamanai Field Research Centre (LFRC), located at the Lamanai Outpost Lodge in Indian Church. The LFRC was established officially as a non-profit organization in 1998. Since 1997, both fieldwork and laboratory analyses have been ongoing under the auspices of the Lamanai Archaeological Project (LAP), directed by Elizabeth Graham. The program of research is inter-disciplinary in nature and focuses on many aspects of material culture relating to the long history of occupation at the site (Graham 2000; Howie-Langs 2002b; Meadows 2001; Powis 1999, 2000b; Shelby 2000). Financial support for the excavations has been provided by the Social Sciences and Humanities Research Council (SSHRC) of Canada, the Royal Ontario Museum, York University, University College London, and the British Academy.

Based on the work of Pendergast and Graham, the site of Lamanai has revealed a long, largely uninterrupted stratified sequence of occupation dating from the Early Preclassic to the Spanish and British Historic periods, roughly three thousand years of cultural development, from ca. 1500 B.C. to A.D. 1900 (Pendergast 1981a:34, 1986:226; Graham 2000). The earliest evidence of occupation at the site is not based on ceramic or architectural data but is, instead, derived from wood stratigraphically associated with corn pollen found in the harbor located at the north end of the site (Pendergast 1998:56). A radiocarbon date of 1500 B.C. is given for the concentration of

pollen that Pendergast (1998:56) believes was an offering of “whole young corn plants tossed into the waters from a boat, raft, or platform.”

However, it is not until the late Middle Preclassic (600-400 B.C.) period that there is more substantial evidence of occupation. A number of structures, including Structures N9-56, N10-43, P8-9, P8-11, and P8-103, have been securely identified as dating to this period (Pendergast 1981a:42; Powis 2000b). The most intensive occupation and construction began in the Late Preclassic period with numerous structures, including some monumental in scale, being built in the northern and central areas of the site. Based on architectural and ceramic data, it is during this period that the site experienced its first major peak of cultural activity. Continuous occupation occurred throughout the Classic (A.D. 250-1000), Postclassic (A.D. 1000-1450), and Spanish Historic (1450-1700) periods with shifts in focus of settlement from north to south. A brief overview of some of the major structures excavated by the Royal Ontario Museum Lamanai Project is presented below in order to give the reader an idea regarding the nature and extent of occupation, in both time and space, across the site from Preclassic to Historic times.

In the mid-to-late 1970s, Pendergast (1981a) undertook investigation in the northern part of the site. These excavations were centered on both ceremonial and residential buildings and the data collected revealed extensive architecture dating to the Middle and Late Preclassic periods. One of the most significant structures in this area, halfway between Structure N10-43 and the Harbor, is Structure N9-56, now known as the Mask Temple. This 17 m tall platform group, which borders the lagoon, was chosen for excavation based on its apparent architectural similarities with Structure N10-9 (Pendergast 1981a:36). Initial construction dates to the Late Preclassic (Pendergast 1981b:96), and the earliest phase encountered comprises a Late Preclassic structure adorned with masks. The only mask excavated, and subsequently sealed, closely resembles those encountered on Structures 5C-2nd and 6B at Cerros (Freidel 1977, 1979:45-46, Figures 7 and 8). The final major modification, in the form of the Lamanai Building Type, has been dated to the Late Classic. The Lamanai Building Type refers to

the presence of a chambered building set across the center stair of a terraced platform with no building at the structure summit present (Pendergast 1981a:35). However, it is the Middle Classic primary structure that is of interest because of the discovery of large, stone masks that adorn the stairside outsets. The only exposed example has a headdress depicting crocodile features (Pendergast 1978, 1981a:37-38). Two tombs were also discovered here, one along the primary axis and the other within the platform that supports N9-56 and its flanking structures (Pendergast 1978, 1980b:3, 1981a:38-39).

Other notable structures in the Preclassic central precinct, located in the northern portion of the site, include structures P9-2, P9-25, P8-9, and P8-12 (Figure 9). Structure P9-2 is an isolated pyramidal structure located just north of the Mask Temple. Its primary structure dates to the Late Preclassic and, like many other of Lamanai's major structures, never supported a chambered building. Only two offerings were unearthed during excavation, with the vessels dating to the first Century A.D. (Pendergast 1981a:40). A number of structures were investigated adjacent to the Harbor, a feature possibly identified with storing, loading, and/or shipping of material goods to and from local and nonlocal communities (Pendergast 1981a:40; Powis 2000b:4-10; Powis et al. n.d.). Structure P9-25 is a massive acropolis-like architectural assemblage located only a few meters from the Harbor. This giant platform, the largest at the site, measures 90 m by 110 m on the top, and is 18 m tall. On its summit are several buildings that are 9-10 m in height (Pendergast 1981a:34). Testing of two of these structures did not reveal any offerings but, based on sherds recovered from core, the final modifications may have been made around A.D. 400.

Structure P8-9, a small pyramidal structure, was also tested, revealing a sequence of construction ending around 300 B.C. Two Late Preclassic burials were uncovered with one accompanied by seven pottery vessels (Pendergast 1981a:40). One of the vessels from this burial included the earliest crocodile representation discovered at the site, dating to 300 B.C. or so. Its discovery strengthens the suggestion that the ancient name of the site was Lama'an/ayin or submerged crocodile (Pendergast

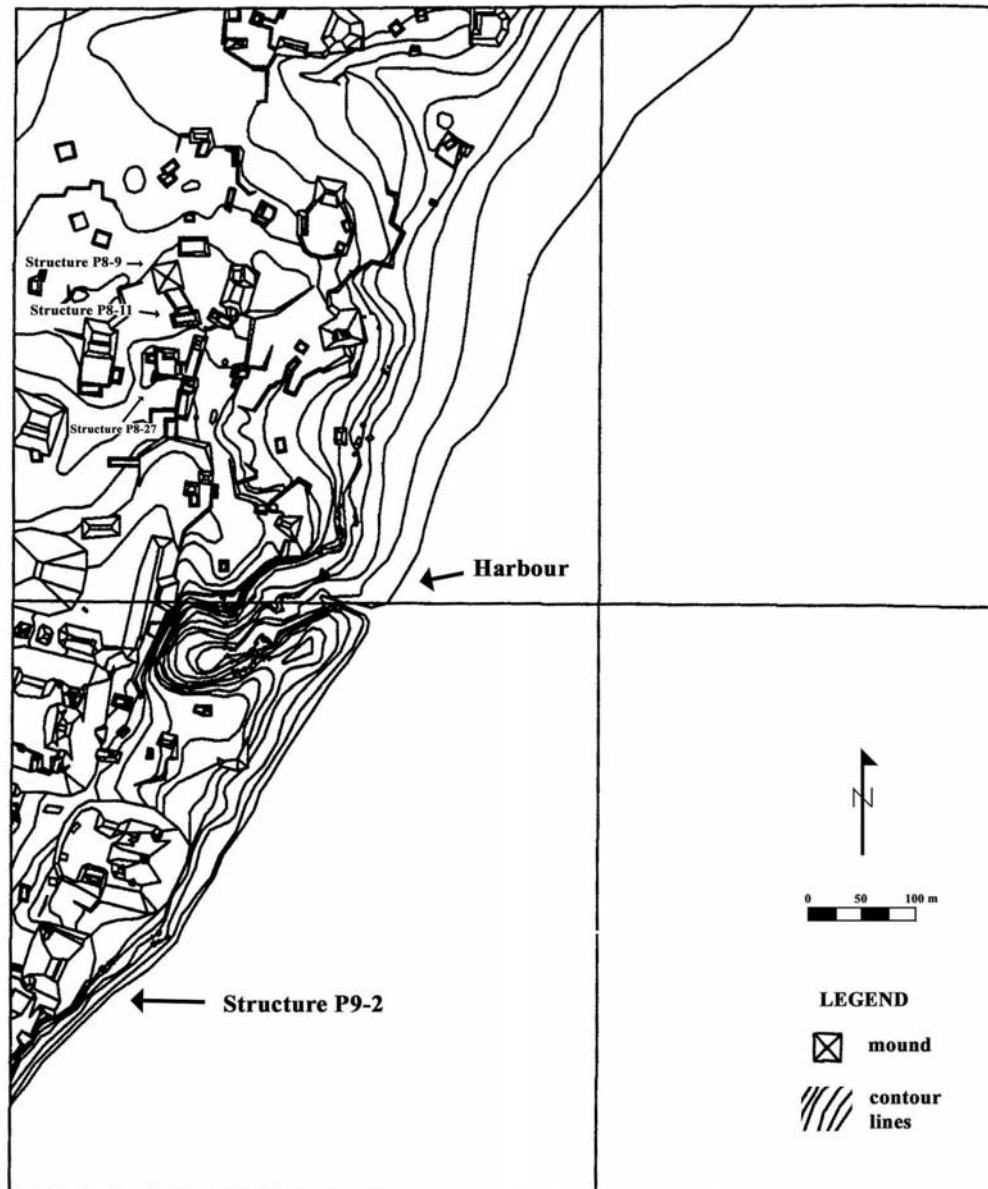


Figure 9: Northern area of Lamanai showing the Harbor and excavated Preclassic structures. Drawing digitized by Peter Gross and modified by Terry Powis.

1980b:2). Another platform, Structure P8-12, located northeast of Structure P9-25 and adjacent to the Harbor, was excavated by Pendergast (1981a:40). It is a long platform measuring 97 m on the top and exhibits no superstructure. Testing of its final modification revealed a Late Preclassic date. To date, there is no solid evidence to suggest that Structure P8-12 was used as a docking and/or storage facility for a Harbor. Recent archaeological and geological investigations in the Harbor zone have cast some doubt on its function as a harbor at all (Powis et al. n.d.).

Farther north is an unusually large, three-chambered chultun (Feature P8-2), a subterranean feature carved into bedrock and used by the ancient Maya for storage purposes. It is associated with a group of five structures. It yielded hundreds of apple snails (*Pomacea* sp.) as well as numerous intact and fragmented Late Preclassic vessels dumped in as refuse (Pendergast 1981c:62, 1981e:3-4). The majority of these ceramics date to the Protoclassic period, the largest sample of such material recovered from the site. In the extreme northern part of the site, near Barber Creek, are extensive areas of raised fields presumably used for agricultural purposes.

In the early years of investigation at Lamanai, Pendergast focused primarily on the structures nearest to the area where the camp was established. Excavations revealed occupation dating from Classic to Late Postclassic times. Intensive and extensive investigations were undertaken of many structures of different sizes, shape, and status, including Structures N10-9, N10-27, and N10-43. On the south end of one of the main plazas at Lamanai is Structure N10-9, now known as the Temple of the Jaguar. The earliest phase encountered dates to the Early Classic (6th century A.D.) and stood approximately 19 m in height. During the Late Classic and Early Postclassic periods, modifications were made to the front of the structure only, including new stairs and stairside outsets (Pendergast 1978, 1980b, 1986:230-231). While numerous offerings were found along the primary axis, no tombs were encountered (see Pendergast 1998). One cache, for example, associated with the Late Classic modification, contained a jade mosaic mask. The structure was largely abandoned, probably by the 14th century, with a number of Buk phase censers and chalices (a shallow dish set atop a very high

pedestal base) smashed and scattered over the steps (Pendergast 1981a:43-44, 1981b:97; Elizabeth Graham, personal communication, 2002). Some Historic Yglesias material has also come from small, frontal additions (David Pendergast, personal communication, 2002). One of the most important aspects of this structure is its distinctive Late Classic architectural form; the first evidence of the Lamanai Building Type was identified as part of Structure N10-9.

The tallest structure at Lamanai, known as the High Temple, is Structure N10-43. This multi-terraced platform was built in the Late Preclassic (ca. 100 B.C.) period and measures 33 m in height (Pendergast 1981a:41, 1981b:96). The primary structure had a tripartite stair flanked by large masks with a triadic arrangement of false temples at its summit. Prior to the massive construction of this ceremonial structure around 100 B.C., there was a series of residential buildings erected on the spot with an associated hearth (Pendergast 1980a:2). During the Late Classic, Structure N10-43 was modified, which involved the creation of a single stair, the engulfing of the false temples at the summit by an uppermost platform terrace with a featureless surface, and the addition of a range structure that spanned one of the front terraces. A number of caches helped to date the various construction phases of this structure (Pendergast 1981a:40-41, 1998:56). More information is currently forthcoming as the result of an International Development Bank (IDB) reconstruction project directed by Claude Belanger. So far, features of the Late Preclassic phases are becoming much clearer, as in the Late Classic structure, but intervening phases remain highly elusive (Elizabeth Graham, personal communication, 2002)

Located just to the south of the High Temple is the only ballcourt at Lamanai. The ballcourt consists of two low, parallel structures (Structures N10-40 and N10-41) that date to the Terminal Classic (9th Century A.D.). The ballcourt is diminutive in size, oriented north-south, and in the middle of the playing alley is a massive marker disc. Below this stone marker was a cache that contained a Terminal Classic-style lidded vessel, inside of which were two miniature vessels, a quantity of cinnabar, and small objects of jade and shell, all resting in a 9.7 cc pool of liquid mercury (Pendergast

1981a:40, 1982b, 1986:229-230). This ballcourt is very reminiscent of ballcourt Structure 61 at Cerros (Scarborough 1985:336).

Just to the southeast of the ballcourt at Lamanai is Structure N10-27. It is a moderately large terraced platform that dates to the Late Classic, but there is also a midden that accumulated around the frontal terraces and stair that dates from the 9th to 12th century (Graham 2001). Digging at the base of the stair in 1983, Pendergast and his colleagues also uncovered a beautifully carved stela, Stela 9, lying face down, with an accession date of A.D. 609 and a date of erection in A.D. 626 (Pendergast 1983, 1988). Around the same time excavations at Structure N10-27 were being conducted, investigations began further south in Plaza N10-3, an elite residential and administrative assemblage now known as the Ottawa Group (Pendergast 1982c, 1982d, 1986:231-233, 1990b:172). Current excavations continue in this area (Graham 2001). The earliest construction encountered here is the Early Classic. At least six of the buildings stood around the courtyard in the Late Classic. Sometime in the 8th century the courtyard began to be filled with boulders. These raised the courtyard surface considerably and covered at least three of the buildings. Modifications continued into the Postclassic, although the final dates of construction and use are not yet known (Elizabeth Graham, personal communication, 2002). The most distinctive feature in this group is the remains of a polychrome stucco facade that adorned the upper zone of Structure N10-28 (Pendergast 1986:231; Shelby 2000; Shelby and Reents-Budet 2001), and dates to around A.D. 800.

At Lamanai, the highest concentration of Postclassic ceremonial and mortuary construction is found in the camp area and adjacent zones. Many of the structures in this area (Structures N10-1, N10-2, N10-4, and N10-7) demonstrate architectural and ceramic affinities to Yucatecan sites (Pendergast 1986:235). Associated with these structures were numerous Postclassic (Buk and Cib phase) burials (Graham 1987), which contained many vessels (e.g., chalices), copper objects (e.g., bells, rings), gold objects (e.g., sheet coverings), pyrite mirrors, shell objects, and carved bone tubes (Pendergast 1981a:44-49).

By the 16th century, the center of occupation at Lamanai had again shifted farther south (Figure 10). Approximately one kilometer from the principal Postclassic activity, a ramada church was built by Spanish priests in the 1540s (Pendergast 1981a, 1986, 1991:341). The church erected at Lamanai followed the practice widely used elsewhere in the Americas of superimposing the Christian building on an existing indigenous ceremonial structure (Graham 1998:50; Pendergast 1991:341, 1993:121). The first church at Lamanai is an almost exact duplicate of the church erected at Tipu, located at the modern site of Negroman in western Belize (Graham 1991:321-322; Graham and Bennett 1989; Graham et al. 1985; Graham et al. 1989:1256; Pendergast et al. 1993:68). The process of Christianization, which met with varying degrees of success, continued for the better part of a century at Lamanai, during which time a second, larger church was constructed (Pendergast 1975, 1993:120). The sanctuary of this church was made of masonry construction, which still stands today. The nave was constructed of pole and thatch. The first church at Lamanai served as the cemetery for Christian Maya between A.D. 1570-1640 (Graham et al. 1989:1255; Pendergast 1981a:52), although we now know that a second cemetery is located just east of the stone sanctuary of the second church (Elizabeth Graham and David Pendergast, personal communications, 2002). The second church was burned in 1641 during a Maya rebellion. By the early 18th century, the population had declined and the site center was nearly abandoned, although the Maya still continued to occupy the area. In the 19th century, the British built a sugar mill and other structures, including residences and a cistern, only to be abandoned within 30 years (Pendergast 1981d).

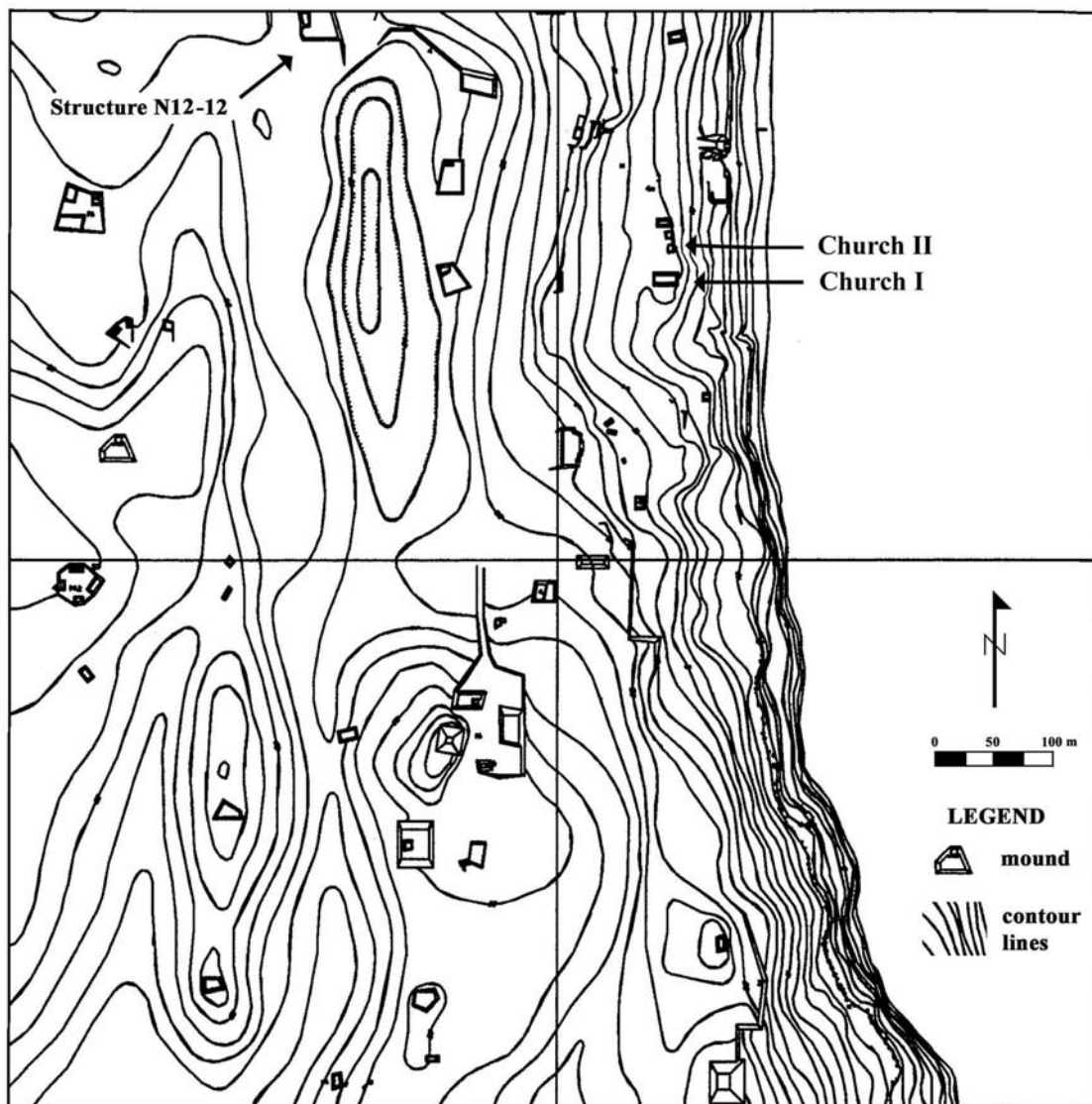


Figure 10: Southern area of Lamanai showing the location of the Spanish churches. Drawing digitized by Peter Gross and modified by Terry Powis.

CHAPTER 4:

THE CERAMIC COLLECTION AT LAMANAI

INTRODUCTION

Prior to 1998, ceramic studies at Lamanai were focused primarily on the later periods of occupation at the site, specifically from Terminal Classic times through the Historic period (Graham 1987, 1991, 1998; Graham et al. 1985; Graham et al. 1989; Pendergast 1981a, 1985, 1986, 1990b, 1991, 1993; Pendergast et al. 1993). In the summer of 1998 after discussions with Elizabeth Graham, I began a three year ceramic project that was designed to examine the Preclassic pottery recovered from Lamanai. Since excavations on structures with extensive Preclassic occupation had ceased by the mid-1980s, the ceramic collection was now available for laboratory analysis. It was hoped by both Graham and me that an emphasis on these earlier periods of ceramic development at Lamanai would complement those already existing for later time periods (Graham 1987; Howie-Langs 2001, 2002b), thus providing a more precise chronological framework for the lengthy occupation of this site.

The study of the Late Preclassic assemblage had a clearly defined set of goals, and these have been outlined in Chapter 1. It should be stressed that the main concern of this research is to reconstruct the Late Preclassic culture history of Lamanai and, by extension, that of the region itself, which goes beyond merely establishing a ceramic sequence. In this chapter, the first section describes the sample size of whole and complete vessels. The second section focuses on the methodology I employed. This is followed by an examination of the archaeological context and relative dating of each ceramic vessel. Both of these sections are important for understanding the spatial and temporal placement of this material at Lamanai and in relation to other sites in the region.

CERAMIC SAMPLE SIZE

The ceramic sample size for the Late Preclassic period at Lamanai is 140 vessels. Complete vessels are represented by a rim-to-base profile. A few partial vessels, lacking a center base, were used in this study because they added to the form repertoire or exhibited unique decorative elements. Sherd material was not considered for analysis mainly due to the fact that whole and complete vessels ultimately comprise the variety, type, and mode units which display the most meaningful interpretative significance to the potters themselves and to the community as a whole (Gifford 1976:6) (see also Chapter 2). Moreover, the sherd sample size from the Late Preclassic period was not large, estimated to be only a few thousand sherds. Interestingly, the entire Late Preclassic assemblage used in this study also represents the type collection for the site, available to both researchers and the public, since all of the vessels are maintained in the on-site museum.

Several hundred Preclassic sherds and a few reconstructed vessels have been excavated in recent years by me from the Harbor (Powis 2000b, 2001a; Powis et al. n.d.). While they have not been used in the present study, due to their low frequency of occurrence, they have helped with chronological and typological problems on the intra-site level. Furthermore, Late Preclassic sherds continue to be recovered from pyramidal Structures N9-56, N10-27, and N10-43, and from the area of the Spanish churches. All of these structures are currently being consolidated by the Belize Department of Archaeology for tourism purposes. As with the material recovered from the Harbor, the sherds from these structures are most useful for aiding with typological issues.

Methodology

Laboratory Procedures

During the investigations at Lamanai, Pendergast maintained a description of all whole and complete ceramic vessels. Vessel data were recorded on Burroughs Y9 Unisort Analysis Card forms, which were specially printed to permit uniform reporting

of data. The keying and punching of the cards permitted needle sorting of data by structure, context, and time period. Identical recording practices were also used at Altun Ha (Pendergast 1979:27-28). On the cards, basic information included: catalogue number, illustration number, provenience, temporal placement, form, size, surface treatment, specific color, decoration, paste and temper, surface decoration and technique, appendages, comparative material, and general remarks. The color standard and color nomenclature used to identify pastes and surfaces was based on Ridgway (1912). At present, all of his punch cards are on file at the Royal Ontario Museum. Ridgway-Munsell equivalents can be found in Graham (1994).

Xerox copies of these cards were used during my research of the Late Preclassic assemblage. During my analysis in the field laboratory at Lamanai, I used a new, updated ceramic database form that was created by Elizabeth Graham, David Pendergast, Heidi Ritscher, and myself (Figure 11). Suggested descriptive fields for this ceramic database form are listed in Table 2. The new ceramic database form was an expansion, in terms of number of attributes listed, of Pendergast's punch cards. However, his cards proved invaluable during my analysis because he had insight into this material upon recovery from the field. In every case, the vessels I analyzed for this study had been sitting on shelves in the on-site field museum for 20 years or more. As a result, both time and exposure to the elements (e.g., weather and pests) have affected the vessels (e.g., fading of surface color and decoration).

Given that the Late Preclassic ceramic assemblage was excavated more than 20 years ago, I did not have the opportunity to discuss the archaeological contexts of the ceramics with the excavators at the time. This exchange of information would have improved the interpretation of the ceramics and helped me to understand a particular deposit more fully (see Sabloff 1975:7). Nevertheless, numerous conversations with Pendergast and access to his field notes and structural plans and profiles provided me with the necessary background to undertake a formal analysis of the Late Preclassic ceramic collection. All of the architectural descriptions in this study follow the

SITE:		YEAR EXCAVATED:	
Lot No.		Catalogue No.	
PROVENIENCE:			
Op. No.:		Burial No.:	Cache No.:
Structure:		Assessment:	
REMARKS:			
DESCRIPTION:			
Type Name:		Origin:	
Variety:		Period:	
Ware:		Complex:	
Condition: <input type="radio"/> whole <input type="radio"/> complete <input type="radio"/> fragmented		Manufacture: <input type="radio"/> Coil <input type="radio"/> Pinch <input type="radio"/> Slab <input type="radio"/> Wheel	
REMARKS:		REMARKS:	
Vessel Form:			
Primary:		Specialization:	Function:
Sides:		Rim:	Base:
Handle:		Spout:	Lid:
Lip:		Flanges/Ridges:	Feet:
REMARKS:			
Surface Treatment:			
<input type="radio"/> Unslipped <input type="radio"/> Partially Slipped <input type="radio"/> Slipped <input type="radio"/> Glazed <input type="radio"/> Plain <input type="radio"/> Striated <input type="radio"/> Monochrome <input type="radio"/> Bichrome <input type="radio"/> Polychrome			
REMARKS:			
Colour:		Surface:	
Munsell:		Surface:	
Luster: <input type="radio"/> Glossy <input type="radio"/> Matte <input type="radio"/> Waxy		Paste:	
Paste:		Paste:	
Decoration: Pre-slip (kind and location on vessel): Post-slip (kind and location on vessel): Blemishes: Kind and location on vessel: REMARKS:			
Paste Composition: Texture: <input type="radio"/> Coarse <input type="radio"/> Medium <input type="radio"/> Fine		Temper:	
Residue: YES / NO / POSSIBLE		Incrustation: YES / NO	Stain: <input type="radio"/> Carbon <input type="radio"/> Other:
DIMENSIONS:			
Height:		Thickness: Rim:	
Rim Diameter:		Body:	
Base Diameter:			
Illustrate? YES / NO		Photo? YES / NO	

Figure 11: Database form used for the Late Preclassic ceramics at Lamanai.

Table 2: Suggested descriptive fields for the ceramic database form at Lamanai.

FORM1 (General)	FORM2 (Specifics)	SURFACE1 (General)	SURFACE2 (Specifics)	Paste Composition:	
<p><u>Primary:</u> BOWL CANDELEROS CENSER COMAL DISH JAR PLATE PLATTER UNIDENTIFIED</p> <p><u>Specialization:</u> Chocolate Pot Olive Jar</p> <p><u>Function:</u> e.g., Water Jug</p>	<p><u>Sides:</u> None Incurred Outcurved Flared Inslped Rounded Vertical</p> <p><u>Base:</u> Flat Hollow/Double Incurred Pedestal Ring Rounded Scored Truncated-Conical</p> <p><u>Feet:</u> Solid Hollow Effigy Perforated Tripod Tetrapod Bell-shaped Bulbous Conical Hemispherical Mammiform Nubbin Oven Ovoid Scroll Slab Tau-shaped</p> <p><u>Handle:</u> Coiled Horizontal Strap</p>	<p><u>Rim:</u> Direct Exterior Thickened Interior Thickened Interior Folded Interior Everted Horizontal Everted Outflared Everted</p> <p><u>Lip:</u> Beveled In Beveled Out Bolstered Crenellated Flattened Grooved Notched Pointed Rounded Squared Tapering</p> <p><u>Spout:</u> Supported Unsupported Open</p> <p><u>Lids:</u> Flat Conical Truncated-Conical Scutate</p> <p><u>Flanges/Ridges:</u> <u>Medial:</u> flange/ridge Basal: flange/ridge/angle Z-angle Notched Segmented</p>	<p>UNSLIPPED PARTIALLY SLIPPED SLIPPED GLAZED</p> <p>PLAIN STRIATED MONOCHROME BICHROME POLYCHROME</p>	<p><u>Colour:</u> Surface: Paste: Black Brown Buff Orange Tan</p> <p>White</p> <p><u>Munsell:</u> Surface: Paste:</p> <p><u>Luster:</u> Glossy Matte Waxy</p> <p><u>Decoration:</u> Pre-slip: Post-slip: -Appliqué -Carving -Chamfering -Fluting -Gadrooning -Impressing -Incising (6 kinds) -Modelling -Notching -Perforating -Punctating -Stamping -Texturing (striating)</p> <p><u>Blemishes:</u> Crazing Fire-clouding Flaking Liquid-marking Rootlet-marking</p>	<p><u>Paste Composition:</u> <u>Texture:</u> Coarse Medium Fine</p> <p><u>Temper:</u> Untempered Ash Calcite Fiber Quartz Sand Shell Sherd</p> <p><u>Residue:</u> Yes/No/Possible <u>Incrustation:</u> Yes/No</p> <p><u>Stain:</u> Carbon Other:</p>

terminology of Loten and Pendergast (1984).

As mentioned above, the ceramic material used for the analysis was housed in the on-site museum at Lamanai and some cleaning and re-organization of the collection had already been carried out by Graham in 1996 and 1997. Prior to my analysis, each vessel was lightly washed or brushed, reconstructed if not recovered whole, and then labeled with a lot number (e.g., LA 125) based on its provenience and context at the site. Initial sorting of the ceramic material was based on a combination of attributes that were inherent to each ceramic unit, specifically surface treatment, surface color, form, and paste. At this stage, some of the ceramic units remained without any typological distinction, but others exhibited recognizable homogeneity that could be typed. The identified material slowly acquired a series of characteristics that formed a ceramic unit, variety, or type. In cases where the ceramic units did not support the creation of a type or variety, I described the recognizable attributes and specified the vessels as “Unnamed”. These “Unnamed” vessels may later be placed into existing types or used to define new types like those reported from other sites in the region, including Cerros (Robertson-Freidel 1980:193-245), Colha (Valdez 187:48), and K'axob (Lopez Varela 1996:82). The term “Unnamed” does not represent the name of the type, but indicates that the vessel did not allow me to establish the vessels as either a type or a variety. The typology developed for the Late Preclassic collection at Lamanai includes 49 type:variety units (see type descriptions in Chapter 6). Of these, 35 are defined types whereas 14 are considered specials and remain unnamed.

After the vessels were sorted, they were individually drawn (both plan and profile views) in pencil and later inked with Pigma permanent pens by the illustrators (Louise Belanger and Ruth Dickau). More than 35 attributes were examined on each Late Preclassic vessel, including form, surface treatment, decoration, technique, color, luster, blemishes, paste composition, temper type, residue, incrustation, carbon stain, volume, and metrics (e.g., height, rim diameter, wall thickness, weight). The data collected from each vessel were written onto a ceramic database form and then entered

into both a spreadsheet program (Excel version 6.0) and a word processor (Word 2000) on a PC computer for analysis.

CERAMIC CONTEXTS

According to Valdez (1987:49-50), the archaeological contexts from which ceramics are derived and analyzed contribute to the “typology, chronology, and intersite and intrasite distribution of ceramics, in addition to the understanding of vessel function and site use.” Moreover, contextual studies of ceramics focus on where a pottery vessel was found, which vessels were associated with it, and how the vessel relates to other material found with it. Such information provides the analyst with groupings of vessels that had meaning to the ancient Maya. The Maya used various combinations of ceramics for both short-term and long-term use and, therefore, clearly recognized functional groupings of vessels and often purposefully left such groupings for the archaeological record (Chase 1994:181). It is expected that by determining what and how vessels co-occurred in conjunction with other archaeological data insight into the Maya economic system, social structure, and ritual patterns that once operated at Lamanai and across the region will be obtained. One important point to stress here is that a detailed presentation of the excavations and the stratigraphy for the site of Lamanai is reserved for separate volumes by Pendergast and Graham.

Every vessel in this assemblage was recovered through excavation. In other words, none of the pottery comes from either surface collections or unprovenienced locations. The major contextual categories include: 1) burials and caches; 2) primary midden deposits; 3) core material; 4) hearth; 5) sherd feature; and 6) rock feature (Table 3). Overall, most of the assemblage is derived from primary midden material associated with habitation as well as subcomplex material such as burials and caches. Although these sources are spread out across all settlement areas, they are most often recovered from the northern area of the site. For example, Feature P8-2, the chultun located at the north end of the site, contained the highest number of Late Preclassic and Protoclassic

Table 3. Archaeological Contexts of the Late Preclassic Vessels at Lamanai.

Provenience	Structure/Feature Type	Context	Lot#	# of Vessels
LAMANAI SITE CORE				
N10-2	small pyramidal structure	sherd feature	125/1-125/14	14
P9-2	large pyramidal structure	core	236/1	1
N10-43	large pyramidal structure	cache	340/1, 2, 3, and 5	4
P8-14	small residential structure	core	351/5	1
P8-11	low platform	core	355/1-5, 8-11	9
P8-14	small housemound	cache	356/1-356/2	2
N10-43	large pyramidal structure	cache	357/1	1
N10-43	large pyramidal structure	hearth	364/1-364/4	4
P8-11	low platform	midden	367/1-367/2	2
N10-43	large pyramidal structure	rock feature	372/1	1
N10-43	large pyramidal structure	cache	385/1a & 1b	1
P8-27	low platform	core	418/1	1
P8-11	low platform	midden	421/1-3, 7-8, 10-13	9
N10-43	large pyramidal structure	core	434/2-434-5	4
P8-9	small pyramidal structure	collapse debris	435/2	1
P8-11	low platform	midden	440/2-440/17	16
P9-2	large pyramidal structure	core	442/1	1
P8-9	small pyramidal structure	burial	449/1-449/7	7
P8-9	small pyramidal structure	burial	454/1	1
P8-9	small pyramidal structure	burial	479/1-479/2	2
P8-9	small pyramidal structure	cache	480/1-480/2	2
P8-9	small pyramidal structure	burial	481/1-482/2	2
P8-2	chultun	midden	496/1-5, 7-19	18

P8-2	chultun	midden	520/1-520/6	6
P8-2	chultun	midden	521/1-2, 4, 7-9	6
P8-2	chultun	midden	524/1	1
P8-2	chultun	midden	526/1-526/7	7
P8-2	chultun	midden	544/1	1
P8-2	chultun	midden	552/1	1
P8-103	small residential structure	burial	732/1-732/3	3
N10-9	large pyramidal structure	core	748/1	1
N10-27	small pyramidal structure	cache	792/1	1
N12-13	Spanish Church II	cache	801/1	1
N11-7	low platform	core	860/1	1
Harbor	low platform	midden	1127/2	1
Harbor	low platform	midden	1128/1	1

LAMANAI SOUTH

Mound II	plazuela group	burial	LS15	1
Mound II	plazuela group	burial	LS 35	1
Mound II	plazuela group	burial	LS 111	1
Mound II	plazuela group	burial	LS 162	1
Mound II	plazuela group	burial	LS 164	1

vessels (n=40) at the site. These vessels were recovered from substantial midden deposits (nearly one meter thick), located inside each of its three subterranean chambers.

Both midden material and subcomplex material have provided the best means of chronological assessment for the vessels contained therein because of their primary context. By primary midden material I mean the trash deposited by the inhabitants either inside or outside their structures that was not subsequently moved. These primary midden deposits may have been the result of either long-term or short-term accumulation. Additionally, it was the recovery of this material that helped to expand and develop the range of types within each of the three ceramic complexes at Lamanai. According to Adams (1971:8), burials, caches, and primary middens are useful for expanding and defining a complex typologically because they represent single depositional events (see also Pendergast 2002). Therefore, the ceramics associated with each of them are considered, for the most part, contemporaneous in date.

Preclassic pottery from core material was also typically found in structures to the north, but, on occasion, Preclassic sherds were derived from monumental architecture in the central precinct (e.g., Structures N10-9 and N10-43). Compared to midden material and special deposits such as burials and caches, the dating of construction phases on the basis of ceramic material contained in architectural core, although a standard procedure in Maya archaeology, is problematic. At best, core material can be used to determine the *terminus post quem* for construction activities; however, core sherds can aid in determining a date if the core is found between sealed floors (Valdez 1987:50), although a degree of uncertainty always remains.

Of the three remaining categories, two of them (Hearth 1 and Rock Feature 1) were found beneath a number of plaza floors at the base of Structure N10-43. Both features were located along the primary axis. Hearth 1 was associated with at least two low platforms erected just above bedrock, one of them being a small round structure with a diameter of 5.5 meters (Pendergast 1981b:96-97; Powis 2001c). These sub-plaza structures and the hearth pre-date the construction of the 33 meter tall multi-terrace

platform known as the High Temple, which dates to ca. 100 B.C. The final category, Sherd Feature 1, was reported from just one location at the site. It consisted of 14 vessels found smashed and mixed together on the center axis of the primary building of Structure N10-2.

CERAMIC DATING

Investigations at Lamanai since 1974 have produced substantial Preclassic occupation, dating to both the Middle Preclassic (Mesh Complex) and Late Preclassic (Lag and Zotz Complexes) periods (see Table 1). Excavations conducted on a number of structures have determined that occupation, based on the presence of architectural remains, began as early as the late Middle Preclassic (late Mesh Complex, 600-400 B.C.). However, the Middle Preclassic assemblage consisted of only four whole vessels (LA 579/1-579/4), all derived from the same burial context (Burial P8-103/1) in Structure P8-103. Unfortunately, this small sample size (n=4), recovered from a single deposit, prevented any reasonable ceramic comparisons with other nearby sites because the vessels did not belong to a functionally complete ceramic complex. Therefore, this ceramic complex is not included in this present study. The Mesh Complex material did shed some light on the chronological framework for the site by providing evidence for the earliest date of ceramic use to 600-400 B.C (Pendergast 1981a, 1981d; Powis 2000b).

The Late Preclassic period at Lamanai contained two separate ceramic complexes, of which one was divided into an early and a late facet (see Table 1). Identification of these temporally distinct complexes (Lag and Zotz Complexes) was based on changes in ceramic materials recovered from stratified deposits (Powis 2001b). The establishment of the pottery sequence for the Late Preclassic dates from 400 B.C. to A.D. 250. In summary, these are:

<u>Complex</u>	<u>Dates</u>	<u>Temporal Designation</u>
Zotz (late facet)	A.D. 150-250	Protoclassic
Zotz (early facet)	100 B.C. - A.D. 150	Late Preclassic/Protoclassic
Lag	400-100 B.C.	Late Preclassic

The internal ceramic sequence for Lamanai is based mainly on primary deposits, such as burials, caches, and middens. That it to say that these types of deposits were used independently, wherever possible, of sherds recovered from architectural core. Ceramic cross-ties also link many structures at the site, providing clear-cut relative placement of most of the ceramic material. The basic framework rests on whole vessel ceramic sequencing, construction history data, and the close ceramic relationships that exist between core and periphery which permit application of the relative chronology to all structures examined (see Pendergast 1979:33). Therefore, the occurrence of numerous subcomplex and midden materials in many structures that were investigated by Pendergast provides an excellent basis for the development of the Late Preclassic ceramic sequence. In sum, the dating of the Late Preclassic sequence is based on stratigraphic position of vessels at the site and on relative cross-dating with other northern Belize sites. It is only through the comparison of the Lamanai material with that from other sites in the region and across the lowlands that a conversion of the relative chronology into an absolute time framework can occur.

To a limited extent, the dating was hampered by a lack of carbon material being analyzed from sealed contexts containing Late Preclassic pottery. Although these existing samples would have helped me to clarify the beginning and ending dates for this time period at Lamanai, they may now be too contaminated, after being stored for nearly a quarter of a century at the Royal Ontario Museum, to be useful to my study. Fortunately, there has been a considerable amount of recent ceramic research on the Preclassic period across the region of northern Belize, providing me with sufficient data to date the Late Preclassic sequence at Lamanai adequately. In time, it is hoped that the number of unnamed types still present in the assemblage will be placed into existing types with defined dates, thereby allowing for better chronological control of the Late Preclassic sequence.

CHAPTER 5:

METHOD OF CLASSIFICATION AND PRESENTATION

INTRODUCTION

In this chapter the methodology for presenting the ceramic types identified at Lamanai for the Late Preclassic period are discussed. They are presented in chronological order by ceramic complex, beginning with the earliest (Lag Complex) and continuing through the latest material (late facet of the Zotz Complex). Although this method of presentation is most often used by type:variety-mode analysts, some have preferred presentation by type-class (Adams 1971; Ball 1977). As a general rule, the type descriptions in the present study follow the format outlined by Sabloff (1975:19-21), but adaptations from other ceramic reports such as Barton Ramie (Gifford 1976), Cerros (Robertson-Freidel 1980), Colha (Valdez 1987), Cuello (Kosakowsky 1987), El Mirador (Forsyth 1989), and K'axob (Lopez Varela 1996) have also been used. Furthermore, I have chosen, wherever possible, to assign the Lamanai vessels to existing types and/or varieties with full descriptions for known types from the comparative literature (see Tables 4-6). In a few instances new types and varieties have been determined, but, in accordance with the type:variety-mode system the type name has remained binomial, consisting of a geographical term followed by a type-class term (e.g., Sierra Red) (see Rice 1987a:282).

As mentioned above, the following format is adapted from a number of ceramic reports that employ the traditional presentation of the type:variety-mode system. However, I have made modifications to this presentation format so that there is more of a focus on the contextual data. Instead of presenting the type descriptions based principally by ceramic groups, my focus is with presenting the type descriptions within the context they were recovered archaeologically. In other words, types belonging to the Lag Complex, for example, are first presented by provenience and context, not by their ceramic group affiliation. In conjunction with this approach, the ceramic contextual

units at Lamanai are also illustrated together, not apart as is frequently done in ceramic reports that utilize the traditional type:variety-mode approach.

One of the main drawbacks when using the traditional approach is that the groupings of vessels which had meaning to the ancient Maya are rarely reconstructed elsewhere in a report because the types established by the ceramicist remain artificially segregated by ceramic groups. Exceptions to this approach are found at Caracol (Chase 1994) and Tikal (Culbert 1993). This new approach to presenting the ceramics at Lamanai alleviates this problem of artificial or abstract construction by maintaining the specific grouping(s) of vessels that were deposited in various locations across the site by the Late Preclassic Maya. My point is that the contextual data becomes obscured in the present way that ceramic reports are written. In many cases, the contexts and frequencies for a particular ceramic group or type are lumped together. There is no breakdown within either of these descriptions to inform the reader of precisely where each vessel was derived or how many of the vessel types were recovered from that deposit. In my view, there is more of an emphasis placed on describing the ceramic types and varieties than on the contexts from which they have come. Even if this is overstated, there does not seem to be enough integration between the ceramic types that have been described and their contexts within the data presentation section of many ceramic reports. My intent here is only to point out that, in a number of cases, type descriptions and contextual units appear to be two disparate sets of data, only brought together in the culture-historical interpretation section of the ceramic report.

Again, it must be stressed that the general format of the type:variety-mode system (consisting of type, variety, established, group, ware, complex, sphere affiliation, illustration, principal identifying attributes, paste and temper, surface finish and decoration, form, appendages, and intrasite and intersite locations) is still followed for the Lamanai collection. The only major departure from other ceramic reports is the emphasis on contextual units during the presentation of the type descriptions. Therefore, the format used in this study consists of all of the hierarchical information required within the type:variety-mode system, including provenience and context,

vessel number, type:variety name, established, group, ware, complex, sphere affiliation, illustration, principal identifying attributes, paste and temper, surface finish and decoration, form, appendages, cultural significance (vessel function), and intersite locations. Although the format has changed slightly from more traditional presentations, my approach continues to use type descriptions which can be made comparable, on an inter-site level, with that used by researchers throughout northern Belize and across the Maya area. In order to facilitate general comparison and synthesis, I have included an appendix (Appendix A) with the type descriptions presented by ceramic group that guarantees sufficient uniformity with the structure of other Maya ceramic reports.

TYPE DESCRIPTION FORMAT

The general format for the 50 types and varieties identified for the Late Preclassic ceramic collection at Lamanai is presented below. The definitions provided in this section basically follow Gifford (1976), Sabloff (1975), and Smith (1955). According to Robertson-Freidel (1980:20), presenting the ceramic data in this standard format “facilitates accomplishing the principle goals of the type:variety system of analysis: intersite comparison and relative dating of time periods represented by archaeological deposits containing pottery.”

General Format:

Provenience and Context

Vessel Number

Type:Variety Name

Established

Group

Ware

Complex

Sphere Affiliation

Illustration

Principal Identifying Attributes

Paste, Temper, and Firing

Surface Finish and Decoration

Form

Appendages

Cultural Significance

Intersite Locations

Provenience and Context: Lists the structure location at Lamanai (e.g., Structure N10-43) where the ceramic vessel was recovered archaeologically. The context refers to the type of deposit within the structure that the ceramic vessel was derived. For example, the vessel may have belonged to a cache, burial, or midden assemblage.

Vessel Number: Refers to the lot number (e.g., LA 125/1) assigned to each vessel excavated at Lamanai. The lot number provides the provenience and context for each vessel. All of the lot numbers are catalogued and kept in a master lot book. The prefix (LA) represents the Lamanai site name and the number (125/1) refers to the first vessel recovered from Lot 125, a sherd feature containing 14 vessels in Structure N10-2.

Type:Variety Name: A type is a ceramic unit representing a cluster of distinct ceramic attributes which indicates a particular category of pottery that was produced during a specific time period within a region (Wheat et al. 1958:34). The variety represents minor variations within the type and is considered the basic unit of ceramic analysis (Sabloff and Smith 1969:278). Following Valdez (1987:52), the variety will carry the name of the type if the type is first described in this study. Furthermore, the designation “Variety Unspecified” will be used when the variety differs from any yet defined. If attributes differ enough within a type a new variety will be established (see Ball 1977:4; Lopez Varela 1996:93; McDow 1997:19; Valdez 1987:52). In this section, the name of

the type:variety is listed. For example, Sierra Red: Sierra Variety, Laguna Verde Incised: Grooved-Incised Variety, etc.

Established: This section gives reference to the site that first established the type and/or variety. If the type and variety were first defined and named at different sites, then each is referenced separately (Robertson-Freidel 1980:22). If the type and variety were defined at one time, then a single site reference is presented.

Group: A ceramic group is a set of closely related and very similar pottery types that demonstrate a distinctive homogeneity in range of variation concerning form, base color, technological, and other allied attributes (Gifford 1976:17). Thus, types included within any given ceramic group are always of the same pottery ware.

Ware: A ware is composed of a large number of ceramic types all having a group of similar technological attributes (e.g., paste or surface finish). There are no direct spatial or temporal limits, but internal continuity must be demonstrated in both respects (Smith 1971; Willey et al. 1967).

Complex: A ceramic complex is defined by the ordering of types and varieties forming clusters from a certain geographical setting and during a particular time period (Gifford 1976:11). According to Ball (1977:3), “types are combined into ceramic complexes on the basis of consistent contextual association.”

Sphere Affiliation: The ceramic sphere contains two or more complexes that share a majority of types (Valdez 1987:33). It is the total of all types, varieties, and modes present within the constituent complexes. These complexes could be contained within sites from the same region (e.g., northern Belize) or contained within sites between regions (e.g., northern Belize and the Belize Valley).

Illustration: The ceramic collection used in this study has all been illustrated with line drawings. No photographs are included. In the field the drawings were produced at a 1:1 scale, but have been reduced to fit the pages in this dissertation. Therefore, a scale indicating size accompanies each drawing. The conventions used for slip color at Lamanai are those established by Smith (1955) at Uaxactun (Figure 12).

Principal Identifying Attributes: This section provides a summary of the most important characteristics or attributes of the type or variety (Lopez Varela 1996:95). Following Sabloff (1975), the list provides quick and concise descriptive information on those physical and chemical attributes that objectify the types and/or varieties for comparative purposes. Principal Identifying Attributes are provided for each Lamanai ceramic type and if a type and/or variety are established in this study then those attributes which most clearly identify the type will only apply to the observed vessel.

Paste, Temper, and Firing: A macroscopic description of the ceramic material is presented in this section. Additionally, a 10X hand lens was used to aid with the macroscopic observations. All observations made in the field were made using natural daylight. Paste texture, color, hardness, firing characteristics, types of tempering materials present, their frequency (%), category of roundness (shape), and grain size were determined (see Table 2). Munsell (1954) color standards and nomenclature were used to determine vessel slip and paste color. For paste color, a fresh break on a small corner of each vessel was made unless it was 100% intact. In this case, paste characteristics were taken from weathered areas of the vessel so that some information could be provided. In cross-section, the different colors of paste relate to the clay types used and firing technique. Lighter colors (e.g., yellows and reds) are the result of an oxidizing atmosphere, and darker colors (e.g., grays, browns, and blacks) are the result of a reduction atmosphere (Lucero 1994:73).

Under the hand lens, it was possible to estimate what tempering materials were

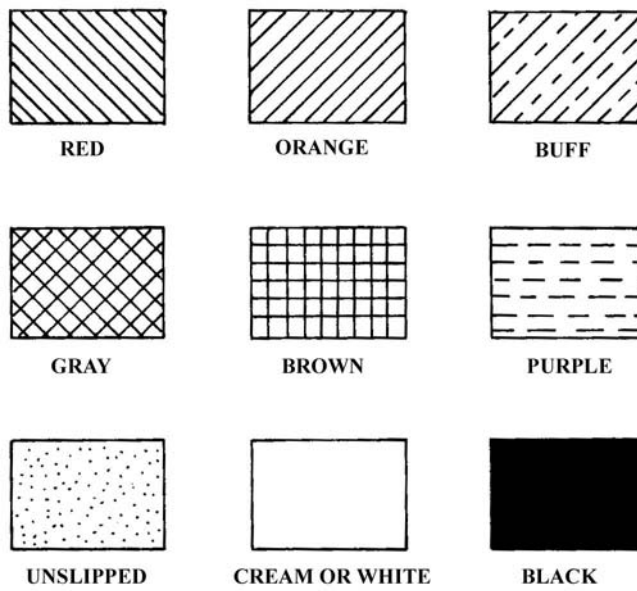


Figure 12: Key to color symbols used in the ceramic illustrations (after Smith 1955).

consistently present. A legend of nine different tempers was employed with each one assigned a number for coding purposes (1=calcite, 2=quartz, 3=hematite, 4=shell, 5=grog, 6=feldspar, and 7=magnetite, 8=rock or pebble, 9=unidentifiable). Much of the temper identified under the hand lens consisted of white grains (ranging from opaque to translucent). In order to distinguish these grains (primarily calcite, quartz, and feldspar) from one another hydrochloric acid (HCL) was used because of its strong reaction with calcium carbonate. In the Maya area, clays and tempering materials (e.g., calcite, lime, shell) are all high in calcium given the karst topography of the region. Therefore, to alleviate the confusion between identifying these minerals from others such as feldspar and quartz a drop of HCL was dispensed through a syringe on a one centimeter area of the paste. If it reacted to the acid test then calcite was present. However, it was important to remember that the clays themselves were rich in calcium and careful observation was necessary to see that the minerals were reacting and not the clay paste itself. If there was no reaction to the HCL then it was classified as either quartz or feldspar. To further differentiate between quartz and feldspar, a metal blade (from a small penknife) was used to scratch the mineral. Hardness was determined by Moh's mineral hardness scratch test. If the mineral was scratched then it was identified as feldspar; if not, then it was listed as quartz. Quartz was also distinguishable from the other two because of its cleavage properties.

A comparison chart for estimating percentage of temper to clay paste (from the American Geological Institute) was used (Figure 13). Under the hand lens, the percentages ranged from a minimum of 10-20% (fine-grained) to a maximum of 30-40% (coarse-grained). Archaeological pottery is expected to fall within a normal range of 25-30% (James Neely, personal communication, 1997). Grain shape and size were also examined. In terms of shape, a scheme was devised so that the grains could be identified as either well-rounded, rounded, sub-rounded, sub-angular, angular, or very angular (Figure 14). A classification of grain size (i.e., gradation) was developed using calipers to measure the minerals in each vessel. Grain size was measured in millimeters

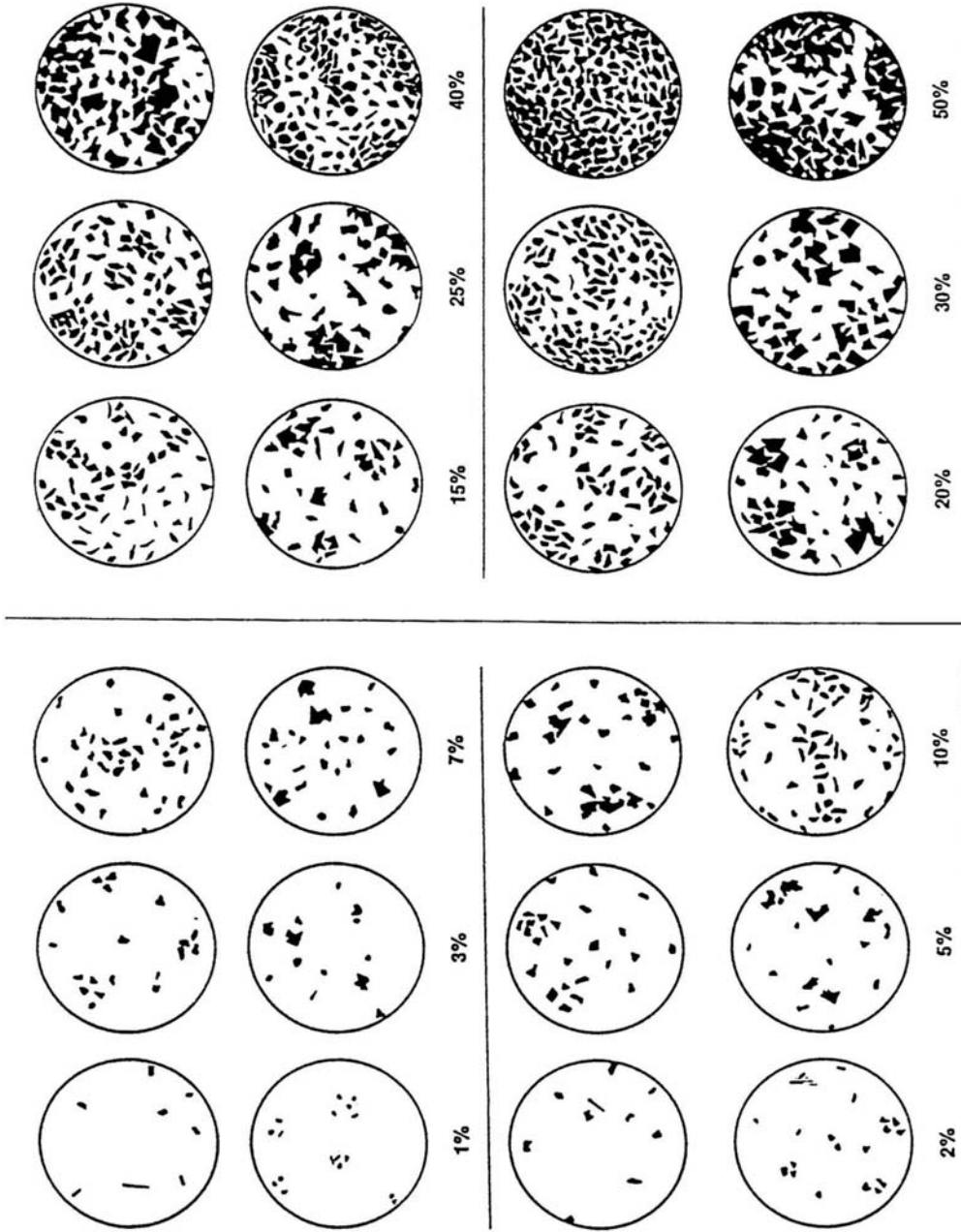


Figure 13: Comparison chart for estimating percentage composition (modified from Pettijohn et al. 1972:585).

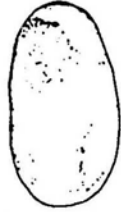
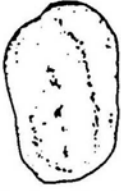




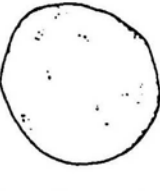
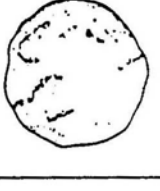
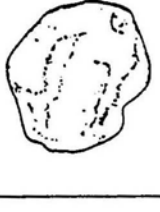
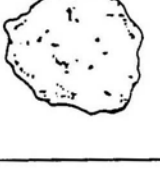


Well-rounded	Rounded	Sub-rounded	Sub-angular	Angular	Very Angular
					
					

Figure 14: Categories of roundness for grains of low and high sphericity (after Pettijohn et al. 1972:586).

(mm).

Surface Finish and Decoration: In this section a detailed description of surface finish, color, and nature of decoration are presented for each vessel. Surface finish is considered to be the final treatment given to a vessel prior to being fired or a prelude to additional decoration (Rice 1987:138). Decoration refers to “all alterations or additions to vessel surfaces (except slipping) after vessel shaping and smoothing (including polishing) have been completed” (Forsyth 1989:13). Munsell color charts (1954) are used in an effort to standardize color references with other Maya sites (see Robertson-Freidel 1980:30 and Sabloff 1975:20 for discussion on using color identification systems). Color readings of surface finish were taken during daylight hours only. In many instances, a range of colors for monochrome slipped vessels has been provided to indicate the variations present on individual vessels. These variations may be the result of cultural and/or environmental factors.

The principal surface characteristics noted in my descriptions are slipping, smoothing, polishing, and burnishing. The types and varieties at Lamanai were decorated using a number of techniques, including incising, striating, gadrooning, punctating, impressing, modeling, applique decoration, painting (e.g., glyphs, geometric designs), and resist painting (see Table 2). These decorative designs and techniques are described following Sabloff (1975) and Smith (1955).

In addition to the recording of surface color and decoration, the observed effects of erosion, leaching, firing clouds, crazing, flaking, and rootlet-marking are considered in some detail. In many instances, the kind and location of these blemishes can reveal important technological information (Rye 1981:120), as well as be used as chronological markers.

Form: In this section, vessel forms are described following the scheme that Sabloff (1975:22-27) used at Seibal (Figure 15). The identifications are based on the presence

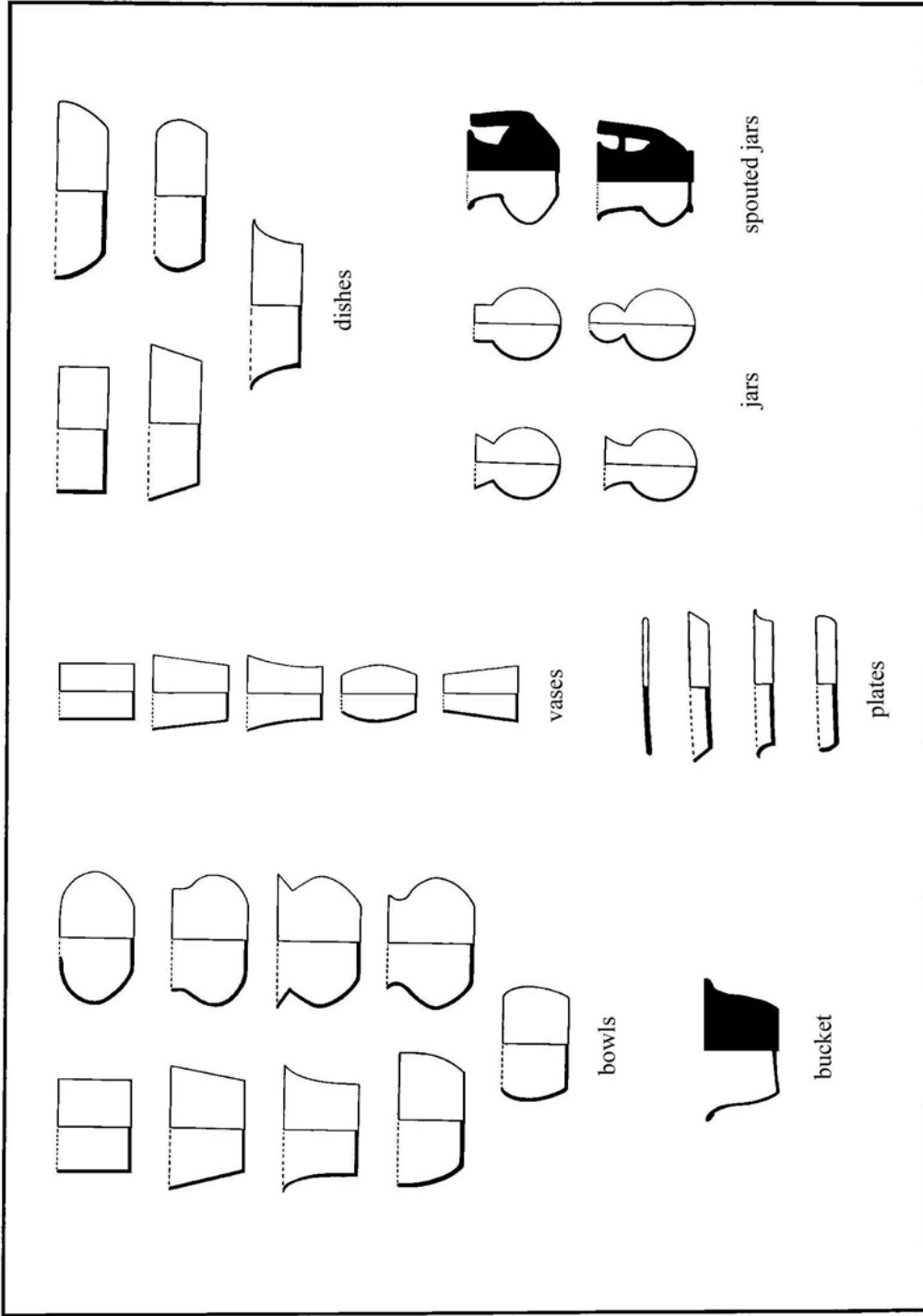


Figure 15: Primary vessel form categories used for the Late Preclassic ceramics at Lamanai (after Adams 1971; Robertson-Freidel 1980; Sabloff 1975).

of whole and complete vessels. The forms established at Lamanai include plates, dishes, bowls, jars, spouted jars, vases, and buckets. Buckets were not included within his primary classes, but Robertson-Freidel (1980:32) added it to her form classification due to their occurrence at Cerros. Similarly, spouted vessels were not included within Sabloff's (1975) primary classes of form, even though they are diagnostic forms of Preclassic Maya ceramic assemblages. Figure 15 illustrates both types of spouted vessels (bridged and unbridged) that have been found at Lamanai.

A number of measurements (height, rim diameter, base diameter, rim thickness, body thickness, base thickness) were taken on each vessel from Lamanai using digital calipers and recorded in centimeters (cm). Rim diameter measurements were taken from lip to lip of rims. Orifice size is a strong indicator of vessel use since "it is related to issues of pouring, lifting, retaining goods, accessibility of contents, and elements of style" (Lucero 1994:71). Vessel thickness is the average wall thickness, avoiding any extremes on the surface of the vessel (Kosakowsky 1987:8). Wall thickness relates to function and skill of the potter. Only whole vessels, approximately one third of the Late Preclassic ceramic collection, were weighed (in grams) using an Ohaus Scout digital scale.

Appendages: This section includes additions to a vessel side such as spouts, flanges, handles, feet, and lids. The definitions of these terms also follow Sabloff (1975:24-27). These appendages were all recorded on the ceramic database forms and measured in centimeters.

Cultural Significance: Following Robertson-Freidel (1980:33), this category, based on vessel form, refers to the functional assignments that have been given to each type and variety contained within the Lamanai assemblage. The function of vessels is an important aspect of my research at the site and a number of classes have been identified as a result of this analysis, including cooking vessels, mixing vessels, soaking vessels,

water storage vessels, water carrying vessels, dry storage vessels, serving vessels, and ritual vessels (see Chapter 7).

Intersite Locations: This section contains the comparative material (i.e., distribution of types and varieties) from other sites in the Maya area. The majority of the information provided here is taken from published reports. In some cases, where published material for a site is not yet available, I have made every attempt to make personal observations of those type collections. In particular, I examined ceramic material in the field, especially at northern Belize sites, and collections housed in the Department of Archaeology located in Belmopan, Belize. On the rare occasion, I visited collections in the States for further comparative purposes. For example, given the close proximity between the sites of Lamanai and San Jose, there may have been strong stylistic modes that were shared between these two sites. Therefore, I went to The Field Museum in Chicago, where the San Jose ceramic collection is currently being housed, and examined the Late Preclassic (San Jose Phase II) pottery (Powis 2001d).

Table 4: Lamanai Ceramic Type: Varieties by Complex and Group

The Lag Ceramic Complex:

Flor Group

- Accordion Incised: Variety Unspecified (1)
- Flor Cream: Indian Church Variety (1)
- Flor Cream: Variety Unspecified (1)

Paila?

- Unnamed Buff-and-plain (1)

Polvero Group

- Lechugal Incised: Gouged-incised Variety (2)
- Lechugal Incised: Grooved-incised Variety (4)
- Polvero Black: Polvero Variety (1)
- Unnamed Black, Punctated, and Unslipped (1)

Richardson Peak

- Richardson Peak Unslipped: Richardson Peak Variety (2)

Sierra Group

- Alta Mira Fluted: Horizontally-fluted Variety (1)
- Alta Mira Fluted: Variety Unspecified (1)
- Ciego Composite: Dawson Creek Variety (1)
- Laguna Verde Incised: Grooved-incised Variety (5)
- Laguna Verde Incised: Variety Unspecified (1)
- Puletan Red-and-unslipped: Composite Variety (1)
- Puletan Red-and-unslipped: Puletan Variety (1)
- Sierra Red: Ahuacan Variety (1)
- Sierra Red: Black-rimmed Variety (dichrome) (1)
- Sierra Red: Sierra Variety (23)
- Sierra Red: Variety Unspecified (4)
- Sierra Red: Variety Unspecified (Red-double slip) (4)

Unspecified Group

- Unnamed Buff-and-modeled (1)

The Zotz Ceramic Complex (early facet):

Flor Group

Flor Cream: Variety Unspecified (1)
Unnamed Cream (1)

Matamore

Matamore Dichrome: Matamore Variety (1)

Polvero Group

Polvero Black: Polvero Variety (1)

Quacco Creek

Quacco Creek Red: Quacco Creek Variety (2)

Sierra Group

Alta Mira Fluted: Variety Unspecified (2)

Laguna Verde Incised: Grooved-incised Variety (2)

Sierra Red: Sierra Variety (14)

Sierra Red: Variety Unspecified (3)

Society Hall Red: Society Hall Variety (3)

Unnamed Cream-over-red Incised (1)

The Zotz Ceramic Complex (late facet):

Aguacate Group

Guacamallo Red-on-orange: Grooved-incised Variety (1)

Ixcantio Orange-polychrome: Ixcantio Variety (2)

Unnamed Red-on-orange (1)

Unnamed Red-rimmed Orange and Trickle (1)

Aguacate?

Unnamed Brown and Modeled (1)

Cabro Group

Cabro Red: Cabro Variety (4)

Cabro Red: Trickle Variety (7)

Liscanal Grooved-incised: Liscanal Variety (2)

Liscanal Grooved-incised: Trickle Variety (4)

Pahote Punctated: Pahote Variety (1)

Cabro?

Unnamed Black-on-red (1)

Unnamed Red-on-cream (1)

Unnamed Black-on-red and Grooved-incised (1)

Flor?

Unnamed Cream-and-modeled (1)

Monkey Falls

Monkey Falls Striated: Variety Unspecified (1)

Paila

Chahmah Washed: Chahmah Variety (1)

Polvero Group

Polvero Black: Variety Unspecified (1)

Sierra Group

Lagartos Punctated: Lagartos Variety (1)

Puletan Red-and-unslipped: Puletan Variety (8)

Sierra Red: Variety Unspecified (5)

Sierra Red: Variety Unspecified (Red-and-black) (2)

Society Hall Red: Variety Unspecified (1)

Unspecified

Unnamed Cream-polychrome (1)

Unnamed Red-rimmed Brown and Grooved-incised (1)

Note: Frequencies are listed in parentheses.

Table 5: Alphabetical Directory of Late Preclassic Ceramic Types at Lamanai

Accordion Incised: Variety Unspecified (1)
 Alta Mira Fluted: Horizontally-fluted Variety (1)
 Alta Mira Fluted: Variety Unspecified (3)
 Cabro Red: Cabro Variety (4)
 Cabro Red: Trickle Variety (7)
 Chahmah Washed: Chahmah Variety (1)
 Ciego Composite: Dawson Creek Variety (1)
 Flor Cream: Indian Church Variety (1)
 Flor Cream: Variety Unspecified (2)
 Guacamallo Red-on-orange: Grooved-incised Variety (1)
 Ixcario Orange-polychrome: Ixcario Variety (2)
 Lagartos Punctated: Lagartos Variety (1)
 Laguna Verde Incised: Grooved-incised Variety (7)
 Laguna Verde Incised: Variety Unspecified (1)
 Lechugal Incised: Gouged-incised Variety (2)
 Lechugal Incised: Grooved-incised Variety (4)
 Liscanal Grooved-incised: Liscanal Variety (2)
 Liscanal Grooved-incised: Trickle Variety (4)
 Matamore Dichrome: Matamore Variety (1)
 Monkey Falls Striated: Variety Unspecified (1)
 Pahote Punctated: Pahote Variety (1)
 Polvero Black: Polvero Variety (2)
 Polvero Black: Variety Unspecified (1)
 Puletan Red-and-unslipped: Composite Variety (1)
 Puletan Red-and-unslipped: Puletan Variety (9)
 Quacco Creek Red: Quacco Creek Variety (2)
 Richardson Peak Unslipped: Richardson Peak Variety (2)
 Sierra Red: Ahuacan Variety (1)
 Sierra Red: Black-rimmed Variety (dichrome) (1)
 Sierra Red: Sierra Variety (37)
 Sierra Red: Variety Unspecified (12)
 Sierra Red: Variety Unspecified (Red-and-black) (2)
 Sierra Red: Variety Unspecified (Red-double slip) (4)
 Society Hall Red: Society Hall Variety (3)
 Society Hall Red: Variety Unspecified (1)
 Unnamed Black-on-red (1)
 Unnamed Black-on-red and Grooved-incised (1)
 Unnamed Black, Punctated, and Unslipped (1)
 Unnamed Brown-and-modeled (1)

Unnamed Buff-and-modeled (1)
Unnamed Buff-and-plain (1)
Unnamed Cream (1)
Unnamed Cream-and-modeled (1)
Unnamed Cream-over-red Incised (1)
Unnamed Cream-polychrome (1)
Unnamed Red-on-cream (1)
Unnamed Red-on-orange (1)
Unnamed Red-rimmed Brown and Grooved-incised (1)
Unnamed Red-rimmed Orange and Trickle (1)

Note: Frequencies are listed in parentheses.

Table 6: Listing of the Ceramic Types by Decorative Name

BLACK

Polvero Black: Polvero Variety (2)

Polvero Black: Variety Unspecified (1)

BLACK-AND-BROWN

Matamore Dichrome: Matamore Variety (1)

BLACK AND PUNCTATED

Unnamed Black, Punctated, and Unslipped (1)

BLACK-ON-RED

Unnamed Black-on-red (1)

BLACK-ON-RED AND GROOVED-INCISED

Unnamed Black-on-red and Grooved-incised (1)

BLACK-RIMMED REDWARE

Sierra Red: Black-rimmed Variety (dichrome) (1)

BUFF

Unnamed Buff-and-plain (1)

COMPOSITE

Ciego Composite: Dawson Creek Variety (1)

CREAM

Flor Cream: Indian Church Variety (1)

Flor Cream: Variety Unspecified (2)

Unnamed Cream (1)

CREAM-OVER-RED INCISED

Unnamed Cream-over-red Incised (1)

CREAM-POLYCHROME

Unnamed Cream-polychrome (1)

FLUTED

Alta Mira Fluted: Horizontally-fluted Variety (1)

Alta Mira Fluted: Variety Unspecified (3)

GOUGED-INCISED

Lechugal Incised: Gouged-incised Variety (2)

GROOVED-INCISED

Laguna Verde Incised: Grooved-incised Variety (7)

Lechugal Incised: Grooved-incised Variety (4)

Liscanal Grooved-incised: Liscanal Variety (2)

GROOVED-INCISED AND TRICKLE LINE DECORATION

Liscanal Grooved-incised: Trickle Variety (4)

INCISED

Accordian Incised: Variety Unspecified (1)

Laguna Verde Incised: Variety Unspecified (1)

MODELED

Unnamed Brown-and-modeled (1)

Unnamed Buff-and-modeled (1)

Unnamed Cream-and-modeled (1)

ORANGE-POLYCHROME

Ixcanrio Orange-polychrome: Ixcanrio Variety (2)

PUNCTATED

Lagartos Punctated: Lagartos Variety (1)

Pahote Punctated: Pahote Variety (1)

RED

Cabro Red: Cabro Variety (4)

Chahmah Washed: Chahmah Variety (1)

Quacco Creek Red: Quacco Creek Variety (2)

Sierra Red: Ahuacan Variety (1)

Sierra Red: Sierra Variety (37)

Sierra Red: Variety Unspecified (12)

Sierra Red: Variety Unspecified (Red-double slip) (4)

Society Hall Red: Society Hall Variety (3)

Society Hall Red: Variety Unspecified (1)

RED-AND-BLACK

Sierra Red: Variety Unspecified (Red-and-black) (2)

RED-AND-UNSLIPPED

Puletan Red-and-unslipped: Composite Variety (1)

Puletan Red-and-unslipped: Puletan Variety (9)

RED-ON-CREAM

Unnamed Red-on-cream (1)

RED-ON-ORANGE

Unnamed Red-on-orange (1)

RED-ON-ORANGE AND GROOVED-INCISED

Guacamallo Red-on-orange: Grooved-incised Variety (1)

RED-RIMMED AND GROOVED-INCISED

Unnamed Red-rimmed Brown and Grooved-incised (1)

RED-RIMMED AND TRICKLE LINE DECORATION

Unnamed Red-rimmed Orange and Trickle (1)

STRIATED

Monkey Falls Striated: Variety Unspecified (1)

TRICKLE LINE DECORATION

Cabro Red: Trickle Variety (7)

UNSLIPPED

Richardson Peak Unslipped: Richardson Peak Variety (2)

Note: Frequencies are listed in parentheses.

CHAPTER 6:

THE CERAMIC TYPE DESCRIPTIONS

THE LAG CERAMIC COMPLEX: 400-100 B.C.

The Lag Complex begins the Late Preclassic at Lamanai. Based on ceramic cross-dating, the beginning and ending dates are estimated to be 400-100 B.C. The complex is closely related to a majority of northern Belize sites, including Altun Ha (Pendergast 1982a); Blue Creek (Williams-Beck 1999); Cerros (Robertson-Freidel 1980); Colha (Valdez 1987); Cuello (Pring 1977a; Kosakowsky 1987; Kosakowsky and Pring 1998); K'axob (McAnany and Lopez Varela 1999; Lopez Varela 1996); Kichpanha (McDow 1997; Meskill 1992; Reese and Valdez 1987); and San Jose (Thompson 1939). The pottery of the Lag Complex is representative of the traditional Chicanel sphere. During this period Maya pottery was typologically and modally similar across the lowlands and highlands. The consistency of the slips and vessel forms suggests a uniformity of conservative ideas and relatively little individual site expression. The pan-regional participation in this shared ceramic tradition occurred primarily in the last three centuries B.C.

Most Maya sites, including Lamanai, produced Chicanel wares that generally exhibit waxy-textured monochrome-colored slips on flat-based, flaring-sided dishes, bowls, and plates with horizontal everted rims and labial flanges. At Lamanai, the Lag Complex consists of 59 vessels, approximately 42% of the entire Late Preclassic collection. The early Chicanel pottery has a variety of forms, including open bowls, dishes, and plates, as well as jars and buckets. More than three-quarters of the assemblage was highly polished serving vessels and slipped black, red, cream, or a combination of two of these colors. The Sierra Group is the dominant ceramic group at this site at this time making up 74% of the total Lag Ceramic Complex. This is followed by ceramics of the Polvero Group which comprise 13% of the collection. All other groups, including Flor, Richardson Peak, and Unnamed consist of less than 5% each.

All of these groups were generally decorated with pre-slip incising, grooved-incising, impressing, fluting, and punctating. A few vessels also exhibit post-slip gouged-incising. The collection at Lamanai exhibited a number of modeled vessels in the zoomorphic shapes of birds and crocodiles. Noticeably absent from the assemblage are ceramics belonging to the Chicago and Sapote Groups, which are typically found at most sites in the region.

STRUCTURE N10-9

Core below Lowest Floor:

One vessel (LA 748/1) was recovered from beneath the earliest floor of the earliest structure encountered in the excavation of Structure N10-9. The floor was found during the excavation of a trench placed along the primary axis.

VESSEL NUMBER: 748/1

TYPE: VARIETY: Lechugal Incised: Grooved-incised Variety

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated in present study.

GROUP: Polvero

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 16

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) soft, waxy, black slipped surfaces; 2) bowl with rounded sides and horizontal everted rim; 3) grooved-incised lines on interior rim; 4) effigy rim flange modeled to represent bird; 5) red tinges to slipped surface.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 7.5YR 5/6 (strong brown) to 7.5YR 6/6 (reddish yellow). No carbon stain is present. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper material consists mostly of calcite, quartz, and hematite, but unidentified black and red particles occur as well. The paste is slightly porous with some burned out organic material.

SURFACE FINISH AND DECORATION: A soft, waxy black slip with a color ranging from 7.5YR 2/0 (black) to 2.5YR 3/2 (dusky red) was applied to the interior and exterior surfaces. Red tinges, similar in color to LA 367/1, 480/1, and 480/2, are extensive on both sides. The interior and exterior surfaces are well-smoothed and exhibit a high burnish. Some temper shows through the slips. Decoration consists of two pre-slip grooved-incised lines encircling upper rim flange terminating at each of four opposing projecting tabs. Each tab has two short, parallel lines that are grouped between the encircling lines. The tabs represent wings of a bird. crazing is prevalent on both sides. No firing clouds are present.

FORM: Round-sided bowl with horizontal everted rim and rounded lip. The rim is exterior folded. The base is flat. Height: 7.4 cm; Rim diameter: 15.0 cm; Base diameter: 5.1 cm; Rim thickness: 0.65 cm; Body thickness: 0.64 cm; Base thickness: 0.5 cm; Rim flange width: 2.86 cm; Width of grooved-incisions: 0.1 cm.

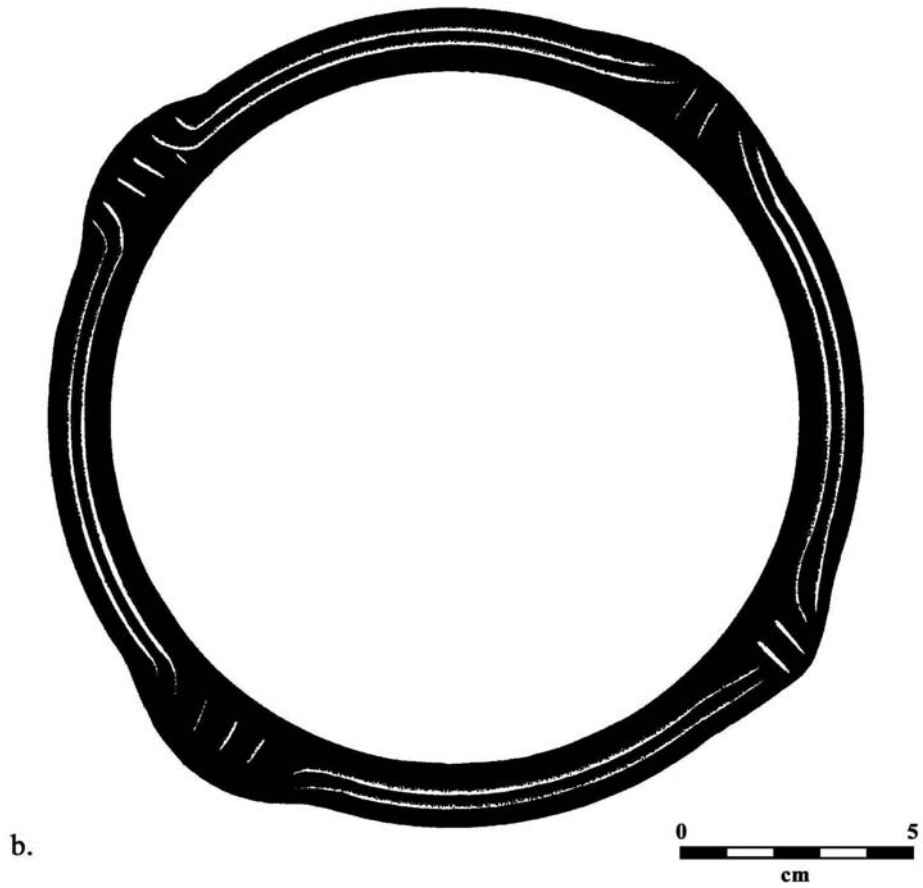
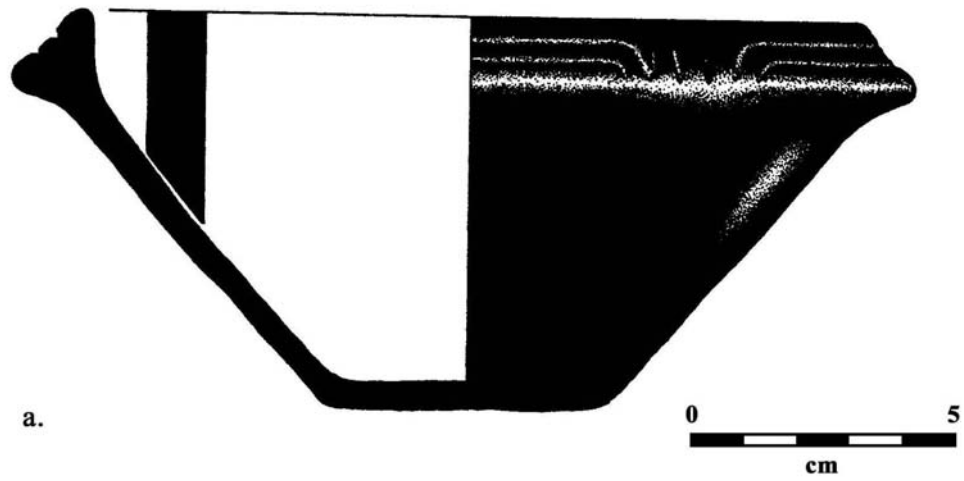


Figure 16: Lechugal Incised: Grooved-incised Variety (LA 748/1) bowl:
a) side view; b) top view of effigy rim flange.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either surface. No use wear was found on the bowl. It probably functioned as a serving/eating vessel for hot soups and/or stews because of its interior slipped surface and wide everted rim. The rim flange would have aided in carrying hot liquids.

INTERSITE LOCATIONS: See LA 367/1 for distribution of variety.

STRUCTURE N10-43

Hearth 1:

This unlined hearth or firepit, 55 cm in diameter, is associated with the earliest platform located beneath the High Temple, the 33 meter high pyramidal structure that was erected around 100 B.C. A test pit placed at the base of the stairs (at plaza level) of Structure N10-43 revealed that this platform was low, rectangular, and edged with unshaped stones (Pendergast 1980a, 1981a, 1981b). It was built on top of a plaza floor, possibly the earliest encountered in this location. The hearth was found adjacent to the rectangular platform. Additional testing in the summer of 2001 near the pit excavated in 1979-1980 revealed a small round platform with a diameter of 5-5.5 meters (Powis 2001c). The round platform, uncovered only a few meters to the southwest, is situated on the same plaza floor as the rectangular one and, therefore, also associated with Hearth 1. Together, these two structures, form part of a small Late Preclassic community dating to Lag times. Ceramic material recovered from Hearth 1 included four vessels (LA 364/1-364/4).

VESSEL NUMBER: LA 364/1

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 17a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) red slip color; 2) lustrous and slightly waxy vessel surfaces; 3) plate with horizontal everted rim; 4) crazing and firing clouds are prevalent.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color centering on 2.5YR 5/8 (red). A thick gray to black core ranging from 2.5YR 3/0 (very dark gray) to 2.5YR 2.5/0 (black) is present. It has a medium hard (and compact) texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, and hematite, but unidentified black, brown, and red particles occur as well.

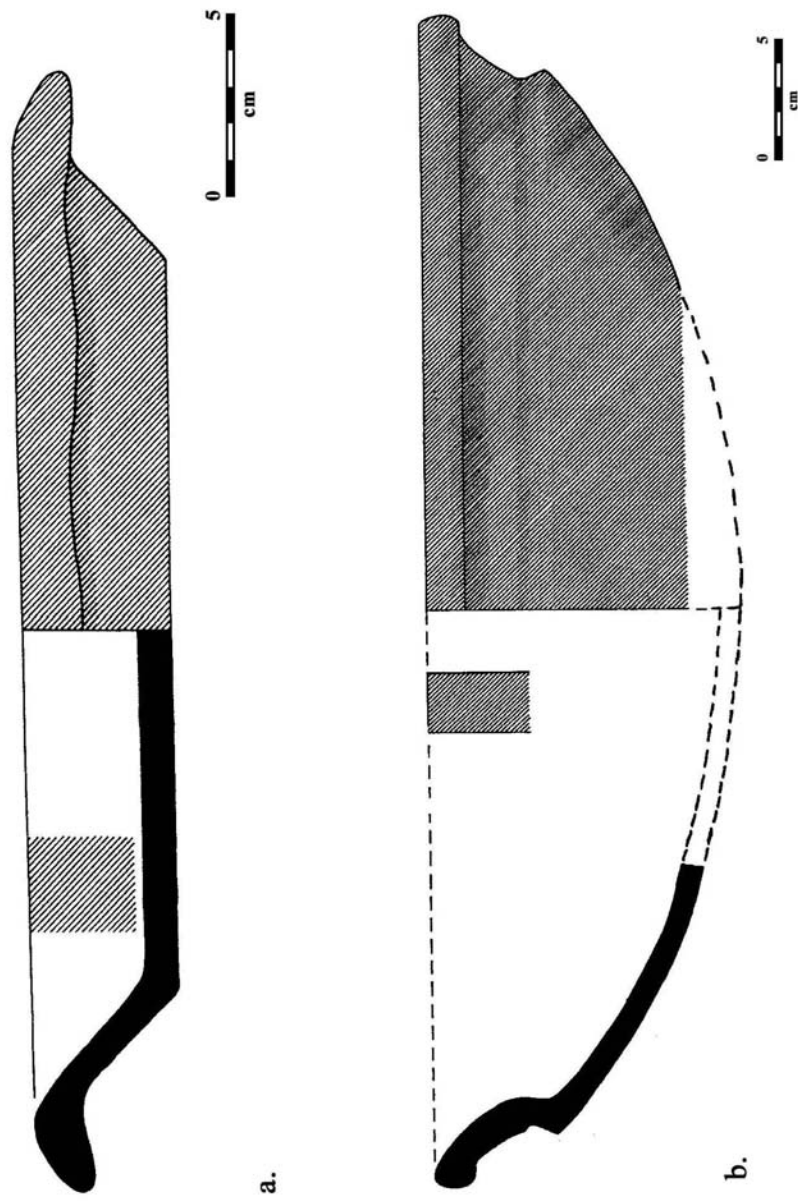


Figure 17: a) Sierra Red: Sierra Variety (LA 364/1) plate; b) Laguna Verde Incised: Grooved-incised Variety (LA 364/2) dish.

SURFACE FINISH AND DECORATION: A lustrous and slightly waxy red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, including the base. Both sides are well-smoothed and exhibit a high burnish. The exterior base is also well-smoothed. No decoration except broad or widely-spaced scalloping of rim. Craze and firing clouds are prevalent on both sides. Heavy firing clouds, black and tan in color, occur on both surfaces creating a mottled or variegated color; Pendergast feels that this effect may have been intentional, but no pattern is discernible. Rootlet markings are found on the exterior surface.

FORM: Flaring-sided plate with horizontal everted rim and rounded lip. The rim is sharply everted and downturned. The base is flat and exhibits a rounded margin. Height: 4.1 cm; Rim diameter: 26.9 cm; Base diameter: 22.0 cm; Rim thickness: 1.2 cm; Body thickness: 0.9 cm; Base thickness: 0.96 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either side. Extensive use wear on the exterior base margin. The broad, wavy rim and slipped interior surface suggest it functioned as a serving/eating vessel for hot soups and/or stews.

INTERSITE LOCATIONS: Sierra Red is the principal type in the ceramic assemblages at most Late Preclassic lowland Maya sites. It was first reported at Uaxactun by both Smith (1955) and Smith and Gifford (1966). It has subsequently been identified at Altar de Sacrificios (Adams 1971); Barton Ramie (Gifford 1976); Becan (Ball 1977); Cahal Pech (Awe 1992); Cerros (Robertson-Freidel 1980); Chiapa de Corzo (Lowe and Agrinier 1960); Colha (Valdez 1987); Cuello (Kosakowsky 1987; Kosakowsky and Pring 1998); Edzna (Forsyth 1983); Ek Balam (Bey et al. 1998); El Mirador (Forsyth 1986, 1989); K'axob (Lopez Varela 1996); Kichpanha (McDow 1997; Meskill 1992;

Reese and Valdez 1987); Komchen (Andrews V 1988); Mayapan (Smith 1971); Nakbe (Forsyth 1993); Pacbitun (Healy 1990); San Jose (Powis 2001d; Thompson 1939); Santa Rita Corozal (Chase and Chase 1987); Seibal (Sabloff 1975); Tikal (Culbert 1993); and Yaxuna (Suhler et al. 1998).

VESSEL NUMBER: LA 364/2

TYPE: VARIETY: Laguna Verde Incised: Grooved-incised Variety

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated by Sabloff (1975) at Seibal.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 17b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip color; 2) lustrous and waxy vessel surfaces; 3) dish with sharp basal angle; 4) grooved-incised line above basal angle; 5) crazing and firing clouds are present.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color centering on 2.5YR 5/8 (red). A thick gray to black core ranging from 7.5YR 3/0 (very dark gray) to 2.5YR 2.5/0 (black) is present. It is moderately sorted (grains generally less than 1 mm

in size) with temper material having a round to angular fracture. This vessel (sample #2000-16) was subjected to a petrographic analysis by Linda Howie-Langs (2002a:8). It belongs to the Grog Group, one of five groups (Grog, Crystalline Calcite, Relic Rhomb, Micrite/Quartz, and Quartz/Calcite), identified for the Late Preclassic collection. The paste is primarily composed of grog (or crushed sherd material), monocrystalline quartz, and crystalline calcite. Lesser amounts of tiny hematite nodules, chalcedonic quartz, and agglomerates of sparry and crystalline calcite also occur. In addition to the grog, another added constituent is burnt organic material.

SURFACE FINISH AND DECORATION: A lustrous and very waxy red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, including the base. The slip is thin and applied as a single layer (Howie-Langs 2002a:8). Both sides are well-smoothed with some lateral wiping found below exterior rim. Both sides exhibit a high burnish. The exterior base is also well-smoothed. Decoration consists of a preslip grooved-incised line above the sharp basal angle. Crazeing is light on both sides and can only be seen with hand lens. Rootlet marking and firing clouds cover both surfaces. The firing clouds, black and tan in color, are located on each side and have created a mottled or variegated color.

FORM: Flaring-sided dish with outflaring everted rim and rounded lip. The rim is exteriorly thickened. The basal angle is z-shaped. The base is flat to slightly rounded. Height: 9.2 cm; Rim diameter: 38.0 cm; Base diameter: n/a; Rim thickness: 1.5 cm; Body thickness: 0.95 cm; Base thickness: 0.6 cm; Thickness at basal angle: 1.25 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either side. Several scratch marks occur in all directions on

the interior surface. The large diameter and slipped interior surface suggest it functioned as a serving/eating vessel of soups and/or stews for large groups.

INTERSITE LOCATIONS: See LA 479/2 for distribution of this common variety across the lowlands. The vessel form is very similar to a Sierra Red: Sierra Variety bowl found at Cuello (Kosakowsky 1987:Figure 6.8).

VESSEL NUMBER: LA 364/3

TYPE: VARIETY: Puletan Red-and-unslipped: Composite Variety

ESTABLISHED: Type named by Pring (1977a) at Cuello; Variety designated in present study.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 18a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) red slip on interior rim only; 2) exterior of the vessel is unslipped; 3) deep bowl with rounded sides and everted rim; 4) encircling band of linear punctates at upper body; 5) applied lug bosses.

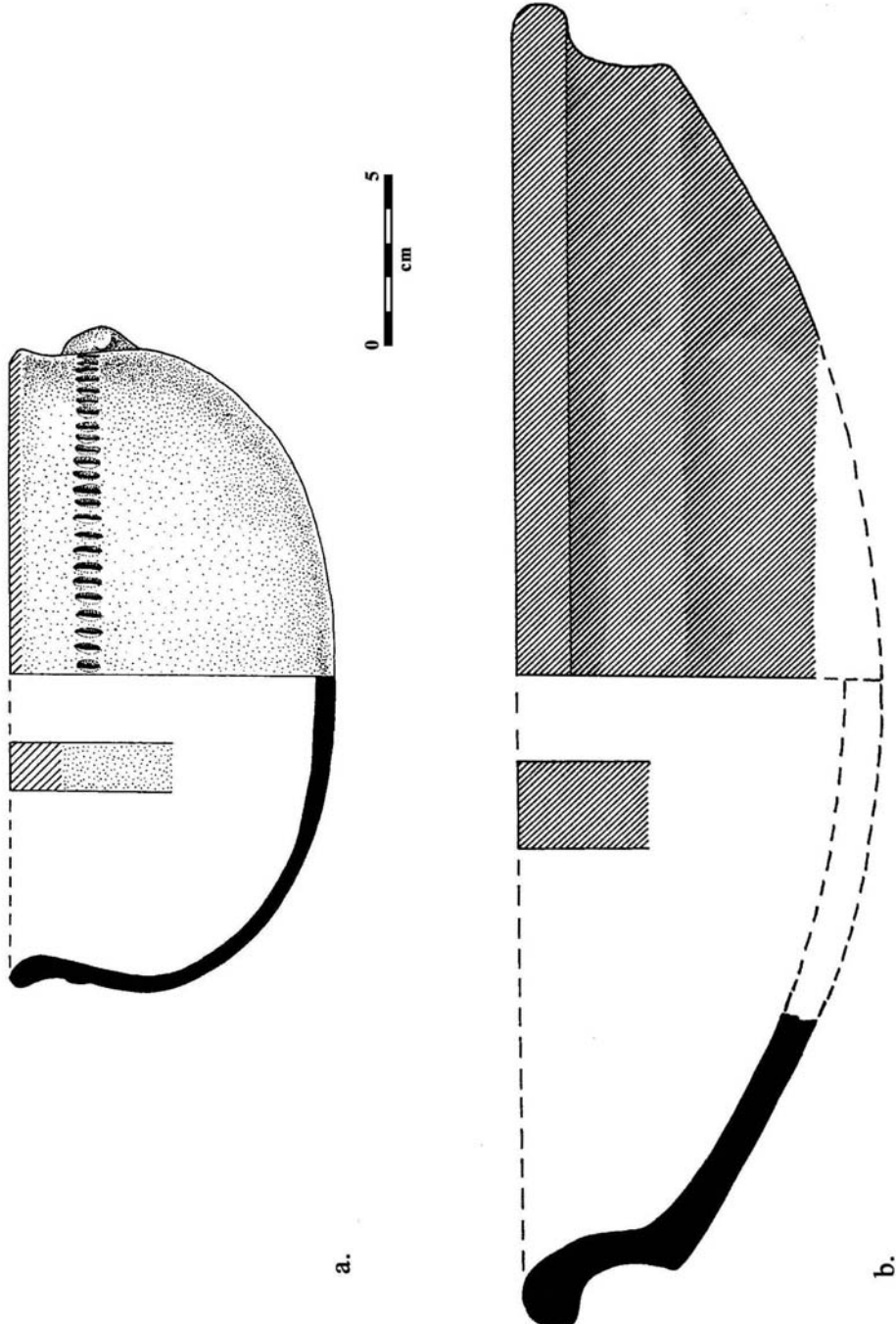


Figure 18: a) Puletan Red-and-unslipped: Composite Variety (LA 364/3) bowl; b) Sierra Red: Sierra Variety (LA 364/4) dish.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color centering on 7.5YR 6/6 (reddish yellow). A thick black (2.5YR 2.5/0) core is present; it is thicker at the rim than the base. It has a medium hard (and compact) texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified red, black, white, and pink particles occur as well.

SURFACE FINISH AND DECORATION: A lustrous and very waxy red slip ranging from 10R 4/8 (red) and 10R 5/8 (red) to 2.5YR 4/6 (red) and 4/8 (red) was applied only to the interior rim; the rest of the vessel was left unslipped. The red slip spills over the lip onto the exterior rim in spots that is likely the result of poor application by the potter. Both sides are well-smoothed, including the exterior base. There are wiping marks found across the exterior body, especially between the linear punctates and the applied lugs. Both sides exhibit a high burnish. Decoration consists of an encircling band of linear punctates at the shoulder that was produced by a vertical tool pressed from right, raising clay at left. The linear punctates are closely-spaced and parallel to one another. Additionally, there are two opposing applied rounded lug bosses (small protuberances) that are set in the band. Both of the lugs are roughly-shaped and slightly uneven in placement from the rim. Crazeing is present on the slipped portion of the vessel. Rootlet marking (white and gray in color) and firing clouds are found on both sides. The firing clouds, black in color, are located on each side, particularly around rim.

FORM: Round, thin-sided bowl with slightly everted rim and rounded to slightly pointed lip. The rim is interior thickened. The base is rounded. Height: 9.5 cm; Rim diameter: 18.5 cm; Base diameter: n/a; Rim thickness: 0.85 cm; Body thickness: 0.4 cm; Base thickness: 0.43 cm; Length of punctates: 0.5-0.8 cm; Width of punctates: 0.1-0.3 cm; Width of applied lug from exterior wall: 0.6 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This thin-walled vessel had numerous black blotches on its lower sides, possibly the result of being held over a fire. Given its tall, slightly incurving sides and unslipped lower surfaces, this vessel likely functioned as a cooking vessel, but may also have been used for warming or reheating foods.

INTERSITE LOCATIONS: This type has been found mostly in northern Belize sites wherever Sierra Red types are commonly encountered in Late Preclassic deposits (Kosakowsky 1987; Lopez Varela 1996; Pring 1977a). Its frequency, however, is generally low compared to other red slipped pottery of the period. Some ceramicists have placed this ceramic type (Kosakowsky 1987:73-74) and kind of decoration (Robertson-Freidel 1980:187-188) into late Chicanel times, but some specimens have been recovered at K'axob dating to the late facet of the K'atache'kax Complex (ca. 200-50 B.C.) (Lopez Varela 1996:217-218). Additionally, Valdez (1987:136-137) has found this type in both Onecimo and Blossom Bank ceramic complexes at Colha. The variety at Lamanai may represent an early variety of the Puletan Red-and-unslipped type.

VESSEL NUMBER: LA 364/4

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 18b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip color; 2) lustrous and waxy vessel surfaces; 3) dish with horizontal everted rim and sharp basal angle; 4) crazing and firing clouds are present.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color centering on 2.5YR 5/8 (red). A thin gray core is present. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having an angular fracture. The temper consists mainly of calcite and quartz, but unidentified black particles occur as well.

SURFACE FINISH AND DECORATION: A lustrous and waxy red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, including the base. Both sides are well-smoothed exhibit a very high burnish. The exterior base is also well-smoothed. No decoration is present. Crazing is light on both sides. Firing clouds, black in color, are found on the interior surface creating a mottled color.

FORM: Flaring-sided dish with horizontal everted rim and rounded lip. The rim is exteriorly thickened. The basal angle is z-shaped. The base is flat to slightly rounded. Height: 9.0 cm; Rim diameter: 29.5 cm; Base diameter: n/a; Rim thickness: 1.25 cm; Body thickness: 1.0 cm; Base thickness: n/a.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either side. The large diameter and slipped interior surface suggest it functioned as a serving/eating vessel of soups and/or stews for large groups.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common variety across the lowlands. The vessel form is very similar to a Sierra Red: Sierra Variety bowl found at Cuello (Kosakowsky 1987:Figure 6.8).

Rock Feature 1:

This rock feature is situated approximately two meters west of Hearth 1. Stratigraphically, Rock Feature 1 is slightly higher in elevation, but still associated and, therefore, contemporaneous with Hearth 1 and the low platforms located in front of the High Temple, below the plaza level (Pendergast 1980a, 1981a, 1981b). Ceramic material recovered from around the perimeter of the rock feature included one complete vessel (LA 372/1).

VESSEL NUMBER: LA 372/1

TYPE: VARIETY: Puletan Red-and-unslipped: Puletan Variety

ESTABLISHED: Type and Variety named by Pring (1977a) at Cuello.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 19a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) Interior of the vessel and just over the rim onto the exterior is slipped red; 2) exterior of the vessel is largely unslipped; 3) incurving sided dish; 4) encircling band of linear punctates at medial angle.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 2.5YR 5/8 (red) to 2.5YR 6/8 (light red). No carbon stain is present. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, and hematite (up to 2 mm in size), but unidentified black, white, and pink particles occur as well.

SURFACE FINISH AND DECORATION: A lustrous and waxy red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior surface of the vessel and just over the rim to the medial angle on the exterior. The remaining portion of the exterior surface was left unslipped. The red slip spills down over the medial angle (and punctate decoration) in spots which is likely the result of poor application by the potter. Both sides are well-smoothed, including the exterior base. There are vertical and horizontal wiping marks found across the exterior body. Both sides exhibit a medium-high burnish. Decoration consists of an encircling band of linear punctates across the medial angle that was produced by a vertical tool pressed from the right, raising clay at left. The linear punctates are widely-spaced and parallel to one another. Crazeing and rootlet marking are prevalent on both slipped surfaces. One small area at basal angle has a firing cloud.

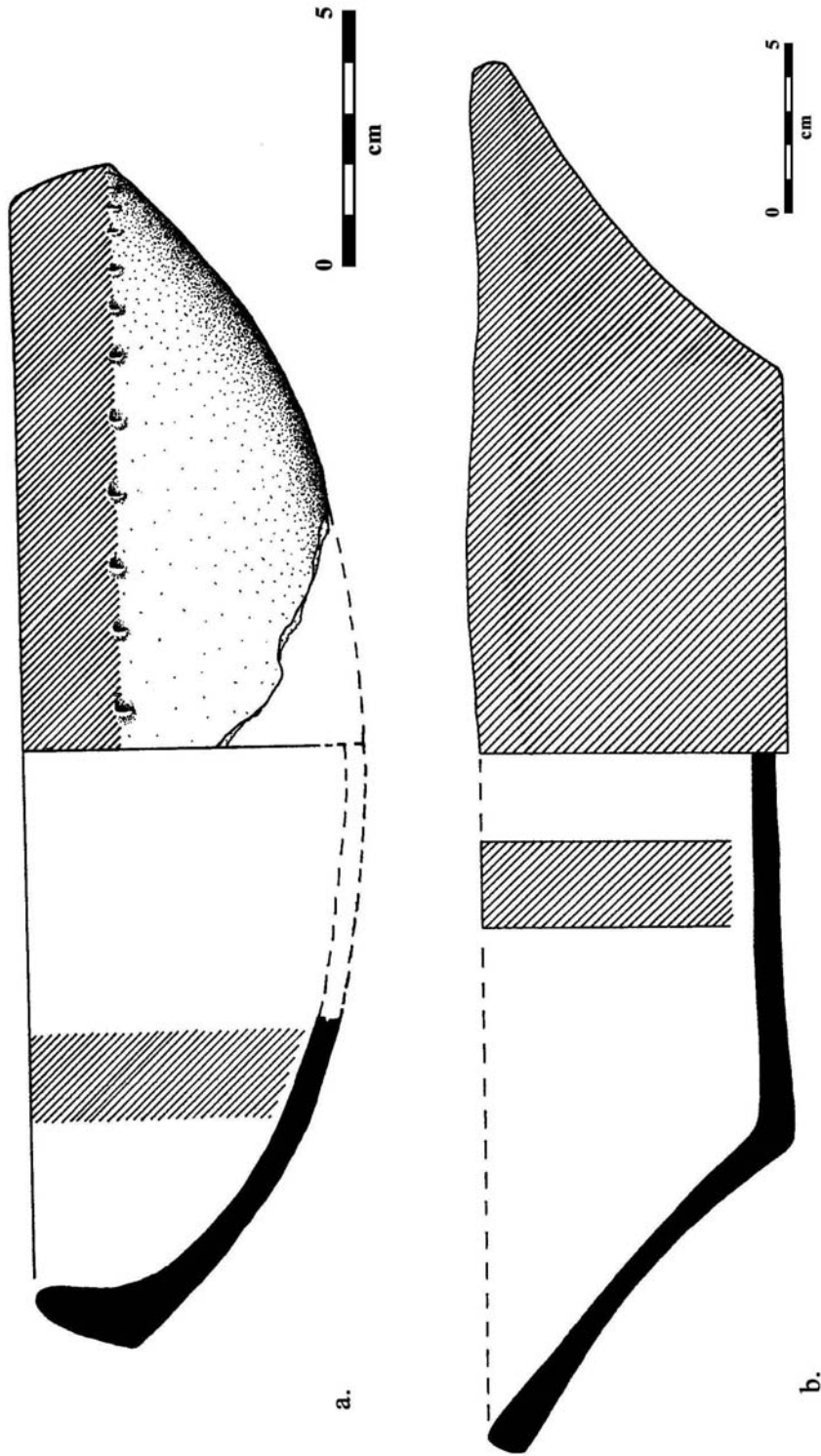


Figure 19: a) Puletan Red-and-unslipped: Puletan Variety (LA 372/1) dish; b) Sierra Red: Sierra Variety (LA 357/1) dish.

FORM: Round, thin-sided dish with sharp medial angle that rises to an incurving rim. The orifice is slightly restricted. The lip is rounded lip and the rim is exteriorly thickened. The base is slightly rounded. Height: 6.7 cm; Rim diameter: 21.8 cm; Base diameter: n/a; Rim thickness: 0.75 cm; Body thickness: 0.64 cm; Base thickness: 0.49 cm; Length of punctates: 0.43-0.58 cm; Width of punctates: 0.36-0.71 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either side. No use wear present on exterior base, but scratches found on interior base. The slightly restricted neck and the unslipped interior surface suggest it functioned as an individual serving/eating vessel for soups and/or stews.

INTERSITE LOCATIONS: See LA 364/3 for distribution of this type across the Maya area.

Cache N10-43/5:

This cache is located within the earliest or primary structure of the N10-43 sequence. This structure is the first public or communal building erected in this location. Cache N10-43/6 is the earliest offering recovered from the High Temple. This platform was built on top of a plaster floor, which sealed the low, residential structures and their associated features (LA 364 and 372). Therefore, the cache postdates Hearth 1 and Rock feature 1. The offering was found in the core of the platform and contained one ceramic vessel (LA 357/1). Inside the vessel was the “articulated skeleton of a juvenile bird of moderate size, lacking the beak and frontal portion of the skull, accompanied by bones of one or more other birds” (Pendergast 1981a:41).

VESSEL NUMBER: LA 357/1

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 19b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) red slip color; 2) dish with flaring sides; 3) slip is heavily discolored from leaching.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 6/6 (reddish yellow) to 5YR 6/8 (reddish yellow). No carbon stain is present. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz and grog, but unidentified gray particles (one piece is 6 mm in size) occur as well.

SURFACE FINISH AND DECORATION: A red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, including the base. The interior slip is heavily eroded and leached to an off-white color (10YR 8/2),

especially on the lower sides and base. Both sides are smoothed, but many lateral wiping marks are present. The exterior base shows extensive wiping marks, particularly around the margin. The interior surface is only slightly burnished while the exterior side is left unburnished. No decoration is present. No crazing, firing clouds, or rootlet marking were observed on the vessel.

FORM: Flaring-sided dish with direct rim and squared lip. The rim is slightly exteriorly thickened. The rim is also uneven or wobbly. The base is flat and exhibits an angular margin. Height: 6.8-7.8 cm; Rim diameter: 31.8 cm; Base diameter: 17.5 cm; Rim thickness: 0.81 cm; Body thickness: 0.53 cm; Base thickness: 0.5 cm; Weight: 1,220 g.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either side. The leaching on the interior lower sides and base was likely caused by post-depositional processes, but could have also occurred as a result of the inclusion of the bird carcasses. Some pitting is found on the interior base. The vessel was used for ritual meals as evidenced by the bird skeletons found in the dish.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common variety across the lowlands. The Lamanai vessel is similar to two specimens found at Cuello (Pring 1977a:Figures 55a, c).

STRUCTURE P8-9

Burial P8-9/5:

Stratigraphically, there are four architectural phases (1st to 4th, sequence earliest to latest) associated with Structure P8-9. This burial was found in an axial trench and sealed by a floor associated with the earliest structure in P8-9. It pre-dates Burials P8-9/2, P8-9/3, P8-9/6, and Cache P8-9/1. Burial P8-9/5 was interred with no apparent lining or cap, but was placed within core below the floor. It contained a mature adult (sex undetermined) in an extended (supine) position and oriented in a north-south direction. Two ceramic vessels (LA 481/1 and 481/2) were recovered from the grave.

VESSEL NUMBER: LA 481/1, upright at left knee and upper tibia.

TYPE: VARIETY NAME: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

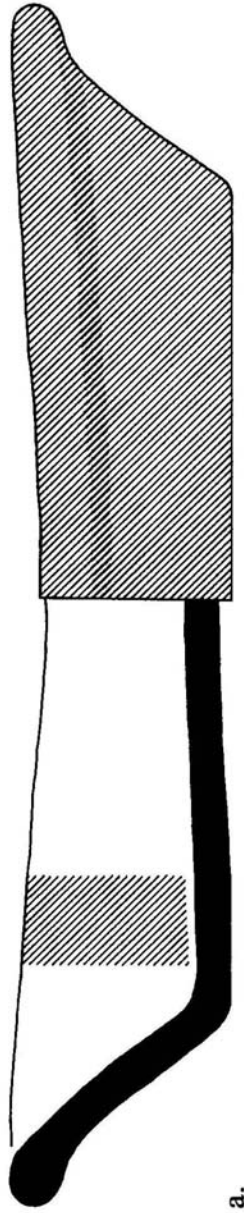
GROUP: Sierra

WARE: Paso Caballo Waxy

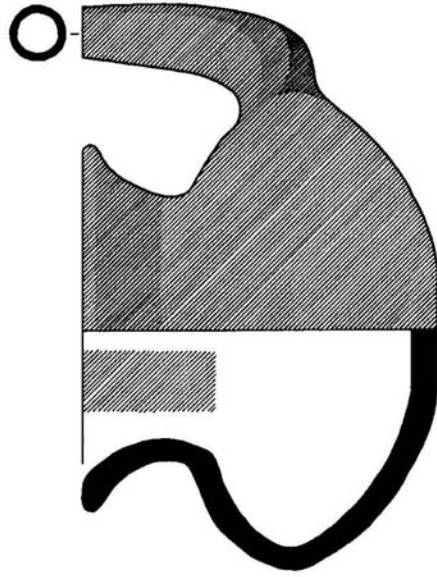
COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 20a



a.



b.

Figure 20: a) Sierra Red: Sierra Variety (LA 481/1) plate; b) Sierra Red: Variety Unspecified (Red-double slip) (LA 481/2) spouted jar.

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip color; 2) lustrous, waxy vessel surfaces; 3) plate with outflaring rim.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 5/8 (yellowish red) to 5YR 6/8 (reddish yellow). A thick gray core is present, but too diffuse for Munsell reading. It has a medium hard texture (grains generally less than 1.5 mm in size) with temper material having a round to angular fracture. The temper consists mainly of calcite, quartz, hematite, and grog, but unidentified pink and black particles occur as well.

SURFACE FINISH AND DECORATION: A thick, waxy red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to both surfaces, including exterior base. The interior and exterior sides are well-smoothed with slight lateral marks visible on and under exterior rim. Both slips exhibit a high burnish. The exterior base is also well-smoothed and variegated red and purple (10R 3/3, 10R 3/4, 10R 3/6) in color. No decoration is present. Crazeing is present on both sides and has resulted in flaking. Rootlet marks were found on the exterior and several small, fine-line scratches, running in all directions, were observed on the interior. The entire exterior surface, including base, is covered with one large firing cloud that ranges in color from black and tan to dusky red or purple.

FORM: Flaring-sided plate with outflaring everted rim and rounded lip. The rim is exterior folded. The base is flat to slightly incurved with a rounded margin. The vessel is well made, but the rim is uneven in height. Height: 4.9 cm; Rim diameter: 32.1 cm; Base diameter: 22.3 cm; Rim thickness: 1.1 cm; Body thickness: 0.8 cm; Base thickness: 0.5 cm; Weight: 1,524 g.

APPENDAGES: None

CULTURAL SIGNIFICANCE: The vessel had no visible incrustation and residue on either side. There is heavy use wear, several centimeters wide, around the exterior base margin. Given the low flaring walls, large rim diameter, and slipped interior surface, this ritual vessel probably contained non-liquid foods.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common type across the Maya area. A similar specimen, although designated as a Sierra Red: Variety Unspecified, has been found at Santa Rita Corozal (Chase and Chase 1987:Figure 2c).

VESSEL NUMBER: LA 481/2, upright at left lower tibia and foot.

TYPE: VARIETY NAME: Sierra Red: Variety Unspecified (Red-double slip)

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated in present study.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 20b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) double red slip on both surfaces; 2) thin, waxy slip surfaces; 3) spouted jar with short globular body; 4) extensive firing clouds on exterior surface.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 2.5YR 6/6 (light red) to 2.5 YR 6/8 (light red). A thick gray core was noted, but no Munsell reading was determinable. It has a medium hard (and compact) texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified black particles occur as well.

SURFACE FINISH AND DECORATION: Both the interior and exterior surfaces have a light red or reddish-orange slip (possibly a wash?) applied first, and the typical Sierra Red slip wiped over it. The interior is only slipped to the neck margin. The underslip ranges in color from 10R 5/8 (red) to 2.5YR 5/8 (red) and the overslip ranges in color from 10R 4/8 (red) to 2.5YR 4/8 (red). The underslip frequently shows through the thin red overslip showing a variegated color. The exterior base is also double slipped. Both sides are very well-smoothed and manifest a high burnish. Despite the double slip some temper is visible on each surface. There is no decoration on this vessel. Light crazing is present on both sides and has resulted in flaking of the overslip that allowed for the identification of the double slip. Firing clouds, varying in size and location, are extensive on each surface and are black, tan, gray, and white in color.

FORM: Flaring, thin-sided spouted jar with outflared everted rim and rounded to slightly pointed lip. The vessel has a squat, globular body with rounded shoulder break rising to flaring neck. The rim is exterior folded. The base is small, symmetrical, slightly incurved, and rounded at the margin. Height: 9.3 cm; Rim diameter: 10.1 cm; Base diameter: 3.8 cm; Rim thickness: 1.0 cm; Body thickness: 0.3 cm; Base thickness: 0.58 cm; Weight: 440 g.

APPENDAGES: The vertical spout is attached at the shoulder and rises to just above the lip. It is unsupported and tapers near the orifice. The top of the spout is flat and

round in cross-section. Spout height at lower body: 6.5 cm; Spout height at upper body: 3.9 cm; Spout maximum diameter: 1.5 cm; Spout orifice diameter: 0.95 cm.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation and residue on either surface. The margins of the spout and base exhibit some wear. Recent findings from Colha have shown that some spouted vessels contained residues of cacao (*Theobroma cacao*) (Powis et al. 2002). It is possible that this ritual vessel may have also held liquid chocolate.

INTERSITE LOCATIONS: See LA 479/1 for distribution of this Sierra Red: Red-double slip Variety in the Maya area. The size and shape of the Lamanai specimen is very similar to one recovered from Burial 17 in Structure C-13 at Altun Ha, dating to the Xul phase (ca. 300 B.C.) (Pendergast 1982:174-175, 183).

Burial P8-9/3:

This burial was found in an axial trench and sealed by a floor associated with the second earliest structure in P8-9. It pre-dates Burials P8-9/2 and P8-9/6 as well as Cache P8-9/1. It post-dates Burial P8-9/5. Burial P8-9/2 was interred with no apparent lining or cap, but was placed within core below the floor. It contained a mature adult (possibly male?) in an extended (supine) position and oriented in a north-south direction. Two ceramic vessels (LA 479/1 and 479/2) were recovered from the grave.

VESSEL NUMBER: LA 479/1, upright at feet.

TYPE: VARIETY NAME: Sierra Red: Variety Unspecified (Red-double slip)

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated in present study.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 21a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) double red slip on interior surface only; 2) thin, waxy slip surfaces; 3) plate with flaring sides; 4) crazing is prevalent on interior.

PASTE, TEMPER, AND FIRING: The color of the paste centers on 7.5YR 7/4 (pink). A thick gray core is found from the base to the rim. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists of calcite, quartz, and unidentified white particles.

SURFACE FINISH AND DECORATION: The interior surface has a light red or reddish-orange slip (possibly a wash?) applied first, and the typical Sierra Red slip wiped over it. On the interior, the underslip ranges in color from 5YR 5/8 (yellowish red) to 5YR 6/8 (reddish yellow) and the overslip ranges in color from 10R 4/8 (red) to 2.5YR 4/8 (red). The underslip frequently shows through the thin red overslip showing a variegated color. The exterior (single) slip exhibits the same red color as the overslip on the interior. The exterior base is not slipped. Both the interior and exterior surfaces are well-smoothed and manifest a medium-to-high burnish. Despite the double slip temper is visible on the interior surface. There is no decoration on this vessel. Crazing

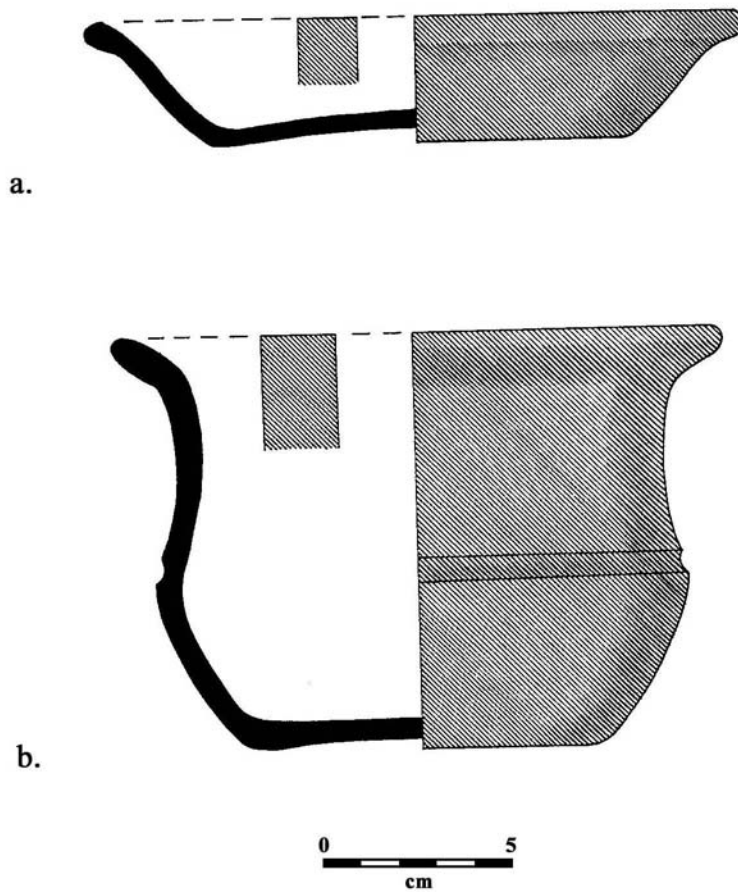


Figure 21: a) Sierra Red: Variety Unspecified (Red-double slip) (LA 479/1) plate; b) Laguna Verde Incised: Grooved-incised Variety (LA 479/2) bowl.

is prevalent on the overslip and resulted in heavy flaking and erosion that allowed for identification of double slip on the interior. The exterior slip has crazing, but is not as extensive. Firing clouds, both small and localized, are found only on the exterior surface and are black and tan in color.

FORM: Flaring-sided plate with outflaring everted rim and rounded lip. The rim is exterior folded and irregularly shaped or wobbly in spots. The base is slightly incurved and exhibits an angular margin. Height: 3.3 cm; Rim diameter: 17.4 cm; Base diameter: 10.9 cm; Rim thickness: 0.6 cm; Body thickness: 0.5 cm; Base thickness: n/a; Weight: 327 g.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either surface. There are some worn areas on the base margin. Given the double slip, this ritual vessel probably functioned as an individual eating vessel, likely for non-liquid foods.

INTERSITE LOCATIONS: None have been observed in the literature corresponding to this variety. However, there are a few varieties that are reminiscent to the Red-double slip vessel at Lamanai. For example, Gifford (1976:88) refers to a Sierra Red: Variety Unspecified (Orange-double slip) at Barton Ramie, but no Munsell color readings are provided in order to determine if his Orange-double slip variety is similar to the Lamanai Red-double slip variety. Furthermore, Gifford's variety may be later in date based on his notion that the Orange-double-slip variety had more stylistic affinities (e.g. slip color and texture) to the Aguacate Orange types. At Cuello, Kosakowsky (1987:62-63) and Pring (1977a) identified a Sierra Red: Big Pond Variety that is similar to the Lamanai variety, but they also felt that it belonged in the second half of the Late Preclassic.

VESSEL NUMBER: LA 479/2, upright and northeast of LA 479/1.

TYPE: VARIETY NAME: Laguna Verde Incised: Grooved-incised Variety

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety is designated by Sabloff (1975:80-81) at Seibal.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 21b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) waxy red slip; 2) grooved-incised line encircling body; 3) bowl with cuspidor profile; 4) heavy firing clouds on both sides.

PASTE, TEMPER, AND FIRING: Due to wholeness of the vessel no Munsell reading was taken for this vessel, but the edges were buff-orange and the carbon stain was light gray in color. The texture is unknown but temper visible through both the interior and exterior surfaces indicates that grain size is generally less than 1 mm in size. Also, the observed temper appeared to have a round to angular fracture. On the surfaces only calcite, quartz, and hematite were identified.

SURFACE FINISH AND DECORATION: A hard, waxy red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and portions of the exterior surface. The exterior is slipped to the base margin. Both sides are well-smoothed with

few visible lateral marks and exhibit a high burnish. The exterior base is also well-smoothed. Temper is noticeable through both slip surfaces. Decoration consists of a single pre-slip grooved-incised line encircling the vessel at the neck/shoulder break. The grooved-incised line is slightly wobbly in execution. Crazing is present, but is light on both sides. It has resulting in some leaching erosion (e.g., flaking). Firing clouds are very prevalent on both surfaces and consist of small and large blotches that are mostly tan in color. Some rootlet marks are also found on both sides.

FORM: Recurving-sided bowl (composite profile) with restricted neck has outflaring everted rim and rounded lip. The neck/shoulder break is rounded where the grooved-incised line is located. The rim is only slightly exteriorly thickened. The base is flat and exhibits an angular margin. Height: 11.1 cm; Rim diameter: 15.9 cm; Base diameter: 9.2 cm; Rim thickness: 0.85 cm; Body thickness: 0.35 cm; Base thickness: n/a; Weight: 600 g.

APPENDAGES: None

CULTURAL SIGNIFICANCE: The vessel had no visible incrustation and residue on either side. There is heavy use wear on the exterior base margin. The high flaring walls and slipped interior surface suggest this ritual vessel may have been used as a container for serving/eating, likely for soups and/or stews.

INTERSITE LOCATIONS: The Laguna Verde Incised: Grooved-incised Variety is one of many varieties belonging to the Laguna Verde Incised type (Forsyth 1993; Holley 1986; Lopez Varela 1996; Kosakowsky and Pring 1998; Pring 1977a; Robertson-Freidel 1980; Sabloff 1975; Valdez 1988). However, it has not been recorded at as many lowland sites as the incised variety. Some ceramicists have placed this grooved-incised material as belonging to the later part of the Late Preclassic where the decoration occurs on the inside rim (Adams 1971:93; Sabloff 1975:81), but

specimens, albeit in low frequencies, do occur in early Chicanel contexts (Robertson-Freidel 1980:80). In terms of form, the variety at Lamanai is very similar to the Chuen Complex (350-0 B.C.) Sierra Red jars at Tikal (Culbert 1993:Figure 99a and b). Based on stratigraphic evidence and vessel form, the Laguna Verde Incised: Grooved-incised Variety bowl at Lamanai belongs in the Lag Complex. At present, the form and location of the decoration make this vessel somewhat unique in northern Belize.

Cache P8-9/1:

This dedicatory cache was located in an axial trench running north-south and sealed below a floor associated with the penultimate phase of architecture in Structure P8-9. It pre-dates Burials P8-9/2 and P8-9/6, but post-dates Burials P8-9/3 and P8-9/5. It contained two ceramic vessels (LA 480/1 and 480/2), two unmodified marine shells (LA 480/3), and one obsidian core (LA 480/4). The marine shells were found east of LA 480/2 and the obsidian core was located south of this vessel. All flake scars and edges of striking platform on the obsidian core are abraded and/or battered. Its length is 7.9 cm and the diameter is 1.6 cm.

VESSEL NUMBER: LA 480/1

TYPE: VARIETY NAME: Lechugal Incised: Grooved-incised Variety

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated in present study.

GROUP: Polvero

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 22a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) waxy, black slip exterior surface; 2) jar with slightly incurved sides and everted rim; 3) vertical grooved-incised lines; 4) four equidistant handles at rim; 5) red tinges to slipped surface.

PASTE, TEMPER, AND FIRING: The paste ranges in color from 5YR 6/6 (reddish yellow) to 5YR 7/8 (reddish yellow). A very thin gray core was observed. It is poorly sorted with temper material having a round to angular fracture. This vessel (sample #2000-11) was subjected to a petrographic analysis by Linda Howie-Langs (2002a:5-6). It belongs to the Grog Group. The paste is primarily composed of grog, monocrystalline quartz, and crystalline calcite. Lesser amounts of sparry calcite, hematite nodules, and plagioclase feldspar also occur.

SURFACE FINISH AND DECORATION: A black slip with a Munsell reading of 2.5YR 2.5/0 (black) was applied to the exterior side, from the base margin to the interior rim only. This Lechugal Incised type is not a true black because there are red tinges found across the slipped surface creating a variegated color. The red tinges are diffuse in color and range from 10R 4/8 (red) to 2.5YR 4/8 (red). The presence of these red tinges has led to sorting problems at some sites (Kosakowsky 1987:77). According to Howie-Langs (2002a:6), the slip is very thin on this vessel. The interior and exterior surfaces, including the base, are well smoothed. Both sides are also highly burnished. Some temper is visible through the slip. Decoration consists of pre-slip, close-set, grooved-incised lines running from the exterior base to rim margin. The lines are

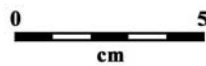
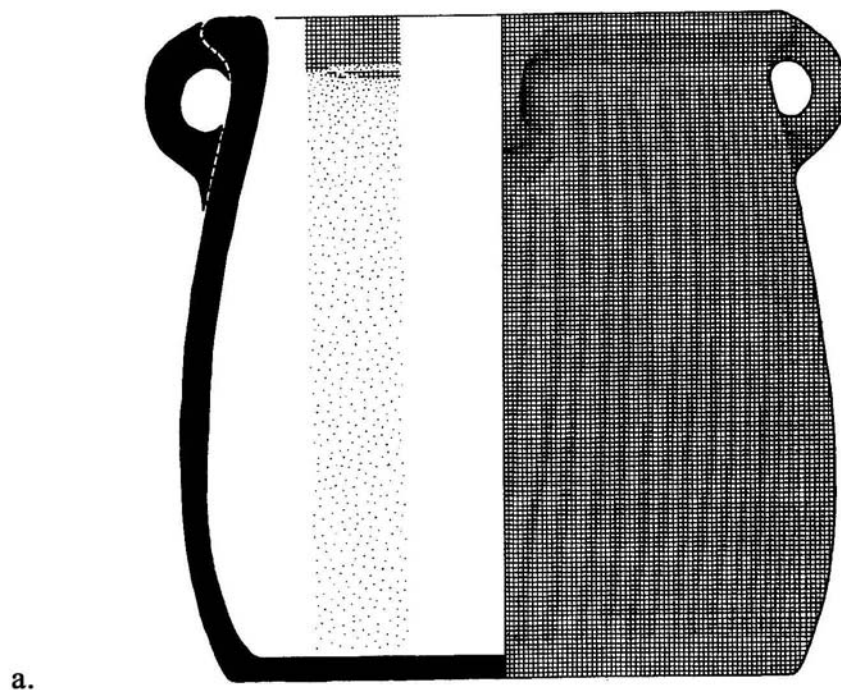


Figure 22: a) Lechugal Incised: Grooved-incised Variety (LA 480/1) jar;
b) Polvero Black: Polvero Variety (LA 480/2) plate. (a and b have black
decoration, not brown as shown.)

parallel and relatively vertical in direction. The lines continue around the four loop handles. Crazeing is prevalent on the slipped surface. No firing clouds are present. There is some pitting and leaching of the black slip.

FORM: A thin-walled jar with horizontal everted rim and loop handles. The rim is exterior folded and the lip is rounded. The lower sides are rounded and curve in slightly to the base of low, flaring rim. The base is flat and exhibits an angular margin. Height: 17.5 cm; Rim diameter: 15.5 cm; Base diameter: 15.7 cm; Rim thickness: 1.1 cm; Body thickness; 0.6 cm; Base thickness: 0.6 cm; Groove width: 1.5 to 2.9 cm; Weight: 1,312 g.

APPENDAGES: Four equidistant, vertical, single-coil handles that are attached from the upper body to the rim. The interior portion of each handle is round in cross-section, manifests considerable wiping marks, and is not slipped black. Handle width: 3.0 cm; Interior handle diameter: 1.8 cm.

CULTURAL SIGNIFICANCE: This vessel is not particularly durable in its present condition. It shows no visible signs of incrustation or residue on the interior surface. There is some wear on the exterior base margin. Given its unslipped interior surface, unrestricted orifice, and high vertical walls, this ritual vessel may have been used as a container for storing a dry substance.

INTERSITE LOCATIONS: Lechugal Incised types are generally found in low quantities at sites where Polvero Black is prominent. This variety has not been reported from any other lowland site. In terms of form, including the presence of four equidistant loop handles, one Chuen or Cauac Complex Sierra Red vessel from Tikal is reminiscent (Culbert 1993: Figure 99f), but it lacks similar slip color and vertical grooved-incised lines on the exterior surface.

VESSEL NUMBER: LA 480/2, inverted.

TYPE: VARIETY: Polvero Black: Polvero Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Polvero

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 22b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) lustrous, waxy black slipped surfaces; 2) flaring side plate; 3) red tinges to slipped surfaces.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 6/6 (reddish yellow) to 6/8 (reddish yellow). A thin carbon stain is present at base only (no Munsell reading). It has a medium hard (and compact) texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists of quartz, calcite, and hematite (up to 3 mm in size), but unidentified brown and black particles occur as well.

SURFACE FINISH AND DECORATION: A thin, somewhat hard, waxy black slip ranging in color from 2.5YR 2.5/0 (black) to 5YR 3/2 (dark reddish brown) was applied to the interior and exterior surfaces, including the base. Like LA 480/1, there are red

tinges covering both slipped surfaces of this vessel. It creates a mottled surface of black and red colors. The red tinges are quite vibrant in color ranging from 2.5YR 4/6 (red) to 2.5YR 5/8 (red). It is unclear whether this mottled slipped surface was a desired (firing) effect because some Polvero Black vessels exhibit red tinging while others do not. Clearly, the intended color was black, achieved through reduction firing, but some areas turned red during the oxidation process. All surfaces are well-smoothed with slight lateral wiping marks around rim. Both sides exhibit a high burnish. No decoration is present. Crazeing is present on all surfaces of the vessel.

FORM: Flaring, medium-thick sided plate with outflaring everted rim and rounded lip. The rim is slightly exterior folded. The base is flat. Height: 3.0 cm; Rim diameter: 16.6 cm; Base diameter: 10.7 cm; Rim thickness: 0.8 cm; Body thickness: 0.62 cm; Base thickness: 0.54 cm; Weight: 66 g.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either surface. Given the slipped interior surface, flaring sides, and shallow depth of this ritual vessel it likely functioned as an individual eating plate.

INTERSITE LOCATIONS: This type is widespread across the Maya area, and occurs wherever Sierra Red is found in quantity; however, it is typically recovered in lower quantities than Sierra Red. Sites with Polvero Black types include: Altar de Sacrificios (Adams 1971); Barton Ramie (Gifford 1976); Becan (Ball 1977); Cahal Pech (Awe 1992); Colha (Adams and Valdez 1979); Cuello (Kosakowsky 1987; Pring 1977a); Edzna (Forsyth 1983); El Mirador (Forsyth 1989); Holmul (Kosakowsky 2001); Komchen (Andrews V 1988); Nakbe (Forsyth 1993); Seibal (Sabloff 1975); Tikal (Culbert 1993); and Uaxactun (Smith 1955; Smith and Gifford 1966).

Burial P8-9/6:

This burial was found in an axial trench within the core of the terminal phase platform. P8-9/6 was a secondary burial, with no apparent lining or cap, which contained a mature adult (possibly female?) extended in position and oriented in a north-south direction. It is contemporaneous with Burial P8-9/2. Accompanying the adult were a number of grave goods, including seven ceramic vessels (LA 449/1-449/7) and two modified marine shell beads (one *Marginella* sp. and one *Oliva* sp.). The shells were scattered throughout the grave. The *Marginella* shell was punctured on one side and the *Oliva* shell had a narrow, horizontal hole (1.3 cm long x 0.2 cm wide) near its base.

VESSEL NUMBER: LA 449/1, inverted near skull.

TYPE: VARIETY NAME: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

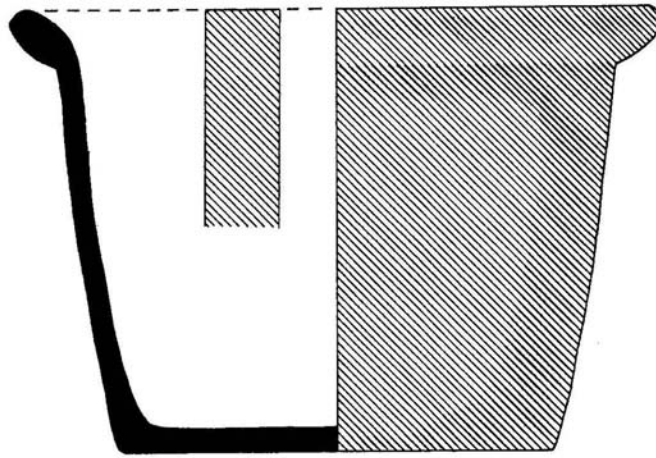
WARE: Paso Caballo Waxy

COMPLEX: Lag

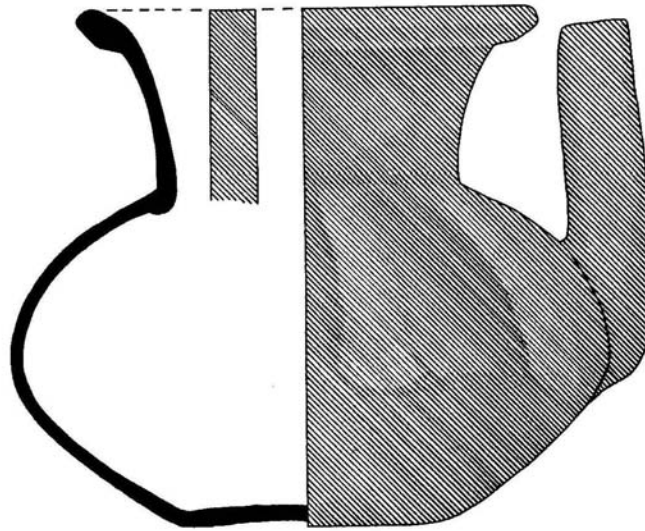
SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 23a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip color; 2) slip is soft, thick, and waxy with a high luster; 3) vertical sided bucket with everted rim.



a.



b.

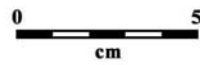


Figure 23: a) Sierra Red: Sierra Variety (LA 449/1) bucket;
b) Sierra Red: Sierra Variety (LA 449/2) spouted jar.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 7/6 (reddish yellow) to 5YR 6/6 (reddish yellow). A light gray core was found in the thick rim. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified white, black, and red particles occur as well.

SURFACE FINISH AND DECORATION: A thick, waxy red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to both the interior and exterior surface (except base). Both sides are relatively well-smoothed with slight lateral markings; exhibit a medium to high burnish; and have temper visible through slip. Base is well-smoothed with slight traces of red slip having dripped down over base margin. Crazeing is prevalent on both sides, especially the exterior surface. Flaking of the slip occurs where crazeing is heaviest. Rootlet marks, resembling white worm-like marks, are also very visible on the exterior. One firing cloud of black and tan colors covers one 5-10 cm section of exterior slip from lip to base.

FORM: This medium-sized bucket has slightly bulging vertical sides with exterior folded everted rim and rounded lip. A slight step-up in the upper body creates a bulging effect. The base is flat with an angular margin. Height: 12.1 cm; Rim diameter: 18.4 cm; Base diameter: 12.3 cm; Rim thickness: 1.1 cm; Body thickness: 0.55 cm; Base thickness: n/a; Distance from base to step-up: 6.8 cm; Weight 955 g.

APPENDAGES: None

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either surface. The margins of the base are considerably worn. It probably functioned as a ritual serving vessel for soups or stews because of the slipped interior surface and tall, vertical sides (see Robertson-Freidel 1980:71).

INTERSITE LOCATIONS: See LA 364/1 for distribution of this common variety across the lowlands. This Sierra Red: Sierra Variety vessel at Lamanai is very similar to a Juventud Red deep bowl or bucket found in a Late Yancotil (350-250 B.C.) phase burial in Operation 5, Mound 357 at Lakes Yaxha-Sacnab (Rice 1979:32-33). It is also reminiscent in form to the buckets found at Cuello (Kosakowsky 1987:Figure 6.6).

VESSEL NUMBER: LA 449/2, upright at north end of grave.

TYPE: VARIETY NAME: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 23b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip color; 2) slip is soft, thick, and waxy with a high luster; 3) spouted jar; 4) squash-like indentations on upper body

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 7/6 (reddish yellow) to 5YR 6/6 (reddish yellow). No carbon stain present. It is moderately sorted (grains generally less than 1 mm in size) with temper material

having a round to angular fracture. This vessel (sample #2000-6) was subjected to a petrographic analysis by Linda Howie-Langs (2002a:3). It belongs to the Crystalline Calcite Group. The paste is densely packed with large fragments of crystalline calcite. Lesser amounts of monocrystalline quartz, hematite nodules (up to 2.5 mm in size), chert, plagioclase feldspar, and grog also occur. The crystalline calcite is an added constituent.

SURFACE FINISH AND DECORATION: A waxy red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the exterior and portions of the interior surface. According to Howie-Langs (2002a:3), microscopic analysis has shown that a single thick layer of slip was applied to the surfaces of this vessel. The interior is slipped to neck base and has very high burnish with a few lateral marks on the lower body and base. Interior base has red drips marks. The exterior is slipped including the base, is very highly burnished, and is very well-smoothed with slight lateral marks between indentations. The base is well-smoothed and has faint lateral marks. The spout is also well-smoothed with faint vertical marks present. It is well-rounded with slight tapering at open end. Some temper visible through slip. Decoration consists of squash-like indentations or lobes encircling the shoulder. Crazing is prevalent on both surfaces resulting in flaking of slips, especially on the exterior. Firing clouds are localized in three separate areas (exterior neck, shoulder, and lower body) and are black and tan in color.

FORM: Flaring-sided jar with rounded shoulder (i.e., domed) that rises to a high outcurving neck. The neck is constricted at the shoulder break. The rim is everted and the lip is slightly pointed. The base is small, slightly incurved, and exhibits a rounded margin. Height: 16.8 cm; Rim diameter: 14.9 cm; Base diameter: 7.3 cm; Rim thickness: 1.0 cm; Body thickness: 0.4 cm; Base thickness: n/a; Weight 1,064 g.

APPENDAGES: The vertical spout is attached at the shoulder and rises to just below the rim. It is an unsupported or unbridged spout. The top of the spout is flat and round in cross-section. Spout height at lower body: 11.5 cm; Spout height at upper body: 6.6 cm; Spout orifice diameter: 1.6 cm.

CULTURAL SIGNIFICANCE: This moderately hard and durable vessel had no visible incrustation and residue on either surface. The margins of the base are considerably worn. Like the spouted vessels from Colha (Powis et al. 2002), this ritual vessel may have also contained liquid cacao.

INTERSITE LOCATIONS: The same as those listed for Vessel Number LA 449/1. In terms of form, spouted vessels, dating to the Late Preclassic, have also been found all over the Maya lowlands and highlands, from Kabah in the Yucatan Peninsula to Kaminaljuyu in the Guatemalan highlands. They are recovered primarily from burials and associated with elite individuals. At times, they are occasionally deposited in caches and middens. Spouted vessels are not high frequency items (as evidenced by their elaborate forms and decorations) and typically co-occur with other ritual serving vessels, such as plates, bowls, and dishes (see Powis et al. 2002). The Lamanai vessel is similar to a specimen found at Cuello (Pring 1977a:Figure 56k).

VESSEL NUMBER: LA 449/3, placed inside LA 449/4.

TYPE: VARIETY NAME: Unnamed Buff-and-modeled

ESTABLISHED: Present study

GROUP: Unspecified

WARE: Uaxactun Unslipped

COMPLEX: Lag

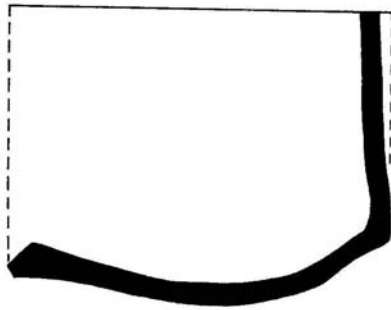
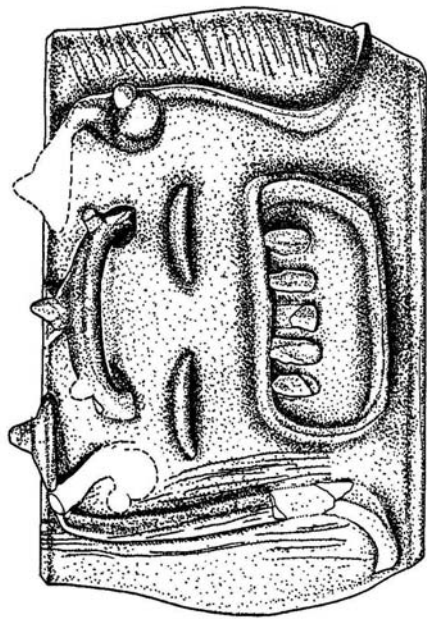
SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 24a

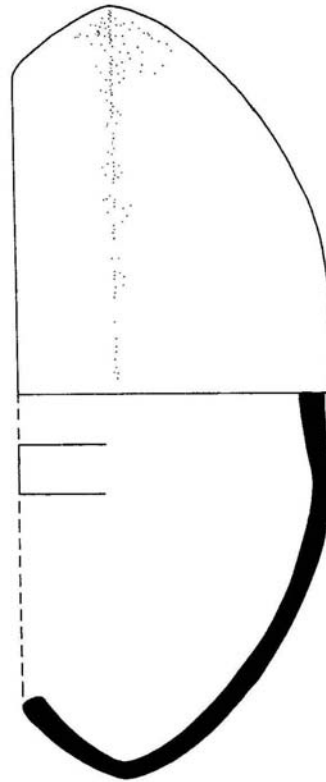
PRINCIPAL IDENTIFYING ATTRIBUTES: 1) striated exterior surface that is buff in color; 2) round sided effigy bowl with slightly restricted orifice.

PASTE, TEMPER, AND FIRING: The paste ranges in color from 5YR 7/4 (pink) to 5YR 6/4 (light reddish brown). Medium gray core occurs throughout vessel sides. It has a coarse texture (grains generally less than 3 mm in size) with temper having a round to angular fracture. The temper consists mostly of quartz and calcite, but pink, white, and black particles also occur.

SURFACE FINISH AND DECORATION: Both interior and exterior surfaces are unslipped. The interior is moderately well-smoothed with lateral finger smoothing marks in upper body (at lip). On the exterior, all but the face area is raked laterally and down to right with broad, deep striations. Some vertical striations occur in the face area, but generally it is well-smoothed. Some temper visible through paste on both sides. In terms of decoration, the exterior surface has a complex applied face with schematized crocodile headdress, eyes projecting above this, at margins of curvilinear side elements (shaped like an 'S'); two horizontal tabs below the eyes lie above a large irregular mouth with raised border and five applied teeth (David Pendergast, personal communication, 1999). The applique is not well-executed in some places as some of the



a.



b.



Figure 24: a) Unnamed Buff-and-modeled (LA 449/3) effigy bowl; b) Flor Cream: Variety Unspecified (LA 449/4) bowl.

elements are unevenly applied (headdress and teeth). There are only a few blemishes on this vessel and they include a small, localized firing cloud (black in color) just to the right of the face and some leaching (white in color) around the face.

FORM: Round-sided bowl curving in slightly in the upper body with the orifice also being slightly restricted. The rim is direct and uneven in a few areas where clay has been welled-up over the lip prior to firing. The lip has a beveled-in shape. The base is slightly incurved and the base margin is angular. Height: 11.6 cm; Rim diameter: 16.6 cm; Base diameter: 15.1 cm; Rim thickness: 1.25 cm; Body thickness: 0.6 cm; Base thickness: 0.4 cm; Width of face: 13.43 cm; Weight 1,186g.

APPENDAGES: None

CULTURAL SIGNIFICANCE: This moderately hard vessel had no visible incrustation and residue on either surface. The margins of the base are worn to the point where the striations are smoothed. Since this vessel was included in a burial it is considered a ritual form and may have fulfilled a serving/eating or storage function (e.g., individual eating bowl or container for dry substances).

INTERSITE LOCATIONS: None noted for this paste, form, and style of applique. It is a unique vessel at the site and it is the earliest crocodile representation yet discovered at Lamanai. According to Pendergast (1980d; 1981a), the existence of this early vessel strengthens the argument that the ancient name of the site was Lama'an/ayin, or submerged crocodile, and that this saurian held some kind of special place among the deities worshipped at Lamanai.

VESSEL NUMBER: LA 449/4, containing LA 449/3.

TYPE: VARIETY NAME: Flor Cream: Variety Unspecified

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety named for present study.

GROUP: Flor

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 24b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, waxy cream slip; 2) bowl with medial angle and restricted orifice; 3) reddish yellow paste.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 7/6 (reddish yellow) to 5YR 6/6 (reddish yellow). It has a medium hard texture (grains generally less than 2 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, and hematite, but black and pink particles occur as well.

SURFACE FINISH AND DECORATION: A thin, hard, waxy cream slip centering on 7.5YR 8/3 (pink) was applied to both the interior and exterior surfaces, including the base. The interior is generally well-smoothed, but some lateral wiping marks are visible

running in all directions. The exterior slip is slightly less regular than interior and has lateral marks like the interior. The base is well-smoothed too. Medium burnishing occurs on both sides. Some temper shows through slip in areas where pitting has occurred, particularly on the exterior surface. Rootlet marks and leaching are also present on both sides. Crazing is light on both the interior and exterior slips. Four large firing clouds cover most of the lower exterior body and are white, black, and tan in color.

FORM: Rounded, thick-sided, bowl (tecomate-like in shape) rising to angle above mid-body from which sides slope in to restricted orifice. The lip is somewhat rounded-to-squared in form. The base is small, slightly incurved, and exhibits a rounded base margin. Height 11.5 cm; Rim diameter: 22.7 cm; Base diameter: 7.8 cm; Rim thickness: 1.0 cm; Body thickness: 1.0 cm; Base thickness: n/a; Weight: 1,614 g.

APPENDAGES: None

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either surface. The slip around the lip area and the margins of the exterior base are worn. Given its incurved sides and interior slipped surface, this ritual vessel probably functioned as a serving/eating vessel.

INTERSITE LOCATIONS: Flor Cream: Varieties Unspecified is another major type:variety that is found in ceramic assemblages across the Maya area throughout early Chicanel times. Related forms to the variety identified at Lamanai have been recovered from Altar de Sacrificios (Adams 1971); Barton Ramie (Gifford 1976); Becan (Ball 1977); Colha (Valdez 1987); Cuello (Kosakowsky 1987); Edzna (Forsyth 1983); El Mirador (Forsyth 1986, 1989); Seibal (Sabloff 1975); Tikal (Culbert 1993); Uaxactun (Smith 1955; Smith and Gifford 1966); and Yaxchilan (Lopez Varela 1989, 1992).

VESSEL NUMBER: LA 449/5

TYPE: VARIETY NAME: Sierra Red: Ahuacan Variety

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated by Culbert (1993) at Tikal.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 25a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) patchy red slip color; 2) slip has waxy feel; 3) bowl with composite profile; 4) firing clouds are prevalent.

PASTE, TEMPER, AND FIRING: The paste color centers on 2.5YR 5/8 (red). No carbon stain is present. It has a medium texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, and hematite (up to 2.5 mm in size), but white, pink, and black particles occur as well. The paste is porous with a lot of burned out organic material.

SURFACE FINISH AND DECORATION: A waxy red slip centering on 2.5YR 4/8 (red) was applied to both sides, except the exterior base. Both sides have a medium-

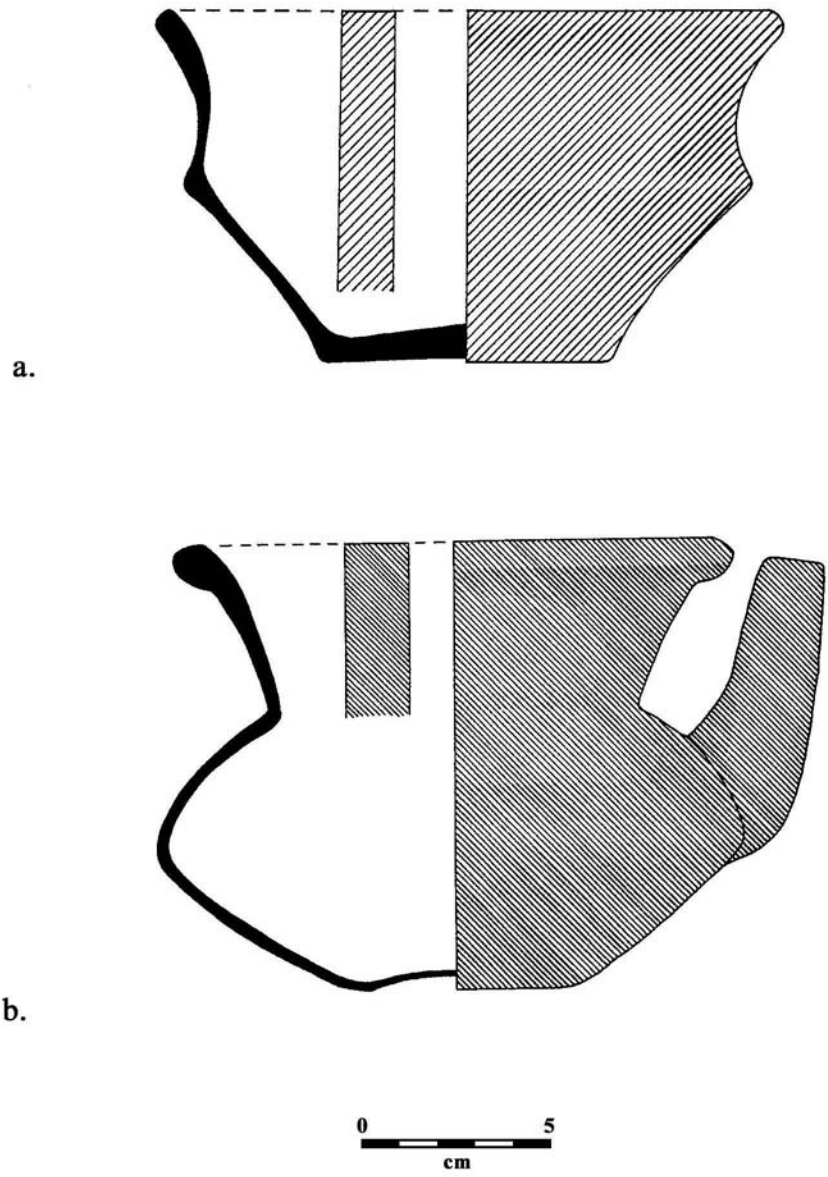


Figure 25: a) Sierra Red: Ahuacan Variety (LA 449/5) bowl;
b) Sierra Red: Variety Unspecified (LA 449/6) spouted jar.
(a has red decoration, not orange as shown.)

high burnish and are very well-smoothed with only faint lateral marks occurring near the interior base margin. Each surface is extensively pitted, especially the exterior base where large pieces of temper (mainly calcite and quartz) are falling out. Temper is visible through slip on both sides. Crazeing is found on each surface, but it is light compared to LA 449/1. Some leaching is present on interior slip. Heavy firing clouds occur across both surfaces from the interior base to the exterior base and range in color from black to tan to yellow.

FORM: Recurving-sided bowl with outflaring everted rim and rounded-to-squared lip. Flaring, thin lower sides, rising to sharp medial angle from which upper sides curve in and then out to rim. The base is flat and exhibits an angular margin. Height: 9.3 cm; Rim diameter; 16.8 cm; Base diameter: 8.1 cm; Rim thickness: 0.8 cm; Body thickness: 0.4 cm; Base thickness; n/a; Weight 604g.

APPENDAGES: None

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either surface. The margins of the base and medial angle are extensively worn. It probably functioned as a ritual serving/eating vessel.

INTERSITE LOCATIONS: This variety of Sierra Red has been identified at Colha (Valdez 1987), Cuello (Kosakowsky 1987), and Tikal (Culbert 1993). This specific vessel form is most similar to a recurved-sided bowl with exteriorly folded rim and rounded lip found at Colha (Kosakowsky 1987:57, Figure 6.29c). It may also have modal affinities to the rim sherds of Sierra Red: Sierra Variety recovered at El Mirador (Forsyth 1989:Figures 5-7) and Uaxactun (Smith 1955:Figure 70; Smith and Gifford 1966:150), but since their complete form is unknown it is difficult to state with any degree of certainty.

VESSEL NUMBER: LA 449/6, found upright in grave.

TYPE: VARIETY NAME: Sierra Red: Variety Unspecified

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated by Gifford in the Barton Ramie collection (see Willey et al. 1965).

GROUP: Sierra

WARE: Paso caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 25b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, uneven red slip color; 2) lustrous waxy surfaces; 3) spouted jar; 4) biconvex form.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 7/6 (reddish yellow) to 5YR 6/6 (reddish yellow). No carbon stain is present. It is moderately sorted (grains generally less than 1 m in size) with temper material having a round to angular fracture. This vessel (sample #2000-7) was subjected to a petrographic analysis by Linda Howie-Langs (2002a:3-4). It belongs to the Crystalline Calcite Group and contains a similar paste recipe to LA 449/2 (sample #2000-6). The paste is densely packed with large fragments of crystalline calcite. Lesser amounts of monocrystalline quartz, hematite nodules (up to 3.0 mm in size), and chert also occur.

The crystalline calcite is an added constituent. The paste is somewhat porous in the spout.

SURFACE FINISH AND DECORATION: A waxy red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the exterior and portions of the interior surface. According to Howie-Langs (2002a:4), microscopic analysis has shown that a single thick layer of slip was applied to the surfaces of this vessel. The interior is slipped to the interior neck base. Interior base has red drip marks. The application of the slip on both sides is uneven, almost streaky, but not as deliberate as that produced on Society Hall Red types. Both surfaces are well-smoothed and exhibit a high burnish. Lateral wiping marks are only present at the neck margin on the exterior side. The spout is well-smoothed with only faint lateral streaks. Temper is visible through the eroded slip. Rootlet marks and crazing are prevalent on both surfaces. The crazing is found on both sides, especially the exterior which has caused flaking of the slip. There is also considerable erosion of the exterior slip. There are several small localized tan colored firing clouds on the exterior lower body near the spout.

FORM: Biconvex, flaring-sided, thin-walled jar rising to high outcurving neck with everted rim and rounded lip. The lip is exterior folded and the shoulder is slightly angular. The neck is constricted at the shoulder break and rises to a wide orifice. The base is small, incurved, and exhibits a rounded margin. It is slightly off-center. Height: 14.5 cm; Rim diameter: 18.8 cm; Base diameter: 5.3 cm; Rim thickness: 1.1 cm; Body thickness: 0.4 cm; Base thickness: 0.2 cm; Weight 1,280g.

APPENDAGES: The slightly canted spout rises from the body angle to just below the rim. It is an unsupported or unbridged spout. The top of the spout is flat and round in cross-section. Spout height at lower body: 9.7 cm; Spout height at upper body: 5.9 cm; Spout orifice diameter: 1.4 cm.

CULTURAL SIGNIFICANCE: This moderately hard and durable vessel had no visible incrustation or residue on either side. The exterior base is considerably worn from use. Like the Colha spouted vessels (Powis et al. 2002), this ritual vessel may have also been used for either the preparation and/or serving liquid chocolate drinks.

INTERSITE LOCATIONS: There are many Maya sites that have produced varieties of the Sierra Red type (see LA 449/1). Similarly, there are numerous sites across the Maya area that have reported spouted jars. The Lamanai vessel is nearly identical to a specimen found at Cuello (Pring 1977a:Figure 56k). For a complete listing of these site locations see Powis et al. (2002).

VESSEL NUMBER: LA 449/7, scattered at west side of burial.

TYPE: VARIETY NAME: Sierra Red: Variety Unspecified

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated by Gifford in the Barton Ramie collection (see Willey et al. 1965).

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Not illustrated.

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) waxy red slip; 2) flaring sided dish with sharply everted rim; 3) swirls of slip on exterior base.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color centering on 5YR 6/6 (reddish yellow). No carbon stain is present. It has a medium texture with the temper material having an angular fracture. The temper consists mainly calcite and quartz, but unidentified dark particles occur as well.

SURFACE FINISH AND DECORATION: A lustrous waxy red slip ranging in color from 10R 5/8 (red) to 10R 4/8 (red) was applied to the interior and portions of the exterior surface. The exterior was slipped to base margin, but traces of slip occur around the edges. The slip is streaky in spots and may be the result of erosion rather than the intentional wiping effect produced on Society Hall Red types. Both sides are very well-smoothed, including the base, with no lateral wiping marks present. The interior and exterior surfaces also have a high burnish. Decoration consists of swirls of slip on exterior base, possibly in a pattern. Recent research by McAnany et al. (1999:158-159) at K'axob have revealed that a number of Late Preclassic Sierra Red types exhibited painted decorations on their exterior bases, including cross motifs. The only blemishes observed on this specimen were a few spots where the exterior slip was eroded.

FORM: Flaring, thin-sided dish with large sharply everted rim and rounded lip. The base is flat. Height: 4.2 cm; Rim diameter: 28.0 cm; Rim thickness: 0.9 cm; Body thickness: 0.45 cm.

APPENDAGES: None

CULTURAL SIGNIFICANCE: This moderately hard and durable dish had no visible incrustation or residue on either surface. Given its large diameter and shallow depth, it was probably used for the serving/eating of ritual meals.

INTERSITE LOCATIONS: None noted.

Burial P8-9/2:

This burial was found in an axial trench within the core of the terminal architecture with some of the bones partly sealed by the stairs of the penultimate phase platform. It is contemporaneous with Burial P8-9/6. P8-9/2 was a secondary burial, with no apparent lining, but capped with a large oblong stone placed over the bones. Although the burial was not lined, it was found resting on a stratum of lime soil, possibly laid down as a base for the grave. It contained a mature adult (possibly male?) oriented in a north-south direction. Accompanying the adult was one ceramic vessel (LA 454/1) that was complete except for small pieces of the rim and body. Some of the sherds belonging to this vessel lay higher in the core, above the oblong stone, than the remaining portion of the vessel.

VESSEL NUMBER: LA 454/1, upright, broken and placed southwest of bones.

TYPE: VARIETY NAME: Alta Mira Fluted: Variety Unspecified

ESTABLISHED: Type and Variety identified by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

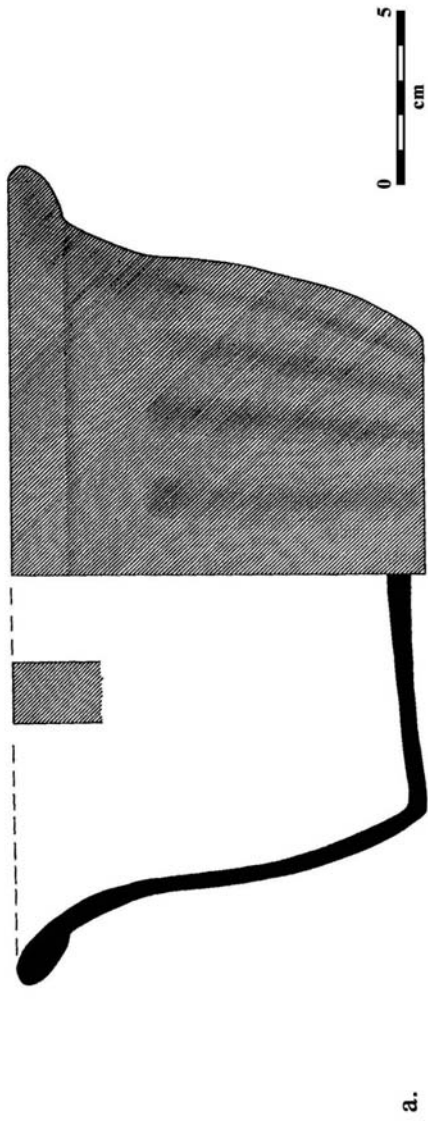
SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 26a

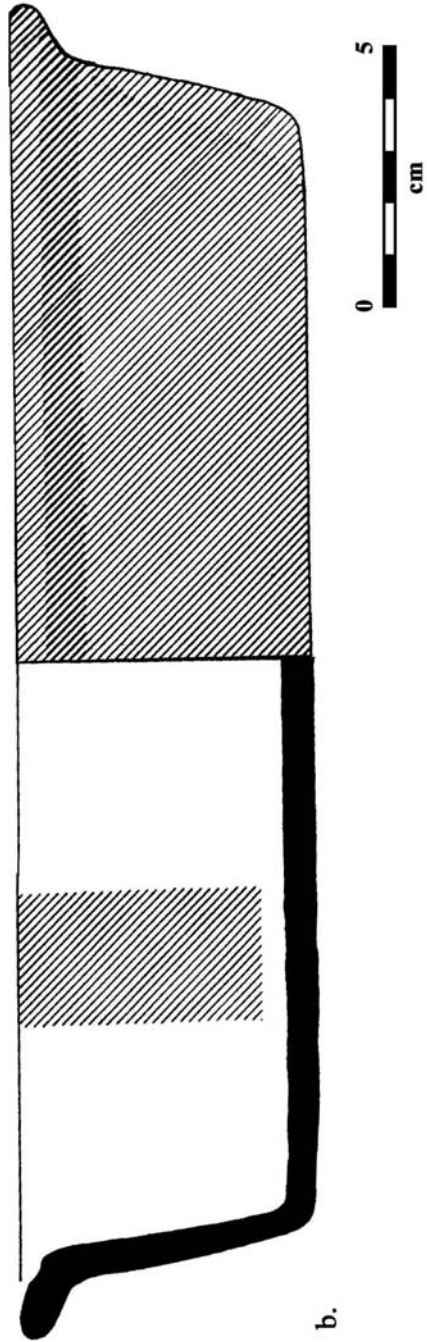
PRINCIPAL IDENTIFYING ATTRIBUTES: 1) slightly streaky red slip; 2) lustrous, waxy slip; 3) vertical fluting on exterior surface; 4) flaring sided deep bowl or bucket with everted rim.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 5/8 (strong brown) to 5YR 6/8 (reddish yellow). No carbon stain is present. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having around to angular fracture. The temper consists mainly of calcite, quartz, hematite (up to 2 mm in size), but unidentified white and black particles occur as well. There are some areas of the paste where organic material has burned out leaving visible voids.

SURFACE FINISH AND DECORATION: A thin red slip, streaky in spots, ranges in color from 10R 4/8 (red) to 2.5YR 4/8 (red) and 2.5YR 5/8 (red). The interior is slipped as well as the exterior to the base margin. The exterior base has slight traces of the red slip, but no pattern discernible. The slip on the interior is streakier than that observed on the exterior. They are not as streaky as the slips found on Society hall Red types. Both sides are very well-smoothed and exhibit a high burnish. The exterior base is well-smoothed as well. Temper, especially hematite, is visible through both slips. Decoration consists primarily of vertical fluting on the exterior surface of the vessel. The flutes are



a.



b.

Figure 26: a) Alta Mira Fluted: Variety Unspecified (LA 454/1) bucket; b) Laguna Verde Incised: Grooved-incised Variety (LA 435/2) dish.

generally parallel and rounded, forming a smooth, undulating surface made up of alternating round-section troughs. A single horizontal flute encircling the vessel is located just above the vertical flutes. Crazeing is prevalent on both sides resulting in flaking of the slips. A number of small, localized firing clouds are found on the exterior (at lip and base margin) and are black and tan in color. Some rootlet marks visible on both sides.

FORM: Flaring, thin-sided bucket with slightly bulging upper sides (at horizontal flute) and an outflaring everted rim. The lip is exterior folded and rounded. The base is slightly incurved and exhibits an angular base margin. Height: 13.9 cm; Rim diameter: 27.6 cm; Base diameter: 15.8 cm; Rim thickness: 1.5 cm; Body thickness: 0.5 cm; Base thickness: n/a; Weight: 1,384 g.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either surface. The lower interior surface is somewhat eroded and the margins of the base are worn. It probably functioned as a ritual serving vessel for soups or stews because of its slipped interior and tall sides which would have contained liquids (see Robertson-Freidel 1980:71).

INTERSITE LOCATIONS: Alta Mira Fluted in a minor type within the Sierra Group, but usually occurs wherever significant deposits of Sierra Red types are found. It has been found at many sites, including Altar de Sacrificios (Adams 1971); Barton Ramie (Gifford 1976); Edzna (Forsyth 1983); El Mirador (Forsyth 1989); Holmul (Kosakowsky 2001); Komchen (Andrews V 1988); Nakbe (Forsyth 1993); Seibal (Sabloff 1975); Tikal (Culbert 1993); and Uaxactun (Smith and Gifford 1966; Smith 1955).

Collapse Debris in 4th:

One vessel (LA 435/2) was recovered from the terminal phase architecture in Structure P8-9. Located along the primary axis, it was located in collapse debris and covered the terminal stairs. The vessel post-dates the rest of the ceramic material (LA 449, 454, 479, 480, and 481) in the structure. Associated with this vessel was an intact limestone bark beater (LA 435/1): Length; 9.3 cm; Width: 8.3 cm; Thickness: 4.6 cm.

VESSEL NUMBER: LA 435/2

TYPE: VARIETY: Laguna Verde Incised: Grooved-incised Variety

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety named by Sabloff (1975) at Seibal.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 26b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) waxy, red slip; 2) grooved-incised line on rim; 3) dish with horizontal everted rim; 4) crazing is present on both surfaces.

PASTE, TEMPER, AND FIRING: The paste ranges in color from 5YR 5/8 (yellowish red) to 5YR 6/8 (reddish yellow). A thick gray core (2.5YR 3/0) is present. It has a

medium texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, and hematite, but unidentified light brown and red particles occur as well.

SURFACE FINISH AND DECORATION: A lustrous, waxy red slip centering on 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, excluding the base. The slip appears to be a little streaky on both sides, but is not as well-defined as that observed on Society Hall Red types at Cuello (Kosakowsky 1987:64-69). Both sides are well-smoothed with only a few lateral wiping marks present around the rim. Medium burnishing is found on each side. Decoration consists of a single, pre-slip grooved-incised line encircling the upper side of the everted rim. It is located beside the interior rim break. Crazeing is present on both sides and has resulted in flaking of the slips. One firing cloud, tan in color (7.5YR 5/8, 6/8), is located from the interior rim to the exterior base in one localized area of the vessel.

FORM: Flaring-sided dish with horizontal everted rim and rounded lip. The rim is interior folded. The base is flat and exhibits a slightly rounded margin. Height: 5.7 cm; Rim diameter: 25.7 cm; Base diameter: 21.0 cm; Rim thickness: 0.87 cm; Body thickness: 0.76 cm; Base thickness: 0.56 cm; Width of grooved-incised line: 0.44 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: It is a hard and durable vessel that exhibited no incrustation or residue on either surface. Some pitting is found on the interior base. No use wear on exterior base margin. It was probably used as a family sized serving/eating vessel for soups and/or stews.

INTERSITE LOCATIONS: See LA 421/7 for distribution of this variety across the lowlands.

STRUCTURE P8-11

Core of Primary Platform:

Nine vessels (LA 355/1-5, 8-11) were recovered from the lower stratum of core material of the primary or earliest platform of P8-11. Two small finds were also found associated with the vessels in the core. A whistle figurine or ocarina (LA 355/6), in the shape of a fat-bodied bird, was found that had two stops in the side of its body, a mouthpiece below its tail, a suspension loop at top of back, and the eyes were depicted by punctations; Length: 3.6 cm; Width: 2.5 cm; Height: 3.15 cm; Stop diameter: 0.2 cm. Also, a tiny disc bead (LA 355/7) was recovered. It was made of jade or albite (white feldspar) and badly broken; Diameter: 0.6 cm; Thickness: 0.3 cm; Perforation diameter: 0.1 cm. LA 355 represents the earliest lot recovered from this structure. Lots LA 367, 421, and 440 postdate this ceramic assemblage.

VESSEL NUMBER: LA 355/1

TYPE: VARIETY: Lechugal Incised: Gouged-incised Variety

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated by Forsyth (1979) at Edzna.

GROUP: Polvero

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 27a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) black slipped surfaces; 2) lustrous and slightly waxy vessel surfaces; 3) dish with rounded sides; 4) gouged-incised lines on exterior body; 5) crazing is prevalent on both sides.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 7.5YR 5/8 (strong brown) to 7.5YR 6/8 (reddish yellow). Thin dark edges occur with a Munsell reading of 7.5YR 3/2 (dark brown). It has a medium hard texture (grains generally less than 1 mm in size) with the temper material having a round to angular fracture. The temper consists mainly of calcite, quartz, and hematite, but unidentified black particles occur as well.

SURFACE FINISH AND DECORATION: A black slip with a color ranging from 2.5YR 2/0 (black) to 7.5Y 2/0 (black) was applied to the interior and exterior surfaces, including the base. Red tinges, similar in color to LA 367/1, 480/1, and 480/2, are noticeable on both sides. The interior and exterior surfaces are well-smoothed and exhibit a high burnish. Some temper shows through the slips. Decoration on exterior has postslip prepolish gouged-incised band consisting of upper and lower border lines containing pairs of stepped lines connected to the borders. The lines are thin and shallow. Incision raised the clay around the lines, only part of which was polished away. Crazing is prevalent on both sides. Erosion of slip on each surface is noticeable, especially on the exterior.

FORM: Round-sided dish with interior folded rim and rounded lip. The base is slightly rounded. Height: 5.9 cm; Rim diameter: 18.8 cm; Rim thickness: 1.4 cm; Body thickness: 0.9 cm; Base thickness; 0.6 cm; Gouged-incised line width: 0.15 cm.

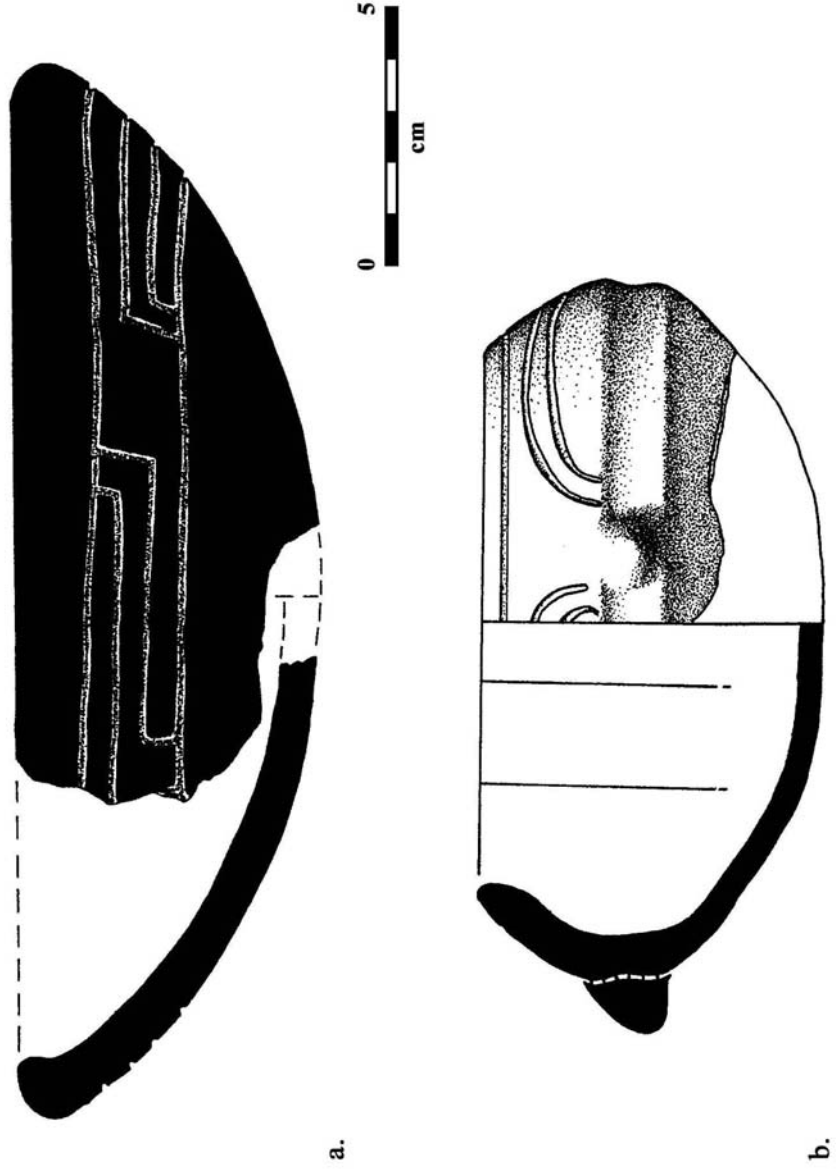


Figure 27: a) Lechugal Incised: Grooved-incised Variety (LA 355/1) dish; b) Accordion Incised: Variety Unspecified (LA 355/2) bowl.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either surface. Some pitting is found on both sides. Given the small size, shallow depth, and slipped interior surface, it probably functioned as an individual serving/eating vessel for hot soups and/or stews.

INTERSITE LOCATIONS: See LA 367/1 and Forsyth (1979) for distribution of this type across the Maya area.

VESSEL NUMBER: LA 355/2

TYPE: VARIETY: Accordion Incised: Variety Unspecified

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated in present study.

GROUP: Flor

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 27b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thick cream slip; 2) lustrous and waxy vessel surfaces; 3) bowl with rounded sides and incurving rim; 4) incisions on upper body; 5) encircling groove at mid-body; 6) applied lug bosses.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 7/4 (pink) to 5YR 7/6 (reddish yellow). No carbon stain is present. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified black, red, and white particles occur as well.

SURFACE FINISH AND DECORATION: A thick, lustrous and waxy cream slip ranging in color from 5YR 8/2 (pinkish white) to 5YR 8/3 (pink) was applied to both the interior and exterior surfaces, including the base. Both sides are very well-smoothed and exhibit a high burnish. A few pieces of temper (calcite) are visible through the slips on each surface. Decoration on exterior has broad encircling groove at mid-body with opposing applied round protuberances within groove. The upper body has preslip incised pairs of inverted lines terminating at the sides of the protuberances, bordered above by an encircling line at rim. Small, blotchy firing clouds, black and bluish-gray in color, are located around the exterior rim only.

FORM: Round-sided bowl with incurving rim and slightly pointed lip. The rim is interior thickened and exhibits a restricted orifice. The base is slightly rounded. Height: 6.7 cm; Rim diameter: 10.5 cm; Orifice diameter: 13.8 cm; Rim thickness: 0.95 cm; Lower body thickness: 0.5 cm; Upper body thickness: 0.8 cm; Base thickness: 0.5 cm; Groove width: 0.75 cm; Incised line width: 0.16 cm; Width of applied protuberance: 1.0 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel exhibited no incrustation or residue on either surface. No use wear was found. Given the small size, restricted orifice, applied protuberances, and slipped interior surface, this vessel probably functioned as an individual serving/eating vessel for soups and/or stews.

INTERSITE LOCATIONS: No comparative specimens have been found for this particular vessel, but this incised type co-occurs wherever Flor Cream types are found. Given the groove at mid-body, incised lines on upper body, and applied protuberances, the Lamanai specimen may be more appropriately designated as a composite variety. If this determination is made, then it should be renamed to reflect its status at the varietal level.

VESSEL NUMBER: LA 355/3

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

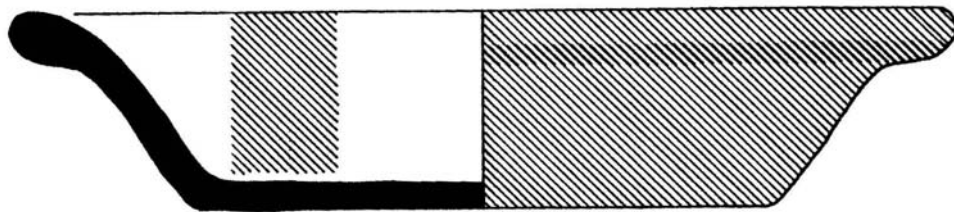
GROUP: Sierra

WARE: Paso Caballo Waxy

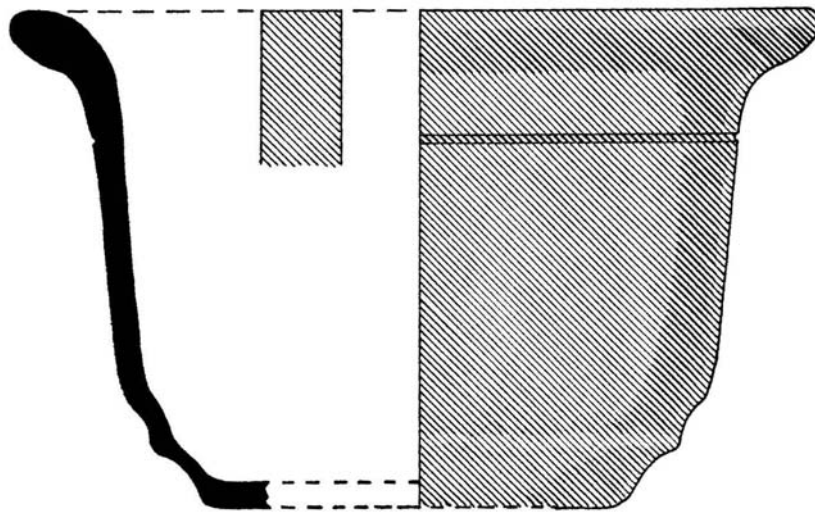
COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 28a



a.



b.

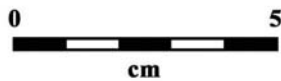


Figure 28: a) Sierra Red: Sierra Variety (LA 355/3) dish; b) Laguna Verde Incised: Variety Unspecified (LA 355/4) bowl.

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip color; 2) lustrous and waxy vessel surfaces; 3) dish with horizontal everted rim.

PASTE, TEMPER, AND FIRING: The paste is uniform in color centering on 7.5YR 7/4 (pink). No carbon stain is present. It has a medium hard texture (grains generally between 1-3 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified black and red particles occur as well.

SURFACE FINISH AND DECORATION: A soft, lustrous, and waxy red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, including the base. Both sides are well-smoothed, especially the interior which appears to have an underslip or self slip (7.5YR 8/4). Each side has a medium-high burnish. Temper is visible through the eroded slipped surfaces. No decoration is present. Two small firing clouds are found on the exterior rim and base margin.

FORM: Flaring-sided dish with horizontal everted rim and rounded lip. The rim is slightly exteriorly thickened. The base is flat and exhibits an angular margin. Height: 3.7 cm; Rim diameter: 17.1 cm; Base diameter: 11.0 cm; Rim thickness: 1.0 cm; Body thickness: 0.7 cm; Base thickness: 0.5 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either side. Some use wear on exterior base margin. Pitting is found on interior base. Given the small size, shallow depth, and slipped interior surface, it probably functioned as an individual serving/eating vessel for soups and/or stews.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common variety across the lowlands.

VESSEL NUMBER: LA 355/4

TYPE: VARIETY: Laguna Verde Incised: Variety Unspecified

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated by Gifford (1976) at Barton Ramie.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 28b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip color; 2) lustrous and waxy vessel surfaces; 3) grooved-incised line encircling upper body; 4) vertical sided bowl with horizontal everted rim; 5) firing clouds are present.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 6/8 (reddish yellow) to 5YR 7/8 (reddish yellow). No carbon stain is present. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite,

quartz, and hematite (up to 2mm in size), but unidentified black and red particles occur as well.

SURFACE FINISH AND DECORATION: A lustrous and waxy red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, including the base. Both sides are well-smoothed and exhibit a very high burnish. The exterior base is also well-smoothed. Decoration consists of a single pre-slip grooved-incised line encircling the vessel at the upper body. The line is both narrow in width and shallow in depth. Rootlet marking occurs on the exterior surface. Two small firing clouds, tan in color, were found on exterior rim and base. Some erosion is found on the slipped surfaces.

FORM: Vertical, thin-sided bowl with horizontal everted rim and rounded to slightly pointed lip. The exterior is stepped, twice near base, and resembles a ridge. It is not paralleled on the interior; interior is only stepped at line of upper exterior step. The base is flat and exhibits an angular margin. Height: 9.5 cm; Rim diameter: 15.3 cm; Base diameter: 7.9 cm; Rim thickness: 0.9 cm; Body thickness: 0.5 cm; Base thickness: 0.6 cm; Width of incised line: 0.1 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either side. Given the depth, narrow orifice, and slipped interior surface, it probably functioned either as an individual serving/eating vessel or as a drinking cup.

INTERSITE LOCATIONS: Although a minor type, it usually occurs wherever significant deposits of Sierra Red are found. The variety at Lamanai is similar to most Laguna Verde Incised types (Adams 1971; Ball 1977; Bey et al. 1998; Culbert 1993;

Forsyth 1989; Gifford 1976; Lopez Varela 1996; Sabloff 1975; Smith and Gifford 1966; Smith 1971; Valdez 1987), with the exception of the lower body stepping.

VESSEL NUMBER: LA 355/5

TYPE: VARIETY: Unnamed Black, Punctated, and Unslipped

ESTABLISHED: Type and Variety designated in present study.

GROUP: Polvero

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 29a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) Interior of the vessel and just over the rim onto the exterior is slipped black; 2) exterior of the vessel is largely unslipped; 3) incurving sided bowl; 4) encircling band of linear punctates at medial angle.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 5/8 (yellowish red) to 5YR 6/8 (reddish yellow). No carbon stain is present. It has a medium hard texture (grains generally between 1-2 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, and hematite, but some may be present as well.

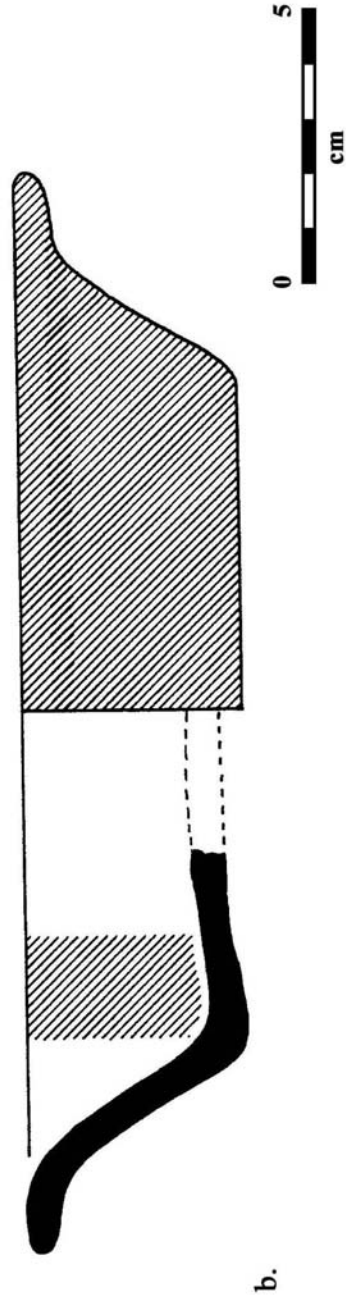
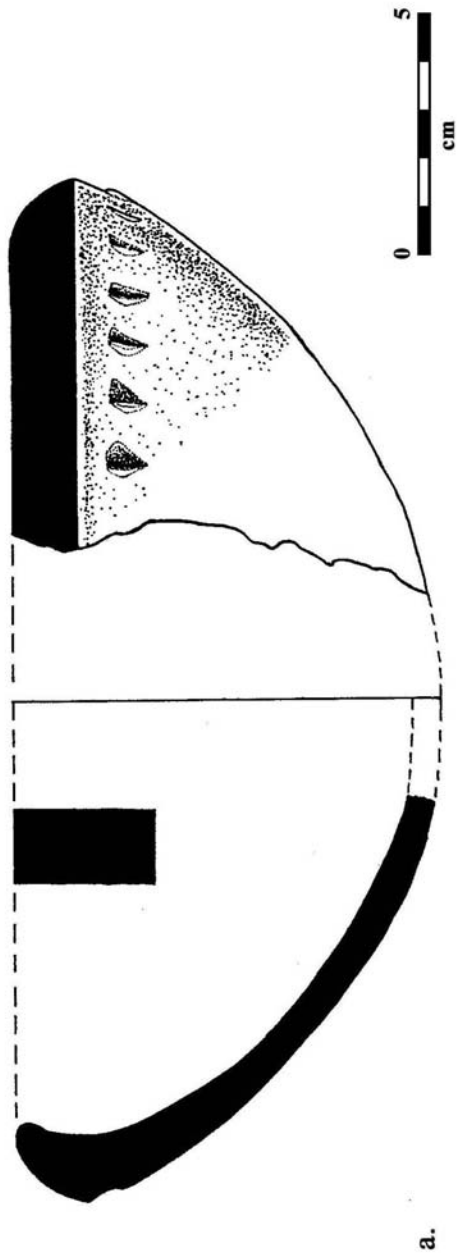


Figure 29: a) Unnamed Black, Punctated, and Unslipped (LA 355/5) bowl; b) Sierra Red: Sierra Variety (LA 355/8) plate.

SURFACE FINISH AND DECORATION: A dull black slip centering on 2.5Y 2/0 (black) was applied to the interior surface of the vessel and just over the rim to the medial angle on the exterior. The remaining portion of the exterior surface was left unslipped. The black slip is blotchy in color showing red tinges. Both sides are well-smoothed, including the exterior base. There are horizontal wiping marks found across the interior rim and vertical wiping marks found in between the punctates on the exterior body. Both sides exhibit a medium-high burnish. Decoration consists of an encircling band of linear punctates across the medial angle that was produced by a vertical tool cut in from right, raising clay (not removed) at left. The linear punctates, triangular in shape, are widely-spaced and parallel to one another. Crazeing is prevalent on both surfaces. Rootlet marking is found only on the exterior below the medial angle.

FORM: Round-sided bowl with medial angle and incurving rim. The orifice is restricted. The lip is rounded lip and the rim is exteriorly thickened. The base is slightly rounded. Height: 8.9 cm; Rim diameter: 18.7 cm; Rim thickness: 1.65 cm; Body thickness: 0.7 cm; Base thickness: 0.7 cm; Length of punctates: 0.8-1.0 cm; Width of punctates: 0.7-0.85 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either side. The restricted orifice, shallow depth, and the slipped interior surface suggest it functioned as an individual serving/eating vessel for soups and/or stews.

INTERSITE LOCATIONS: None noted. However, this specimen is very similar in form and decoration to the Puletan Red-and-unslipped: Puletan Variety vessel (LA 372/1) found on bedrock in Structure N10-9. The only difference between them is their slip color. To date, I have not been able to determine if there is a type and/or variety

name for a Puletan Red-and-unslipped type with a Polvero Black slip. If one exists, then the name given to LA 355/5 should be changed accordingly.

VESSEL NUMBER: LA 355/8

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 29b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform slip color; 2) lustrous and slightly waxy vessel surfaces; 3) plate with horizontal everted rim; 4) crazing and firing clouds are prevalent.

PASTE, TEMPER, AND FIRING: The paste is uniform in color centering on 7.5YR 7/3 (pink) and is sandwiched between thin, light gray surfaces (no Munsell reading). It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified white, black, and light brown particles occur as well.

SURFACE FINISH AND DECORATION: A lustrous and slightly waxy red slip ranging in color from 10R 4/8 (red) to 2.5YR 4/6 (red) and 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, excluding the base. Both sides are well-smoothed and exhibit a high burnishing. Decoration consists of an 'X' symbol that was applied with a wide stroke across the exterior base. The motif touches the base margin. It appears, then, that there was an encircling red slipped line around the base that contained the cross motif. Crazeing and firing clouds are prevalent on both surfaces. A series of blotchy firing clouds, black and tan in color, are found across both sides of the vessel.

FORM: Flaring-sided plate with horizontal everted rim and rounded lip. The base is flat to slightly incurved and exhibits an angular margin. Height: 3.6-4.0 cm; Rim diameter: 20.0 cm; Base diameter: 12.0 cm; Rim thickness: 0.72 cm; Body thickness: 0.6 cm; Base thickness: 0.6 cm; Width of line of 'X' motif: 1.0 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Extensive use wear on exterior base. Given the pronounced incurved base, shallow depth, and slipped interior surface, it likely functioned as a processing or preparation vessel.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common variety across the lowlands.

VESSEL NUMBER: LA 355/9

TYPE: VARIETY: Richardson Peak Unslipped: Richardson Peak Variety

ESTABLISHED: Type and Variety named by Pring (1977a) at Cuello.

GROUP: Richardson Peak

WARE: Uaxactun Unslipped

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 30a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) rough, unslipped surfaces; 2) short, small-mouthed jar with outflaring everted rim; 3) two loop handles.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 7/3 (pink) to 7.5YR 7/3 (pink). A thick, dark gray core (2.5YR 3/0) is present. It has a coarse and poorly sorted texture (grains generally less than 2 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified white, black, and light brown particles occur as well.

SURFACE FINISH AND DECORATION: Both sides are unslipped, including the base. The surface color reflects the paste color and is rather uniform in color. Neither surface is well-smoothed with the texture being rough to the touch. There are extensive wiping marks on each side, especially around the exterior rim, neck, and handles. Additionally, faint, vertical wiping or raking marks occur on exterior body, but they are not considered to be decorative. Temper drag marks are located across both surfaces.

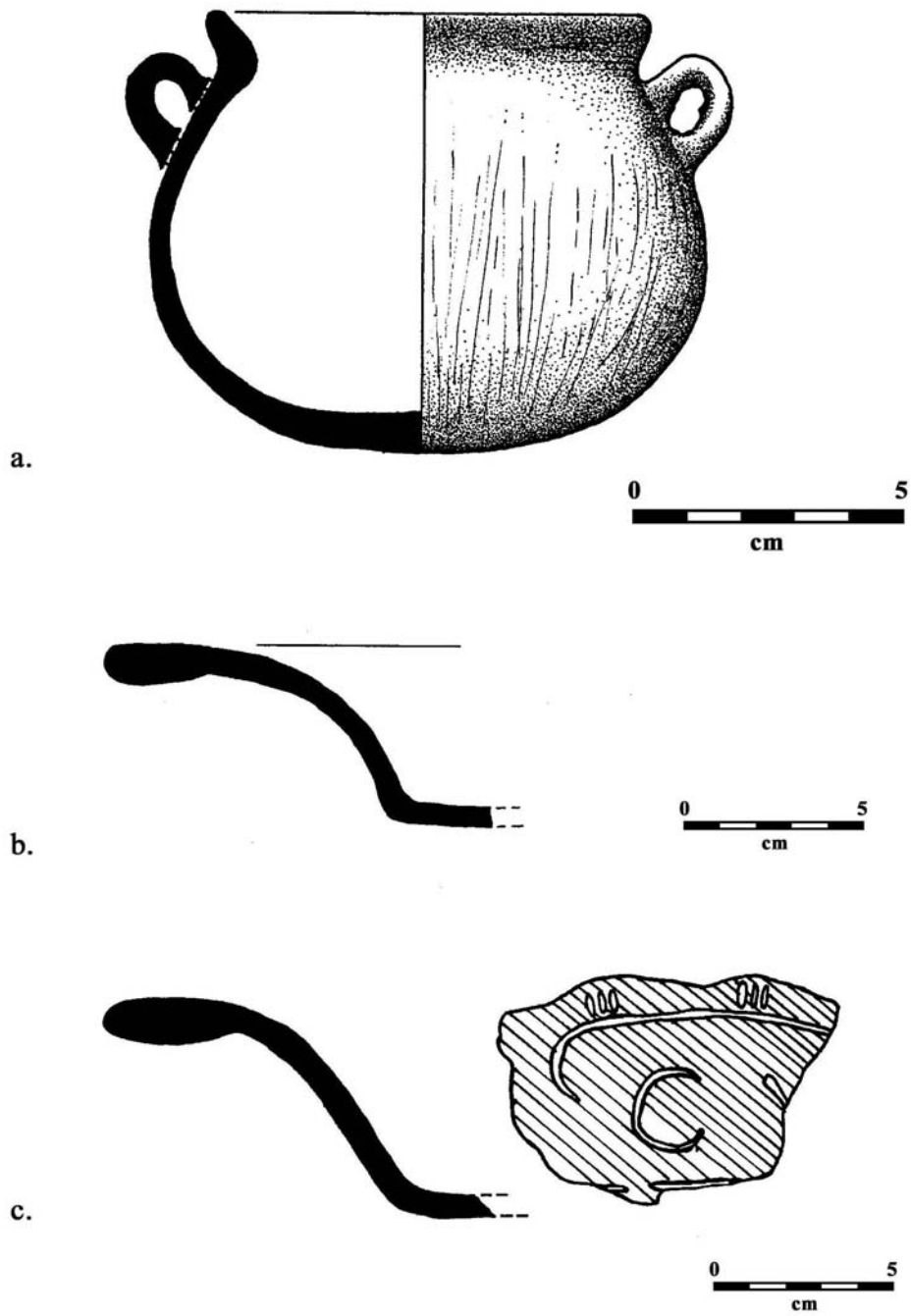


Figure 30: a) Richardson Peak Unslipped: Richardson Peak Variety (LA 355/9) jar; b) Richardson Peak Unslipped: Richardson Peak Variety (LA 355/10) plate; c) Laguna Verde Incised: Grooved-incised Variety (LA 355/11) plate.

Two firing clouds, one black and one red in color, were located on the exterior body.

FORM: Rounded, thin-sided, jar with outflaring everted rim and rounded to slightly pointed lip. This small-mouthed jar has a low neck and a globular body. The rim is interiorly thickened creating a restricted orifice. The base is flat to slightly rounded. Height: 8.4 cm; Rim diameter: 7.8 cm; Rim thickness: 0.8 cm; Body thickness: 0.3-0.6 cm; Base thickness: 0.4 cm.

APPENDAGES: Two opposing strap handles with oval loops have been applied to the neck, located approximately 0.5 cm from rim/neck break. They are wide and well-formed. Length: 1.8 cm; Width: 1.8 cm; Thickness: 0.5 cm.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. This utilitarian jar or olla with its restricted orifice, squat and globular body, unslipped interior surface, and lug handles suggest it functioned as a dry storage vessel. The rough exterior may have aided in carrying the vessel.

INTERSITE LOCATIONS: This type has been found across sites in northern Belize and, like the Puletan Red-and-unslipped type, may be considered a regional manifestation. Pring (1977a) has identified this type and variety at Cuello, Nohmul, San Estevan, and Santa Rita. It has also been found at Colha (Valdez 1987).

VESSEL NUMBER: LA 355/10

TYPE: VARIETY: Richardson Peak Unslipped: Richardson Peak Variety

ESTABLISHED: Type and Variety named by Pring (1977a) at Cuello.

GROUP: Richardson Peak

WARE: Uaxactun Unslipped

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 30b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) rough, unslipped surfaces; 2) flaring sided plate with horizontal everted rim; 3) heavy calcite tempering; 4) firing clouds are present.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 7.5YR 5/8 (strong brown) to 7.5YR 6/8 (reddish yellow). No carbon stain is present. It has a coarse and poorly sorted texture (grains generally less than 2 mm in size) with temper material having a round to angular fracture. The temper consists predominantly of calcite and quartz, but unidentified white, black, and light brown particles occur as well.

SURFACE FINISH AND DECORATION: Both sides are unslipped, including the base. The surface color reflects the paste color, but extensive firing clouds partly obscure both surfaces. Neither surface is well-smoothed with the texture being rough to the touch. There are extensive wiping marks on each side, especially around the interior rim. Firing clouds, black and red in color, are prevalent on both sides. The effect is one of a mottled or variegated surface (paste) color.

FORM: Flaring-sided plate with horizontal everted rim and rounded lip. The rim is very wide or broad and exteriorly thickened. The base is flat. Height: 5.0 cm; Rim

diameter: 30.0 cm; Base diameter: n/a; Rim thickness: 1.4 cm; Body thickness: 0.6 cm;
Base thickness: 0.6 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. This plate with its large diameter, shallow depth, and unslipped interior surface suggest it functioned as a serving vessel for hot and dry foods. The rough exterior and broad horizontal rim likely aided in carrying the vessel.

INTERSITE LOCATIONS: See LA 355/9 for distribution of this type and variety across northern Belize.

VESSEL NUMBER: LA 355/11

TYPE: VARIETY NAME: Laguna Verde Incised: Grooved-incised Variety

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety is designated by Sabloff (1975:80-81) at Seibal.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 30c

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip; 2) lustrous and waxy vessel surfaces; 3) grooved-incised lines on interior rim; 4) plate with horizontal everted rim; 5) crazing and firing clouds are prevalent.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 6/6 (reddish yellow) to 7/6 (reddish yellow). No carbon stain is present. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, and hematite, but unidentified black and white particles occur as well.

SURFACE FINISH AND DECORATION: A thick, lustrous, and waxy red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, excluding the base. Both sides are well-smoothed and exhibit a high burnish. The exterior base is also well-smoothed. Decoration consists of a preslip grooved-incised band consisting of upper and lower border lines containing an arc motif, shaped like the letter 'C'. The border lines also curve in toward the 'C' upon termination. Additionally, above the upper border line there are sets of three tick marks that run perpendicular to the upper border line. They are located within the scalloped portion of the horizontal everted rim. Crazing is prevalent with flaking occurring on both slips. The firing clouds, black and tan in color, are extensive and cover portions of the interior rim and exterior body.

FORM: Flaring-sided plate with horizontal everted rim and rounded lip. The rim is scalloped and exteriorly thickened. The scallops are widely spaced. The base is flat and exhibits an angular margin. Height: 5.0 cm; Rim diameter: 30.0 cm; Rim thickness: 1.44 cm; Body thickness: 0.7 cm; Width of grooved-incised line: 0.6 cm; Tick length: 0.8 cm; Tick width: 0.2 cm.

APPENDAGES: None

CULTURAL SIGNIFICANCE: The vessel had no visible incrustation and residue on either side. The shallow depth, broad horizontal rim, and slipped interior surface suggest it functioned as a family sized serving vessel, likely for soups and/or stews.

INTERSITE LOCATIONS: See LA 479/2 for distribution of this type and variety across the Maya lowlands. This specimen is similar to San Jose I red wares (e.g., S23, S37) recovered at San Jose (Powis 2001d; Thompson 1939:76).

Midden in Core of Platform Addition:

This domestic midden deposit is located in the platform core of the second architectural phase associated with P8-11. The platform is an addition to the south face of the original structure. The midden contained two ceramic vessels (LA 367/1 and 367/2). It was also associated with a large amount of animal bone (e.g., an intact turtle carapace, *Dermatemys* sp.), shell (*Pomacea* sp.), and fragments of charcoal. The midden postdates lot LA 355 (the lot associated with the original structure), but predates lots LA 421 and LA 440.

VESSEL NUMBER: 367/1

TYPE: VARIETY: Lechugal Incised: Gouged-incised Variety

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated in present study. Similar to that identified by Forsyth (1983) at Edzna, but his variety did not include effigy vessels.

GROUP: Polvero

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 31a and b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) waxy, black slipped surfaces; 2) bowl with flaring sides and horizontal everted rim; 3) gouged-incised lines on interior rim; 4) effigy rim flange modeled to represent bird.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 7.5YR 6/6 (reddish yellow) to 7.5YR 7/6 (reddish yellow). No carbon stain present. It has a medium hard texture (grains generally less than 1 mm in size) with the temper material having a round to angular fracture. The temper consists mainly of calcite and quartz, but unidentified white, black, and pink particles occur as well.

SURFACE FINISH AND DECORATION: A black slip with a color ranging from 7.5YR 2/0 (black) to 2.5Y 2/0 (black) was applied to the interior and a portion of the exterior surface. The exterior base was not slipped. Red tinges, similar in color to LA 480/1 and 480/2, are noticeable on both sides. The interior and exterior surfaces are well-smoothed and exhibit a high burnish. The exterior base has considerable lateral wiping marks. Some temper shows through the slips. Decoration consists of a bird head at one end; rim flange has edge modeling (i.e., scalloping) and incision to represent wings and tail; wings shown with post-slip pre-polish gouged-incised arcs in groups of four; and tail feathers shown with longitudinal lines separating paired short, straight lines. Crazeing is prevalent on both sides. No firing clouds are present.

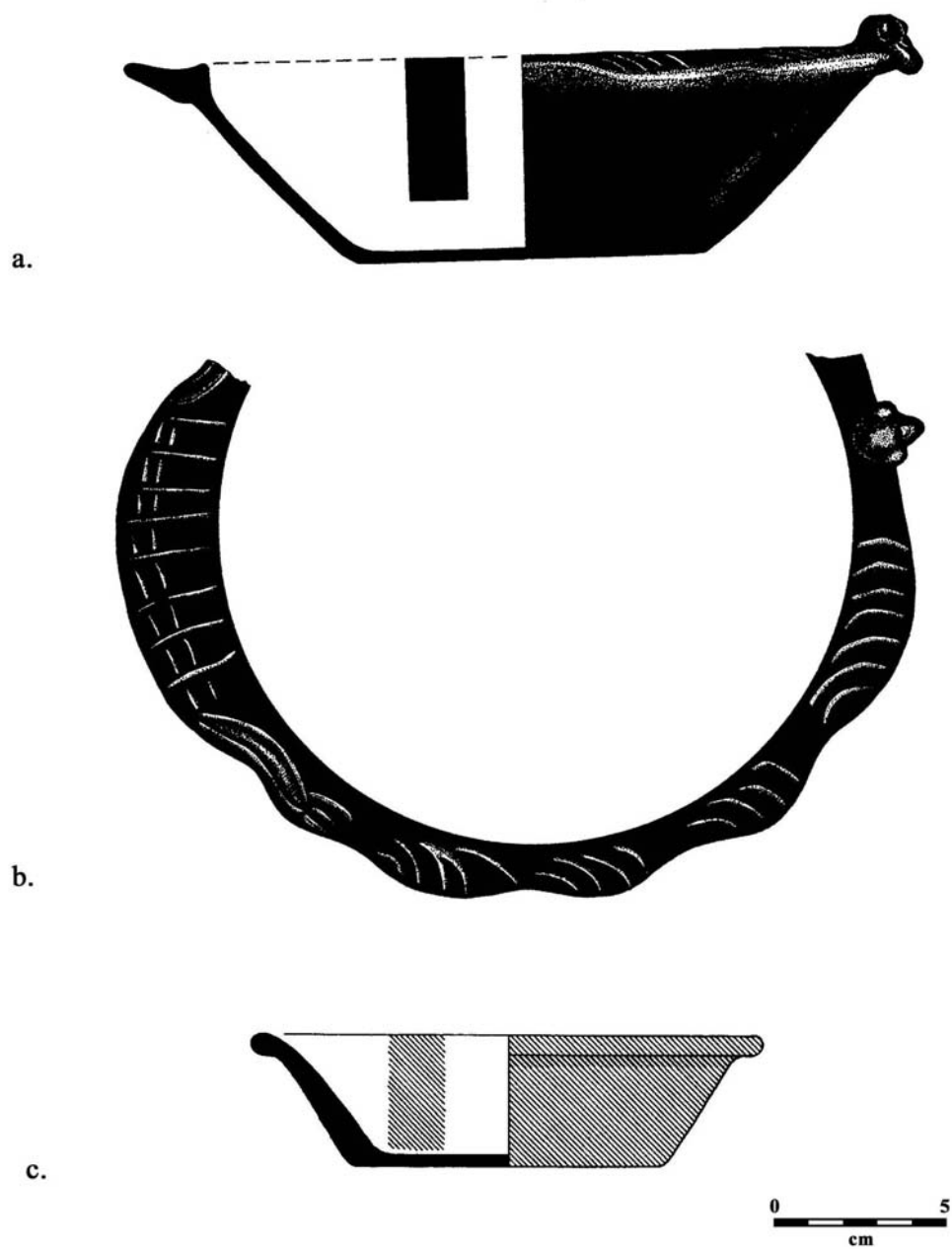


Figure 31: a and b) Lechugal Incised: Gouged-incised Variety (LA 367/1) effigy bowl; c) Sierra Red: Variety Unspecified (Red-double slip) (LA 367/2) dish.

FORM: Flaring, thin-sided bowl rising to a large, modeled, and concave rim flange. The rim is horizontal everted and slightly thickened. The lip is rounded. The base is flat. Height with bird head: 7.6 cm; Rim diameter: 22.3 cm; Base diameter: n/a; Rim thickness: 0.83 cm; Body thickness: 0.5 cm; Base thickness: 0.4 cm; Flange width: 2.0-3.0 cm; Width of gouged-incised line: 0.25 cm; Weight: 602 g.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either surface. Some wear on interior and exterior bases. It probably functioned as a serving/eating vessel for hot soups and/or stews because of its interior slipped surface and wide everted rim. The rim flange would have aided in carrying hot liquids.

INTERSITE LOCATIONS: Zoomorphic effigy vessels in early Chicanel times are not particularly common in the Maya area, but a number of them have been found at Lamanai. Temporally, similar specimens with effigy rim flanges have been reported from the sites of Mirador (Peterson 1963:42) and Santa Rosa (Brockington 1967:6), both located in Chiapas, Mexico.

VESSEL NUMBER: LA 367/2

TYPE: VARIETY: Sierra Red: Variety Unspecified (Red-double slip)

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated in present study.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 31c

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) double red slip on both surfaces; 2) lustrous, waxy slipped surfaces; 3) dish with flaring sides; 4) extensive firing clouds on both sides.

PASTE, TEMPER, AND FIRING: The paste centers on 5YR 6/6 (reddish yellow) or 7/6 (reddish yellow) to 7.5YR 6/6 (reddish yellow). A carbon stain is present with the lower sides and base being somewhat thicker than the upper portions of the vessel. The paste has a medium texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of quartz and white particles (not calcite). Some hematite nodules and black particles occur as well, but in lower frequencies.

SURFACE FINISH AND DECORATION: On both sides, including the exterior base, a light red slip (possibly a wash?) was applied first, and then the typical Sierra Red slip wiped over it. The underslip ranges in color from 2.5YR 5/6 (red) to 5YR 5/8 (yellowish red) and the overslip ranges in color from 10R 4/8 (red) to 2.5YR 4/8 (red). The underslip frequently shows through the thin red overslip showing a variegated color. Both the interior and exterior surfaces are well-smoothed and manifest a high burnish. There is no decoration on this vessel. Crazeing of both slips on both surfaces is prevalent. Firing clouds are extensive around the entire vessel and are exclusively black in color. These blemishes create a very mottled red and black color to this dish.

FORM: Flaring, thick-sided dish with everted rim and rounded lip. The everted rim is nearly horizontal in profile and slightly exterior folded. The base is flat to slightly incurved. Height: 3.7 cm; Rim diameter: 15.3 cm; Base diameter; 9.3 cm; Rim thickness: 0.6 cm; Body thickness: 0.9 cm; Base thickness: 0.4 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either surface. The exterior base margin shows considerable wear. Given the slipped interior surface and small size, it probably functioned as a serving/eating vessel for individual sized portions of either hot or cold liquid substances.

INTERSITE LOCATIONS: See LA 479/1 for distribution of this variety.

Midden against Platform Face of 1st:

A total of nine vessels (LA 421/1-3, 7-8, and 10-13) were recovered lying against the rear (south) face of the original platform of P8-11 as a relatively concentrated midden deposit atop the floor associated with the platform. Associated with the pottery was the torso of a ceramic figurine (LA 421/9): lacking head and arms; broken at mid-body; depicted very small breasts; height: 5.7+ cm; width: 7.0+ cm; thickness: 2.3 cm. It is possible that this midden assemblage is contemporaneous with the midden material in LA 440; if not, the horizontal stratigraphy probably argues for an earlier date for LA 421 than for LA 440 (David Pendergast, personal communication, 2001). Taken together, they would postdate LA 355 and LA 367.

VESSEL NUMBER: LA 421/1

TYPE: VARIETY: Lechugal Incised: Grooved-incised Variety

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated in present study.

GROUP: Polvero

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 32a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) waxy, black slipped surfaces; 2) dish with flaring sides and horizontal everted rim; 3) grooved-incised lines on interior rim; 4) effigy rim flange modeled to represent bird; 5) red tinges to slipped surfaces.

PASTE, TEMPER, AND FIRING: The paste is uniform in color centering on 7.5YR 6/6 (reddish yellow). It is sandwiched between black edges with a Munsell reading of 2.5YR 2.5/0 (black). It has a medium texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified white, black, and red (not hematite) particles occur as well.

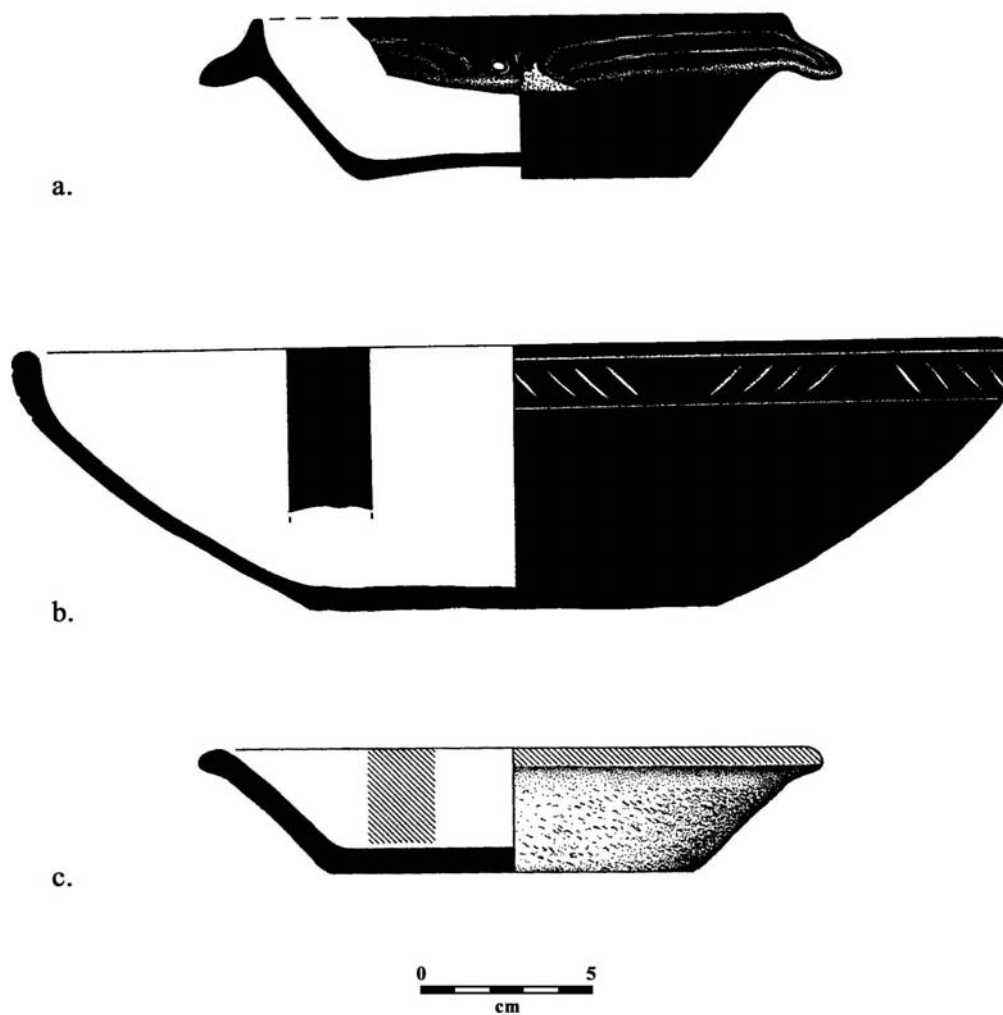


Figure 32: a) Lechugal Incised: Grooved-incised Variety (LA 421/1) effigy bowl; b) Lechugal Incised: Grooved-incised Variety (LA 421/2) dish; c) Ciego Composite: Dawson Creek Variety (LA 421/3) dish.

SURFACE FINISH AND DECORATION: A lustrous, thick, waxy black slip with a color centering on 2.5YR 2.5/0 (black) was applied to the interior and exterior surfaces of the vessel. The exterior base is unslipped. Red tinges (2.5YR 3/2 to 10R 3/1), similar in color to LA 367/1, 480/1, and 480/2, are extensive on both sides creating a variegated color. The interior and exterior surfaces are well-smoothed and exhibit a high burnish. Decoration consists of a rim flange that has four equidistant tab projections; one is bird head, opposite is tail, and side ones are the wings. All four are joined by paired lines (i.e., double-break line motif); wings and tail marked with two short, parallel lines. All are pre-slip grooved-incised. Crazeing is prevalent on both sides. No firing clouds are present.

FORM: Flaring-sided dish with everted (downcurving) rim flange and rounded lip. The rim is slightly incurving. The base is slightly incurved. Height: 5.0 cm; Rim diameter: 15.5 cm; Maximum rim diameter (including tab projections): 18.9 cm; Base diameter: n/a; Rim thickness: 0.7 cm; Body thickness: 0.6 cm; Base thickness: 0.44 cm; Grooved-incised line width: 0.13 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either surface. Extensive use wear on exterior base margin. Tiny scratch marks are found in all directions on the interior surface. It probably functioned as a serving/eating vessel for hot soups and/or stews because of its interior slipped surface and wide everted rim. The rim flange would have aided in carrying hot liquids.

INTERSITE LOCATIONS: See LA 367/1 for distribution of this variety of Lechugal Incised.

VESSEL NUMBER: LA 421/2

TYPE: VARIETY: Lechugal Incised: Grooved-incised Variety

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety named by Pring (1977a) at Cuello.

GROUP: Polvero

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 32b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) waxy, black slipped surfaces; 2) dish with rounded sides and rounded lip; 3) grooved-incised lines on exterior; 4) red tinges to slipped surfaces.

PASTE, TEMPER, AND FIRING: The paste color ranges from 10YR 5/4 (weak red) to 10R 6/4 (pale red). It is sandwiched between black surfaces (2.5Y 2/0). The paste has a medium texture (grains generally less than 1.5 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified black and white particles occur as well.

SURFACE FINISH AND DECORATION: A lustrous, waxy black slip ranging in color from 2.5Y 2/0 (black) and 2.5YR 3/2 (dusky red) to 10R 2.5/1 (reddish black) was

applied over both surfaces, including exterior base. Red tinges (2.5YR 4/8, 5/8) cover each side and may be the result of a desired effect or leaching of the black slip (see LA 480/2). Both sides are well-smoothed with only slight lateral wiping marks on the exterior. Temper is visible through slips in spots. Decoration consists of a rim band (immediately below break) on the exterior side with single-line upper and lower borders enclosing alternating sloped (opposing) groups of four (1 to 5) lines. All pre-slip grooved-incised. Some lines show mark of tool, indicating they are dragged not stamped. The opposing lines generally do not touch the upper and lower borders. Crazeing is present on both sides.

FORM: Round-sided dish with slightly incurving rim and rounded lip. The rim is interior folded. The base is flat to slightly incurved. Height: 7.6 cm; Rim diameter: 28.5 cm; Base diameter: 11.3 cm; Rim thickness: 1.1 cm; Body thickness: 0.7 cm; base thickness; 0.6 cm; Width of rim band: 1.81 to 2.31 cm; Width of grooved-incised lines: 0.2 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either side. No use wear found on interior and exterior bases. Given its slipped interior surface and small size, it probably functioned as a single serving/eating vessel for soups and/or stews.

INTERSITE LOCATIONS: See LA 480/1 for distribution of this variety.

VESSEL NUMBER: LA 421/3

TYPE: VARIETY: Ciego Composite: Dawson Creek Variety

ESTABLISHED: Type named by Ball (1977) at Becan; Variety designated in present study.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 32c

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) red slip on vessel interior; 2) lustrous, waxy finish on vessel interior; 3) vessel exterior unslipped and impressed; 4) dish with outflaring sides.

PASTE, TEMPER, AND FIRING: The paste ranges in color from 10R 4/8 (red) and 10R 5/8 (red) to 2.5YR 4/8 (red) and 2.5YR 5/8 (red). A thick black core, 2.5YR 2.5/0 (black), is present with only traces of the original red paste color showing through. It has a medium texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of quartz, calcite, grog, and hematite.

SURFACE FINISH AND DECORATION: A lustrous, waxy red slip ranging in color from 2.5YR 4/8 (red) to 2.5YR 5/8 (red) was applied to the interior surface, including the lip. The exterior body, however, was left unslipped. The interior is well-smoothed with few visible lateral wiping marks. It also exhibits a high burnish. Decoration consists of impressions in mostly horizontal pattern located across the exterior surface

of the vessel to produce rough surface. The exterior rim was smoothed, by potter's finger, after roughening because faint impressions can still be seen. This smoothing effect, although not well-executed, was accomplished prior to slipping the interior surface. The roughening of the exterior surface may have made either by tool-impressions, cord-impressions, or some other type of fabric-impressions. Crazeing is present on interior slipped surface. There are many black blotchy areas on the interior and suggest either they are the result of firing clouds or some kind of postfiring process.

FORM: Outcurving, medium-thick sided dish with rounded lip and flat base. The lip and exterior base have angular margins. There is a slight groove found at interior base margin. The base is flat. Height: 3.7 cm; Rim diameter: 17.7 cm; Base diameter: 10.3 cm; Rim thickness: 0.9 cm; Body thickness: 0.7 cm; Base thickness: 0.8 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no incrustation on either side. There is no use wear on exterior base surface. Given the interior is slipped and the exterior is unslipped and roughened (for graspability), this vessel was probably used in food processing or preparation.

INTERSITE LOCATIONS: This type of vessel is rare in Sierra Group pottery and distribution across the lowlands. It is similar to Ciego Composite: Ciego Variety by Ball (1977) at Becan, Andrews V (1988) at Dzibilchaltun, Forsyth (1983) at Edzna, and Valdez (1987) at Colha. However, the vertical striations found on these varieties are replaced with horizontal impressions on the Lamanai specimen. Stylistically, the Lamanai vessel has affinities to the Edzna variety because Forsyth (1983:43-45) notes that one of his vessels also exhibited "an unslipped, unstriated band, 5-10 mm wide, between the slipped and striated zones."

VESSEL NUMBER: LA 421/7

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 33a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip color; 2) lustrous, waxy vessel surfaces; 3) thin-sided plate with flaring sides and horizontal everted rim.

PASTE, TEMPER, AND FIRING: The paste is uniform in color centering on 5YR 7/6 (reddish yellow). No carbon stain is present. It has a medium texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mainly of calcite and quartz, but unidentified white and black particles occur as well.

SURFACE FINISH AND DECORATION: A lustrous, waxy red slip centering on 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, excluding the base. Both sides are well-smoothed and exhibit a high burnish. The exterior base is well-

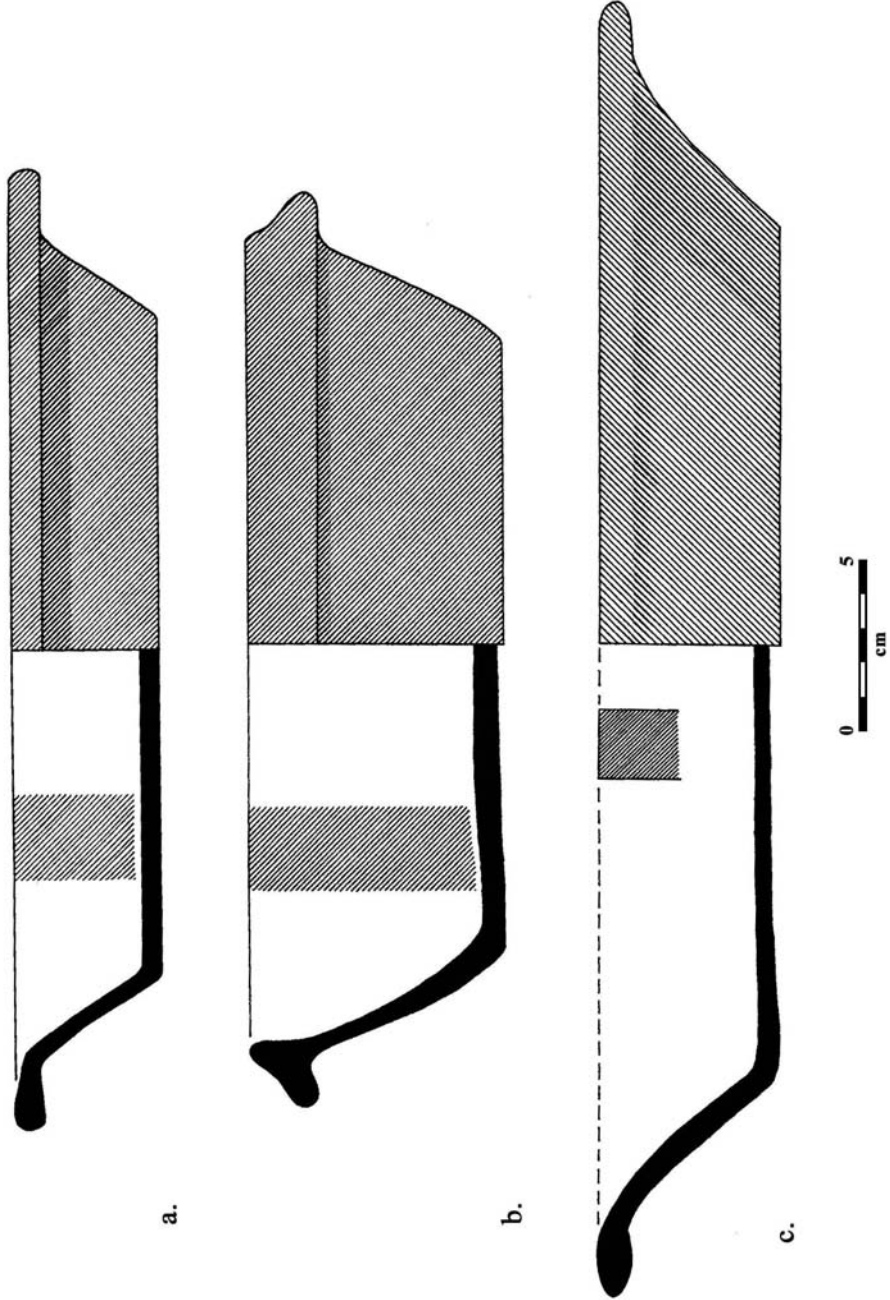


Figure 33: a) Sierra Red: Sierra Variety (LA 421/7) plate; b) Sierra Red: Sierra Variety (LA 421/8) dish; c) Sierra Red: Sierra Variety (LA 421/10) plate. (c has red decoration on exterior, not orange as shown.)

smoothed as well. No decoration is present on vessel sides, but exterior base shows broad, swirling lines of red slip. The pattern is not discernible. Crazeing is prevalent on both sides. One small, localized firing cloud, tan in color, occurs from interior rim to exterior neck.

FORM: Flaring, thin-sided plate with horizontal everted rim and rounded lip. The rim is exterior folded. The base is slightly incurved. Height: 4.1 cm; Rim diameter: 27.0 cm; Base diameter: 20.0 cm; Rim thickness: 0.9 cm; Body thickness: 0.5 cm; Base thickness: 0.5 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either side. Slight pitting is found on the interior surface. Given the interior slipped surface, broad everted rim, and large diameter, it likely functioned as a serving vessel for hot, non-liquid foods to family sized groups.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common type and variety across the Maya area.

VESSEL NUMBER: LA 421/8

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 33b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) red slipped surfaces; 2) lustrous, waxy vessel surfaces; 3) flaring sided dish with rim flange; 4) rounded rim protrusion; 5) crazing and firing clouds are prevalent.

PASTE, TEMPER, AND FIRING: The paste is uniform in color centering on 5YR 6/8 (reddish yellow). It has a medium texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, and tiny black particles.

SURFACE FINISH AND DECORATION: A lustrous, waxy red slip ranging in color from 2.5YR 4/8 (red) to 2.5/2 (very dusky red) was applied to the interior and exterior surfaces, excluding the base. Both sides are well-smoothed, but lateral wiping marks are found at interior base margin. The exterior base is also well-smoothed. Both surfaces exhibit a high burnish. Temper shows through the slips. Decoration consists of a single, dime-sized rim protuberance bulging at the end of the labial flange (not illustrated). It is unclear if there was an additional one on the opposing side. Also, the exterior base shows a single, broad, swirling line and several drips of red slip. The pattern is not discernible. Crazing and firing clouds are prevalent on both surfaces. The firing clouds are large, black in color, and extend over most of the vessel. Pitting is visible on both sides, especially the interior base.

FORM: Flaring-sided dish with slightly downturned rim flange and rounded lip. The rim flange exhibits a protrusion (i.e., rounded tab projection) that is the size and shape

of a dime. The rim is slightly incurving. The base is flat to slightly incurved and exhibits a rounded margin. Height: 7.0 cm; Rim diameter: 23.3 cm; Base diameter: 18 cm; Rim thickness (above flange): 0.75 cm; Lower body thickness: 0.8 cm; Upper body thickness: 0.5 cm; Base thickness: 0.65 cm; Rim flange width: 2.4 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either side. Several scratches were found on the interior surface. The exterior base margin exhibited use wear. Given the interior slipped surface, rim flange, and large diameter, it likely functioned as a family sized serving vessel for hot, non-liquid foods.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common type and variety across the Maya area.

VESSEL NUMBER: LA 421/10

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 33c

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip color on interior; 2) lustrous, waxy vessel surfaces; 3) plate with flaring sides and horizontal everted rim; 4) firing cloud covering entire exterior surface.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 2.5YR 5/8 (light red) to 2.5YR 6/8 (red). A light, thick gray core is present. It has a medium and well-sorted texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mainly of calcite and quartz, but unidentified white, black, and red particles occur as well.

SURFACE FINISH AND DECORATION: A lustrous, waxy red slip ranging in color from 2.5YR 4/8 (red) to 2.5YR 5/8 (red) was applied to the interior and exterior surfaces, excluding the base. Both sides are well-smoothed, including the exterior base. They also exhibit a high burnish. Temper shows through the slips. No decoration is present. Crazeing is prevalent on both sides. The exterior surface is entirely covered by a firing cloud, ranging in color from tan to black. The firing cloud extends onto the interior rim surface in a few areas. It is unclear whether the exterior surface was intentionally fired this way in order to produce a dichrome. If so, it should be given a different variety name such as Matamore Dichrome: Matamore Variety. Crazeing is prevalent on both surfaces. Rootlet marks are extensive on the exterior.

FORM: Flaring-sided plate with horizontal everted rim and rounded lip. The rim is exterior folded. The base is incurved and exhibits a soft, rounded margin. Height: 6.3 cm; Rim diameter: 37.0 cm; Base diameter: 25.4 cm; Rim thickness: 1.0 cm; Body thickness: 0.6 cm; Base thickness: 0.51 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either side. Some use wear on the exterior base margin is noted. Pitting is visible on both sides, especially on the interior base. Given the interior slipped surface, broad everted rim, and large diameter, it likely functioned as a serving vessel for hot, non-liquid foods to family sized groups.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common type and variety across the Maya area. If the presence of a firing cloud across the entire exterior surface of the Lamanai specimen was intentionally produced, then the type and variety name may have to be changed to Matamore Dichrome: Matamore Variety. Pring (1977a) established this Cocos Chicanel type and variety at Cuello and Nohmul where one side of the vessel exhibited a Sierra Red slip and the other side had either a black, cream, or brown slip color, similar in effect to fire clouding (see Kosakowsky 1987:79-80). At K'axob, Lopez Varela (1996:157-159) has identified this Matamore type and variety dating to the transitional period between Mamom and Chicanel (ca. 400 B.C.). At Cerros, Robertson-Freidel (1980:149-152) has also identified this type and variety, but dating it from 200-50 B.C. Similarly, Reese and Valdez (1987:39) date this type at Kichpanha to roughly the same time period (ca. 100 B.C.) as those described at these other northern Belize sites.

VESSEL NUMBER: LA 421/11

TYPE: VARIETY: Sierra Red: Variety Unspecified

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated by Gifford (1976) at Barton Ramie.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 34a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform, thick red slip; 2) lustrous, slightly waxy interior and exterior slipped surfaces; 3) thick-rimmed jar or olla with globular body and everted rim.

PASTE, TEMPER, AND FIRING: The paste ranges in color from 2.5YR 4/4 (reddish brown) to 2.5YR 5/8 (red). A thick gray core (2.5YR 2.5/0) is present. It has a medium texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mainly of calcite, quartz, and grog, but unidentified brown, black, and red (not hematite) particles occur as well.

SURFACE FINISH AND DECORATION: A lustrous, slightly waxy, thick red slip ranging in color from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to both the interior and exterior surfaces. The interior slip extends below the neck margin indicating that the entire interior surface may have been slipped; however, without the complete form this remains speculative. Both sides are well-smoothed, but below the interior neck there are horizontal wiping marks which create a rougher surface. Each side is highly burnished. Decoration consists of a single, closely-spaced row of round-to-oval punctates encircling the upper shoulder. Crazeing is prevalent on both sides. Small and localized firing clouds are found on interior and exterior rim, neck, and shoulder. They are black (2.5YR 2.5/0) in color.

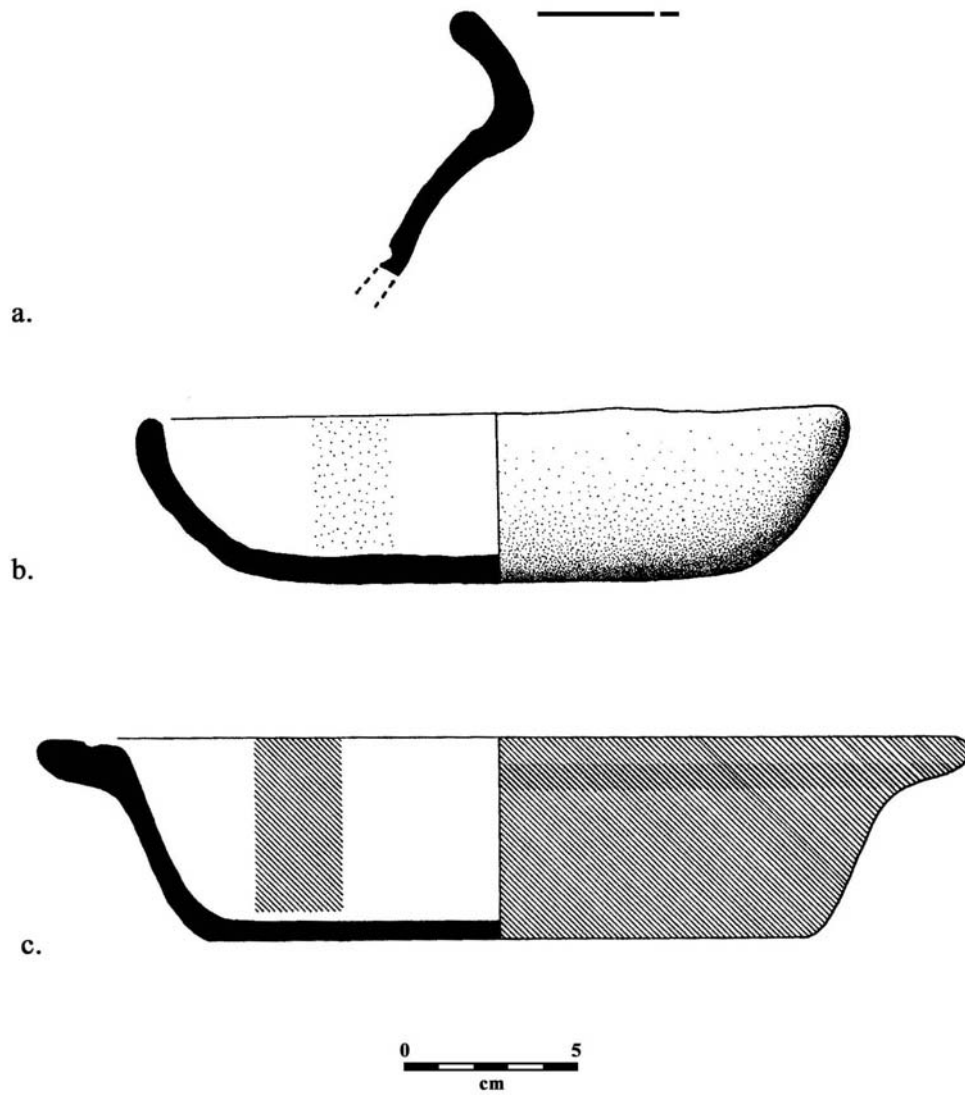


Figure 34: a) Sierra Red: Variety Unspecified (LA 421/11) jar; b) Unnamed Buff-and-plain (LA 421/12) dish; c) Laguna Verde Incised: Grooved-incised Variety (LA 421/13) dish.

FORM: This fragmented vessel consists of a rim-to-shoulder sherd. It is a thin-sided, wide-mouthed jar with an everted rim and rounded lip. The rim is exterior thickened. The base is missing, but it likely had a round bottom. Height: 7.4+ cm; Rim diameter: 26.5 cm; Rim thickness: 1.1 cm; Body thickness: 0.5 cm; Length and width of punctates: 0.4 cm x 0.4 cm; Location of punctates (from neck break): 5.0 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This very strong and durable vessel had no visible incrustation or residue on either side. There is use wear around the neck margin as if a rope or cord had been tied around it. Some wear also occurs on the lip. Pitting is observed on both sides as well. The wear on the lip may indicate that this jar was covered with a lid during use. Given the small size, wide mouth, and likelihood of the interior being slipped, it was probably used as a storage container for dry foods (e.g., spices, seasonings). The unrestricted orifice likely made it easier to access the contents inside if it was used as a storage container.

INTERSITE LOCATIONS: See LA 449/6 for distribution of this Sierra Red type and variety across the lowlands.

VESSEL NUMBER: LA 421/12

TYPE: VARIETY: Unnamed Buff-and-plain

ESTABLISHED: Present study

GROUP: Paila?

WARE: Uaxactun Unslipped

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 34b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) unslipped buff surfaces; 2) rounded dish with slightly incurved rim; 3) extensive firing clouds on both sides.

PASTE, TEMPER, AND FIRING: The paste color is barely detectable in this vessel. Nearly 100% of the paste material has been reduced to a black color (2.5YR 2.5/0). The carbon stain is very thick with only one small surface on the interior having a weal red color (10YR 5/4); it is unclear if this is the actual paste color or the result of the firing process. It has coarse texture (grains ranging from 1-5 mm in size) with temper material having an angular fracture. The temper consists mostly of calcite, quartz, and hematite, but unidentified black and brown particles occur as well.

SURFACE FINISH AND DECORATION: Both the interior and exterior are unslipped. Neither side is well-smoothed, but the interior does exhibit fewer lateral (finger) wiping marks. Overall, each surface is generally uneven in shape, containing bumps or dents, which is the result of finger molding. Temper is visible of both sides because of the large inclusions. No decoration is present. Extensive rootlet marking, leaching, and firing clouds are found on both surfaces. Given the extent of the firing clouds, exclusively black in color, it was hard to determine the original paste color.

FORM: A round, thick-sided dish with slightly incurving rim and rounded lip. The lip is uneven in execution. The base is flat and exhibits a rounded margin. Height: 5.5 cm; Rim diameter: 18 cm; Base diameter: 9.0 cm; Rim thickness: 0.7-0.9 cm; Body thickness: 0.8 cm; Base thickness: 0.65 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel contained possible incrustation and residue on both surfaces. There is pitting on the interior base and use wear around the base margin. Given the unslipped surface, small size, and wall strength, it probably served as a utilitarian vessel in cooking. It may also have been used to warm or reheat foods.

INTERSITE LOCATIONS: Upon further comparative study, this vessel could belong to the Paila Group, originally named by Smith and Gifford (1966) at Uaxactun. If so, then it should be renamed to Paila Unslipped: Variety Unspecified following Gifford (1976) at Barton Ramie and Robertson-Freidel (1980) at Cerros. On the basis of vessel form, paste color, and extent of firing clouds, the Lamanai specimen is similar to those identified at both Cerros at Barton Ramie. However, the sample size is too small at the site, only recovered from this one domestic midden context, to make any definitive decision on its placement at the group level.

VESSEL NUMBER: LA 421/13

TYPE: VARIETY: Laguna Verde: Grooved-incised Variety

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated by Sabloff (1975) at Seibal.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 34c

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) waxy, red slip; 2) grooved-incised lines on rim; 3) dish with horizontal everted rim; 4) crazing and firing clouds are present.

PASTE, TEMPER, AND FIRING: The paste is uniform in color centering on 2.5YR 5/8 (red). No carbon stain is present. It has a medium texture (grains generally less than 1 mm in size) with the temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, and hematite, but unidentified black and white particles occur as well.

SURFACE FINISH AND DECORATION: A lustrous, waxy red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, excluding the base. The slip appears to be a little streaky on both sides, but is not as well-defined as that observed on Society Hall Red types identified at Cuello (see Kosakowsky 1987:64-69). Both sides are well-smoothed and exhibit a high burnish. The exterior base is also well-smoothed. Some temper is visible through the slips. Decoration consists of a single pre-slip grooved-incised line encircling the interior rim of the vessel. On the outside (lip side) of this line are two small, parallel grooved-incised ticks or hooks that run from right to left in direction. They may be accompanied by opposing sets on one of more sides of the rim. Crazing is prevalent on both sides. One firing cloud, tan in color, is located on the exterior rim.

FORM: Flaring-sided dish with horizontal everted rim and rounded lip. The rim is interior folded or bolstered. The base is flat and exhibits a slightly rounded margin. Height: 6.6 cm; Rim diameter: 27.3 cm; Base diameter: 22 cm; Rim thickness: 1.2 cm;

Body thickness: 0.6 cm; Base thickness: 0.6 cm; Width of Grooved-incised line: 0.7 cm;
Width of grooved-incised ticks: 0.3 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either surface. Use wear is found on the exterior base margin. Pitting is observed on the interior base surface. Given the interior slipped surface, deep profile, and everted rim, it probably functioned as a family sized serving vessel for soups or stews.

INTERSITE LOCATIONS: The Laguna Verde Incised: Grooved-incised Variety is one of many varieties belonging to the Laguna Verde Incised type (Forsyth 1993; Holley 1986; Lopez Varela 1996; Kosakowsky and Pring 1998; Pring 1977a; Robertson-Freidel 1980; Sabloff 1975; Valdez 1988). However, it has not been recorded at as many lowland sites as the incised variety. Some ceramicists have placed this grooved-incised material as belonging to the later part of the Late Preclassic where the decoration occurs on the inside rim (Adams 1971:93; Sabloff 1975:81), but specimens, albeit in low frequencies, do occur in early Chicanel contexts (Robertson-Freidel 1980:80). The placement of this type is hampered by a lack of whole specimens from lowland sites for comparative purposes. Based on stratigraphic evidence and vessel form (particularly the horizontal everted rim), the Laguna Verde Incised: Grooved-incised Variety dish at Lamanai belongs in the Lag Complex, possibly dating to the latter half.

Midden on Floor of 1st:

A total of 16 vessels (LA 440/2-17) were recovered from a domestic midden deposit located in a center trench cut into the earliest or primary structure of P8-11. This

ceramic material was found farther away from the face of the original platform than LA 421, but still located on the same floor surface. Therefore, it is possible that this midden assemblage is contemporaneous with the midden material in LA 421. However, it is possible that LA 440 slightly postdates LA 421 in date. Taken together, both LA 421 and 440 postdate LA 355 and LA 367. No associated artifacts.

VESSEL NUMBER: LA 440/2

TYPE: VARIETY: Flor Cream: Indian Church Variety

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated in present study.

GROUP: Flor

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 35a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, streaky cream slip; 2) slightly lustrous and waxy surfaces; 3) dish with labial flange; 4) crazing and firing clouds present.

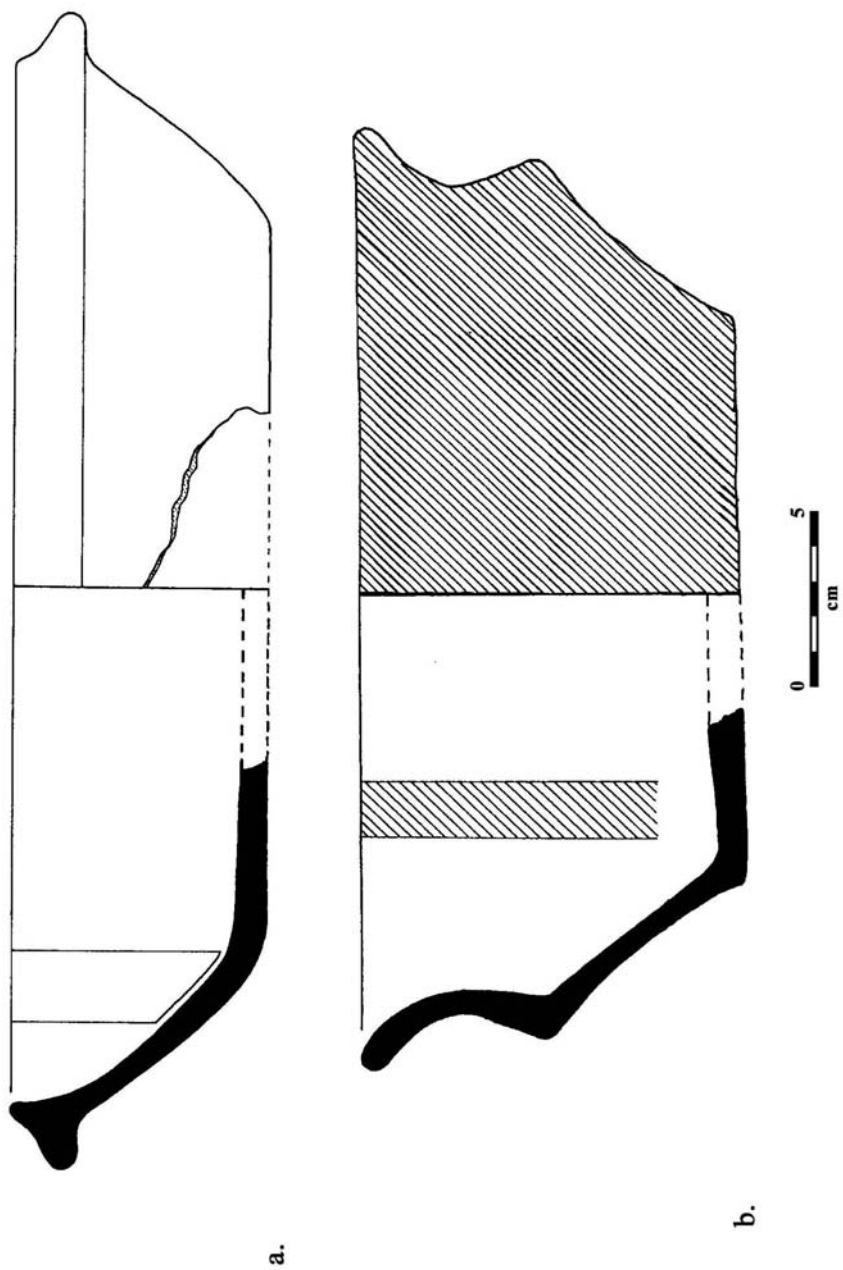


Figure 35: a) Flor Cream: Indian Church Variety (LA 440/2) dish; b) Sierra Red: Sierra Variety (LA 440/2) bowl. (b has red decoration on both sides, not orange as shown.)

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 7.5YR 7/4 (pink) to 7/6 (reddish yellow). No carbon stain is present. It is moderately sorted (grains generally less than 1.2 mm in size) and grainy with temper material having a round to angular fracture. This vessel (sample #2000-18) was subjected to a petrographic analysis by Linda Howie-Langs (2002a:9). It belongs to the Micrite/Quartz Group. The paste primarily contains individual grains of sparry calcite as well as some agglomerates with larger grains of crystalline calcite. Lesser amounts of monocrystalline quartz also occur. One fossil fragment was also found in the paste.

SURFACE FINISH AND DECORATION: A slightly lustrous, thick, and waxy cream slip ranging in color from 5YR 8/1 (white) to 7.5YR 8/2 (pinkish white) was applied to both the interior and exterior surfaces, excluding the base. According to Howie-Langs (2002a:9), microscopic analysis has shown that multiple layers of slip were applied to the surfaces of this vessel. There are prominent concentric horizontal streaky marks on both vessel surfaces. This intentional streaky effect is similar in pattern to that identified for Society Hall Red (Kosakowsky 1987:64-69). Both sides are very well-smoothed and exhibit a high burnish. The exterior base is also well-smoothed. Given the thinness of the slip, temper is visible on each surface. Decoration consists only of the horizontal streaky slipped surfaces. Crazeing and firing clouds (black, gray, and white in color) are present on both sides, but neither is heavy. When analyzing this vessel, there were a few discolored sherds (black and red) which were likely caused by post-depositional processes. Clearly, some sherds were scattered throughout the midden prior to recovery and reconstruction.

FORM: Flaring-sided dish with labial flange and rounded lip. The rim is slightly incurving. The lower sides are thin compared to thicker upper sides near rim. The base is flat and exhibits a rounded margin. Height: 7.1 cm; Rim diameter: 29 cm; Rim thickness: 0.6 cm; Body thickness: 0.65 cm; Base thickness: 0.7 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel exhibited no incrustation or residue on either surface. Some use wear on exterior base margin. Given the interior slipped surface, labial flange, and incurving rim profile, this vessel probably functioned as a family sized serving vessel.

INTERSITE LOCATIONS: No comparative specimens have been found for this particular vessel. So, it was decided to create a new variety within the Flor Cream type. At present, this Indian Church Variety consists of only one vessel and, therefore, no attempt has been made to separate it out from the Flor Cream type. In the future, if the frequency of this variety increases, then it may be elevated to a new ceramic type, similar to what Kosakowsky (1987:64-69) did at Cuello with the creation of the Society Hall Red type out of the Sierra Red type.

VESSEL NUMBER: LA 440/3

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety established by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Not illustrated.

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform slip color; 2) lustrous, slightly waxy vessel surfaces; 3) flaring sided dish with horizontal everted rim; 4) crazing is prevalent.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 2.5YR 4/6 (red) to 5YR 4/6 (yellowish red). A thick gray (2.5YR 3/0) carbon stain is present near the rim, but thins out at base. It has a medium hard (and compact) texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, and hematite (up to 2 mm in size), but unidentified red and brown particles (possibly grog) occurs as well.

SURFACE FINISH AND DECORATION: A lustrous, slightly waxy red slip ranging in color from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, excluding the base. The interior surface is very well-smoothed up to the lip. The exterior exhibits lateral wiping marks, especially around the body. Both sides have a medium burnish. Temper is visible through the slip on each side. This is primarily the result of slip erosion and not because of slip thinness. No decoration is present. Crazing is prevalent on both slipped surfaces. One firing cloud is noticeable on the exterior body (from rim to base), but no Munsell reading was taken. The exterior slip is heavily eroded.

FORM: A small, flaring, thin-sided dish with horizontal everted rim and rounded lip. The rim is exterior folded. The base is flat and the margin is rounded to slightly angular. Height: 4.0 cm; Rim diameter: 14 cm; Base diameter: n/a; Rim thickness: 0.84 cm; Body thickness: 0.5 cm; Base thickness: 0.5 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This is a hard and sturdy vessel that exhibited no visible incrustation or residue on either side. No use wear or pitting was observed on either vessel side. Given the interior slip, small diameter and size, and horizontal rim, it was probably used as an individual serving/eating vessel, possibly for soups or stews.

INTERSITE LOCATIONS: See LA 449/1 for distribution of variety across the Maya area.

VESSEL NUMBER: LA 440/4

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 35b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform slip color; 2) slightly lustrous and waxy vessel surfaces; 3) bowl with cuspidor profile; 4) crazing and firing clouds are prevalent.

PASTE, TEMPER, AND FIRING: The paste is uniform in color centering on 2.5YR 6/8 (light red). No carbon stain is present. It has a medium hard (and compact) texture (grains generally less than 1 mm in size) with temper material having a round fracture. The temper consists mostly of calcite, quartz, but unidentified red particles (not hematite) up to 2 mm in size occur as well.

SURFACE FINISH AND DECORATION: A slightly lustrous and waxy red slip ranging in color from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, excluding the base. Both sides are well-smoothed and exhibit a medium-to-high burnish. Some temper visible through slipped surfaces. No decoration is present. Crazeing, firing clouds, and rootlet marking are prevalent on both sides. The firing clouds are most noticeable on interior lip. Both sides have heavily leached surfaces.

FORM: Recurving-sided bowl (composite profile) with restricted neck has outflaring everted rim and rounded lip. The rim is only slightly interiorly thickened. The base is flat and exhibits an angular margin. The lower sides are thin-walled and rise to a sharp basal angle from which the upper sides recurve inward before outcurving at rim; it is very similar in form to LA 479/2. Height: 9.5 cm; Rim diameter: 16.5 cm; Base diameter: 7.5 cm; Rim thickness: 0.8-0.9 cm; Body thickness: 0.4-0.65 cm; Base thickness: 0.74 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: The vessel had no visible incrustation or residue on either side. No use wear was observed. The flaring walls, restricted neck, and slipped interior surface suggest it functioned as a serving vessel, likely for meals with a high liquid content.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this variety across the lowlands. In terms of form, this vessel at Lamanai is very reminiscent to the Chuen Complex (350-0 B.C.) Sierra Red jars at Tikal (Culbert 1993:Figure 99a and b). At present, its form is somewhat rare in northern Belize, but Kosakowsky (1987:57, Figure 6.29) has reported a Sierra Red: Ahuacan Variety vessel from Cuello that is quite similar to the Lamanai specimen under discussion here.

VESSEL NUMBER: LA 440/5

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 36a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform slip color; 2) lustrous and waxy vessel surfaces; 3) plate with outflaring everted rim; 4) crazing is present.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color centering on 2.5YR 6/8 (light red). A thick gray carbon stain is present and is sandwiched between

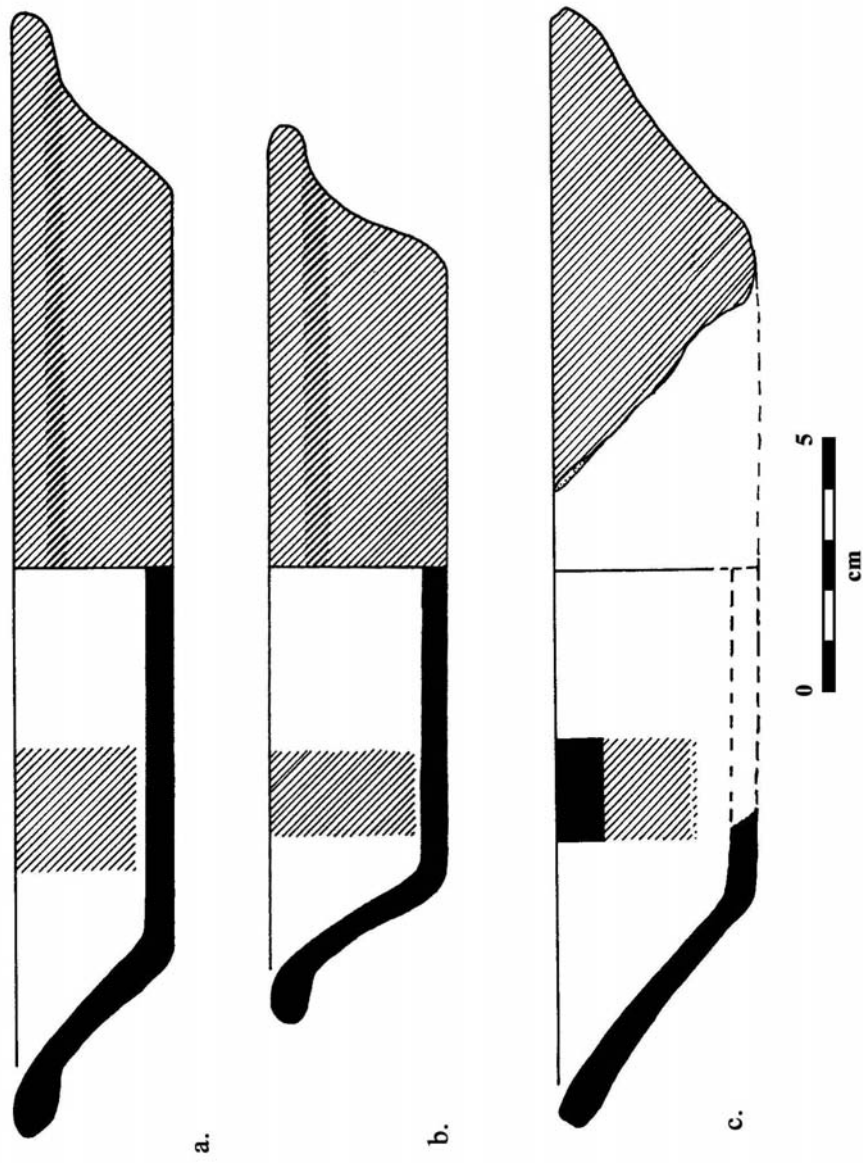


Figure 36: a) Sierra Red: Sierra Variety (LA 440/5) plate; b) Sierra Red: Sierra Variety (LA 440/6) plate; c) Sierra Red: Black-Rimmed Variety (dichrome) (LA 440/7) plate.

thin paste edges. It has a medium hard (and compact) texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of unidentified white particles (no reaction to HCL) as well as minor amounts of calcite, quartz, and hematite.

SURFACE FINISH AND DECORATION: A lustrous and waxy red slip ranging in color from 2.5YR 4/8 (red) to 2.5YR 5/8 (red) was applied to the interior and exterior surfaces, including the base. Both sides show considerable lateral wiping marks, especially around exterior rim and base. Both surfaces exhibit a high burnish. No decoration is present. With the exception of minor crazing, the vessel contains no visible blemishes on either side.

FORM: Plate with outflaring everted rim and rounded lip. The rim is exteriorly thickened. The base is flat and exhibits a rounded to slightly angular margin. Height: 3.9 cm; Rim diameter: 22 cm; Base diameter: n/a; Rim thickness: 1.0 cm; Body thickness: 0.7 cm; Base thickness: 0.55 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. No use wear was observed. The large size, shallow depth, and slipped interior surface suggest it functioned as a family sized serving vessel.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common variety across the lowlands.

VESSEL NUMBER: LA 440/6

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 36b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform slip color; 2) lustrous and slightly waxy vessel surfaces; 3) plate with outflaring everted rim; 4) crazing and firing clouds are prevalent.

PASTE, TEMPER, AND FIRING: A differential paste color was observed for this vessel. On the interior, the paste color is centered on 2.5YR 5/8 (red). On the exterior, the paste color is 10R 7/4 (very pale brown), likely the result of a firing cloud. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified white and black particles occur as well.

SURFACE FINISH AND DECORATION: A lustrous and slightly waxy red slip centering on 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, excluding the base. Both sides are well-smoothed and exhibit a high burnishing. No decoration is present. Crazing is prevalent on both surfaces and has resulted in flaking of the slips. Firing clouds are tan in color (no Munsell reading) and cover much of the exterior

surface. Also, the exterior is highly eroded compared to the interior which is very well-preserved.

FORM: Flaring sided plate with outflaring everted rim and rounded lip. The rim is exteriorly thickened. The base is flat and exhibits a rounded margin. Height: 3.3 cm; Rim diameter: 18 cm; Base diameter: 10 cm; Rim thickness: 0.95 cm; Body thickness: 0.45 cm; Base thickness: 0.55 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. The exterior base margin shows use wear. The small size, shallow depth, and slipped interior surface suggest it functioned as an individual sized serving vessel.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common variety across the lowlands.

VESSEL NUMBER: LA 440/7

TYPE: VARIETY: Sierra Red: Black-Rimmed Variety (dichrome)

ESTABLISHED: Present study

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 36c

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform slip color; 2) lustrous and waxy vessel surfaces; 3) black slip over red slip on interior rim; 4) plate with flaring sides; 5) crazing is prevalent.

PASTE, TEMPER, AND FIRING: The paste centers on 5YR 6/8 (reddish yellow). A thick gray core (5Y 4/0) is present. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, and hematite, but unidentified white and black particles occur as well. The paste contains a lot of burned-out organic material.

SURFACE FINISH AND DECORATION: A lustrous and waxy red slip ranging in color from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, excluding the base. Both sides are well-smoothed and exhibit a high burnishing. Temper, primarily calcite, is visible through both slips. Decoration consists of a thick, black slipped band encircling the interior rim of the vessel. The black band begins at the exterior lip and comes down 1.4 cm onto the interior surface. It centers on 2.5Y 2/0 (black) and is very similar to a Polvero Black slip color. The black slip is intentional (not the result of firing clouds) and well-executed with very little overlap between the red and black colors. The slips are also thick and soft. Crazing is prevalent on both surfaces and has resulted in flaking of the slips. Rootlet marking and one firing cloud (black and tan in color) are found below exterior rim.

FORM: Flaring, thin-sided plate with very slightly outflaring rim and rounded lip. The base is flat and exhibits a round to slightly angular margin. Height: 4.0 cm; Rim

diameter: 21.8 cm; Rim thickness: 0.85 cm; Body thickness: 0.73 cm; Base thickness: 0.6 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. The exterior base margin shows no use wear. The large size, shallow depth, and slipped interior surface suggest it functioned as a family sized serving vessel.

INTERSITE LOCATIONS: None have been noted for the Lamanai vessel. However, the application of both a Sierra Red and Pulvero Black slip to the same vessel is reminiscent to the Sierra Red: Variety Unspecified (Red-and-black) sherds identified by Gifford (1976:88) at Barton Ramie (Smith and Gifford 1966) and Powis (n.d.) at Cahal Pech. The Lamanai variety may also have stylistic affinities to Repasto Black-on-red Varieties Unspecified (Adams 1971; Culbert 1993; Gifford 1976; Smith and Gifford 1966), except that the latter has black decoration, which is typically shown in blotchy vertical patterns, and not a horizontal rim band decoration like the former specimen.

VESSEL NUMBER: LA 440/8

TYPE: VARIETY NAME: Alta Mira Fluted: Horizontally-fluted Variety

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety is designated by Forsyth (1983:41) at Edzna.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 37a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip; 2) single horizontal flute encircling body; 3) bowl with outflaring everted rim; 4) crazing is prevalent.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 2.5YR 5/8 (red) to 2.5YR 6/8 (light red). It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mainly of calcite, quartz, and hematite, but unidentified white, black, and light brown occur as well. The paste contains some burned-out organic material.

SURFACE FINISH AND DECORATION: A lustrous and slightly waxy red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, excluding the base. The exterior base has a weak red wash (2.5YR 5/8) applied to it. Both sides are well-smoothed and exhibit a high burnish. The exterior base is also well-smoothed. Temper is visible through both slip surfaces. Decoration consists of a single pre-slip horizontal flute encircling the vessel at mid-body. The flute is wide and shallow, and creates a slight bulging effect on the shoulder of the vessel. Crazing is prevalent and results in flaking of the slipped surfaces. The red slip on both sides has leached in some areas to a lighter red. One firing cloud is found on the lower base on the exterior side.

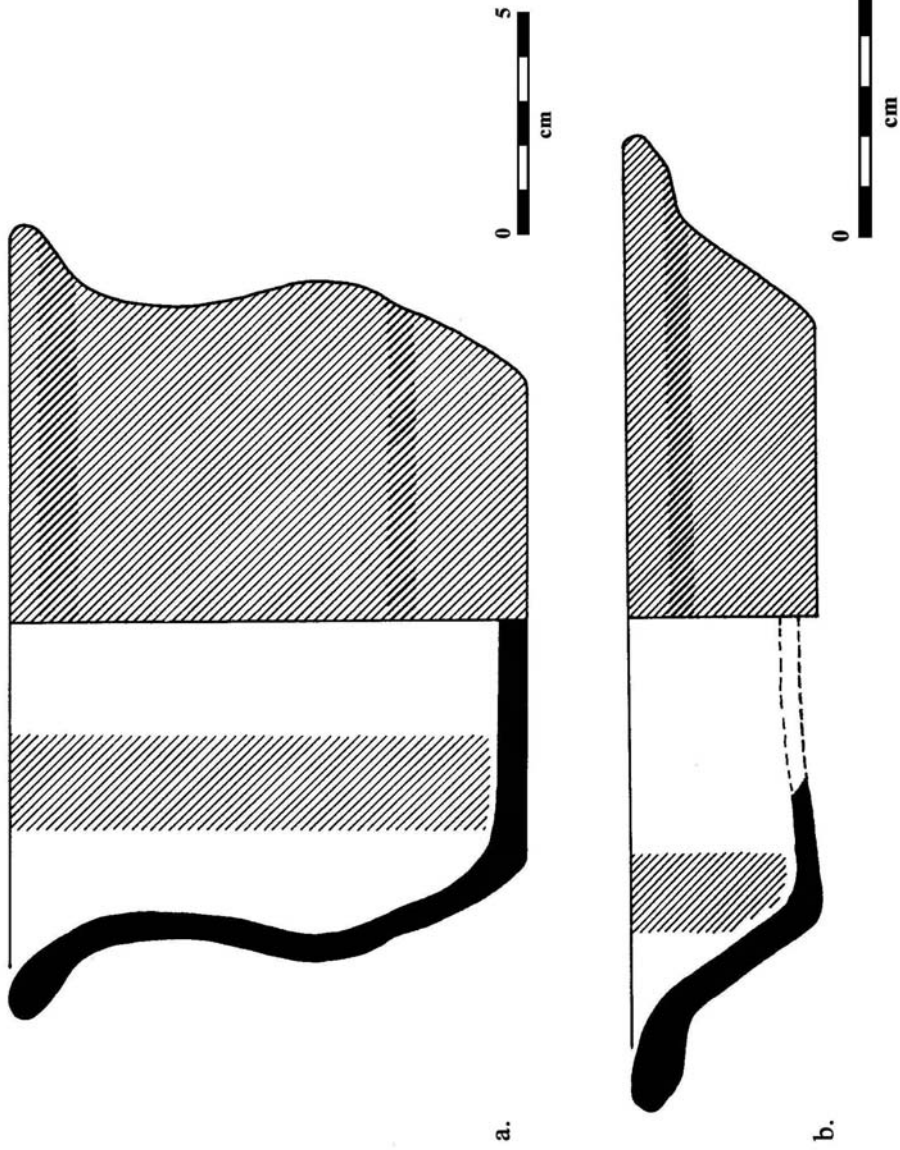


Figure 37: a) Alta Mira Fluted: Horizontally-fluted Variety (LA 440/8) bowl;
b) Sierra Red: Sierra Variety (LA 440/9) plate.

FORM: A round-sided bowl with outflaring everted rim and rounded lip. The rounded lower sides rise to high, incurving neck which flares out at rim. The rim is only slightly exteriorly thickened. The neck has a restricted opening. The base is flat and exhibits a very sharp angular margin. Height: 11.6 cm; Rim diameter: 18.0 cm; Base diameter: 10.5 cm; Rim thickness: 1.0 cm; Body thickness: 0.55 cm; Base thickness: 0.67; Width of flute: 0.6 cm.

APPENDAGES: None

CULTURAL SIGNIFICANCE: The vessel had no visible incrustation or residue on either side. The exterior base margin is worn. The height, restricted neck, and slipped interior surface suggest it functioned as a serving vessel for soups and/or stews.

INTERSITE LOCATIONS: See LA 454/1 for distribution of Alta Mira Fluted types across the Maya area. The Horizontally-fluted Variety at Lamanai shares some stylistic affinities to the Sierra Red: Gadrooned Variety at K'axob (Lopez Varela 1996:212-216) and Unnamed Fluted types at Seibal (Sabloff 1975:94), but is most similar to the Ednza variety, for which it is named, except that it does not exhibit as many horizontal flutes on the exterior body (Forsyth 1983:41). On the basis of vessel form, the Lamanai variety is somewhat unique in northern Belize.

VESSEL NUMBER: LA 440/9

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 37b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform slip color; 2) lustrous and waxy vessel surfaces; 3) plate with outflaring everted rim; 4) crazing is present.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 6/6 (reddish yellow) to 5YR 7/6 (reddish yellow). A light gray core is present (no Munsell reading). It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified white, black, and red (not hematite) particles occur as well.

SURFACE FINISH AND DECORATION: A lustrous and waxy red slip ranging in color from 2.5YR 4/8 (red) to 2.5YR 5/8 (red) was applied to the interior and exterior surfaces, excluding the base. Both sides are well-smoothed with only slight lateral wiping marks visible on exterior rim. They also exhibit a high burnishing. Decoration consists of an 'X' symbol that was applied with a wide stroke across the exterior base. The motif touches the base margin. These 'X' motifs, or cross motifs, have been recorded on early Chicanel (Sierra Group) dishes in burials at K'axob (McAnany and Lopez Varela 1996:159). Also, on the base was a biconically drilled hole, possibly a kill hole. Crazing is present, but light on both sides. No firing clouds were observed.

FORM: Flaring-sided plate with outflaring everted rim and rounded lip. The rim is wide and exteriorly thickened. The base is thin-walled, incurved, and exhibited an angular margin. Height: 3.6 cm; Rim diameter: 19 cm; Base diameter: 11 cm; Rim thickness: 1.0 cm; Body thickness: 0.65 cm; Base thickness: 0.4 cm; Width of line of 'X' motif: 2.0 cm; Diameter of hole: 1.6 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. The exterior base margin shows use wear. Pitting and tiny scratches are found on the interior surface. Given the pronounced incurved base, shallow depth, and slipped interior surface, it probably functioned as a processing or preparation vessel prior to the addition of the hole in the center base.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common variety across the lowlands.

VESSEL NUMBER: LA 440/10

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 38a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) red slip color; 2) lustrous and slightly waxy vessel surfaces; 3) plate with outflaring everted rim; 4) crazing and firing clouds are prevalent.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 5/8 (yellowish red) to 5YR 6/8 (reddish yellow). No carbon stain is present. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified white, black, and red (not hematite) particles occur as well.

SURFACE FINISH AND DECORATION: A lustrous and slightly waxy red slip ranging in color from 2.5YR 4/8 (red) to 2.5YR 5/8 (red) was applied to the interior surface. The exterior slip is a slightly darker color ranging from 5YR 3/3 (dark reddish brown) to 5YR 4/3 (dark reddish brown). The firing effect is not one of a dichrome, like Matamore Dichrome or Sierra Red: Red-and-black Variety, but, instead, may have been accidental. There is no border between the two different color slips. In fact, both the red and brown slip colors are diffuse and bleed into one another on the interior rim. It may be that the exterior surface is the product of a large firing cloud or that both vessel surfaces were subjected to different post-depositional processes (e.g., leaching). In either case, without the other half of the vessel it is uncertain what the intentions were of the potter. Both sides are well-smoothed with only slight lateral wiping marks visible on exterior surface. They also exhibit a high burnishing. Temper is visible through the slips. Decoration consists of an 'X' symbol or cross motif that was applied with a wide

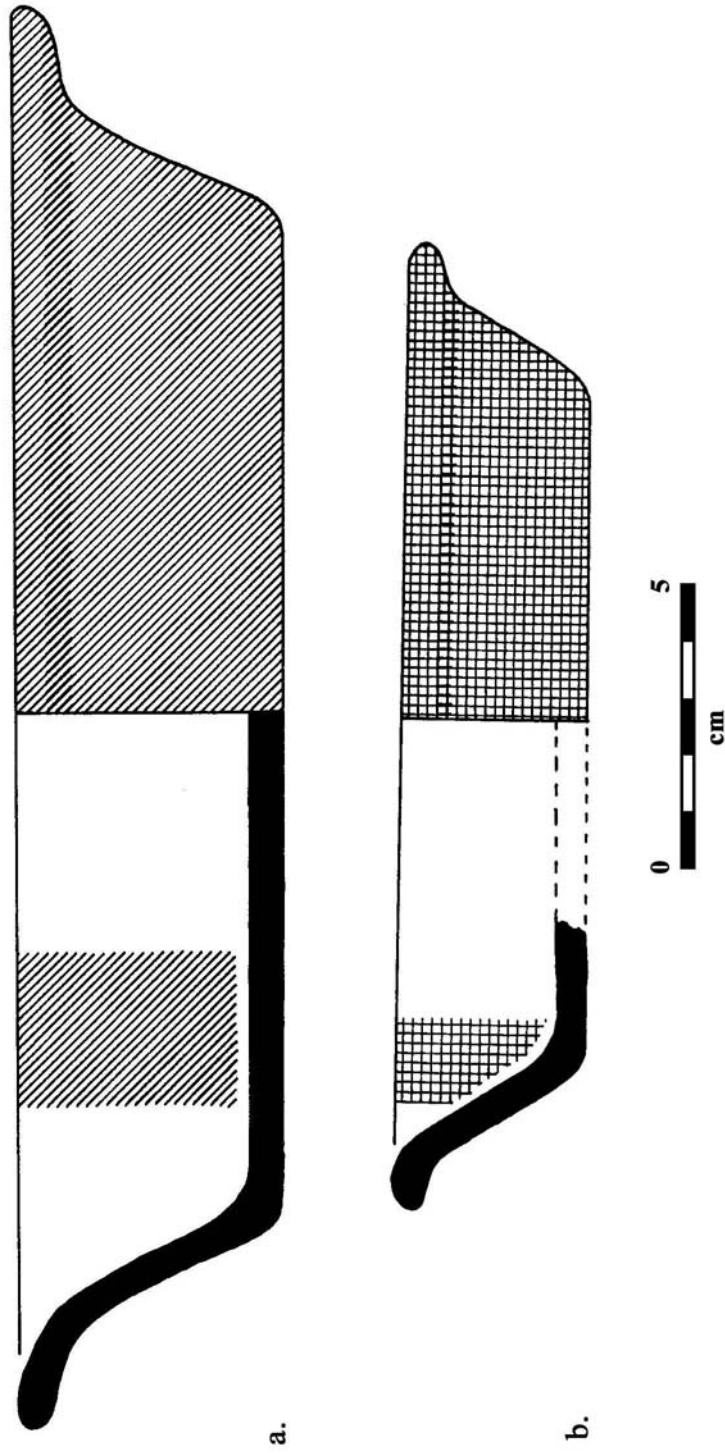


Figure 38: a) Sierra Red: Sierra Variety (LA 440/10) plate; b) Sierra Red: Sierra Variety (LA 440/11) plate. (b has red decoration on both sides, not brown as shown.)

stroke across the exterior base. The motif touches the base margin. Also, on the base was a biconically drilled hole, possibly a kill hole. Crazing and firing clouds are prevalent on both sides.

FORM: Flaring-sided plate with outflaring everted rim and rounded lip. The rim is wide. The base is flat and exhibits an angular margin. Height: 4.3 cm; Rim diameter: 25.2 cm; Base diameter: 17.5 cm; Rim thickness: 0.86 cm; Body thickness: 0.67 cm; Base thickness: 0.56 cm; Width of line of 'X' motif: 2.2 cm; Diameter of hole: 1.2 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. The exterior base margin and interior rim/neck margin show use wear. The large size, shallow depth, and slipped interior surface suggest it functioned as a family sized serving vessel prior to the addition of the hole in the center base.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common variety across the lowlands.

VESSEL NUMBER: LA 440/11

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 38b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) red slip color; 2) lustrous and slightly waxy vessel surfaces; 3) plate with outflaring everted rim; 4) crazing and firing clouds are prevalent.

PASTE, TEMPER, AND FIRING: The paste is differential in color ranging from 10R 3/1 (dark reddish gray) on the interior and 7.5YR 5/8 (strong brown) on the exterior. It has a coarse (poorly sorted) texture (grains generally less than 2 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, but unidentified white, black, pink, and light brown particles occur as well.

SURFACE FINISH AND DECORATION: A lustrous and slightly waxy red slip is found on only a small portion of the plate. The majority of the vessel exhibits firing clouds, but the Sierra Red slip, although somewhat darker in color (10R 3/6, 4/6), can still be observed. Both sides have been slipped, including the exterior base. The interior slip is much darker in color than the exterior. The surface color of this vessel is very similar to LA 440/10 where firing clouds have almost completely obscured the Sierra Red slip color. Both sides are well-smoothed and exhibit a high burnishing. No decoration is present. Temper is visible through the slips. Crazing and firing clouds (black in color) are prevalent on both sides. Rootlet marking is also observed on each surface.

FORM: Flaring-sided plate with outflaring everted rim and rounded lip. The base is flat and exhibits a rounded to slightly angular margin. Height: 3.0 cm; Rim diameter: 17.0

cm; Base diameter: 11.5 cm; Rim thickness: 0.72 cm; Body thickness: 0.7 cm; Base thickness: 0.45 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. No use wear found on either surface. The small size, shallow depth, and slipped interior surface suggest it functioned as an individual eating vessel for soups and/or stews.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common variety across the lowlands.

VESSEL NUMBER: LA 440/12

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 39a

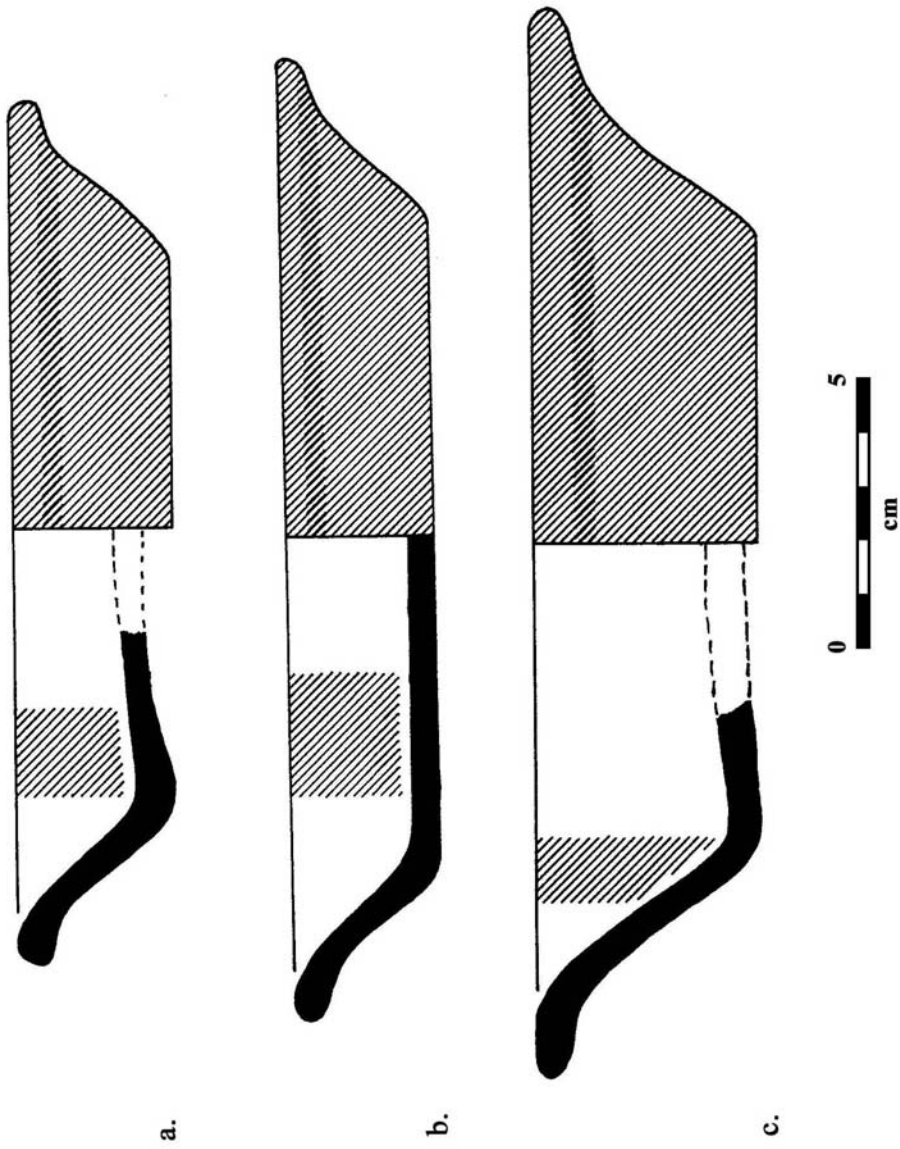


Figure 39: a) Sierra Red: Sierra Variety (LA 440/12) plate; b) Sierra Red: Sierra Variety (LA 440/13) plate; c) Sierra Red: Sierra Variety (LA 440/14) plate.

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) red slip color; 2) lustrous and waxy vessel surfaces; 3) plate with outflaring everted rim; 4) crazing is prevalent.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 6/6 (reddish yellow) to 5YR 6/8 (reddish yellow). A thin gray core (5YR 4/1) is present at base only. It has a coarse (poorly sorted) texture (grains generally less than 3 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, and hematite, but unidentified white and black particles occur as well.

SURFACE FINISH AND DECORATION: A lustrous and waxy red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, excluding the base. Both sides are well-smoothed and exhibit a medium burnishing. The exterior base is also well-smoothed. Temper is visible through the slips. No decoration is present. Crazing is prevalent and has resulted in flaking of both surfaces. One small firing cloud, tan and white in color, was found on the exterior rim and body.

FORM: Flaring-sided plate with outflaring everted rim and rounded to slightly square lip. The base is incurved and exhibits a rounded margin. Height: 2.8 cm; Rim diameter: 16.0 cm; Base diameter: 10.0 cm; Rim thickness: 0.84 cm; Lower body thickness: 0.75; Upper body thickness: 0.6 cm; Base thickness: 0.4 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Tiny scratches were found across the entire interior surface. The small size, shallow depth, and slipped interior surface suggest it functioned as an individual eating vessel for soups and/or stews.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common variety across the lowlands.

VESSEL NUMBER: LA 440/13

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 39b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip color; 2) lustrous and waxy vessel surfaces; 3) plate with outflaring everted rim; 4) crazing is prevalent.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 10YR 6/4 (light yellowish brown) to 10YR 7/4 (very pale brown). No carbon stain is present. It has a medium hard (and compact) texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, and hematite (up to 2 mm in size), but unidentified white and black particles occur as well.

SURFACE FINISH AND DECORATION: A lustrous and waxy red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, including the base. Both sides are well-smoothed and exhibit a high burnish. The exterior base is also well-smoothed. No decoration is present. Crazeing is prevalent and has resulted in some flaking of both surfaces. One large firing cloud, tan in color (7.5YR 5/6), was found covering portions of the exterior body.

FORM: Flaring-sided plate with outflaring everted rim and rounded lip. The base is flat and exhibits a round to slightly angular margin. Height: 2.7 cm; Rim diameter: 18.0 cm; Base diameter: 12.0 cm; Rim thickness: 0.7 cm; Body thickness: 0.62 cm; Base thickness: 0.55 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Some use wear on exterior base margin. The small size, shallow depth, and slipped interior surface suggest it functioned as an individual eating vessel for soups and/or stews.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common variety across the lowlands.

VESSEL NUMBER: LA 440/14

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 39c

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip color; 2) lustrous and waxy vessel surfaces; 3) plate with horizontal everted rim; 4) crazing and firing clouds are present.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color centering on 2.5YR 6/8 (light red). A thin gray core ranging from 10YR 6/4 (light yellowish brown) to 10YR 7/4 (very pale brown) is present. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified white and black particles occur as well.

SURFACE FINISH AND DECORATION: A lustrous and waxy red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, excluding the base. Both sides are well-smoothed and exhibit a high burnish. The exterior base is also well-smoothed. No decoration is present. Crazing is light and has resulted in some flaking of both surfaces. One large firing cloud, tan in color (7.5YR 5/6), was found on the exterior rim and body. Rootlet markings occur on both surfaces as well. The red slip on the exterior is leached in spots to a lighter red color.

FORM: Flaring-sided plate with horizontal everted rim and rounded lip. The base is flat and exhibits a rounded margin. Height: 4.1 cm; Rim diameter: 20.1 cm; Base

diameter: 11.3 cm; Rim thickness: 0.9 cm; Body thickness: 0.6 cm; Base thickness: 0.6 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Some use wear on exterior base margin. The small size, shallow depth, and slipped interior surface suggest it functioned either as an individual eating vessel or as a family sized serving vessel.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common variety across the lowlands.

VESSEL NUMBER: LA 440/15

TYPE: VARIETY: Sierra Red: Variety Unspecified (Red-double slip)

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated in present study.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 40a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) double red slip on both surfaces; 2) thin, waxy slip surfaces; 3) dish with rounded sides; 4) crazing and firing clouds are prevalent.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 10YR 6/4 (light yellowish brown) to 10YR 6/6 (brownish yellow). No carbon stain is present. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, hematite, and grog, but unidentified white and black particles occur as well.

SURFACE FINISH AND DECORATION: Both the interior and exterior surfaces have a light red or reddish-orange slip (possibly a wash?) applied first, and the typical Sierra Red slip wiped over it. The underslip ranges in color from 10R 5/8 (red) to 2.5YR 5/8 (red) and the overslip ranges in color from 10R 4/8 (red) to 2.5YR 4/8 (red). The underslip frequently shows through the thin red overslip showing a variegated color. The exterior base is also double slipped. Both sides are very well-smoothed and exhibit a high burnish. Despite the double slip some temper is visible on each surface. There is no decoration on this vessel. Crazing is present on both sides and has resulted in flaking of the overslip which allowed for the identification of the double slip. Firing clouds, varying in size and location, are extensive on each surface and are black (2.5YR 2.5/0, 2.5/2) and gray (2.5YR 6/0; 7.5YR 7/0) in color.

FORM: Round-sided shallow dish with slightly incurving rim and rounded lip. The base is small, symmetrical, and slightly incurved. Height: 6.0 cm; Rim diameter: 22.0 cm; Base diameter: 4.0-5.0 cm; Rim thickness: 0.9 cm; Lower body thickness: 0.7 cm;

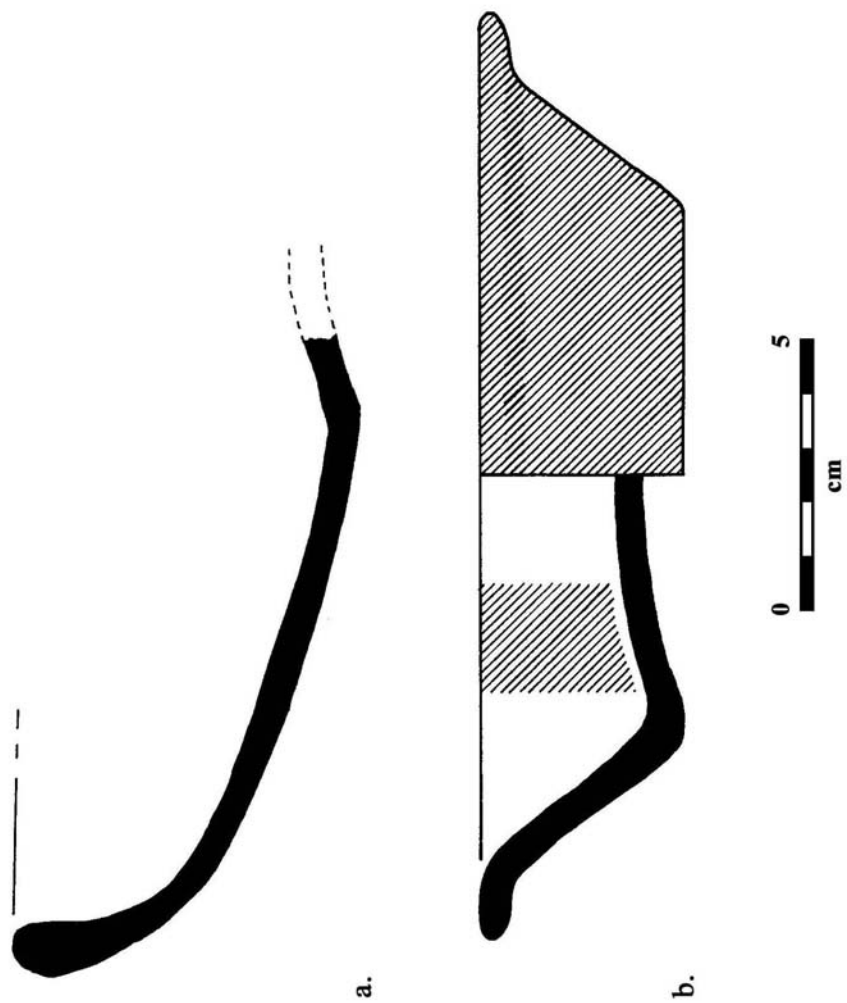


Figure 40: a) Sierra Red: Variety Unspecified (Red-double slip) (LA 440/15) dish;
b) Sierra Red: Sierra Variety (LA 440/16) dish.

Upper body thickness: 0.4 cm; Base thickness: 0.6 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Extensive use wear on exterior base margin. Heavy scratching marks on interior surface. The pronounced incurved base, shallow depth, and slipped interior surface suggest it functioned as a processing or preparation vessel. The low rounded sides would have prevented its use as a serving vessel.

INTERSITE LOCATIONS: See LA 479/1 for distribution of this Sierra Red: Red-double slip Variety in the Maya area.

VESSEL NUMBER: LA 440/16

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 40b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip color; 2) lustrous and waxy vessel surfaces; 3) dish with horizontal everted rim; 4) crazing is prevalent.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 5/8 (yellowish red) to 5YR 6/8 (reddish yellow). No carbon stain is present. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified white, black, and pink particles occur as well.

SURFACE FINISH AND DECORATION: A lustrous, thick, and waxy red slip centering on 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, excluding the base. Both sides are well-smoothed and exhibit a high burnish. The exterior base is also well-smoothed. Decoration consists of an 'X' symbol or cross motif that was applied with a wide stroke across the exterior base. The motif touches the base margin. Crazing is heavy on both sides and has caused flaking of the slips. One small firing cloud, tan in color, was found on the exterior rim. Some leaching of the slips has occurred.

FORM: Flaring-sided plate with horizontal everted rim and rounded lip. The base is incurved and exhibits a rounded margin. Height: 3.7 cm; Rim diameter: 17.2 cm; Base diameter: 9.5 cm; Rim thickness: 0.7 cm; Lower body thickness: 0.75 cm; Upper body thickness: 0.6 cm; Base thickness: 0.55 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either side. Some use wear on exterior base margin. The small size, shallow depth, and slipped interior surface suggest it functioned as an individual eating vessel.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common variety across the lowlands.

VESSEL NUMBER: LA 440/17

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 41a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip color; 2) lustrous and waxy vessel surfaces; 3) plate with outflaring everted rim; 4) crazing is prevalent.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 5/8 (yellowish red) to 5YR 6/8 (reddish yellow). No carbon stain is present. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, and hematite (up to 2.5 mm in size), but unidentified black and gray particles occur as well.

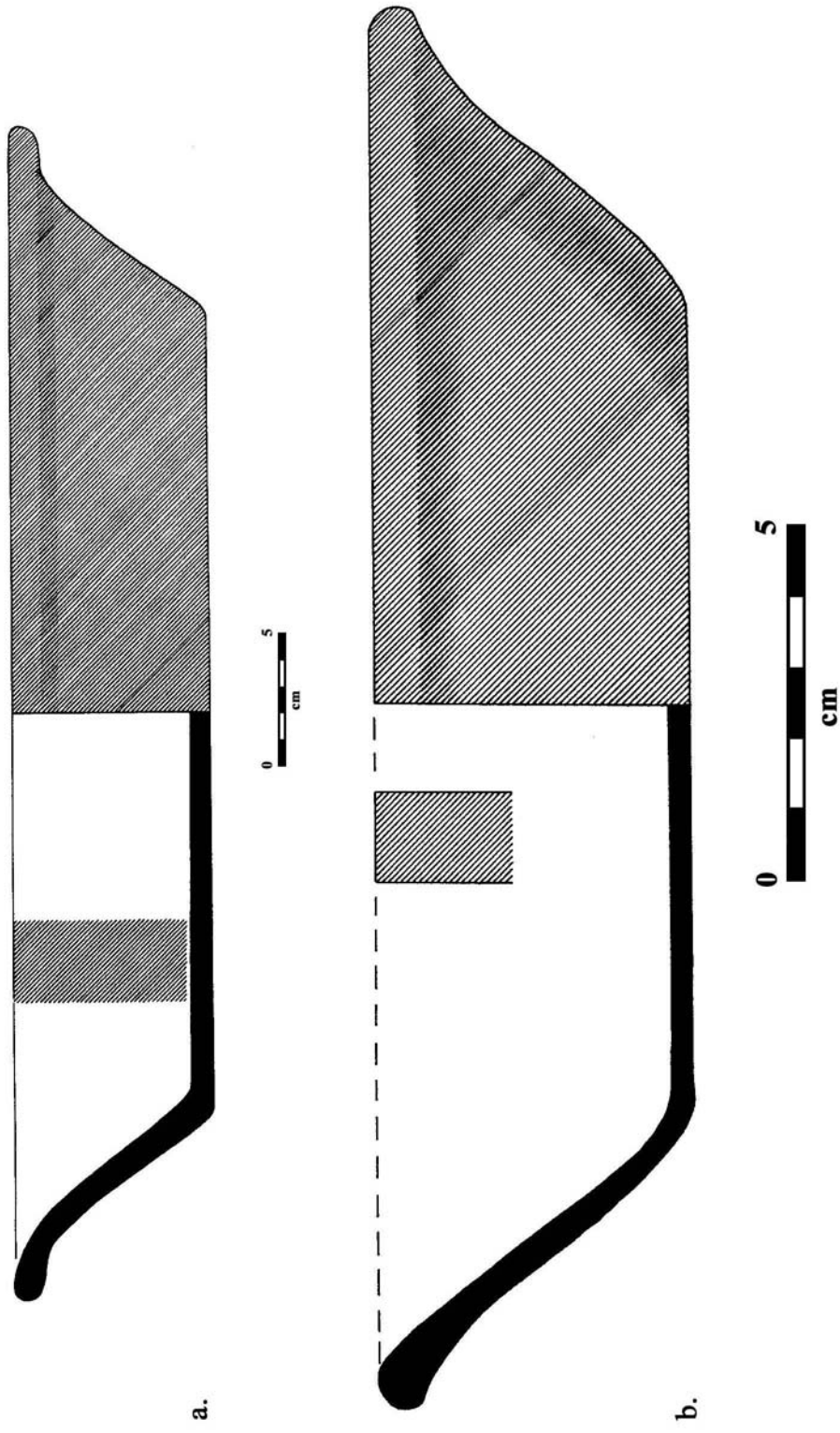


Figure 41: a) Sierra Red: Sierra Variety (LA 440/17) plate; b) Sierra Red: Sierra Variety (LA 801/1) dish.

SURFACE FINISH AND DECORATION: A lustrous and waxy red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, excluding the base. Both sides are well-smoothed with slight lateral wiping marks visible around the rim. Each surface exhibits a high burnish. The exterior base is also well-smoothed. No decoration is present. Crazeing is heavy on both sides and has caused flaking of the slips. There is considerable erosion of the exterior slip.

FORM: Flaring-sided plate with outflaring everted rim and rounded lip. The rim profile is nearly horizontal everted. The base is flat and exhibits a round to slightly angular margin. Height: 7.6 cm; Rim diameter: 44.0 cm; Base diameter: 30.0 cm; Rim thickness: 1.4 cm; Lower body thickness: 1.16 cm; Upper body thickness: 0.95 cm; Base thickness: 0.8 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either side. Considerable use wear on exterior base margin. Given the large size, height, and slipped interior surface, it probably functioned as a serving vessel of soups and/or stews for supra-family groups.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common variety across the lowlands.

STRUCTURE N12-13 (SPANISH CHURCH II)

Cache YDL II-7:

This cache indicates the presence of a Late Preclassic structure on the site of the second Spanish church sanctuary. No identifiable structural remains were associated with the

cache, but presumably the core immediately around the cache represented the razed Preclassic building. One ceramic vessel (LA 801/1) was found in the cache. No other associated artifacts were encountered.

VESSEL NUMBER: LA 801/1

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: Lag

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 41b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip color; 2) lustrous and waxy vessel surfaces; 3) dish with outflaring everted rim; 4) crazing and firing clouds are present.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 2.5YR 5/8 (red) to 2.5YR 6/8 (light red). No carbon stain is present. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz,

hematite, and grog, but unidentified black particles occur as well. The paste has some burned-out organic material.

SURFACE FINISH AND DECORATION: A thick, lustrous, and waxy red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, excluding the base. Both sides are well-smoothed and exhibit a high burnish. The exterior base is smoothed, but many dents are visible. No decoration is present. Crazeing is located on both sides, but has not resulted in flaking of either slipped surface. Small patches of rootlet marking, black in color, were found only on the interior body. Firing clouds, black and tan in color, have been observed on the interior and exterior bases.

FORM: Flaring-sided dish with outflaring everted rim and rounded lip. The lip has an angular exterior margin. The rim is exteriorly thickened. The base is flat, thin-walled, and exhibits a rounded to slightly angular margin. Height: 7.0 cm; Rim diameter: 31.2 cm; Base diameter: 17.8 cm; Rim thickness: 1.3 cm; Body thickness: 0.5 cm; Base thickness: 0.4 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This moderately hard and durable vessel had no visible incrustation or residue on either side. Some use wear on exterior base margin. Given the large diameter, shallow depth, and slipped interior surface, it probably functioned as a family sized serving vessel for foods with a low liquid content.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common variety across the lowlands.

THE ZOTZ COMPLEX (EARLY FACET): 100 B.C. – A.D. 150

The early facet of the Zotz Complex begins at approximately 100 B.C. and lasts to ca. A.D. 150. This is the beginning of the Protoclassic period at Lamanai. The ceramic material in this facet consists of 31 vessels, approximately 22% of the Late Preclassic collection. It is marked by the appearance of thinner and harder slips, concentric horizontal streaky marks on vessel surfaces, and the application of multiple slips. At Lamanai, early facet Zotz pottery continues to be dominated by monochrome redwares. Nearly 81%, or 25 out of 31 vessels, belong to the Sierra Group. Minimal amounts of Flor, Matamore, Polvero, and Quacco Creek Group ceramics were also found. All of the material exhibited a variety of forms, including dishes, bowls, plates, jars, and vases. Over 75% of the vessels were flaring-sided dishes and bowls with flat bases and slightly outflaring everted rims. Tetrapodal supports make their appearance at Lamanai during this time. Although less plastic manipulation of vessel surfaces occurs at this time, some fluting and grooved-incising continues. Effigy vessels common in early Chicanel times are noticeably absent during this period.

Not only does the introduction of a number of ceramic attributes signal a new ceramic stage at Lamanai, there is also a gradual disappearance of such diagnostic traits as thick, soft, and waxy vessel slips. Although waxy slips are being replaced, there is an overlap, or continuation, of Chicanel types (e.g., Sierra Red, Flor Cream, Polvero Black) at this time at the site. This trend of Chicanel types co-occurring with Protoclassic types is found at many other lowland sites, including Barton Ramie (Gifford 1976), Cahal Pech (Awe 1992; Brady et al. 1998:26-27; Powis et al. n.d.), Cerros (Robertson-Freidel 1980), Colha (Valdez 1987), Holmul (Kosakowsky 2001), Kichpanha (McDow 1997; Meskill 1992), La Milpa (Kosakowsky and Sagebiel 1999), Naj Tunich (Brady 1987; Brady et al. 1998), Nohmul (Hammond 1984; Pring 1977a), Santa Rita (Chase and Chase 1987), and Yaxuna (Suhler et al. 1998).

STRUCTURE N10-2

Sherd Feature 1:

This material is associated with the remnants of a Late Preclassic structure that antedates N10-2. A structure stood on the spot in Preclassic times onward, but either there were no Classic modifications or the Classic building was razed, along with most of the Late Preclassic one, when N10-2 was started in the Early Postclassic (David Pendergast, personal communication, 2001). Sherd Feature 1 was found along the primary axis of N10-2. It lay in core material just above a plaster floor. This sherd material was found slightly to the west of another similar feature (Sherd Feature 2). Each appeared to be a pavement of broken vessels. Sherd Feature 1 covered an area 1.95 m north-south by 0.90 m east-west. A total of 14 ceramic vessels (LA 125/1-125/14) were included in this feature and were mixed with freshwater snails (*Pomacea* sp.), freshwater mussels (*Nephronaias* sp.), fragments of bone, and one partial bone tube. The presence of all of this material could be indicative of a midden deposit.

VESSEL NUMBER: LA 125/1

TYPE: VARIETY: Laguna Verde Incised: Grooved-incised Variety

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated by Sabloff (1975) at Seibal.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 42a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thick, lustrous, and slightly waxy red slip; 2) grooved-incised line at mid-body; 3) bowl with outflaring everted rim and basal angle; 4) tetrapod vessel.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 5/8 (yellowish red) to 5YR 6/8 (reddish yellow). No carbon stain is present. It has a medium texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified black and red particles occur as well. The paste contains some burned-out organic material.

SURFACE FINISH AND DECORATION: A thick, lustrous, and slightly waxy red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, excluding the base (feet are not slipped either). The slip on both sides is partly eroded revealing what appears to be a double-red slip; however, it may be the result of the thick slip eroding rather than the application of a second slip. Both sides are well-smoothed and exhibit a very high burnish. The exterior base has a rough surface. Decoration consists of a single, pre-slip grooved-incised line encircling the basal angle. There is slight crazing on both surfaces. One large firing cloud, tan in color, covers the entire lower exterior half (below basal angle) of the vessel. There are also streaks of a bluish-gray color, located only around the basal angle, which could be another firing cloud, but produced for a decorative effect. Some leaching occurs on the slipped surfaces.

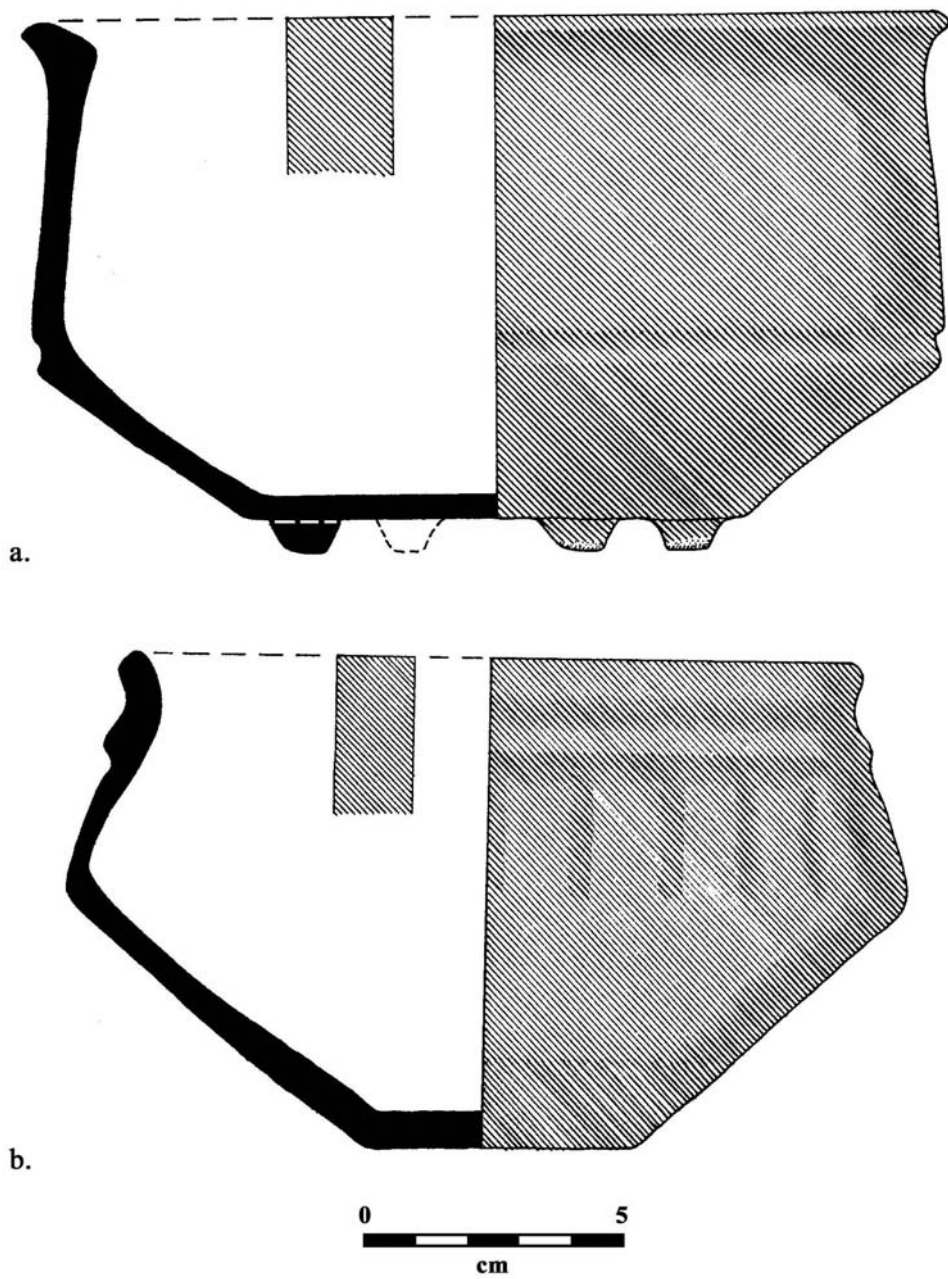


Figure 42: a) Laguna Verde Incised: Grooved-incised Variety (LA 125/1) bowl;
b) Alta Mira Fluted: Variety Unspecified (LA 125/2) bowl.

FORM: Flaring, lower sided bowl with sharp basal angle and outflaring everted rim. The upper sides rise vertically. The rim is interior folded. The lip is beveled-in and pointed. The base is flat, thin-walled, and exhibits an angular margin. Height: 10.5 cm; Rim diameter: 18.0 cm; Base diameter: 9.5 cm; Rim thickness: 0.7 cm; Lower body thickness: 0.5 cm; Upper body thickness: 0.6 cm; Base thickness: 0.42 cm; Width of grooved-incised line: 0.6-0.7 cm.

APPENDAGES: Four solid nubbin feet with flat (slightly squared) bottoms. They are not symmetrical in shape. Foot height: 0.6 cm; Foot width (at base): 0.8-1.4 cm.

CULTURAL SIGNIFICANCE: It is a hard and durable vessel that exhibited no incrustation or residue on either surface. Some pitting is found on the interior base. Considerable use wear on bottoms of the feet. Given its high vertical sides and slipped interior surface, it probably functioned as a serving vessel for soups and/or stews to large groups.

INTERSITE LOCATIONS: See LA 421/7 for distribution of this variety across the lowlands. If, upon further microscopic examination, there appears to be a double slip on both sides of this vessel, then it should be renamed a Sierra Red: Variety Unspecified (Red-double slip) bowl (see LA 479/1 for description).

VESSEL NUMBER: LA 125/2

TYPE: VARIETY NAME: Alta Mira Fluted: Variety Unspecified

ESTABLISHED: Type and Variety identified by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 42b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip; 2) lustrous and slightly waxy slip on vessel surfaces; 3) vertical fluting on exterior surface; 4) recurving sided bowl with restricted orifice.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 6/6 (reddish yellow) to 5YR 7/6 (reddish yellow). No carbon stain is present. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having around to angular fracture. The temper consists mainly of calcite, quartz, and hematite, but unidentified black and light brown particles occur as well.

SURFACE FINISH AND DECORATION: A lustrous and slightly waxy red slip ranging in color from 2.5YR 4/8 (red) to 2.5YR 5/8 (red) was applied to the interior and exterior surfaces, excluding the base. The slipped surfaces have a slightly streaky slip color. Both sides are very well-smoothed and exhibit a high burnish. Decoration consists primarily of vertical fluting on the exterior surface of the vessel. The flutes are generally parallel and rounded, forming a smooth, undulating surface made up of alternating round-section troughs. The vertical flutes are located below a lateral ridge that is located at the base of the neck; the ridge produced two shallow grooves on each side. Light crazing is found on both sides and has resulted in some flaking. One small firing cloud, black and tan in color, was located on the exterior lower body.

FORM: Recurving-sided bowl, almost cuspidor in shape, with outflaring everted rim and rounded lip. The medial angle is somewhat angular. The rim is slightly incurving producing a restricted orifice. The rim is also exteriorly thickened. The base is probably flat. Height: 9.5 cm; Rim diameter: 14.0 cm; Base diameter: n/a; Rim thickness: 0.7 cm; Upper body thickness: 0.5 cm; Lower body thickness: 0.7 cm; Base thickness: 0.67 cm; Width of vertical flutes: 0.4 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either surface. Given the restricted orifice and slipped interior surface, it probably functioned as an individual serving/eating vessel for soups or stews.

INTERSITE LOCATIONS: Alta Mira Fluted in a minor type within the Sierra Group, but usually occurs wherever significant deposits of Sierra Red types are found. It has been found at many sites, including Altar de Sacrificios (Adams 1971); Barton Ramie (Gifford 1976); Edzna (Forsyth 1983); El Mirador (Forsyth 1989); Holmul (Kosakowsky 2001); Komchen (Andrews V 1988); Nakbe (Forsyth 1993); Seibal (Sabloff 1975); Tikal (Culbert 1993); and Uaxactun (Smith and Gifford 1966; Smith 1955).

VESSEL NUMBER: LA 125/3

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 43a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip color; 2) lustrous and slightly waxy vessel surfaces; 3) flaring-sided dish with horizontal everted rim; 4) tripod vessel.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 2.5YR 5/8 (red) to 2.5YR 6/8 (light red). A thick dark gray core (2.5YR 4/0) is present. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, hematite, and grog, but unidentified brown particles occur as well. The paste also had a number of voids, likely caused by the organic material being burned out.

SURFACE FINISH AND DECORATION: A thick, lustrous, and slightly waxy red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, including the base and feet. The slip on both sides is partly eroded revealing what appears to be a double-red slip; however, it may be the result of the thick slip eroding rather than the application of a second slip. Both surfaces are well-smoothed and exhibit a high burnish. The exterior base is not burnished. No decoration is present. Crazeing is visible on both sides and has resulted in flaking. One localized firing cloud, tan in color (5YR 5/8), was found on the exterior side from rim to foot.

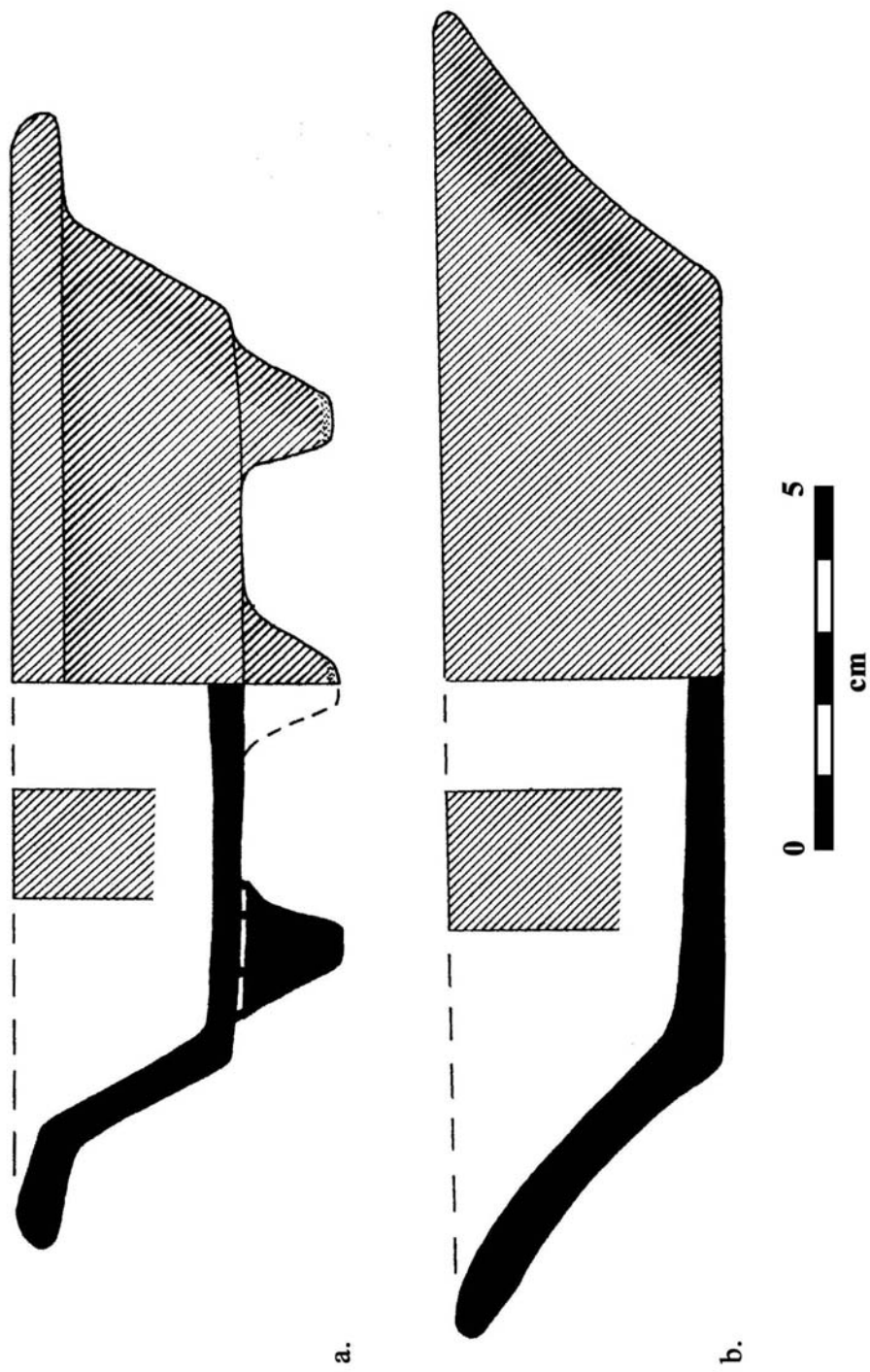


Figure 43: a) Sierra Variety (LA 125/3) dish; b) Sierra Red: Sierra Variety (LA 125/4) dish.

FORM: Flaring, thin-sided dish with horizontal everted rim and rounded to slightly pointed lip. The rim is broad with an angular interior margin. The exterior base is flat to slightly incurved and exhibits an angular base. Height: 4.4 cm; Rim diameter: 15.7 cm; Base diameter: 10.4 cm; Rim thickness: 0.6 cm; Body thickness: 0.46 cm; Base thickness: 0.5 cm.

APPENDAGES: Three solid nubbin feet that taper near base. They are conical and slightly truncated in shape. Foot height: 1.4 cm; Foot width (at base): 2.1 cm.

CULTURAL SIGNIFICANCE: This very hard and durable vessel had no visible incrustation or residue on either side. Some use wear on the bottoms of the feet. Given the small size, shallow depth, and slipped interior surface, it probably functioned as an individual eating vessel for hot soups and/or stews.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common variety across the lowlands.

VESSEL NUMBER: LA 125/4

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 43b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip color; 2) lustrous and slightly waxy vessel surfaces; 3) flaring-sided dish with slightly outflaring everted rim; 4) crazing and firing clouds are present.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 2.5YR 5/8 (red) to 2.5YR 6/8 (light red). A thick dark gray core (7.5YR 4/0) is present. It has a medium hard (and compact) texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, hematite, and grog, but unidentified black and brown particles occur as well.

SURFACE FINISH AND DECORATION: A thick, lustrous, and slightly waxy red slip centering on 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, excluding the base. Both surfaces are well-smoothed with a few lateral wiping marks visible on both surfaces. Each side exhibits a high burnish. The exterior base is smoothed, but not to the extent of the vessel sides. No decoration is present. Crazing is observed only on the interior surface. One large firing cloud, black (2.5Y 2/0) and tan (10YR 5/8) in color, covers most of the exterior surface, including the base. One localized area of leaching on the interior base.

FORM: Flaring-sided dish with slightly outflaring everted rim and rounded lip. The exterior base is flat and exhibits an angular base. Height: 3.8 cm; Rim diameter: 18.1 cm; Base diameter: 10.8 cm; Rim thickness: 0.8 cm; Body thickness: 0.9 cm; Base thickness: 0.56 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Some use wear on the exterior base margin. Given the small size, shallow depth, and slipped interior surface, it probably functioned as an individual serving/eating vessel for hot soups and/or stews.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common variety across the lowlands.

VESSEL NUMBER: LA 125/5

TYPE: VARIETY NAME: Alta Mira Fluted: Variety Unspecified

ESTABLISHED: Type and Variety identified by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 44a

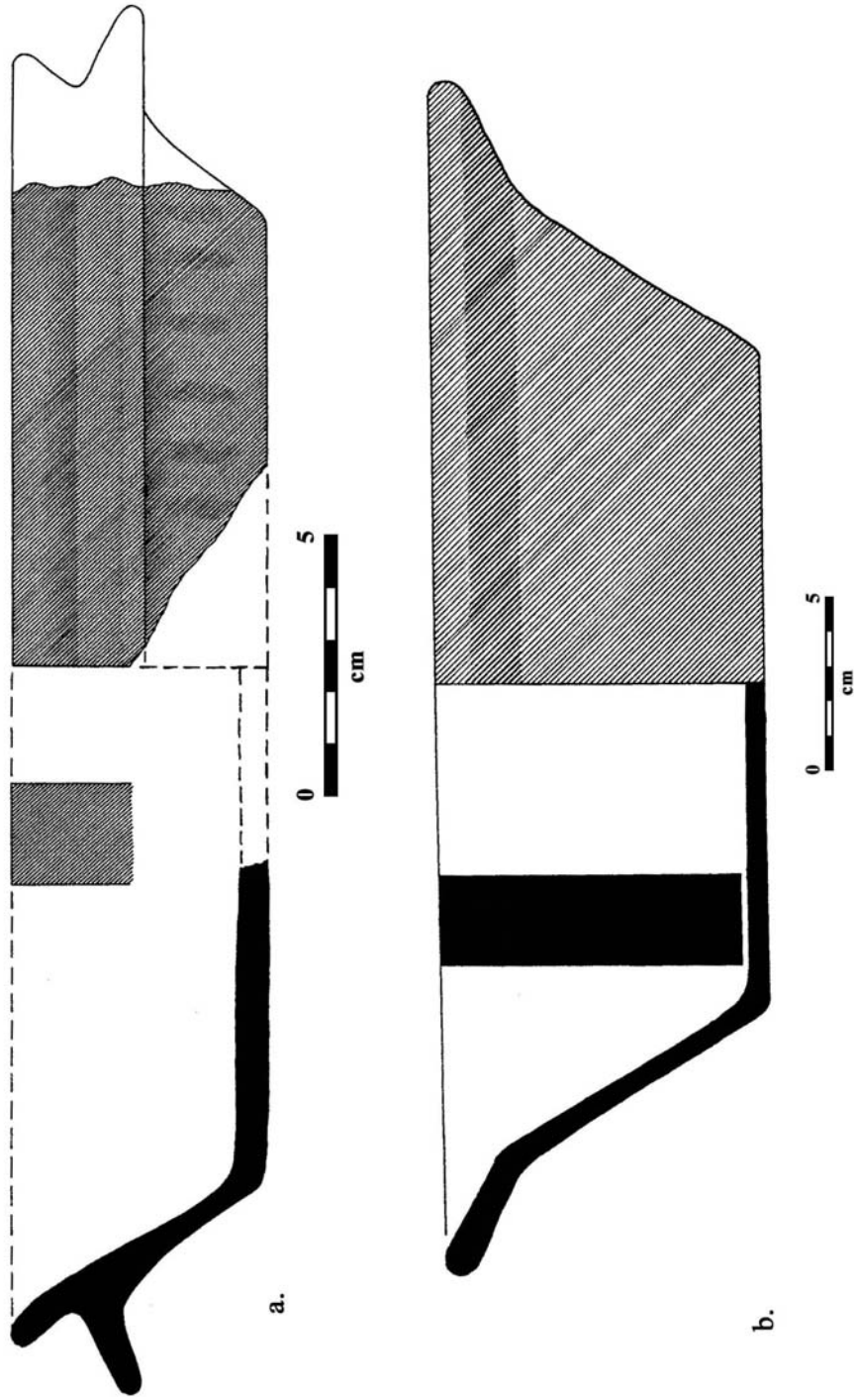


Figure 44: a) Alta Mira Fluted: Variety Unspecified (LA 125/5) dish; b) Matamore Dichrome: Matamore Variety (LA 125/6) dish. (b has brown decoration on exterior side, not red as shown.)

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip; 2) lustrous and slightly waxy slip on vessel surfaces; 3) vertical fluting on exterior surface; 4) flaring sided dish with labial flange; 5) crazing is prevalent.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 6/8 (reddish yellow) to 5YR 7/8 (reddish yellow). No carbon stain is present. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having around to angular fracture. The temper consists mainly of calcite and quartz, but unidentified black and red particles occur as well.

SURFACE FINISH AND DECORATION: A lustrous and slightly waxy red slip centering on 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, excluding the base. Both sides are very well-smoothed and exhibit a high burnish. Decoration consists primarily of vertical fluting on the exterior surface of the vessel exterior. The flutes are generally parallel, rounded, and located equidistantly between the labial flange and the base margin. Heavy crazing is found on both sides and has resulted in flaking, especially on the rim and flange. Firing clouds occur on both sides with a small black (2.5YR 2.5/0) blotch on the interior base and a large tan (7.5YR 5/8) blotch on the exterior lower body and base margin. Like 125/1, there is a line that is bluish-gray in color, at the exterior base, that may be either a firing cloud or some kind of decoration.

FORM: Flaring-sided dish with slightly outflaring everted rim and labial flange. The flange is somewhat downturned and is attached just below the rim. The lip is rounded. The base is flat and exhibits a rounded to angular base margin. Height: 7.7 cm; Rim diameter: 32.0 cm; Rim thickness: 1.1 cm; Body thickness: 0.65 cm; Base thickness: 0.9 cm; Labial flange width: 2.6 cm; Labial flange thickness: 1.0 cm; Vertical flute height: 2.0-2.5 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either surface. Given the large vessel size, flaring sides, and slipped interior surface, it probably functioned as a family sized serving vessel.

INTERSITE LOCATIONS: Alta Mira Fluted in a minor type within the Sierra Group, but usually occurs wherever significant deposits of Sierra Red types are found. It has been found at many sites, including Altar de Sacrificios (Adams 1971); Barton Ramie (Gifford 1976); Edzna (Forsyth 1983); El Mirador (Forsyth 1989); Holmul (Kosakowsky 2001); Komchen (Andrews V 1988); Nakbe (Forsyth 1993); Seibal (Sabloff 1975); Tikal (Culbert 1993); and Uaxactun (Smith and Gifford 1966; Smith 1955).

VESSEL NUMBER: LA 125/6

TYPE: VARIETY: Matamore Dichrome: Matamore Variety

ESTABLISHED: Type and Variety named by Pring (1977a) at Cuello.

GROUP: Matamore

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 44b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform black slip color on the interior; 2) uniform brown slip color on the exterior; 3) lustrous and slightly waxy vessel surfaces; 4) flaring-sided dish with outflaring everted rim; 5) crazing and firing clouds are prevalent.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color centering on 5YR 6/8 (reddish yellow). A thin black core is observed only at the base. It is poorly sorted (grains generally less than 2 mm in size) with temper material having a well-rounded to angular fracture. This vessel (sample #2000-9) was subjected to a petrographic analysis by Linda Howie-Langs (2002a:4-5). It belongs to the Crystalline Calcite Group. The paste is composed primarily of large fragments of sparry calcite. Lesser amounts of crystalline calcite, monocrystalline quartz, micrite, hematite nodules, and grog also occur. Golden-colored fragments of mudstone, possibly carbonate mudstone, are found in the paste. The crystalline calcite and sparry calcite are added constituents.

SURFACE FINISH AND DECORATION: The vessel has two slipped surfaces: the interior is slipped black ranging in color from 2.5YR 2.5/0 (black) to 7.5YR 2/0 (black), and the exterior is slipped brown centering on 5YR 4/6 (yellowish red). According to Howie-Langs (2002a:5), microscopic analysis has shown that multiple layers of slip were applied to the surfaces of this vessel. The interior slip extends to the lip margin on the exterior side. The exterior slip ends at the base margin. Both slips are lustrous, slightly waxy, and thick. The vessel sides are well-smoothed and exhibit a high burnish. The exterior base is also well-smoothed. No decoration is present. Crazing is heaving on both surfaces. Only one firing cloud is found on the exterior. It is both black and bluish-gray in color and forms a narrow band, similar to LA 125/1 and 125/5, around the lower body.

FORM: Flaring-sided dish with outflaring everted rim and rounded lip. The rim is wide and has an angular interior margin. The exterior base is flat and exhibits an angular base. Height: 9.5 cm; Rim diameter: 34.0 cm; Base diameter: 18.6 cm; Rim thickness: 0.9 cm; Body thickness: 0.5 cm; Base thickness: 0.6 cm; Rim width: 3.8 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Some use wear on the exterior base margin. Given the large diameter, flaring sides, broad rim, and slipped interior surface, it probably functioned as a family sized serving vessel.

INTERSITE LOCATIONS: The Matamore type and variety has been found across northern Belize at the sites of Cerros (Robertson-Freidel 1980), Colha (Valdez 1987), Cuello (Kosakowsky 1987; Pring 1977a), K'axob (Lopez Varela 1996), Kichpanha (Reese and Valdez 1987), and Nohmul (Pring 1977a). At San Jose, there is a similar kind of dish (catalogue #189742) with a black interior and a red exterior from the cache associated with Burial D1 in Structure D1 (Powis 2001d; Thompson 1939).

VESSEL NUMBER: LA 125/7

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 45a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip color; 2) lustrous and slightly waxy vessel surfaces; 3) flaring-sided dish with interior folded rim; 4) crazing is present.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 2.5YR 5/8 (red) to 2.5YR 6/8 (light red). A thin gray core (2.5YR 5/0) is present. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, hematite, and grog, but unidentified black and brown particles occur as well.

SURFACE FINISH AND DECORATION: A thick, lustrous, and slightly waxy red slip centering on 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, including the base. Both surfaces are very well-smoothed exhibit a high burnish. No decoration is present, but graffiti lines, possibly a person performing some kind of act, are carved into the interior base. There is also very shallow groove, finger-wide, located below the interior folded rim. Light crazing is observed on both sides. There is considerable erosion of the interior and exterior base slips.

FORM: Flaring, thin-sided dish with interior folded rim and rounded lip. The exterior base is slightly incurved. Height: 5.9 cm; Rim diameter: 20.1 cm; Base diameter: 8.0 cm; Rim thickness: 1.5 cm; Body thickness: 0.5 cm; Base thickness: 0.7 cm.

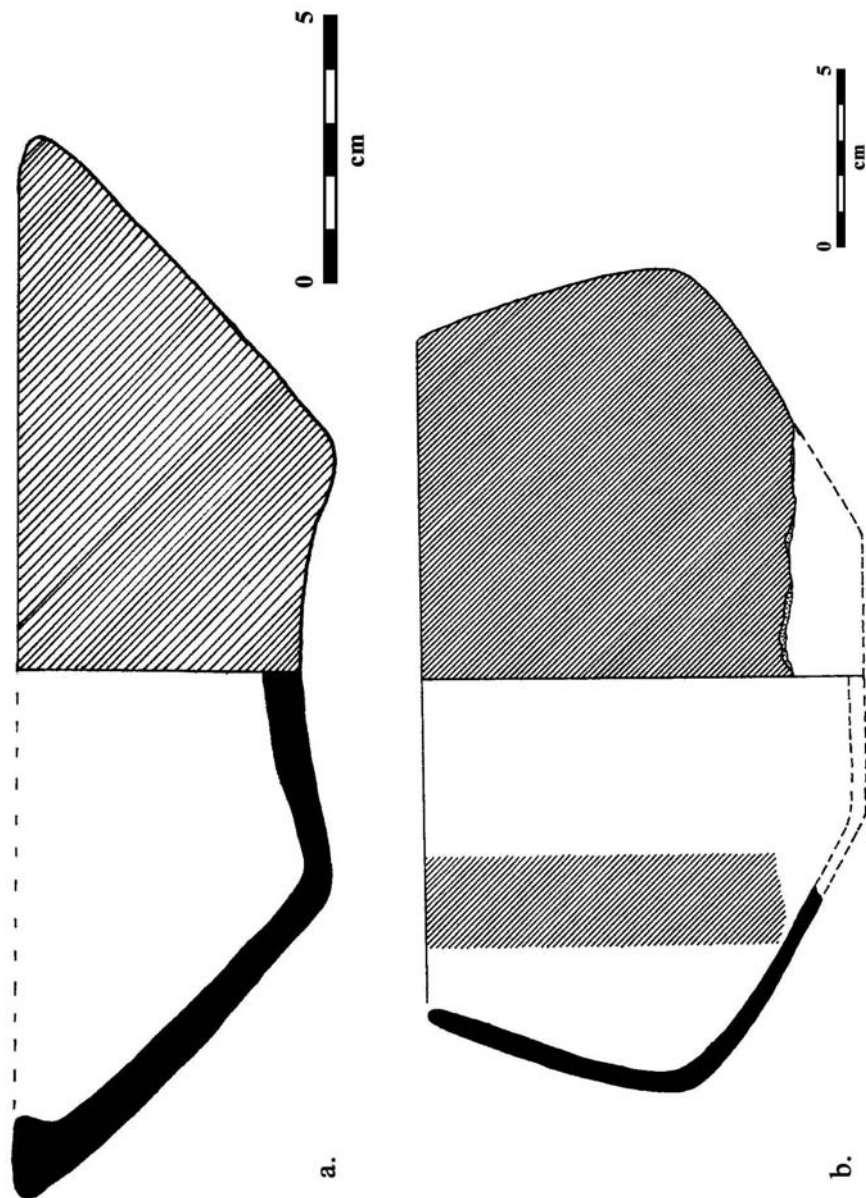


Figure 45: Sierra Red: Sierra Variety (LA 125/7) dish; b) Society Hall Red: Society Hall Variety (LA 125/8) bowl.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Both pitting on interior base and use wear on exterior base margin are found. Given the pronounced incurved base, shallow depth, and slipped interior surface, it probably functioned as a processing or preparation vessel.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common variety across the lowlands. The Lamanai vessel is also similar in form to a Cabro Red: Cabro Variety plate (SF-1362) at Cerros (Robertson-Freidel 1980:Figure 20).

VESSEL NUMBER: LA 125/8

TYPE: VARIETY: Society Hall Red: Society Hall Variety

ESTABLISHED: Type named by Pring (1977a) at Cuello; Variety designated by Kosakowsky (1987) at Cuello.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 45b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) red slip with streaky horizontal marks; 2) slip color is similar to Sierra Red on both vessel surfaces; 3) soft, thin slip; 4) round sided bowl with medial angle and incurving rim.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 2.5YR 5/8 (red) to 2.5YR 6/8 (light red). A thick gray core (2.5YR 4/0 to 2.5YR 3/0) is present. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, and hematite, but unidentified white, black, red, and brown particles occur as well.

SURFACE FINISH AND DECORATION: A soft, thin, red slip with streaky horizontal marks ranging in color from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, including the base. The streakiness of the slip is not as pronounced as that observed on vessels from other nearby sites, such as Colha and Cuello. Both surfaces are well-smoothed with lateral wiping marks present, especially on the interior lower body and base. Each surface also exhibits a high burnish. No decoration is present. Light crazing is observed on both sides and has resulted in flaking of the slips. Small firing clouds occur on the exterior surface.

FORM: Round, thin-sided bowl with rounded medial angle and incurving rim. The orifice is restricted. The lip is rounded. The exterior base is flat. Height: 12.4 cm; Rim diameter: 19.2 cm; Base diameter: n/a; Rim thickness: 0.7 cm; Body thickness: 0.6 cm; Base thickness: 0.4 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Pitting occurs on both sides. Given the height, restricted orifice, and slipped

interior surface, it probably functioned as a serving vessel for soups and/or stews to large groups.

INTERSITE LOCATIONS: The Society Hall Red type has been found at a number of northern Belize sites including: Cerros (Robertson-Freidel 1980); Colha (Valdez 1987); Cuello (Kosakowsky 1987; Kosakowsky and Pring 1998); Kichpanha (McDow 1997; Reese and Valdez 1987); La Milpa (Kosakowsky and Sagebiel 1999); Nohmul (Pring 1977a); San Estevan (Pring 1977a); and San Jose (Powis 2001d; Thompson 1939). In other regions, it has been found at Barton Ramie (Gifford 1976), Holmul (Kosakowsky 2001); Tikal (Culbert 1993), and Uaxactun (Smith and Gifford 1966). At Lamanai, the Society Hall Red type is very rarely encountered in Late Preclassic deposits. A recent study of the San Jose I and II ceramic material revealed very few sherds (catalogue #189403, 189478, 189600, 189841) of Society Hall Red (Powis 2001d). The low frequency found within the Sierra Group assemblage at both of these sites is opposite to that observed at other northern Belize sites like Colha, Cuello, and K'axob. The form of the Lamanai vessel is similar to a Bullet Tree Red-brown: Bullet Tree Variety bowl found at Barton Ramie (Gifford 1976:Figure 55).

VESSEL NUMBER: LA 125/9

TYPE: VARIETY: Society Hall Red: Society Hall Variety

ESTABLISHED: Type named by Pring (1977a) at Cuello; Variety designated by Kosakowsky (1987) at Cuello.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 46a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) red slip with streaky horizontal marks; 2) slip color is similar to Sierra Red on both vessel surfaces; 3) soft, thin slip; 4) flaring sided dish with basal ridge; 5) crazing and firing clouds are present.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 2.5YR 5/8 (red) to 2.5YR 6/8 (light red). A thick gray core (2.5Y 5/2 to 2.5YR 6/2) is present. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified black, red, and brown particles occur as well.

SURFACE FINISH AND DECORATION: A soft, thin, red slip with streaky horizontal marks ranging in color from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, including the base. Both surfaces are well-smoothed with lateral wiping marks present, especially above the basal ridge. Each surface also exhibits a high burnish. Temper is visible through the slips. No decoration is present. Light crazing is observed on both sides and has resulted in flaking of the slips. Small firing clouds, black and tan in color, occur on the exterior surface.

FORM: Flaring-sided dish with small basal ridge and direct rim. The lower sides are flaring, but above the basal ridge the sides are slightly rounded or incurving. The lip is rounded. The exterior base is flat. Height: 12.6 cm; Rim diameter: 41.3 cm; Base diameter: n/a; Rim thickness: 1.0 cm; Body thickness: 0.9 cm; Base thickness: 0.7 cm;

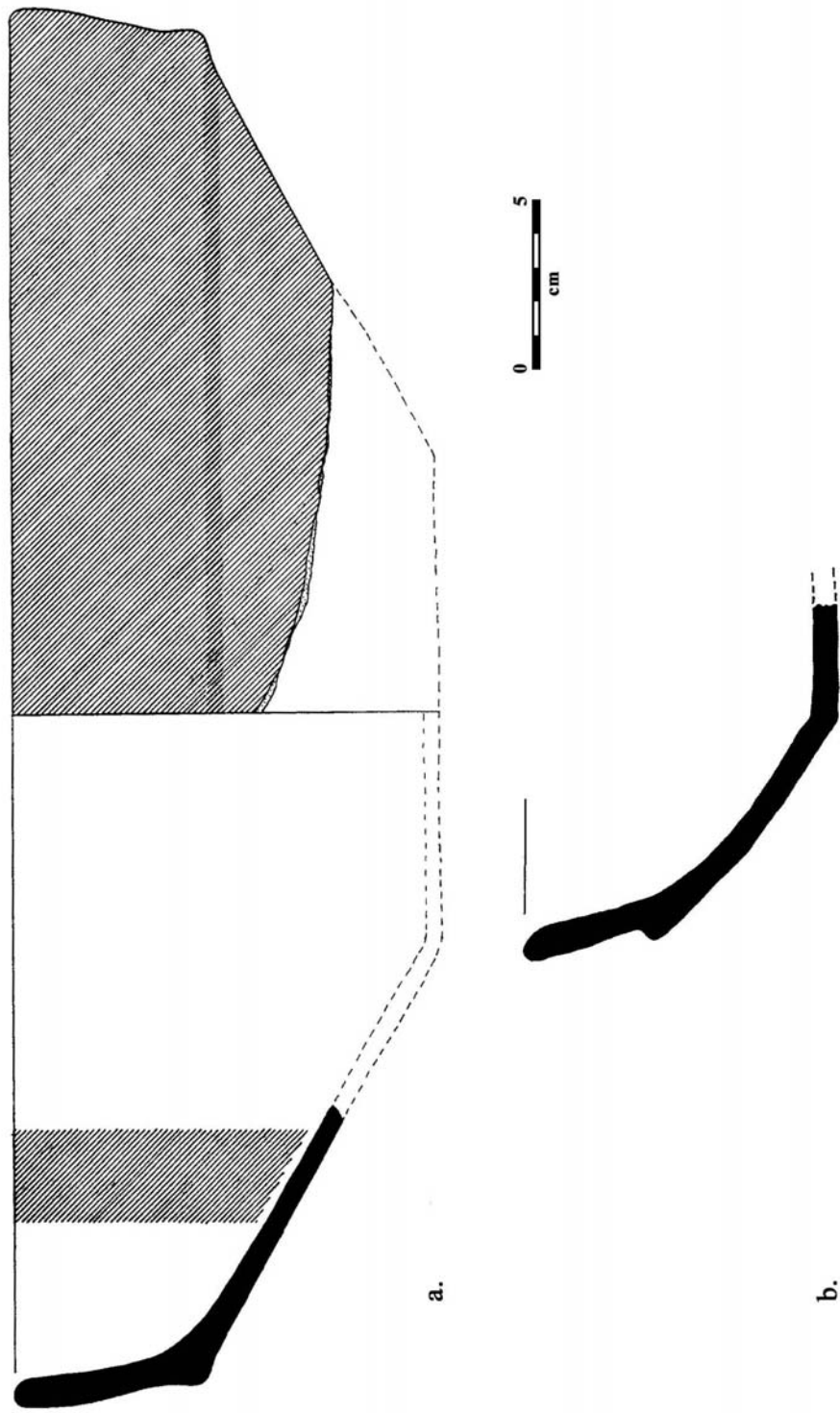


Figure 46: a) Society Hall Red: Society Hall Variety (LA 125/9) dish; b) Society Hall Red: Society Hall Variety (LA 125/10) bowl.

Basal ridge thickness: 1.27 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Pitting occurs on both sides. Given the large diameter and slipped interior surface, it probably functioned as a serving vessel for family sized and/or supra-family sized groups.

INTERSITE LOCATIONS: See LA 125/8 for distribution of this type and variety across the lowlands.

VESSEL NUMBER: LA 125/10

TYPE: VARIETY: Society Hall Red: Society Hall Variety

ESTABLISHED: Type named by Pring (1977a) at Cuello; Variety designated by Kosakowsky (1987) at Cuello.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 46b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) red slip with streaky horizontal marks; 2) slip color is similar to Sierra Red on both vessel surfaces; 3) soft, thin slip; 4) flaring sided bowl with basal angle.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color centering on 5YR 6/6 (reddish yellow). A thick dark gray core (2.5YR 3/0) is present at the rim only. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified white, black, red, and light brown particles occur as well.

SURFACE FINISH AND DECORATION: A soft, thin, red slip with streaky horizontal marks ranging in color from 10R 4/8 (red) to 2.5YR 4/8 (red) and 2.5YR 5/8 (red) was applied to the interior and exterior surfaces, including the base. Both surfaces are well-smoothed with lateral wiping marks present. Each surface also exhibits a medium-high burnish. Temper is visible through the slips. No decoration is present. Light crazing is observed on both sides and has resulted in flaking of the slips.

FORM: Flaring-sided bowl with small basal angle and rounded lip. The basal angle has an angular margin. The exterior base is flat. Height: 9.1 cm; Rim diameter: 26.0 cm; Base diameter: n/a; Rim thickness: 1.0 cm; Body thickness: 0.8 cm; Base thickness: 0.8 cm; Basal ridge thickness: 1.15 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Pitting occurs on both sides. There is erosion of the slip at the basal angle, possibly use wear. Given the large diameter and slipped interior surface, it probably functioned as a family sized serving vessel.

INTERSITE LOCATIONS: See LA 125/8 for distribution of this type and variety across the lowlands.

VESSEL NUMBER: LA 125/11

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Not illustrated.

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip color; 2) soft slip and lustrous vessel surfaces; 3) flaring-sided dish with sharp basal angle; 4) crazing and firing clouds are present.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 5/8 (yellowish red) to 5YR 6/8 (reddish yellow). A thin gray core (2.5YR 5/0 to 2.5YR 4/0) is present. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, and hematite, but unidentified black, red, and light brown particles occur as well.

SURFACE FINISH AND DECORATION: A soft and lustrous red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, including the base. Both surfaces are very well-smoothed exhibit a high burnish. Temper is visible through both slips. No decoration is present. Crazeing is observed on both sides. One large firing cloud, golden-brown in color (7.5YR 5/6 to 7.5YR 6/8), occurs below the basal angle on the exterior surface.

FORM: Flaring-sided dish with a sharp basal angle and interiorly thickened rim. The lip is beveled-out with a rounded interior margin. The exterior base is flat to slightly incurved. Height: 7.5+ cm; Rim diameter: 32.0 cm; Rim thickness: 1.3 cm; Body thickness: 0.85 cm; Base thickness: 0.7 cm; Basal angle thickness: 1.45 cm; Height of rim to basal angle: 3.7 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. There is erosion of slip at both the exterior rim and basal angle margins. Given the large diameter and slipped interior surface, it probably functioned as a family sized serving vessel.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common variety across the lowlands.

VESSEL NUMBER: LA 125/12

TYPE: VARIETY: Sierra Red: Variety Unspecified

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated by Gifford (1976) at Barton Ramie.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 47a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip color; 2) soft, lustrous, and waxy vessel surfaces; 3) flaring-sided plate with outflaring everted rim; 4) crazing and firing clouds are present.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color centering on 2.5YR 5/8 (red). No carbon stain is present. It has a medium hard texture (grains generally less than 2 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified red and light brown particles occur as well. Black particles are found as well and reacted strongly to HCL.

SURFACE FINISH AND DECORATION: A soft, lustrous, and waxy red slip centering on 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, including the base. The slips are a little streaky in color, but not as prominent as that observed on Society Hall Red types. Both surfaces are very well-smoothed exhibit a high burnish.

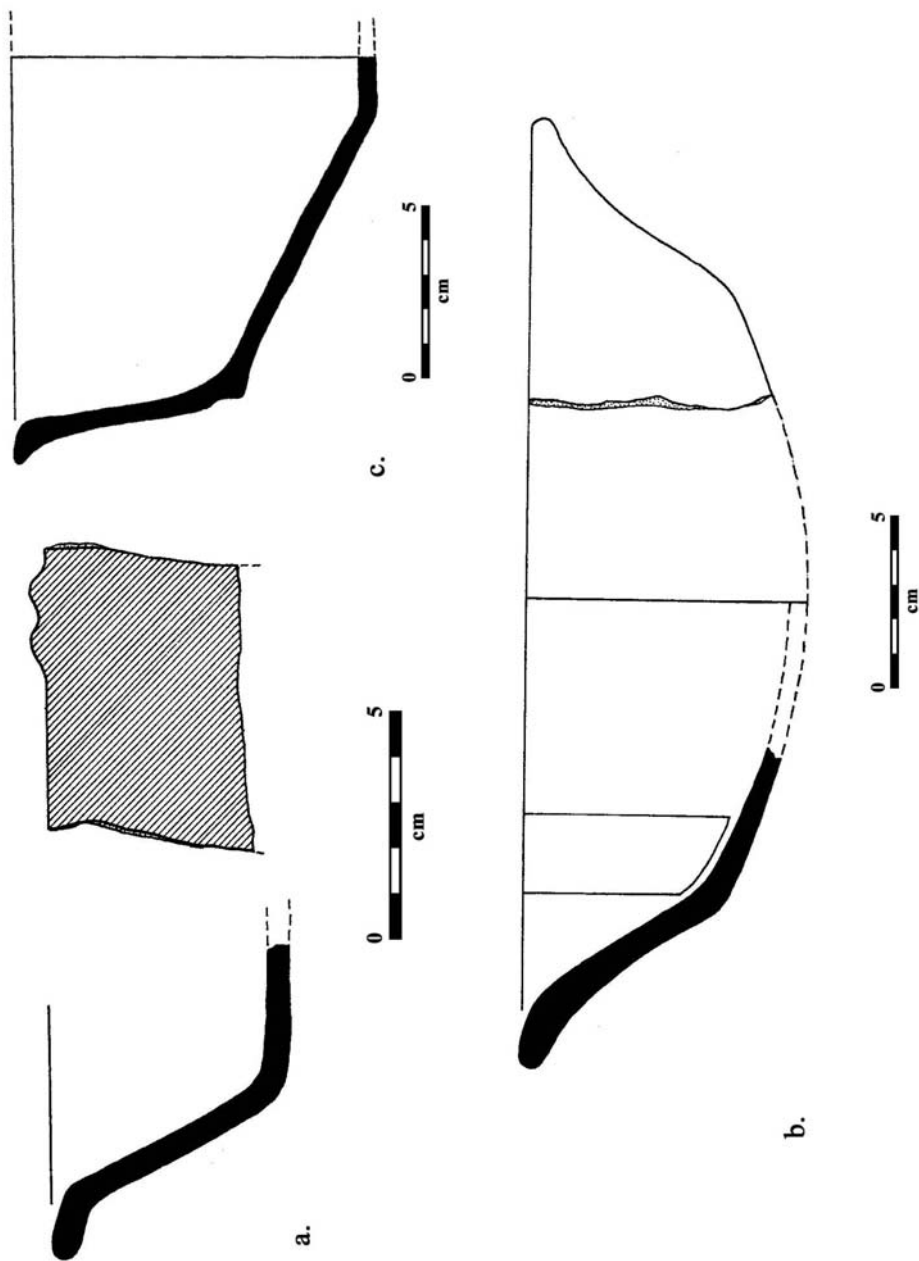


Figure 47: a) Sierra Red: Variety Unspecified (LA 125/12) plate; b) Unnamed Cream (LA 125/13) dish; c) Laguna Verde Incised: Grooved-incised Variety (LA 125/14) bowl.

Large pieces of temper (calcite and quartz) are visible through the slips. Decoration consists of two small, round protuberances on the lip. There may be an opposing set, but not enough of the rim is present. Crazeing is observed on both sides. One large firing cloud, tan in color, occurs on the exterior body.

FORM: Flaring-sided plate with outflaring everted rim and rounded lip. The lip is exteriorly thickened in location of the two small protuberances. The exterior base is flat. Height: 5.3 cm; Rim diameter: 30.0 cm; Rim thickness: 0.84 cm; Body thickness: 0.6 cm; Base thickness: 0.5 cm; Width of protuberance: 2.6 cm; Thickness of protuberances: 0.7 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Given the large diameter, shallow depth, and slipped interior surface, it probably functioned as a family sized serving vessel for non-liquid foods.

INTERSITE LOCATIONS: This is the only vessel in the Sierra Group that exhibits this type of modeled decoration. Therefore, I have left it as a variety unspecified. If, however, more material is found either at Lamanai or elsewhere in the region, then it may be necessary to establish a modeled type within the Sierra Group. Kosakowsky (1987:76) has identified a Sierra Red: Sierra Variety vessel with a small, modeled face at Cuello. She decided not to establish a new type until more material was found. Although the Lamanai specimen increases the frequency of this modeled type, I am hesitant to lump them into the same ceramic type without further examination of both vessels.

VESSEL NUMBER: LA 125/13

TYPE: VARIETY: Unnamed Cream

ESTABLISHED: Present study

GROUP: Flor

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 47b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform cream slip color; 2) soft, lustrous, and waxy vessel surfaces; 3) paste is visible through the slip; 4) flaring-sided dish with outflaring everted rim; 4) crazing is prevalent.

PASTE, TEMPER, AND FIRING: The paste is very uniform in color centering on 7.5YR 6/6 (reddish yellow). No carbon stain is present. It has a medium hard (and compact) texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified white and black particles occur as well.

SURFACE FINISH AND DECORATION: A soft, lustrous, and waxy cream slip ranging from 7.5YR 7/4 (pink) to 7.5YR 7/6 (red) was applied to the interior and exterior surfaces, including the base. The well-preserved slip is uniform in color, but the

reddish yellow paste color shows through the thin slipped surfaces. The slip is thicker on the interior than the exterior. Both surfaces are very well-smoothed exhibit a medium-high burnish. Some temper is visible through the slips on both sides. No decoration is present. Crazeing is prevalent on both surfaces, especially the interior where the slip is thick. In some areas of the vessel, there are tiny black blotches located between the paste and the slip which may have been caused by leaching or during the firing process when organic material was being burned out.

FORM: Flaring, thick-sided dish with outflaring everted rim and rounded lip. The rim is slightly interiorly thickened. The base is slightly rounded and exhibits a rounded base margin. Height: 8.1 cm; Rim diameter: 28.0 cm; Base diameter: n/a; Rim thickness: 1.3 cm; Body thickness: 0.73 cm; Base thickness: 0.55 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Given the flaring sides and slipped interior surface, it probably functioned as a family sized serving vessel.

INTERSITE LOCATIONS: None noted. Most of the traits associated with the Flor Cream type are present in this vessel. However, the slip color is not a true Flor Cream color, especially since the paste, a reddish yellow, clearly shows through. Therefore, the intention of the potter may have been to apply a see-through cream slip color so that the paste color could be seen.

VESSEL NUMBER: LA 125/14

TYPE: VARIETY: Laguna Verde Incised: Grooved-incised Variety

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated by Sabloff (1975) at Seibal.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 47c

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) lustrous and slightly waxy red slip; 2) grooved-incised line at mid-body; 3) bowl with outflaring everted rim; 4) sharp basal angle.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 6/8 (reddish yellow) to 5YR 7/8 (reddish yellow). A thick gray core (2.5YR 6/0) is present. It has a medium hard texture (grains generally between 1-2 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified white, black, and red particles occur as well.

SURFACE FINISH AND DECORATION: A lustrous and slightly waxy red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, including the base. Both sides are well-smoothed and exhibit a high burnish. Decoration consists of a single, pre-slip grooved-incised line encircling the basal angle. Light crazing is found on both surfaces and has resulted in minor flaking of the slips. One firing cloud, gray and white in color, is located on the exterior lower body.

FORM: Flaring-sided bowl with sharp basal angle and outflaring everted rim. The upper sides are relatively vertical in orientation. The rim is interior folded. The lip is squared or flat with rounded margins. The base is flat and exhibits a slightly angular margin. Height: 10.5 cm; Rim diameter: 24.0 cm; Base diameter: n/a; Rim thickness: 1.2 cm; Body thickness: 0.55 cm; Base thickness: 0.55 cm; Width of grooved-incised line: 0.95-1.0 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: It is a hard and durable vessel that exhibited no incrustation or residue on either surface. Some pitting is found on the interior base. Some use wear is found around the basal angle. Given its vertical sides and slipped interior surface, it probably functioned as a family sized serving vessel.

INTERSITE LOCATIONS: See LA 421/7 for distribution of this variety across the lowlands.

STRUCTURE N10-27

Cache N10-27/3:

This cache is associated with a Late Preclassic structure, the earliest encountered in the N10-27 sequence. In the center area, Preclassic construction had been cut away by later activity so association is not clear, but the cache is not related to the later Classic period structure which was associated with Stela 9. All indications are that Cache N10-27/3 was an axial cache sealed by a Preclassic stair. One ceramic vessel (LA 792/1) and one large barrel-shaped bead (LA 792/2), made of albite, were found in the cache. The bead measured 4.8 cm in length, 2.65 cm in width, and 1.2 cm in thickness.

VESSEL NUMBER: LA 792/1

TYPE: VARIETY: Sierra Red: Variety Unspecified

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated by Gifford (1976) at Barton Ramie.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 48

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) red slip color; 2) thin, hard, glossy vessel surfaces; 3) dish with flaring sides.

PASTE, TEMPER, AND FIRING: The paste is uniform in color centering on 7.5YR 6/6 (reddish yellow). A thin, light gray core is present. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified white, black, and pink particles occur as well. The paste has some voids in it likely caused by burned-out organic material.

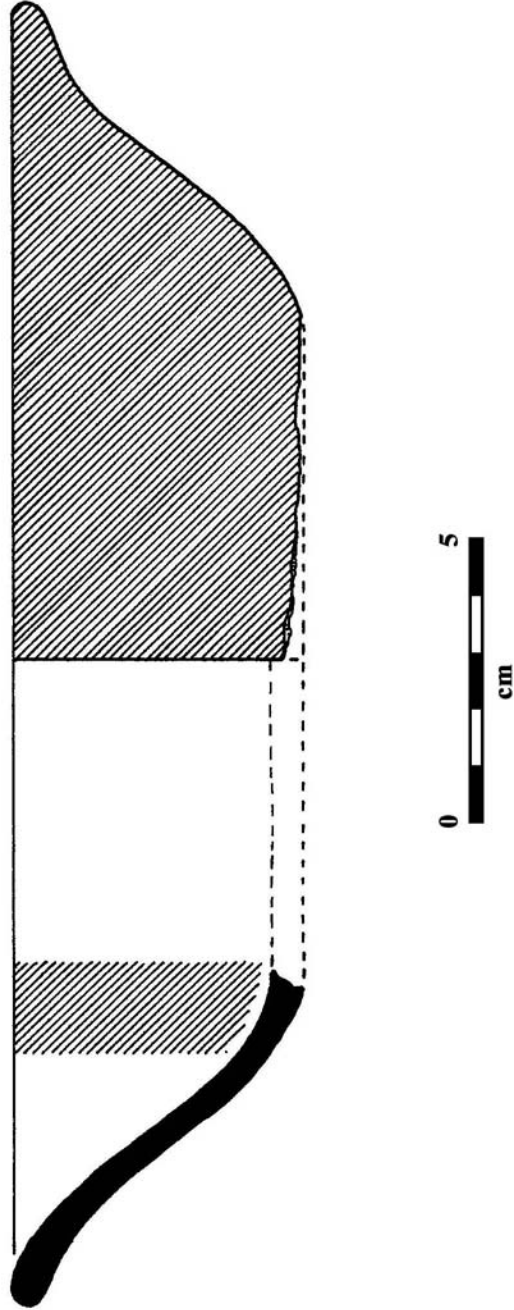


Figure 48: Sierra Red: Variety Unspecified (LA 792/1) dish.

SURFACE FINISH AND DECORATION: A thin, hard, and glossy reddish-orange slip ranging from 2.5YR 5/8 (red) to 2.5YR 6/8 (light red) was applied to the interior and exterior surfaces, including the base. The slipped surfaces are somewhat streaky, but do not have the pronounced effect of Society Hall Red types. Both sides are well-smoothed and exhibit a high burnish. The exterior base is smoothed. Temper is visible through the slips on both sides. No decoration is present. No blemishes of any kind are found on this vessel.

FORM: Flaring, thin-sided dish with outflaring everted rim and rounded lip. The exterior base is flat and exhibits a rounded margin. Height: 5.2 cm; Rim diameter: 23.3 cm; Base diameter: n/a; Rim thickness: 0.77 cm; Body thickness: 0.45 cm; Base thickness: 0.6 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either side. The flaring sides and slipped interior surface suggest it functioned as a ritual container for food offerings.

INTERSITE LOCATIONS: See LA 449/6 for distribution of Sierra Red types and varieties across the lowlands.

STRUCTURE N10-43

Core of 2nd:

Four vessels (LA 434/2-434/5) were recovered from the same deposit within the core of the second earliest platform in the N10-43 sequence, along the primary axis, but not as a coherent cache. Vessels from lots LA 357, 364, and 372 predate this ceramic

assemblage while ceramic material from LA 340 and 385 postdate it. LA 434 most probably dates to the earlier part of this ceramic complex, to around the last century B.C. This material is very similar in form and slip and surface treatment to the 15 vessels found in a midden deposit (LA 440) in Structure P8-11, which is dated to the latter part of the Lag Complex (ca. 200-100 B.C.).

VESSEL NUMBER: LA 434/2

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 49a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip color; 2) lustrous, waxy vessel surfaces; 3) dish with flaring sides and outflaring everted rim; 4) firing cloud is present.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 10YR 5/3 (brown) to 10YR 5/4 (yellowish brown). A thin black core is present. It has a

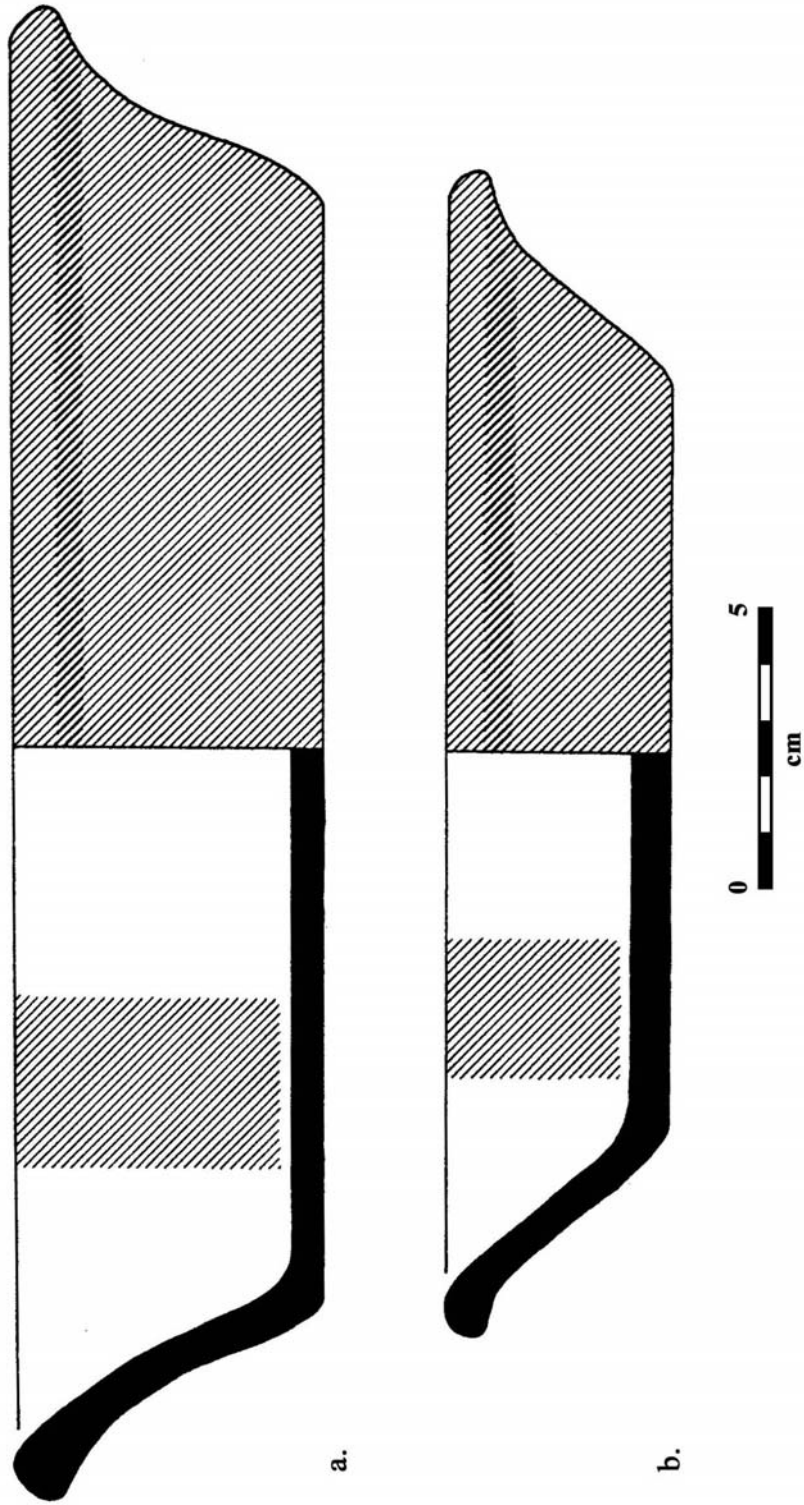


Figure 49: a) Sierra Red: Sierra Variety (LA 434/2) dish; b) Sierra Red: Sierra Variety (LA 434/3) dish.

medium texture (grains generally less than 2 mm in size) with temper material having a round to angular fracture. The temper consists mainly of calcite and quartz, but unidentified white, black, and pink particles occur as well. The paste has a lot of burned out organic material.

SURFACE FINISH AND DECORATION: A lustrous, waxy red slip ranging in color from 2.5YR 4/8 (red) to 2.5YR 5/8 (red) was applied to the interior and exterior surfaces, including the base. The slipped surfaces are highly eroded with only traces left intact; degree of burnishing is not determined. Both sides are well-smoothed, but wiping marks are present on exterior base. Some temper is visible through slips. No decoration is present. Rootlet markings are prevalent on exterior side. One firing cloud is found on interior body.

FORM: Flaring-sided dish with outflaring everted rim rounded-to-squared lip. The rim is exterior folded. The base is flat and exhibits an angular margin. Height: 5.6 cm; Rim diameter: 26.0 cm; Base diameter: 19.8 cm; Rim thickness: 1.34 cm; Body thickness: 0.7 cm; Base thickness: 0.63 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Given the large diameter and interior slipped surface, it likely functioned as a serving vessel for hot, non-liquid foods to family sized groups.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common type and variety across the Maya area.

VESSEL NUMBER: LA 434/3

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 49b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip color; 2) lustrous, waxy vessel surfaces; 3) dish with flaring sides and outflaring everted rim; 4) firing cloud is present.

PASTE, TEMPER, AND FIRING: The paste is differential in color with the interior half being gray (too diffuse for Munsell reading) and the exterior half being 7.5YR 5/4 (brown) to 10YR 5/4 (yellowish brown). It has a medium hard (and compact) texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mainly of calcite, quartz, and hematite, but unidentified white, black, and brown (grog?) particles occur as well.

SURFACE FINISH AND DECORATION: A lustrous and very waxy red slip ranging in color from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, excluding the base. Both sides are well-smoothed, but some wiping marks are

present around rim. Each surface also has a high burnish. No decoration is present. One small, black blotchy firing cloud is present on interior.

FORM: Flaring-sided dish with outflaring everted rim. The lip is rounded, but slightly angular on outer edge. The rim is exterior folded. The base is flat and exhibits a rounded to angular margin. Height: 4.1 cm; Rim diameter: 20.0 cm; Base diameter: 13.5 cm; Rim thickness: 1.04 cm; Body thickness: 0.57 cm; Base thickness: 0.68 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Several scratches are found on the interior base. Given the small size, flaring sides, and interior slipped surface, it likely functioned either as an individual eating vessel or as a family sized serving vessel.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common type and variety across the Maya area.

VESSEL NUMBER: LA 434/4

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 50a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip color; 2) lustrous, waxy vessel surfaces; 3) plate with flaring sides and outflaring everted rim; 4) crazing and firing clouds are present.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 6/6 (reddish yellow) to 7.5YR 6/6 (reddish yellow). It has a medium hard texture (grains generally less than 1.5 mm in size) with temper material having a round to angular fracture. The temper consists mainly of calcite, quartz, and hematite, but unidentified white, black, and brown (grog?) particles occur as well.

SURFACE FINISH AND DECORATION: A lustrous and very waxy red slip ranging in color from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, including the base. Both sides are smoothed with wide lateral wiping marks present on both sides, especially on rim. Each surface also has a high burnish. Some temper is visible through slips. No decoration is present. Crazing is moderate on both surfaces. One firing cloud, tan in color, occurs on the exterior rim.

FORM: Flaring-sided plate with outflaring everted rim and rounded lip. The base is flat and exhibits an angular margin. Height: 2.6 cm; Rim diameter: 21.0 cm; Base diameter: 13.7 cm; Rim thickness: 0.83 cm; Body thickness: 0.54 cm; Base thickness: 0.5 cm.

APPENDAGES: None.

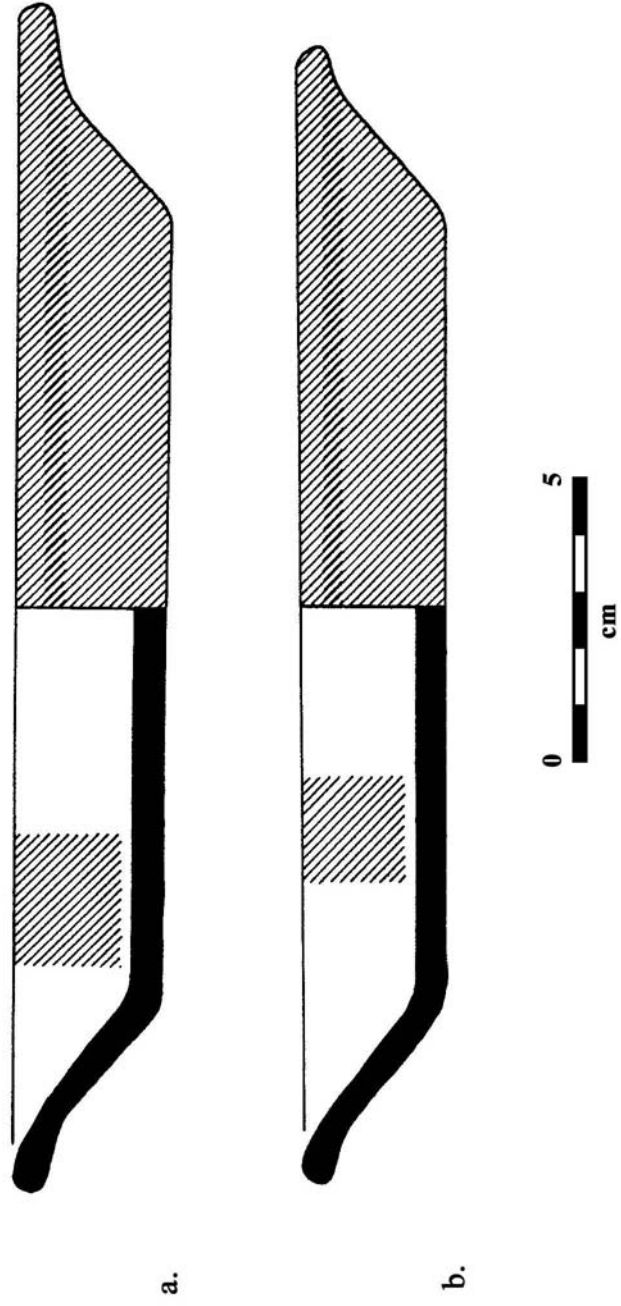


Figure 50: a) Sierra Red: Sierra Variety (LA 434/4) plate; b) Sierra Red: Sierra Variety (LA 434/5) plate.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. The exterior base margin is worn. Given the small size, shallow depth, flaring sides, and interior slipped surface, it likely functioned as an individual serving/eating vessel for hot, non-liquid foods.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common type and variety across the Maya area.

VESSEL NUMBER: LA 434/5

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 50b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip color; 2) lustrous, waxy vessel surfaces; 3) plate with flaring sides and outflaring everted rim; 4) crazing and firing clouds are present.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 7.5YR 6/4 (light brown) to 10YR 6/4 (light yellowish brown). It has a medium hard texture (grains generally less than 1.7 mm in size) with temper material having a round to angular fracture. The temper consists mainly of calcite and quartz, but a few unidentified brown and black particles occur as well.

SURFACE FINISH AND DECORATION: A lustrous and very waxy red slip ranging in color from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, including the base. Both sides are smoothed with wide lateral wiping marks present on both sides, especially on rim. Each surface also has a high burnish. Some temper is visible through slips. No decoration is present. Crazeing is moderate on both surfaces. One firing cloud, black in color, covers most of the interior surface.

FORM: Flaring-sided plate with outflaring everted rim and rounded lip. The base is flat and exhibits a rounded margin. Height: 2.5 cm; Rim diameter: 19.7 cm; Base diameter: 13.5 cm; Rim thickness: 0.73 cm; Body thickness: 0.6 cm; Base thickness: 0.48 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Given the shallow depth, flaring sides, and interior slipped surface, it likely functioned as an individual serving/eating vessel for hot, non-liquid foods.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common type and variety across the Maya area.

Cache N10-43/2:

The cache is associated with the fourth reconfiguration in the N10-43 sequence. This construction consisted of significant changes made to the main lower landing area, including the addition of a new stair. The offering was placed in a pit cut into the plaza floor at the base of the original stair. It was situated on the primary axis and, according to Pendergast (1998:57), the cache was unquestionably a dedicatory effort in advance of the new construction. The cache contained four ceramic vessels (LA 340/1-3, and 5) and a small tubular jade bead (LA 340/4). The vessels were placed lip-to-lip, as lid and container, with LA 340/1 inverted over LA 340/2 and LA 340/3 inverted over LA 340/5. The jade bead was found inside LA 340/2: Length: 1.4 cm; diameter: 0.9 cm; perforation diameter: 0.4 cm. This cache postdates Cache N10-43/5 (LA 357/1), but is slightly earlier in date than Cache N10-43/6 (LA 385/1a&1b).

VESSEL NUMBER: LA 340/1

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 51a

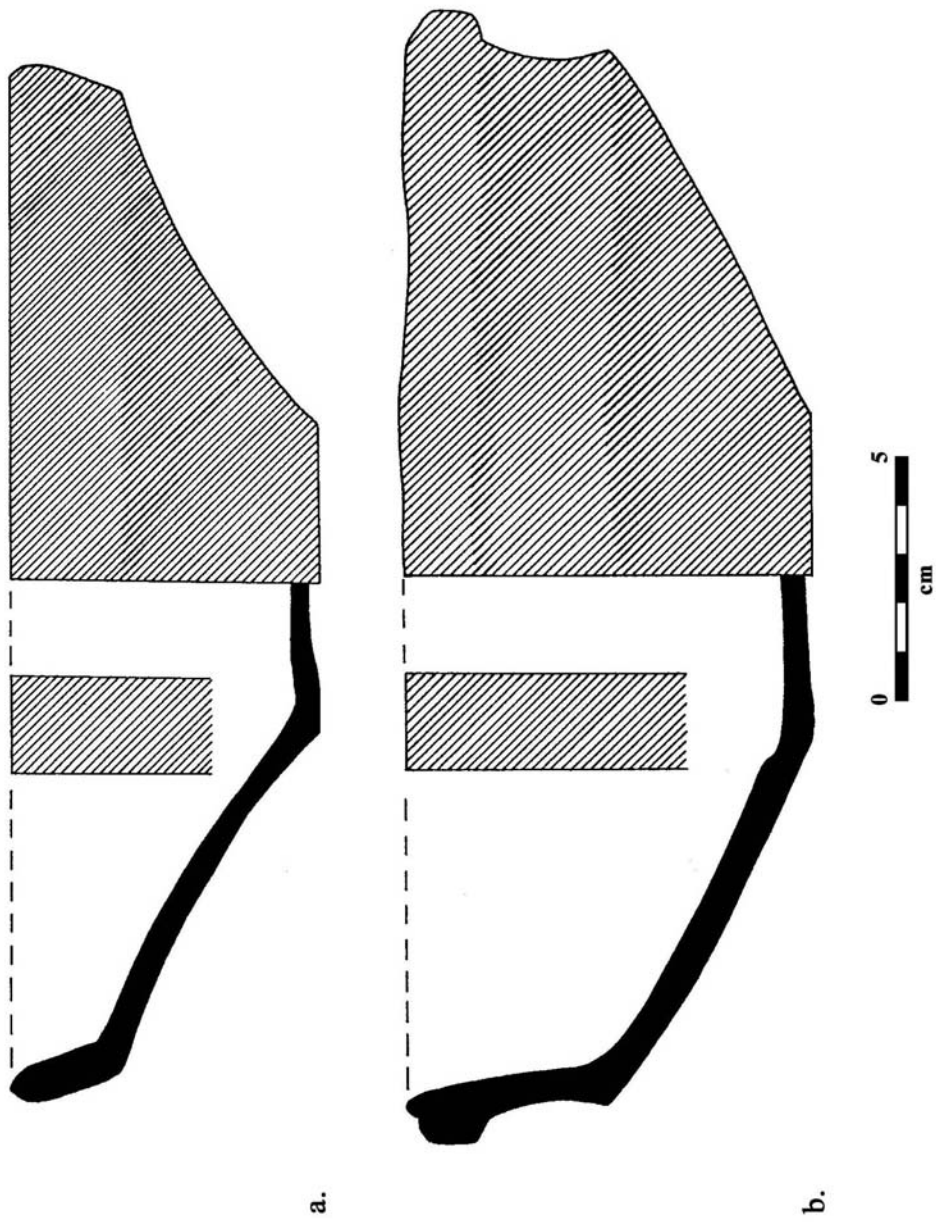


Figure 51: a) Sierra Red: Sierra Variety (LA 340/1) dish; b) Sierra Red: Sierra Variety (LA 340/2) bowl.

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) red slip color on vessel surfaces; 2) dish with sharp medial angle; 3) crazing and firing clouds are present.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 5/8 (yellowish red) to 5YR 6/8 (reddish yellow). No carbon stain is present. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, and hematite, but unidentified white, black, and gray particles occur as well.

SURFACE FINISH AND DECORATION: A slightly lustrous red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, excluding the base. The slip on both sides is slightly streaky, but it is not intentionally produced like that observed on Society Hall Red types. It is the result of considerable lateral wiping marks that has created very irregular surfaces. Consequently, a darker red color is found on the lower or depressed areas and a lighter color is found on the higher or raised areas. Leaching of the slips has also helped to produce the streakiness effect. Each side exhibits a low-to-medium burnish. Some temper is visible on exterior surface. No decoration is present. Crazing, rootlet marking, and firing clouds are present on both sides. Two small firing clouds, one black and one tan, were observed on the exterior surface around the medial angle.

FORM: Flaring, thin-sided dish with sharp medial angle and pointed lip. The rim is direct and undulates markedly. The exterior base is slightly incurved and exhibits an angular margin. Overall, the vessel is not well-executed in shape. Height: 5.4-6.4 cm; Rim diameter: 21.2 cm; Base diameter: 6.4 cm; Rim thickness: 0.68 cm; Body thickness: 0.51 cm; Base thickness: 0.4 cm; Weight: 534 g.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Some use wear on exterior base margin. The interior base shows extensive pitting. This ritual vessel was used as a lid to cover the contents (jade bead) found in LA 340/2.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common variety across the lowlands. As for form, no specimens similar to the Lamanai vessel have been noted.

VESSEL NUMBER: LA 340/2

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 51b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) red slip color; 2) lustrous, waxy vessel surfaces; 3) bowl with sharp medial angle; 4) crazing and firing clouds are present.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging in color from 10YR 5/8 (red) to 2.5YR 6/8 (red). A thin gray core is present, but no Munsell reading was taken. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, and hematite (up to 2.5 mm in size), but unidentified white, black, and gray particles occur as well.

SURFACE FINISH AND DECORATION: A lustrous, thick, and very waxy red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, excluding the base. The interior is well-smoothed, but the exterior has lateral wiping marks, especially around the rim and medial angle. Each surface exhibits a high burnish. The exterior base is smoothed. Some temper (hematite) is visible through the exterior slip. No decoration is present. Crazeing is light on both sides. Rootlet markings on the interior surface only. Firing clouds, black and tan in color, are located on the exterior from the base to the medial angle. The interior base is somewhat leached.

FORM: Flaring, thin-sided bowl (carinated form) with sharp medial angle and beveled-out lip. The rim is very slightly outflaring everted and bolstered or exteriorly thickened. The rim also undulates like LA 340/1. The interior base is inset, irregular in shape (i.e., offset from the center of the vessel), and slightly incurved. The exterior base is flat. Height: 8.1-9.0 cm; Rim diameter: 22.1 cm; Base diameter: 6.6-7.0 cm; Rim thickness: 1.2 cm; Body thickness: 0.5 cm; Base thickness: n/a; Weight: 912 g.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either side, although the interior surface is leached out. This ritual vessel served as a container for the jade bead and, perhaps, other perishable materials.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common variety across the lowlands. The form on the Lamanai vessel is similar to Cocos Chicanel Complex specimens at Cuello (Kosakowsky 1987:Figure 6.8) and Cauac Complex specimens at Tikal (Culbert 1993).

VESSEL NUMBER: LA 340/3

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 52a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) red slip color; 2) slightly lustrous and waxy vessel surfaces; 3) dish with flaring sides; 4) crazing and firing clouds are present.

PASTE, TEMPER, AND FIRING: No Munsell reading on paste because the vessel is whole. Some flecks of temper (up to 2 mm in size) can be seen through the slips on both sides and include calcite and quartz only.

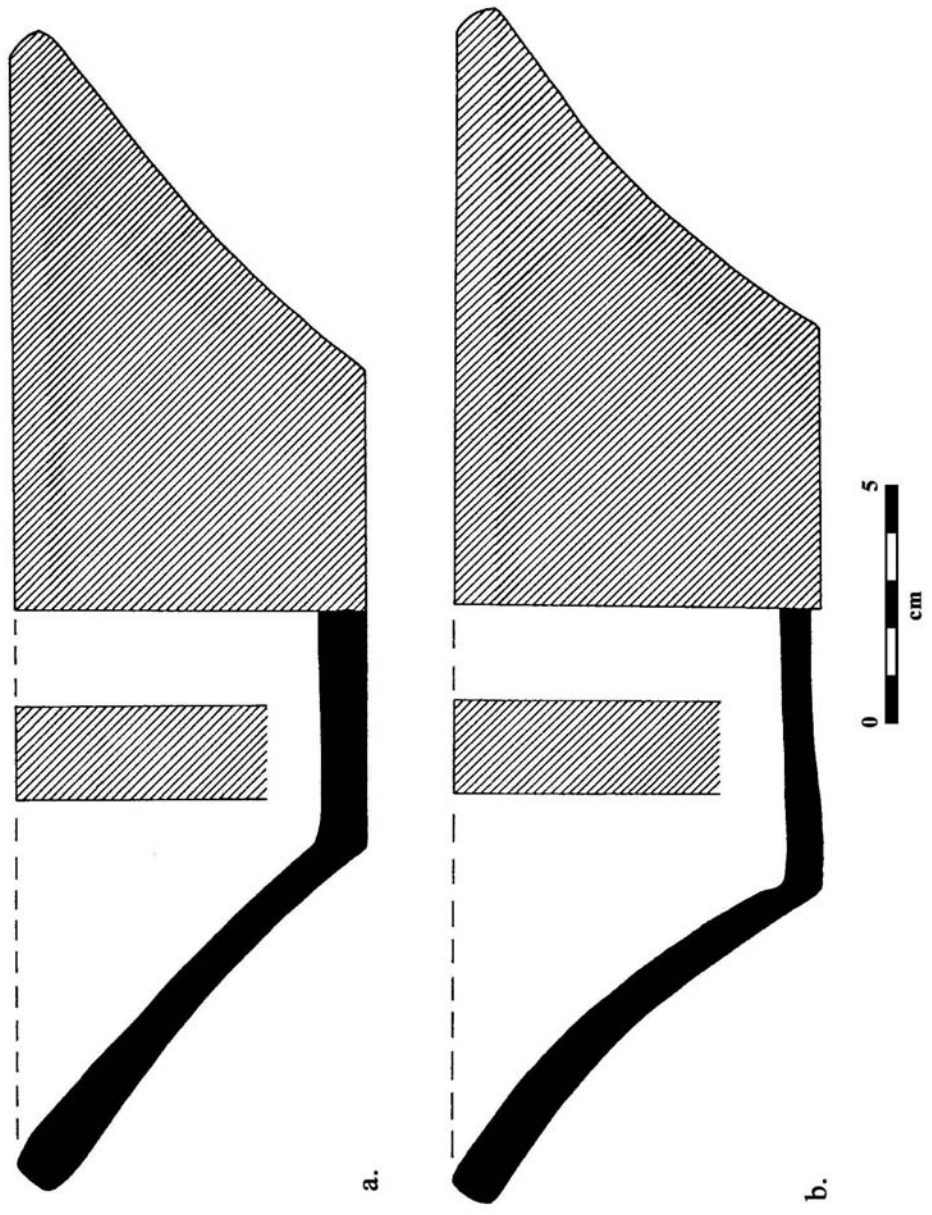


Figure 52: a) Sierra Red: Sierra Variety (LA 340/3) dish; b) Sierra Red: Sierra Variety (LA 340/5) dish.

SURFACE FINISH AND DECORATION: A thin, slightly lustrous and waxy red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, excluding the base. The slip on the interior base is very thin (like a wash) and streaky (more so than on LA 340/3). It is applied in a swirling pattern, but the effect is not similar to the prominent concentric horizontal streaky marks found on Society Hall Red types. Both sides are well-smoothed and exhibit a medium-to-high burnish. The exterior base is smoothed, but there are bits of clay adhering to it. Some temper is visible on exterior surface. No decoration is present. Crazeing is present on both sides. One firing cloud, black and tan in color, covers almost half of the exterior, including all of the base and portions of the lower body.

FORM: Flaring, thick-sided dish with rounded to slightly square lip. The rim is undulating. The exterior base is flat and exhibits a sharp angular margin. Height: 6.6-7.4 cm; Rim diameter: 23.6 cm; Base diameter: 10.1 cm; Rim thickness: 1.0 cm; Body thickness: n/a; Base thickness: n/a; Weight: 984 g.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This very hard and durable vessel had no visible incrustation or residue on either side. Some use wear on exterior base margin. This ritual vessel served as a lid to protect the contents, presumably perishable, found in LA 340/5.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common variety across the lowlands. At Kichpanha, there are a few vessels that exhibit a very similar form to the Lamanai specimen, including Vessel 4 from a dedicatory cache in Feature 51 (McDow 1997:Figure 11). A number of nearly identical early San Jose II red ware (Sierra Red) dishes (cat #189731-189741) have been found in a cache associated with Burial D1 in Structure D1 at San Jose (Powis 2001d; Thompson 1939:Figure 41).

VESSEL NUMBER: LA 340/5

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 52b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) red slip color; 2) thin, slightly lustrous and waxy vessel surfaces; 3) dish with flaring sides; 4) crazing and firing clouds are present.

PASTE, TEMPER, AND FIRING: No Munsell reading on paste because the vessel is whole. Some flecks of temper (generally less than 2 mm in size) can be seen through the slips on both sides and include calcite and quartz only. One white particle (not calcite), located on the exterior base, measured 9 mm in size.

SURFACE FINISH AND DECORATION: A thin, slightly lustrous and waxy red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, excluding the base. The slip on the interior base is very thin (like a wash) and streaky (more so than on LA 340/3). It is applied in a swirling pattern, but the effect is

not similar to the prominent concentric horizontal streaky marks found on Society Hall Red types. Both sides are well-smoothed and exhibit a medium-to-high burnish. The exterior base is smoothed. Some temper is visible on exterior surface. No decoration is present. Crazeing is present on both sides. One firing cloud, black and tan in color, covers almost one half of the exterior surface, including all of the base and portions of the lower body. The exterior base is very dark gray in color (2.5YR 4/0).

FORM: Identical in form to LA 340/3. It is a flaring, thick-sided dish with rounded to slightly square lip. The rim is undulating. The exterior base is flat and exhibits a sharp angular margin. Height: 7.4-7.8 cm; Rim diameter: 24.6 cm; Base diameter: 11.9 cm; Rim thickness: 1.0 cm; Body thickness: n/a; Base thickness: n/a; Weight: 975 g.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This very hard and durable vessel had no visible incrustation or residue on either side. Some use wear on exterior base margin. This ritual vessel was used as a container to hold perishable offerings.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common variety across the lowlands. A number of nearly identical early San Jose II red ware (Sierra Red) dishes (cat #189731-189741) have been found in a cache associated with Burial D1 in Structure D1 at San Jose (Powis 2001d; Thompson 1939:Figure 41).

Cache N10-43/6:

The cache is also associated with the fourth construction episode in the N10-43 sequence. It is located higher up in the core of this structural phase than Cache N10-43/2 (LA 340) and, therefore, slightly postdates it. Located below a plaster floor, this dedicatory offering included one ceramic vessel (LA 385/1a&1b) which contained a

number of small items (Pendergast 1980a:1, 1998:57). The cylindrical lidded blackware vessel contained two *Spondylus* sp. shells (LA 385/2 and LA 385/3) which encased a pair of human figurines, one of shell (LA 385/4) and the other of jade (LA 385/5), both 4.7 cm high. Other objects included were: one thick disk bead (LA 385/6) made of *Spondylus* sp.; one irregularly-shaped disk bead (LA 385/7) made of jadeite; one oval-shaped piece of crystalline hematite (LA 385/8) with polished surfaces; one thin piece of mother-of-pearl (LA 385/9), in pyriform shape, with broken perforation at the top and marked by a shallow incision on both sides; and 26 tiny *Spondylus* sp. disk beads (LA 385/1). Stratigraphically, lots LA 340, 357, 364, 372, and 434 predate this cache.

VESSEL NUMBER: LA 385/1a&1b

TYPE: VARIETY: Polvero Black: Polvero Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Polvero

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 53

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) black slip color; 2) slightly lustrous and waxy exterior vessel surface; 3) tapering-sided cylindrical vase with lid; 4) crazing

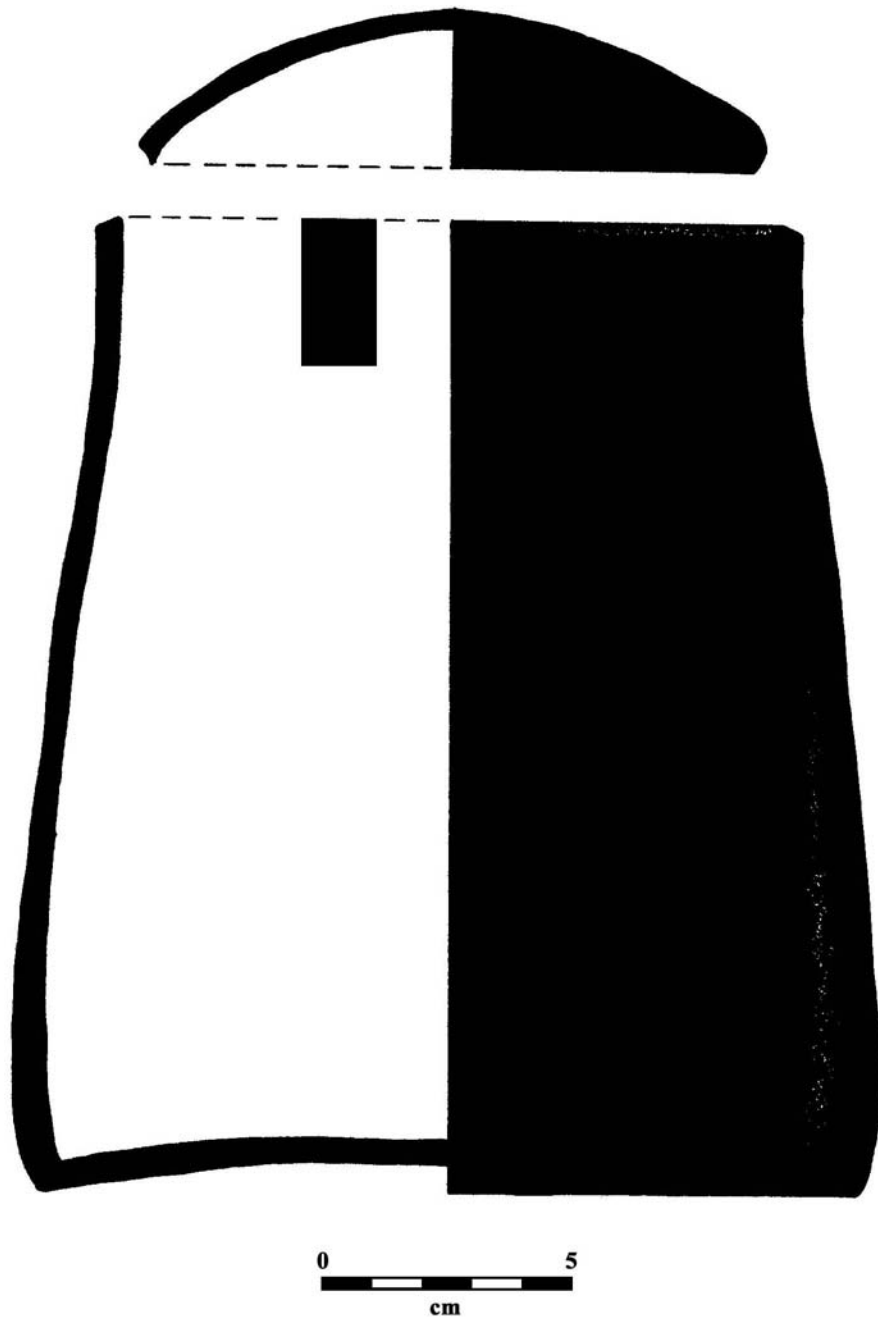


Figure 53: Polvero Black: Polvero Variety (LA 385/1a&1b) vase.

and red tinging are prevalent.

PASTE, TEMPER, AND FIRING: The paste for both the vessel and lid are relatively uniform in color ranging from 5YR 6/6 (reddish yellow) to 5YR 7/6 (reddish yellow). Thin black edges are present. They have a medium texture (grains generally less than 2 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified white, black, red, and light brown particles occur as well. The paste of both the vessel and lid is crumbly and friable.

SURFACE FINISH AND DECORATION: A slightly lustrous black slip centering on 2.5YR 2.5/0 (black) was applied to the exterior surface and over the rim on the interior. The interior slip is carelessly applied, ranging from 1-4 cm in width. The exterior base is not slipped. The slipped portions of the vessel exhibit red tinging, which is typical of Late Preclassic blackwares at Lamanai. Both sides are smoothed, but considerable lateral and vertical wiping marks from incomplete smoothing are visible. The interior is unburnished and the exterior has a medium burnish. The exterior base is unburnished. Temper, mostly calcite, is visible through exterior slip. The lid is slipped, but unburnished on both sides. There is no decoration on the vessel, but the lid is grooved exactly like that described for vessel lips (see Sabloff 1975:24-25). The groove encircles the lip of the lid. Crazeing is prevalent on both sides. No firing clouds are present, but they may be confused with, or obscured by, the extensive red tinging found across the vessel. The interior surface of the vessel and lid are exfoliated.

FORM: Tapering, thin-sided cylindrical vase with vertical rim and beveled-out lip. There is a short vertical section at the rim. The base is slightly incurved and exhibits an angular base. The vessel is cracked vertically on two sides from the base to the rim as well as being warped. The lid is small, round sided, incurved or domed-shaped, and has sharp angular margins. The lid, like the vessel, is warped and does not sit properly on the rim. Height: 20.2 cm; Rim diameter: 14.3 cm; Base diameter: 16.8 cm; Rim

thickness: 0.91 cm; Body thickness: 0.5 cm; Base thickness: 0.5 cm; Lid diameter: 13.2 cm; Lid height: 3.4 cm; Lid thickness: 0.72 cm; Weight of vessel: 1,409 g; Weight of lid: 105 g; Combined Weight: 1,514 g.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Slight use wear found on exterior base margin. This ritual vessel was used as a container for a large number of small objects that were covered by a lid.

INTERSITE LOCATIONS: See LA 480/2 for distribution of this type and variety across the lowlands.

STRUCTURE P8-14

Core of Primary Platform:

Two axial trenches, one running east-west and the other north-south, revealed a facing of roughly-shaped stones. The excavations showed that P8-14 was a single-phase platform that contained five burials (P8-14/1-5) and one cache (Cache P8-14/1). None of the burials contained grave goods. Structural core at about the same level as the cache revealed one ceramic vessel (LA 351/5). This damaged vessel, along with two intact ones (LA 356/1, LA 356/2) recovered in the cache, date the construction of the entire platform. LA 351/5 was associated with four other artifacts, including: one medial section of a celt or chisel (LA 351/1), length 6.3 cm; width 4.9 cm; thickness 2.3 cm; an oval-shaped limestone mano (LA 351/2), width 6.4 cm, thickness 2.4 cm; one distal end of a chert stemmed macroblade (LA 351/3), length 6.1 cm, width 3.5 cm, thickness 2.4 cm; one distal end of chert stemmed macroblade (LA 351/4), length 4.6 cm, width 3.3cm, thickness 1.9 cm.

VESSEL NUMBER: LA 351/5

TYPE: VARIETY: Flor Cream: Variety Unspecified

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated for present study.

GROUP: Flor

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 54

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) soft, thick cream slip color; 2) lustrous, and waxy vessel surfaces; 3) flaring-sided plate with outflaring everted rim; 4) crazing and firing clouds are present.

PASTE, TEMPER, AND FIRING: The paste is differentially fired with the interior having a 10YR 8/4 (very pale brown) color and the exterior having a 5YR 7/6 (reddish yellow) color. It has a medium hard (and compact) texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, and hematite, but unidentified white, black, and red particles occur as well.

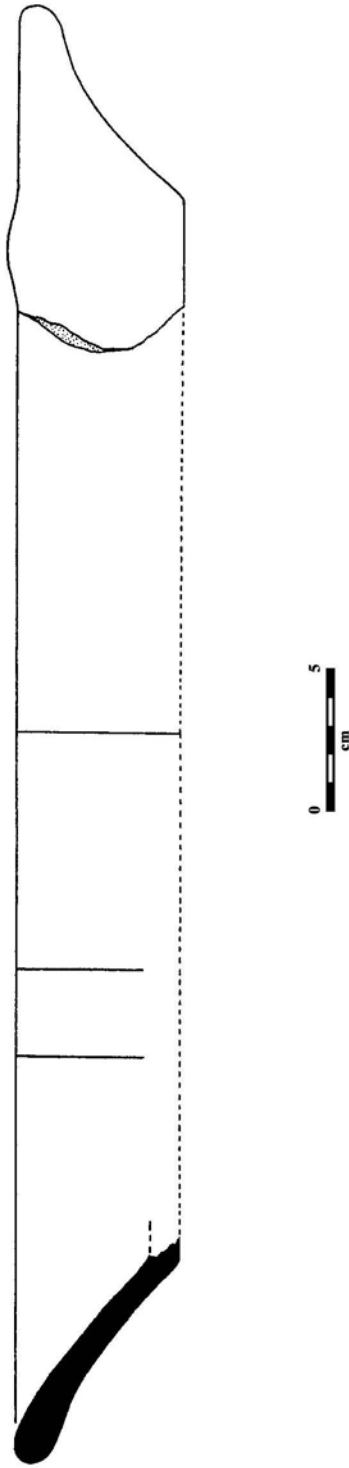


Figure 54: Flor Cream: Variety Unspecified (LA 351/5) plate.

SURFACE FINISH AND DECORATION: A soft, lustrous, and waxy cream slip centering on 10YR 8/2 (white) was applied to the interior and exterior surfaces, excluding the base. Both surfaces are very well-smoothed exhibit a high burnish. No temper is visible through the thick slip. No decoration is present, but the rim has one large, round scallop or projecting tab. It is uncertain if there were opposing tabs around the vessel rim. Light crazing is found on both surfaces and has resulted in flaking. Firing clouds, black and red in color, occur on interior rim and exterior body.

FORM: Flaring, thick-sided plate with outflaring everted rim and rounded lip. The rim is slightly exteriorly thickened. The base is flat and exhibits an angular base margin. Height: 5.7 cm; Rim diameter: 52.4 cm; Base diameter: n/a; Rim thickness: 1.65 cm; Body thickness: 0.93 cm; Base thickness: 0.94 cm; Thickness of scallop: 1.35 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either side. Given the very large diameter, shallow depth, and slipped interior surface, it likely functioned as a serving (i.e., feasting) vessel for supra-family sized groups.

INTERSITE LOCATIONS: See LA 449/4 for distribution of this variety across the lowlands.

VESSEL NUMBER: LA 356/1, upright at north end of area.

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 55a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip color; 2) moderately soft and thick slip; 3) slightly lustrous and waxy vessel surfaces; 4) bowl with sharp medial angle.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 6/4 (light reddish brown) to 5YR 7/4 (pink). No carbon stain is present. It has a medium texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified white, black, and red particles occur as well. The calcite content is high in the paste (over 50%). Overall, the paste is soft and crumbly.

SURFACE FINISH AND DECORATION: A slightly lustrous and waxy red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, excluding the base. The slipped surfaces are moderately soft and thick and erode easily. Most of the interior surface has eroded away. Both sides are smoothed, but lateral wiping marks are present. Each side exhibits a medium burnish. Some temper is visible on interior and exterior surfaces. No decoration is present. Very little crazing is present.

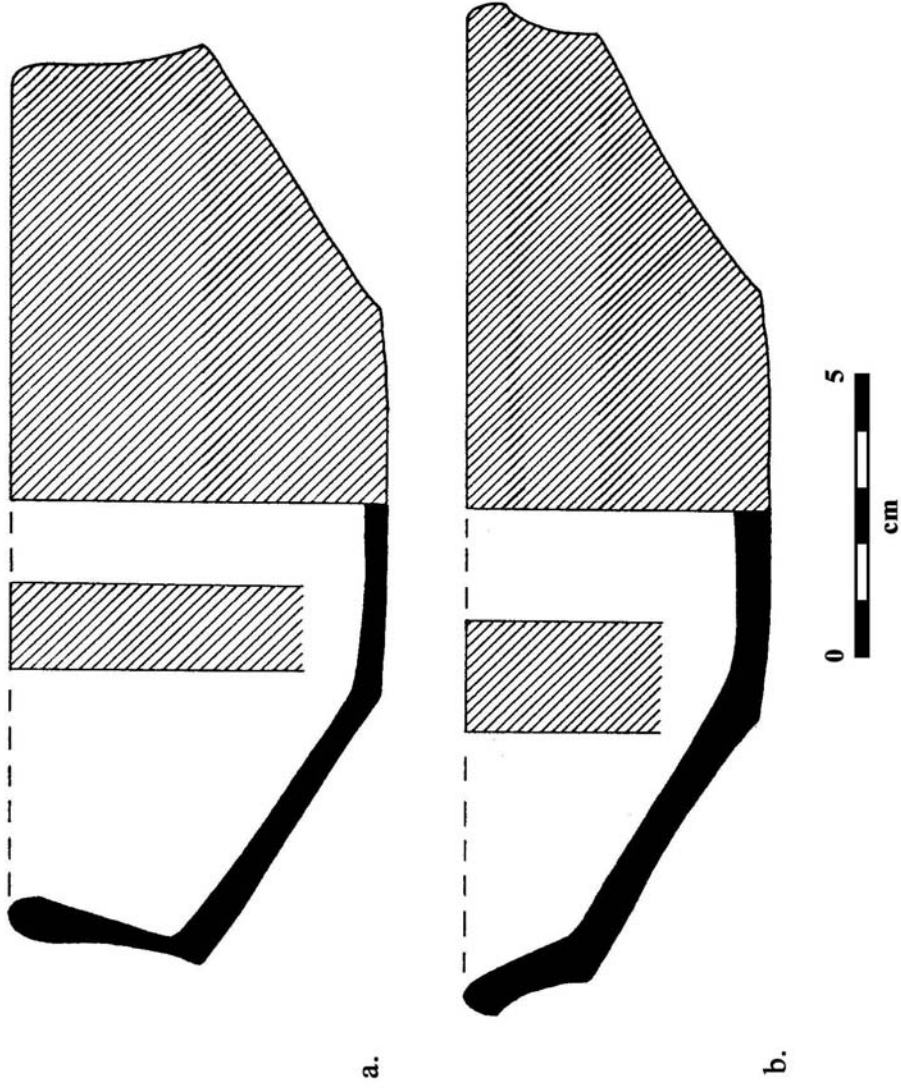


Figure 55: a) Sierra Red: Sierra Variety (LA 356/1) bowl; b) Sierra Red: Sierra Variety (LA 356/2) dish.

FORM: Thin-sided bowl with very sharp medial angle and rounded lip. Flaring lower sides with slightly incurving walls above medial angle. The rim is slightly undulating. The base is flat and has an angular margin. Height: 6.5 cm; Rim diameter: 15.4 cm; Base diameter: 6.9 cm; Rim thickness: 0.65 cm; Upper body thickness: 0.25 cm; Lower body thickness: 0.3 cm; Base thickness: 0.2 cm; Weight: 354 g.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Some use wear on exterior base margin. The small size, incurving sides, and slipped interior surface suggest it functioned as a ritual eating vessel.

INTERSITE LOCATIONS: See LA 449/1 for distribution of this common variety across the lowlands. As for form, very few comparable specimens vessel have been noted in the literature, but similar medially ridged vessels have been found in C'oh Complex deposits at Cerros (Robertson-Freidel 1980:Figure 17a-d) and in Cauac Complex deposits at Tikal (Culbert 1993:Figure 13b).

VESSEL NUMBER: LA 356/2, upright at south end of area.

TYPE: VARIETY: Sierra Red: Sierra Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 55b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip color; 2) thin and moderately soft slip; 3) slightly lustrous and waxy vessel surfaces; 4) dish with sharp medial angle.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 2.5YR 6/6 (light red) to 2.5YR 6/8 (light red). A thick gray core (5YR 5/1) is present. It has a medium texture (grains generally less than 1.5 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified white, black, and red particles occur as well. Overall, the paste is soft and crumbly.

SURFACE FINISH AND DECORATION: A slightly lustrous and waxy red slip ranging from 10R 4/8 (red) and 10R 5/8 (red) to 2.5YR 4/8 (red) and 2.5YR 5/8 (red) was applied to the interior and exterior surfaces, excluding the base. The slipped surfaces are moderately soft and thin and erode easily. Most of the interior surface has either eroded or leached away. Both sides are smoothed, but lateral wiping marks are visible, especially on the rim. Each side exhibits a medium burnish. Some temper is visible on interior and exterior surfaces. Temper drag marks occur. No decoration is present. Light crazing is present on both sides. Surfaces pitted. One large firing cloud, black in color, is located on the exterior lower body and base. There are portions of the interior surface which exhibit discoloration. The discoloration is black in color and consists of seven small circular dots on the upper side and one large area on the base. No discernible pattern is observed. They may either be part of some kind of decoration involving a black slip or wash or be the result of firing clouds. However, the leaching of the red slip makes it difficult to determine.

FORM: Thick-sided dish with very sharp medial angle and rounded lip. Flaring lower sides with slightly outflaring walls above medial angle. The rim is exteriorly thickened and undulates markedly. The interior base is irregularly shaped and domed. The base is flat and has an angular margin. Overall, the vessel is poorly-executed in shape. Height: 5.9 cm; Rim diameter: 18.5 cm; Base diameter: 7.6 cm; Rim thickness: 0.8 cm; Body thickness: 0.58 cm; Base thickness: n/a; Weight: 309 g.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had visible blackened areas on the interior surface, but it is unclear how they were caused. The small size, slightly outflaring upper sides, and slipped interior surface suggest it functioned as a ritual eating vessel.

INTERSITE LOCATIONS: See LA 356/1 for distribution of this common variety across the lowlands.

HARBOR UNIT

Slope Midden off Structure P9-25:

Investigations in the Harbor have revealed the remains of a platform and facing stones extending east from Structure P9-25, toward the lagoon. The platform may be part of a docking facility (Powis 2000b, 2001a; Powis et al. n.d.). In 1999, an excavation unit, Operation 99-2, was placed on the east side of the facing stones to determine the nature and extent of this architectural structure. A secondary midden deposit lay at its base which included ceramic sherds, net sinkers, chert flakes and debitage, obsidian blade fragments, freshwater shells (*Pomacea* sp. and *Nephroniaias* sp.), animal bones of deer (*Odocoileus virginianus*) and peccary (*Tayassu* sp.), and marine fish, such as parrotfish

(Family Scaridae). Associated with this cultural material in the midden were two ceramic vessels (LA 1127/2 and LA 1128/1).

VESSEL NUMBER: LA 1127/2

TYPE: VARIETY: Sierra Red: Variety Unspecified

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety is designated by Gifford (1976) at Barton Ramie.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 56a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip color; 2) slightly lustrous and waxy vessel surfaces; 3) dish with sharp medial angle; 4) crazing is prevalent.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 5/8 (yellowish red) and 5YR 6/8 (reddish yellow) to 7.5YR 5/8 (strong brown) and 7.5YR 6/8 (reddish yellow). A thin gray core is present. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a

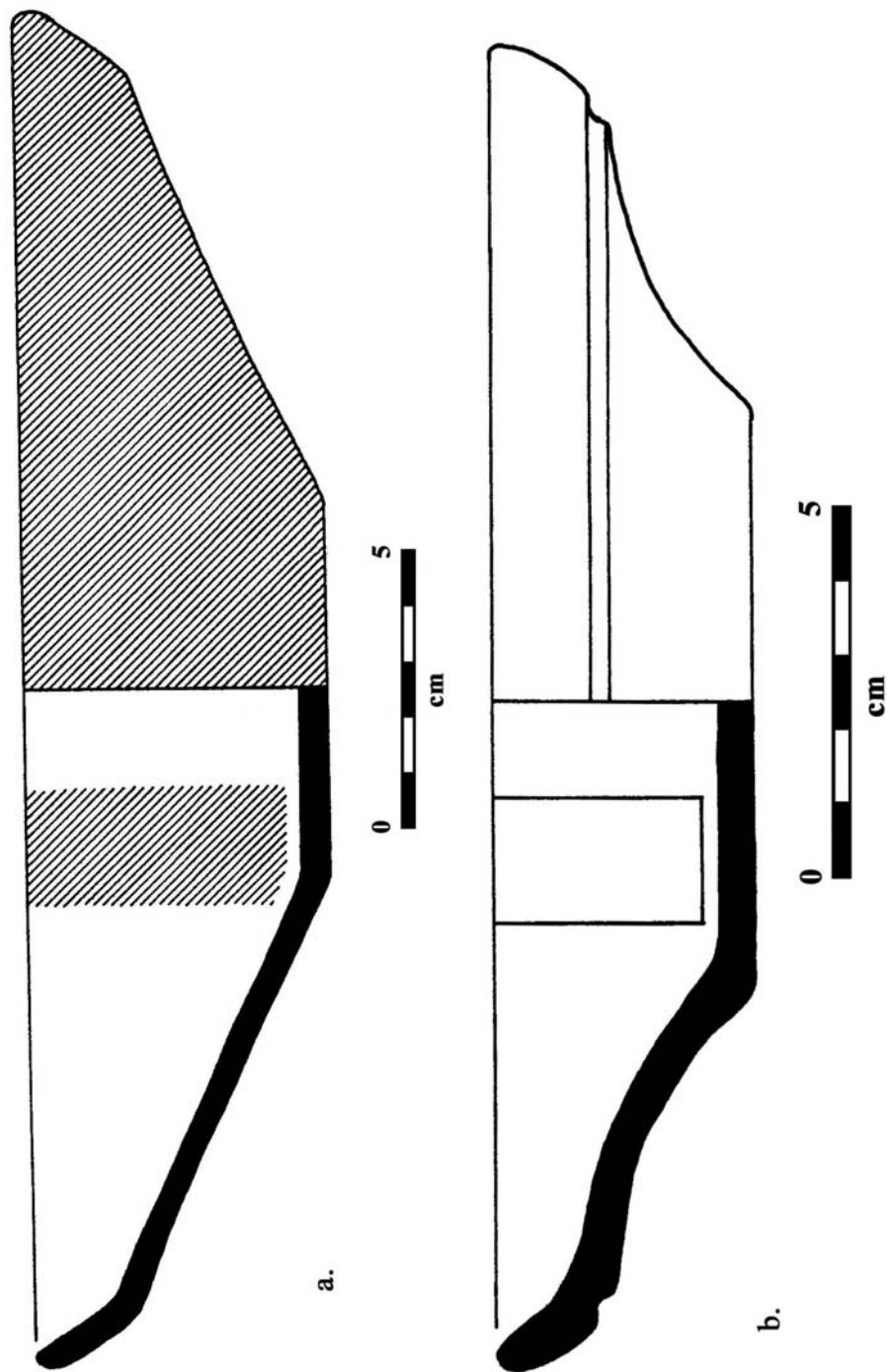


Figure 56: a) Sierra Red: Variety Unspecified (LA 1127/2) dish; b) Unnamed Cream-over-red Incised (LA 1128/1) plate.

round to angular fracture. The temper consists mostly of calcite, quartz, and hematite (up to 2.6 mm in size), but unidentified white, black, red, and pink particles occur as well. The paste is soft, crumbly, and exfoliates. A very high calcite content is found as an acid test entirely melted the paste.

SURFACE FINISH AND DECORATION: A slightly lustrous and waxy red slip ranging from 10R 4/8 (red) and 10R 5/8 (red) to 2.5YR 4/8 (red) and 2.5YR 5/8 (red) was applied to the interior and exterior surfaces, excluding the base. The slip on both sides is hard and thin. Both surfaces are smoothed, but lateral wiping marks are present. Each side exhibits a medium burnish. Some temper is visible through the thin slip. No decoration is present. Fine-line crazing is prevalent on both sides and has resulted in flaking. One firing cloud, black in color, was located on the exterior base. The slip on both sides has slightly eroded away.

FORM: Flaring, thin-sided dish with slightly outflaring everted rim and sharp medial angle. The lip is rounded. The exterior base is flat and exhibits an angular margin. This vessel is similar in form to LA 340/1, 356/1, 356/2, 552/1, 732/1, and 732/2. Height: 5.5 cm; Rim diameter: 24.5 cm; Base diameter: 6.7 cm; Rim thickness: 0.55 cm; Body thickness: 0.45 cm; Base thickness: 0.44 cm; Weight: 305 g.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Some use wear on exterior base margin. The small size and slipped interior surface suggest it functioned as an individual eating vessel for solid foods rather than liquids because the paste is soft and porous.

INTERSITE LOCATIONS: See LA 449/6 for distribution of this common variety across the lowlands.

VESSEL NUMBER: LA 1128/1

TYPE: VARIETY: Unnamed Cream-over-red Incised

ESTABLISHED: Present study

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 56b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) cream slip applied over red slip; 2) lustrous and very waxy vessel surfaces; 3) plate with outflaring everted rim; 4) grooved-incised line encircling lower rim; 5) crazing is prevalent.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 7.5YR 5/6 (strong brown) to 7.5YR 5/8 (strong brown). A thick gray core (7.5YR 6/0, 10YR 6/1) is present. It has a medium to coarse texture (grains generally less than 2 mm in size) with temper material having a round to angular fracture. This vessel (sample #2000-1) was subjected to a petrographic analysis by Linda Howie-Langs (2002a). The primary mineralogy includes calcite and quartz, but reflective particles (possibly schist or mica) occur as well. Overall, the paste is soft and crumbly.

SURFACE FINISH AND DECORATION: Both an underslip and overslip are present on this vessel. A cream slip ranging in color from 5YR 8/2 (pinkish white) to 7.5YR 8/2 (pinkish white) was applied over the top of a red slip ranging in color from 10R 4/8 (red) to 2.5YR 4/8 (red) on both surfaces, except the exterior base. The red underslip is visible in spots on both sides. Both slips are lustrous, moderately hard and thick, and very waxy to the touch. According to Linda Howie-Langs (personal communication, 2001), the slip is multi-layered with the cream overslip being highly vitrified. Both surfaces are well-smoothed, but the thick slips cover any identifiable lateral wiping marks. Each side also exhibits a high burnish. The exterior base is rough and pitted with temper protruding through the paste. Decoration consists of a single pre-slip grooved-incised line that encircles the vessel at the lower rim. Heavy crazing is observed on both sides and on both slipped surfaces which has resulted in extensive flaking, especially on the interior and around the rim. Firing clouds, golden brown in color, are located on the exterior side.

FORM: Flaring, thin-sided plate with slightly outflaring everted rim and rounded lip. The rim incurves above the grooved-incised line which has resulted in a slightly restricted orifice. The exterior base is flat and exhibits a round to angular margin. Height: 3.5 cm; Rim diameter: 17.9 cm; Base diameter: 7.8 cm; Rim thickness: 0.67 cm; Body thickness: 0.53 cm; Base thickness: 0.54 cm; Width of groove-incised line: 0.45-0.57 cm; Weight: 52 g.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Some use wear on exterior base margin. Given the small size, height, and double slipped interior surface, it probably functioned as an individual eating vessel, likely for soups and/or stews. The low, flaring sides would have prevented its use as a serving vessel.

INTERSITE LOCATIONS: None noted.

LAMANAI SOUTH: MOUND II

Between 1995 and 1997, investigations were carried out at Lamanai South, a group of residential structures located about three kilometers south of the central precinct of Lamanai. In 1995 and 1996, Smith and McField (1996) excavated a plazuela group labeled as Mound I. In 1997, Howard and Graham (1998) excavated another plazuela group, designated as Mound II, located approximately 50 meters to the north of Mound I. Mound II is situated ca. 30 meters west of the New River lagoon shoreline. Excavations in Mound II had centered on a small pyramidal structure, measuring about four meters in height. Two 2 m x 2 m units were placed axially on the east and south sides in order to determine the construction history of the structure. Five platform faces and two plaster floors were uncovered revealing a sequence of occupation dating from at least 50 B.C. to A.D. 300 or later (Howard and Graham 1998:10). A total of eight (Burials 1-8) burials were recovered during the 1997 investigations, of which four (Burials 1-3, and 7) contained Late Preclassic pottery vessels. The storage location of the basal flanged plate found in Burial 1 is not known; therefore the plate will not be discussed in this section. Ceramically, Burial 7 is the earliest burial in the sequence dating to early facet of the Zotz Complex. Stratigraphically, it is followed by Burials 2 and 3 which are both dated to the late facet of the Zotz Complex (Protohistoric period).

Burial 7:

This burial was centrally located in the mound. Burial 7 was placed below a plaster floor and, given its centrality, may have been positioned beneath the floor of a platform (Howard and Graham 1998:23). The individual in Burial 7 was supine in position with its knees flexed and its head was oriented to the north. Given the poor preservation of the bones no age or sex determinations were made. Three pottery vessels accompanied the individual, of which two were complete (LS 111, LS 164) and one was too

fragmentary for recovery, but the excavators did note that it was a flat-bottomed Quacco Creek Red type dish or bowl with solid nubbin feet (Howard and Graham 1998:23, 34). All three vessels were placed in an east-west alignment over the lower portion of the body.

VESSEL NUMBER: LS 111

TYPE: VARIETY: Quacco Creek Red: Quacco Creek Variety

ESTABLISHED: Type and Variety named by Gifford (1976) at Barton Ramie.

GROUP: Quacco Creek

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 57a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) soft, thick red slip on upper body of interior and exterior; 2) exterior lower body of vessel is fired golden-brown; 3) lustrous and waxy vessel surfaces; 4) jar with low neck and slightly outflaring everted rim; 5) crazing is prevalent on both sides.

PASTE, TEMPER, AND FIRING: The paste is uniform in color centering on 7.5YR 7/6 (reddish yellow). No carbon stain is present. It has a medium hard texture (grains

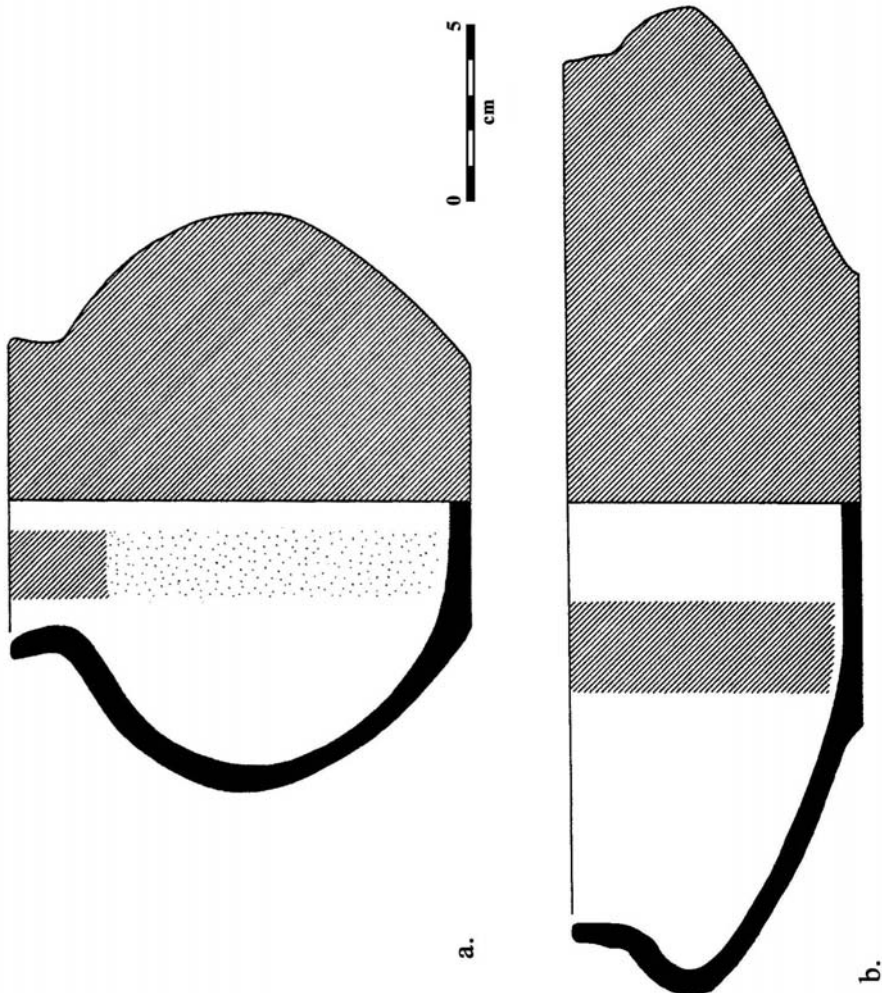


Figure 57: a) Quacco Creek Red: Quacco Creek Variety (LS 111) jar; b) Quacco Creek Red: Quacco Creek Variety (LS 164) bowl.

generally between 1-2 mm in size) with temper material having a round to angular fracture. The temper consists mostly of grog, calcite, quartz, and hematite, but unidentified black particles occur as well. The oxidized paste is very soft, friable, and crumbly. There are numerous stress fractures across the vessel.

SURFACE FINISH AND DECORATION: A soft, thick, lustrous, and waxy red slip ranging from 10R 4/6 (red) to 2.5YR 4/6 (red) was applied to the upper body of the interior and exterior. The interior is left unslipped below the shoulder. The exterior has a golden-brown (10YR 5/8, 6/8) slip color below the shoulder. The golden-brown slip color appears controlled as it uniformly covers the lower half of the exterior. The exterior base is left unslipped. There are a few red drip (or spill) marks on the interior below the slipped shoulder portion. Both surfaces are very well-smoothed and exhibit a high burnish. No decoration is present. Crazeing is prevalent and has resulted in flaking of both slipped surfaces. No firing clouds are observed.

FORM: Small jar with incurving sides and slightly outflaring everted rim. The body is globular in shape and the neck is low and restricted. The lip is rounded. The base is flat and exhibits an angular base margin. Height: 13.0 cm; Rim diameter: 9.2 cm; Base diameter: 7.5 cm; Rim thickness: 0.83 cm; Body thickness: 0.52 cm; Base thickness: 0.97 cm; Rim height: 1.5 cm; Weight: 748 g.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Use wear on rim and exterior base margin. The small size, restricted orifice, and unslipped interior surface suggest it functioned as a ritual vessel for containing dry foods.

INTERSITE LOCATIONS: This type has been found at Barton Ramie (Gifford 1976), Colha (Valdez 1987), and at sites in the Stann Creek District (Graham 1994). In terms of form, it is identical to an Aguacate Orange: Holja Variety jar found in a cache in BR-248 at Barton Ramie (Gifford 1976:Figure 64w).

VESSEL NUMBER: LS 164

TYPE: VARIETY: Quacco Creek Red: Quacco Creek Variety

ESTABLISHED: Type and Variety named by Gifford (1976) at Barton Ramie.

GROUP: Quacco Creek

WARE: Paso Caballo Waxy

COMPLEX: early facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 57b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) soft, thick, waxy slipped surfaces; 2) red slip on interior and upper body of exterior; 3) golden-brown slip on exterior lower body; 4) flaring-sided bowl with rounded basal angle and direct rim; 5) crazing is prevalent on both sides.

PASTE, TEMPER, AND FIRING: The paste is uniform in color centering on 5YR 6/6 (reddish yellow). No carbon stain is present. It has a medium hard texture (grains generally between 2 mm in size) with temper material having a round to angular

fracture. The temper consists mostly of grog, calcite, and quartz, but unidentified black and light gray particles occur as well. The oxidized paste is very soft, friable, and crumbly.

SURFACE FINISH AND DECORATION: A soft, thick, and waxy red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and to the upper body on the exterior. The exterior lower body and base have a golden-brown (10YR 5/6, 5/8) slip color below the basal angle. The golden-brown slip color appears to be controlled as it uniformly covers the lower half of the vessel. Both surfaces are very well-smoothed and exhibit a high burnish. No decoration is present. Crazeing is prevalent and has resulted in flaking of both slipped surfaces. No firing clouds are found.

FORM: Shallow, flaring-sided bowl with rounded basal angle and direct rim. The lip is squared. The upper sides curve inward to a low neck. The base is flat and exhibits an angular margin. Height: 8.3 cm; Rim diameter: 24.7 cm; Base diameter: 12.9 cm; Rim thickness: 0.7 cm; Body thickness: 0.6 cm; Base thickness: 0.78 cm; Neck height: 1.3-1.6 cm; Base height: 0.3 cm; Weight: 1,199 g.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Use wear on exterior rim and base margin. The shallow depth, restricted orifice, and slipped interior surface suggest it functioned as a ritual serving vessel.

INTERSITE LOCATIONS: See LS 111 for distribution of this type across the lowlands.

THE ZOTZ CERAMIC COMPLEX (LATE FACET): A.D. 150-250

The late facet of the Zotz Complex dates from A.D. 150-250 and may be equated with the Terminal Preclassic. A total of 50 vessels comprise this ceramic complex, approximately 36% of the entire Late Preclassic collection. This ceramic stage comprises many of the characteristic traits often associated with Protoclassic pottery, including true red-on-orange dichromes, polychromes, high gloss orangewares, trickle line decoration, mammiform feet, and ring bases. Usulután-style decoration also occurs at Lamanai, but is low in frequency compared to trickle decoration. While it is tempting to state that all of the pottery represented in this facet belongs to true Protoclassic types it simply is not the case. The co-occurrence of Chicanel redwares with Protoclassic orangewares has been found in Chultun P8-2. While Protoclassic types with mammiform supports and trickle decoration are present, their frequencies (23 out of 50 vessels) do not dominate the collection. Instead, their percentages (46%) are slightly lower than that of Chicanel-style redwares, which continue to be produced at the site. These redwares include Cabro Red, Sierra Red, Puletan Red-and-unslipped, and Monkey Falls Red. Although most of the red slipped types are present at Lamanai the rarity of Society Hall Red pottery (1 out of 27 vessels) is unusual. This vessel with its prominent horizontal streaky red slip has been identified at most northern Belize sites (e.g., Colha, Cuello, K'axob), but, to date, represents only a minor type at this site. The few examples that have been identified are questionable and I am not confident that it can be properly separated from other Sierra Group pottery at Lamanai. The red slipped pottery, especially on Cabro Red types, has become much thinner, harder, and glossier than Sierra Red types.

The most popular kind of decoration at Lamanai during this time is trickle line or “dribble” decoration on red slipped vessels. The trickle decoration is found on 13 vessels, or 48% of this late facet Zotz collection. It is positively painted on top of the base slip and generally consists of parallel lines, sometimes in sets, which may be either wavy or straight. The decoration is made mostly on red surfaces by black or golden-brown colors. One of the most interesting aspects of this facet is the number of

specimens that share modes belonging to Chicanel, Floral Park, and Tzakol 1 pottery. For example, there are vessels that exhibit Chicanel-like red slips with Protoclassic trickle line decoration and Early Classic basal flanges.

STRUCTURE N11-7

Core of Primary Platform:

The bulk of construction at this location is Preclassic, but later occupation, dating to the Historic period, occurs as well. One vessel (LA 860/1) was recovered from the core of the earliest platform in the N11-7 sequence, dating to the Protoclassic period.

VESSEL NUMBER: LA 860/1

TYPE: VARIETY: Sierra Red: Variety Unspecified

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated by Gifford (1976) at Barton Ramie.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 58

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) red slip color; 2) soft, lustrous, and slightly waxy vessel surfaces; 3) round-sided bowl with slightly outflaring everted rim; 4) basal flange and ring base; 5) crazing is prevalent.

PASTE, TEMPER, AND FIRING: The paste is uniform in color centering on 5YR 7/8 (reddish yellow). No carbon stain is present. It has a medium hard texture (grains generally less than 1.5 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified white, black, pink, and gray particles occur as well.

SURFACE FINISH AND DECORATION: A soft and moderately thick red slip centering on 2.5YR 5/8 (red) was applied to the interior and the exterior to the basal flange. The surface below the basal flange is left unslipped. The slip on both sides is slightly streaky in color and it is uncertain if it was intentionally produced to look like Society Hall Red types. The surfaces are very well-smoothed and exhibited a high burnish. Some temper is visible through the slips. No decoration is present. Crazing is prevalent on both sides and has resulted in flaking. One small, localized firing cloud, tan in color, was located on basal flange.

FORM: Rounded, thick-sided bowl with slightly outflaring everted rim and basal flange. The basal flange is both narrow in width and slightly downturned. The lip is beveled-in to square. The ring base is small and solid. Height: 8.3 cm; Rim diameter: 24.8 cm; Base diameter: 9.3 cm; Rim thickness: 0.78 cm; Body thickness: 0.6 cm; Base thickness: 1.0 cm; Width of flange: 1.76 cm; Thickness of flange: 0.82 cm.

APPENDAGES: None.

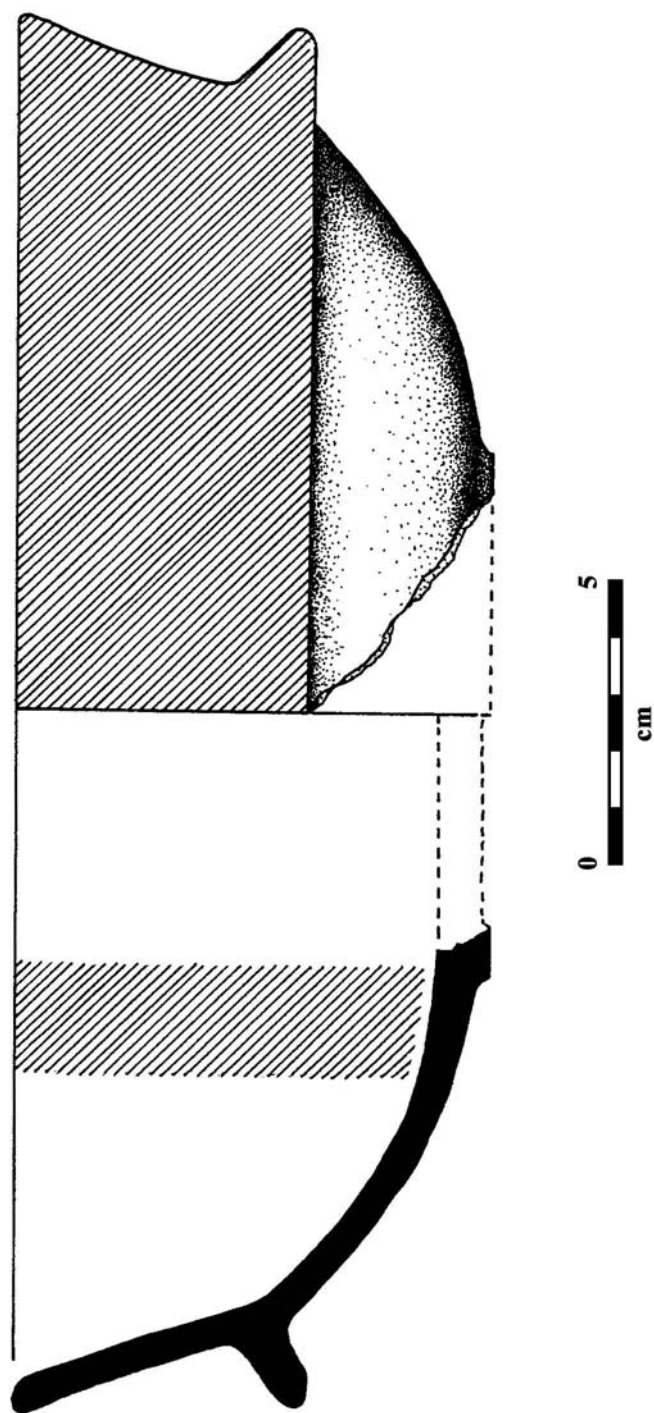


Figure 58: Sierra Red: Variety Unspecified (L.A 860/1) bowl.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either side. Some use wear on lip, flange, and base. Given the size, height, and slipped interior surface, it probably functioned as a family sized serving vessel for hot soups and/or stews. The basal flange likely aided in carrying the hot liquids.

INTERSITE LOCATIONS: See LA 449/6 for distribution of this type across the Maya area. This vessel is slightly different from Sierra types because the slip color is somewhat brighter and glossier and there is also a lack of red slip below the flange. It may be that the Lamanai specimen shares some affinities with the Rio Bravo Red: Rio Bravo Variety named by Sullivan and Valdez (1996) at Dos Hombres and Ma'ax Na. This type is considered to be transitional between the Late Preclassic and Early Classic. A number of Rio bravo Red types have recently been recovered from sites in northern Belize, including Dos Hombres (Sullivan and Valdez 1996), K'axob (Lopez Varela 1996:205), La Milpa (Kosakowsky and Sagebiel 1999:132), and Ma'ax Na (Sullivan and Valdez 1996). According to Sullivan and Valdez (1996), these vessels have been found at sites in the Programme for Belize (Pfb) area dating to the Terminal Preclassic period. The temporal placement of these vessels, labeled as Rio Bravo Red: Rio Bravo Variety, is based on a number of attributes, including Late Preclassic slip color and treatment (e.g., the Sierra Red type) and Early Classic modal characteristics (e.g., the presence of a basal flange).

CHULTUN P8-2

Midden in Chambers 1 and 2:

Surrounded by five structures (P8-101, P8-102, P8-103, P8-104, and P8-105) in the northern part of the site, Chultun P8-2 was a subterranean feature carved into bedrock and used by the Maya for storage purposes. This chultun had three large, separate

lateral-shaped chambers (Chamber 1 on the west side; Chamber 2 in the center; Chamber 3 on the east side). They were accessed by an entrance shaft located in the top of Chamber 2. According to Pendergast (1981e), none of the chambers yielded evidence on its original use, but all contained masses of refuse up to one meter deep, including more than three dozen whole and reconstructable vessels. The chultun was sectioned across all three chambers and separated into lots based on their stratigraphic location. A total of 39 vessels (LA 496/1-5, 7-14, 16-19, LA 520/1-6, 521/1-2, 4, 7-9, 524/1, 526/1-7, 544/1, and 552/1) were recovered from inside Chambers 1 and 2. It is clear from Pendergast's (1981e:2) excavations that "fairly large sections of vessels were cast into the chultun, only to break as they hit the pile, while in others pieces of a pot were stacked together and dumped atop the garbage heap." The basal midden deposit dates to the Protoclassic period (A.D. 150-250) with a few late pieces possibly dating to the transitional period between the Late Preclassic and the Early Classic. Thus, the distribution of later material below the entrance shaft indicates that the last dumping of refuse into the chambers occurred sometime around A.D. 250 or so. This last dumping is, therefore, contemporaneous with the second architectural phase of Structure P8-103. Associated with the ceramic vessels were large quantities of animal bones and thousands of freshwater snails (*Pomacea* sp.). In Chamber 1, three lots (LA 544, 520, and 496) were excavated with LA 544 being the earliest and LA 496 being the latest in the sequence. In Chamber 2, four lots (LA 526, 552, 521, and 524) were excavated with LA 526 being the earliest and LA 524 being the latest in the sequence. Therefore, LA 544, 520, 526, 552, and 521 were recovered from the same level near the bottom of the midden while LA 496 and LA 524 were found at the top of the midden, near the roof collapse.

Chamber 1:

VESSEL NUMBER: LA 544/1, earliest in sequence; predates LA 520 and 496.

TYPE: VARIETY: Unnamed Black-on-red and Grooved-incised

ESTABLISHED: Present study

GROUP: Cabro?

WARE: Chunux Hard?

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 59

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) hard, thin, uniform red slip color; 2) slightly lustrous vessel surfaces; 3) round-sided bowl with ring base; 4) grooved-incised lines encircling exterior rim; 5) black lines on interior lower body.

PASTE, TEMPER, AND FIRING: The paste is uniform in color centering on 2.5YR 4/8 (red). A thin and diffuse black core is present. It has a fine texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified black particles occur as well. The paste contains many small voids likely caused from burned out organic material.

SURFACE FINISH AND DECORATION: A thin, hard, and slightly lustrous red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, excluding the base. The paste and slip color are almost the same color. Both

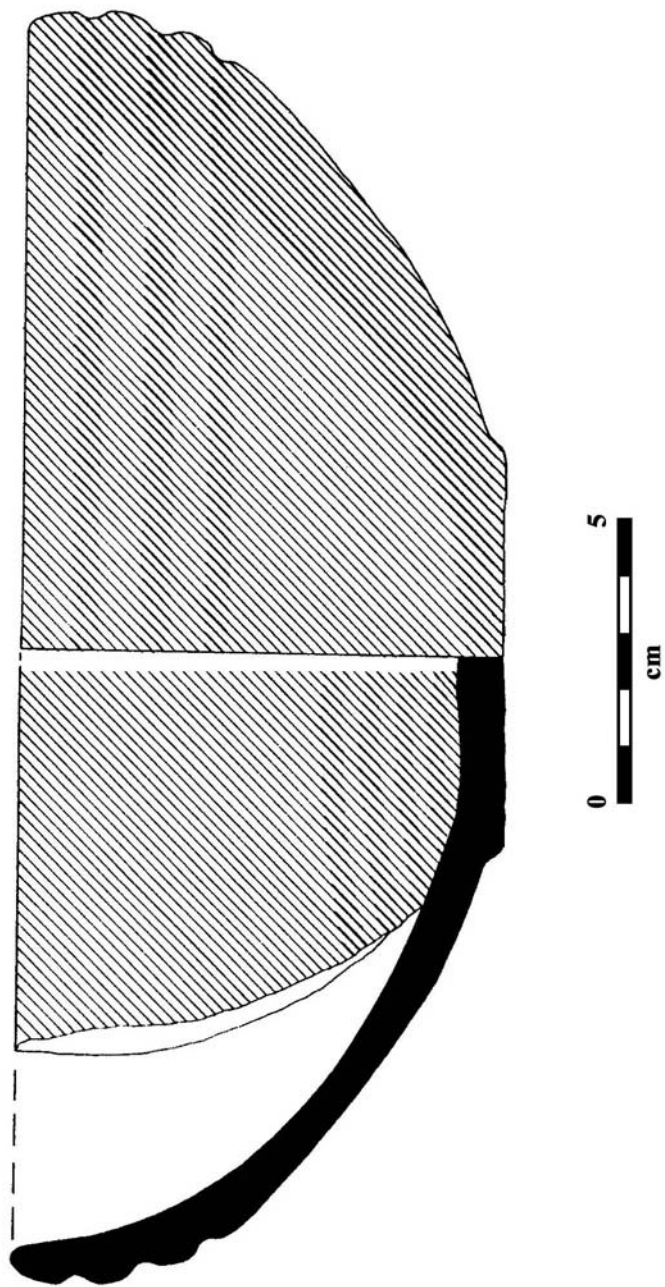


Figure 59: Unnamed Black-on-red and Grooved-incised (LA 544/1) bowl. (vessel has red decoration on both sides, not orange as shown.)

surfaces are well-smoothed with a few lateral wiping marks visible. The ring base is also well-smoothed. Each side exhibits a medium burnish. There may have been a higher luster on this vessel, but some of the slipped surface has eroded. Decoration consists of three pre-slip grooved-incised lines encircling the exterior rim. Secondary decoration has four wide black lines encircling the interior lower body. They are heavily eroded so it is difficult to tell whether they were applied as a slip or a wash. Small firing clouds, black in color, are found on both sides of the rim.

FORM: Round, thick-sided bowl with incurving rim and rounded to slightly pointed lip. The ring base is small, flat, solid, and has an angular margin. Height: 8.5 cm; Rim diameter: 22.0 cm; Base diameter: 7.1 cm; Rim thickness: 0.7 cm; Body thickness: 0.85 cm; Base thickness: 0.75 cm; Width of grooved-incised lines: 0.4-0.5 cm; Width of black lines: 0.5-0.6 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This very hard and durable vessel had no visible incrustation or residue on either side. Given the size, depth, and slipped interior surface, it probably functioned as a serving/eating vessel for foods with a liquid content.

INTERSITE LOCATIONS: No comparable specimens have been found with the same form and decorative attributes. However, vessels belonging to the Cabro Ceramic Group have been found at a few sites in northern Belize, including Cerros (Robertson-Freidel 1980) and Colha (Valdez 1987).

VESSEL NUMBER: LA 520/1, postdates LA 544 and predates LA 496.

TYPE: VARIETY: Cabro Red: Trickle Variety

ESTABLISHED: Present study

GROUP: Cabro

WARE: Chunux Hard

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 60a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, hard red slip; 2) high luster on vessel surfaces; 3) jar with restricted orifice; 4) ridge at neck/shoulder break; 5) golden-brown trickle or “dribble” decoration on ridge; 6) surfaces erode to a strong brown color.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 10YR 5/3 (brown) to 10YR 5/4 (yellowish brown). No carbon stain is present. It has a medium texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified white, black, and gray particles occur as well. The paste contains many small voids likely caused from burned out organic material.

SURFACE FINISH AND DECORATION: A thin, hard, and slightly glossy red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, at least to the upper body. The red slip has eroded to a brown color (7.5YR 4/6) on the interior as well as on a portion of the exterior (from rim to shoulder). Both

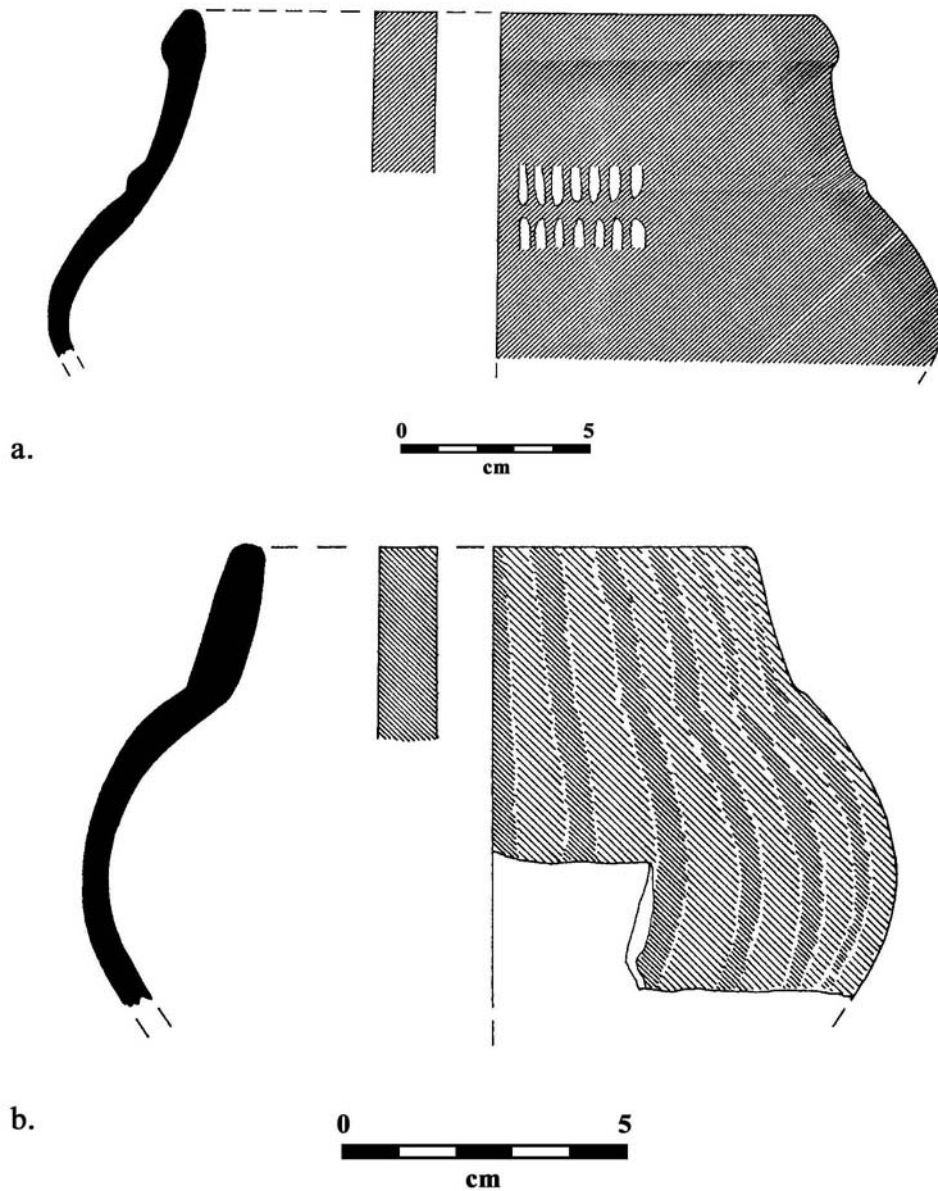


Figure 60: a) Cabro Red: Trickle Variety (LA 520/1) jar; b) Liscanal Grooved-incised: Trickle Variety (LA 520/2) jar. (a has red decoration on both sides, not orange as shown; b has golden-brown trickle decoration, not red as shown.)

surfaces are well-smoothed with only a few lateral wiping marks visible around the ridge. Each side exhibits a high burnish. Temper is visible through the thin slipped surfaces. In terms of decoration, a non-organic liquid has been trickled on to the exterior surface in a controlled manner, probably before firing. The treated area shows up as thin and slightly lighter lines on the lustrous red slip. The trickle decoration on this vessel is quite faint due to erosion of the exterior slip, but is probably golden-brown in color. The decoration is located on the ridge at neck/shoulder break and consists of two opposing sets (an upper and a lower one). Each set contains six parallel, vertical lines with rounded edges. No Munsell reading was taken because they were too faint. Rootlet marking and pitting are evident on both sides.

FORM: Round, thick-sided lower sides, curving in to ridge from which high neck rises slightly inward to exteriorly thickened rim. The lip is rounded to slightly pointed. The base is missing, but presumably it is rounded. Height: 9.6+ cm; Rim diameter: 16.8 cm; Rim thickness: 1.16 cm; Neck thickness: 0.94 cm; Body thickness: 0.9 cm; Thickness at ridge: 0.87 cm; Length of lines: 2.0 cm; Width of lines: 0.33-0.7 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This very hard and durable vessel had no visible incrustation or residue on either side. Given the exterior decoration, restricted orifice, and slipped interior surface, it probably functioned as a storage jar for dry substances.

INTERSITE LOCATIONS: See LA 520/4 for distribution of this type across the region. The Lamanai variety may have some affinities to the Zapatista Trickle-dichrome type found at Becan (Ball 1977:50-52), Cerros (Robertson-Freidel 1980:245-249), and other sites (Brady et al. 1998:Figure 2e). At Lamanai, there are two kinds of trickle decoration (black and golden-brown) that predominate in the Cabro Group. Neither of these two colors was identified at Cerros, the type site for Cabro Group

pottery. At this time, both the black trickle and the golden-brown trickle decoration will not be separated into two different varieties, pending further analysis. However, if either of these trickle decorations occur at other sites, and in frequencies high enough, then they should be separated into a Cabro Red: Black Trickle Variety and a Cabro Red: Golden-brown Trickle Variety.

VESSEL NUMBER: LA 520/2

TYPE: VARIETY: Liscanal Grooved-incised: Trickle Variety

ESTABLISHED: Present study

GROUP: Cabro

WARE: Chunux Hard

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 60b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, hard red slip; 2) high luster on vessel surfaces; 3) jar with restricted orifice; 4) grooved-incised line encircling neck; 5) golden-brown trickle decoration on exterior; 6) crazing is prevalent.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 5/8 (yellowish red) to 5YR 6/8 (reddish yellow). No carbon stain is present. It has a medium texture (grains generally less than 1 mm in size) with temper material

having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified black and red particles occur as well.

SURFACE FINISH AND DECORATION: A thin, hard red slip color centering on 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, at least to the mid-body. The red slip on the interior is streaky below the rim like Society Hall Red types. It may have been the result of the potter not being able to adequately apply the slip below the restricted orifice. The exterior surface is well-smoothed, but the interior shows lateral wiping marks below rim. Each side exhibits a medium-high burnish. Some temper is visible through the slipped surfaces. In terms of decoration, there is a single pre-slip grooved-incised line encircling the exterior neck. Secondary decoration consists of trickle lines running from the rim down the exterior surface of the vessel. They encircle the vessel and are golden-brown in color. The lines are quite faint due to the crazing and flaking of the exterior slip. No Munsell reading on them because they are too faint. Crazing is prevalent on both sides and has resulted in extensive flaking, especially on the exterior. One firing cloud, tan in color, is located on exterior body.

FORM: Round, thin-sided jar with restricted orifice and rounded lip. The vessel is small with a globular body. The rim is slightly incurving. The base is missing, but presumably it is rounded. Height: 9.5+ cm; Rim diameter: 9.0 cm; Rim thickness: 0.8 cm; Body thickness: 0.5 cm; Width of grooved-incised line: 0.5 cm; Width of trickle lines: 0.7 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either side. Given the short, squat size, restricted orifice, decorated exterior, and slipped interior surface, it probably functioned as a storage jar for dry substances.

INTERSITE LOCATIONS: A few specimens similar to the Lamanai vessel, labeled as Laguna Verde Incised: Usulután-style Variety, have been recovered at Barton Ramie (Gifford 1976:Figure 37g), Seibal (Sabloff 1975:Figure 140), and Tikal (Culbert 1993:Figures 8, 13).

VESSEL NUMBER: LA 520/3

TYPE: VARIETY: Cabro Red: Trickle Variety

ESTABLISHED: Present study

GROUP: Cabro

WARE: Chunux Hard

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 61

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, hard red slip; 2) high luster on vessel surfaces; 3) bowl with basal flange; 4) golden-brown trickle decoration on interior and exterior; 6) crazing is prevalent.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 2.5YR 5/8 (red) to 2.5YR 6/8 (light red). A thick gray core (2.5Y 6/2, 7/2) is present. It is moderately sorted (grains generally less than 1 mm in size) with temper

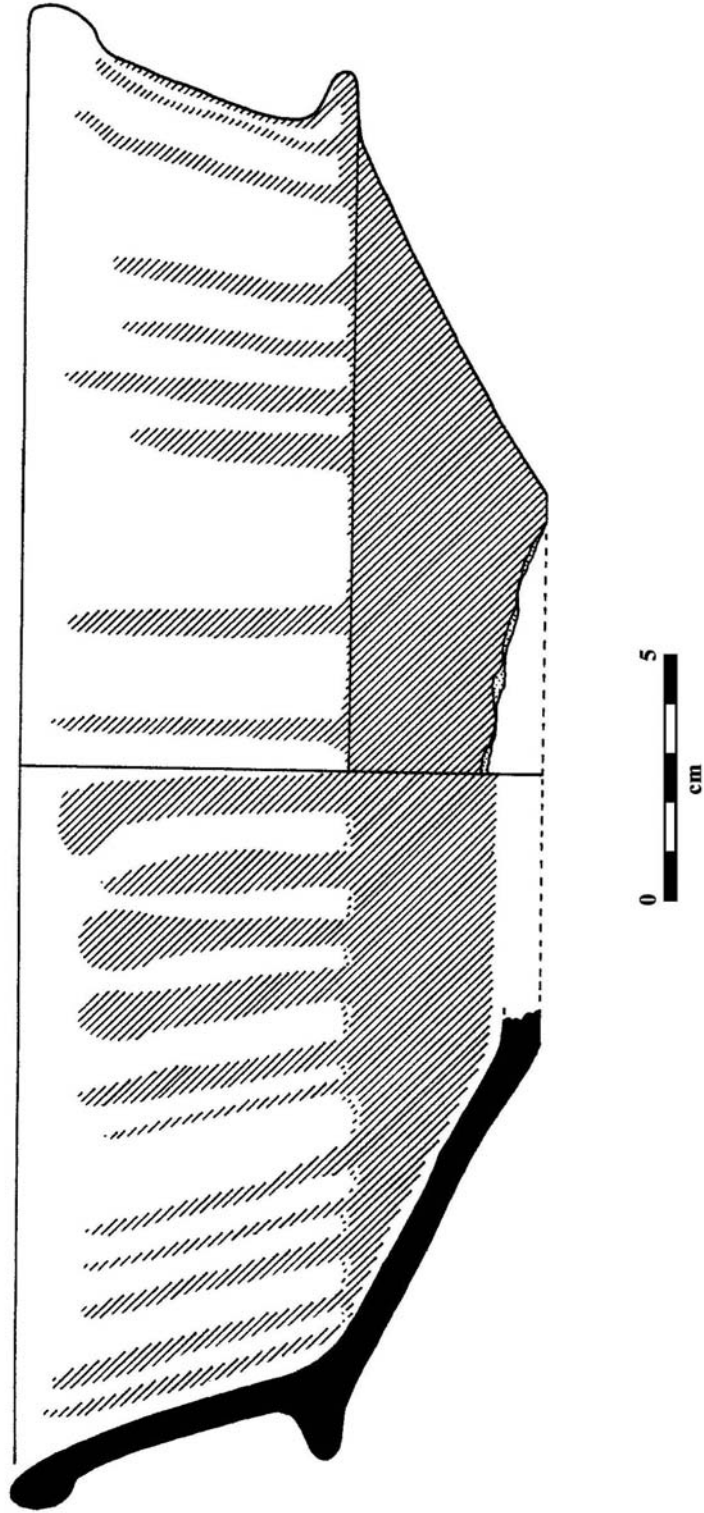


Figure 61: Cabro Red: Trickle Variety (LA 520/3) bowl. (white area represents golden-brown trickle decoration.)

material having a round to angular fracture. This vessel (sample #2000-15) was subjected to a petrographic analysis by Linda Howie-Langs (2002a:7-8). It belongs to the Grog Group. The paste is composed primarily of grog with large fragments of crystalline calcite. Lesser amounts of monocrystalline quartz, chalcedonic quartz, hematite nodules, micrite, and chert also occur. Some of the grog is black in color. The paste contains a number of voids, up to 3.5-4.0 mm in size, likely caused by burnt organic remains. There is a tendency for the paste to flake at the edges. The grog and crystalline calcite are added constituents.

SURFACE FINISH AND DECORATION: A thick, hard red slip color centering on 2.5YR 4/6 (red) was applied to the interior and exterior surfaces, including the flange. The exterior base is left unslipped. The slipped portions of the vessel are uniform in color. Both surfaces are well-smoothed and exhibit a high burnish. Decoration consists of trickle lines running from the rim to base margin on both the interior and exterior surfaces. They encircle the vessel and are golden-brown in color. The lines are quite faint due to the crazing and flaking of the exterior slip. No Munsell reading was taken on them because they are too faint. According to Howie-Langs (2002a:8), microscopic analysis has shown that multiple layers of slip were applied to the surfaces of the vessel. The slip technology is very similar to the tetrapod bowl with trickle line decoration and mammiform feet (LA 521/9; sample #2000-13). Crazing is prevalent on both sides, but little flaking has occurred. One large firing cloud, black and tan in color, covers most of the exterior lower body and base.

FORM: Flaring-sided bowl with outflaring everted rim and basal flange. The rim is exteriorly thickened. The lip is rounded. The base is flat and exhibits an angular margin. Height: 10.5 cm; Rim diameter: 30.4 cm; Base diameter: 9.8 cm; Rim thickness: 0.92 cm; Body thickness: 0.7 cm; Base thickness: 0.6 cm; Width of flange: 1.95 cm; Thickness of flange: 0.75 cm; Width of trickle lines: 0.5-0.9 cm; Weight 1,600 g.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This very hard and durable vessel had no visible incrustation or residue on either side. Some use wear on exterior base margin and edge of basal flange. Given the height, large diameter, and slipped interior surface, it probably functioned as a family sized serving vessel for hot liquids. The basal flange would have aided in carrying the vessel.

INTERSITE LOCATIONS: None noted for the Lamanai specimen, but given the faintness of the trickle decoration, it may occur in higher frequencies in the region and elsewhere in the lowlands than observed.

VESSEL NUMBER: LA 520/4

TYPE: VARIETY: Cabro Red: Cabro Variety

ESTABLISHED: Type and Variety named by Robertson-Freidel (1980) at Cerros.

GROUP: Cabro

WARE: Chunux Hard

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 63a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, hard red slip; 2) high luster on vessel surfaces; 3) dish with flaring sides; 4) crazing is prevalent.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 6/6 (reddish yellow) to 5YR 7/6 (reddish yellow). A thin dark gray core (2.5YR 3/0) is present on upper body and rim; the base is oxidized. It has a medium texture (grains generally less than 1.5 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified white and pink particles occur as well. The paste contains a number of voids likely caused by burned out organic material.

SURFACE FINISH AND DECORATION: A thin, hard red slip centering on 2.5YR 5/6 (red) was applied to the interior and exterior surfaces, excluding the base. Both surfaces are well-smoothed with some lateral wiping marks present. Each side also exhibits a very high burnish. Temper is visible through both slipped surfaces. No decoration is present, but the exterior base does have some red swirling marks. No pattern was discerned. Crazing is prevalent on both sides, but little flaking has occurred. Three firing clouds are located on exterior lower body and base.

FORM: Flaring-sided dish with slightly outflaring everted rim and squared lip. The base is flat and exhibits a sharp angular margin. The interior base also exhibits a sharp margin. Height: 6.3 cm; Rim diameter: 30.1 cm; Base diameter: 16.8 cm; Rim thickness: 0.89 cm; Body thickness: 0.75 cm; Base thickness: 0.47 cm. Weight 1,054 g.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This very hard and durable vessel had no visible incrustation or residue on either side. Given the flaring sides and slipped interior surface, it probably functioned as a family sized serving vessel.

INTERSITE LOCATIONS: Few comparisons have been noted in the region with the exception of vessels recovered from different deposits at Cerros, the type site for Cabro Red: Cabro Variety (Robertson-Freidel 1980:158-173, Figure 17h-j, 20d, and 21c). One Cabro Red: Cabro Variety sherd was found in Operation 24-AI-14 at El Pozito (Case 1982:114-116, Figure 4a) and a number of whole Cabro Red-type jars have been found in Protoclassic Tomb 5 at Blue Creek (personal observation, 2000).

VESSEL NUMBER: LA 520/5

TYPE: VARIETY: Cabro Red: Trickle Variety

ESTABLISHED: Present study

GROUP: Cabro

WARE: Chunux Hard

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 62

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, hard red slip; 2) high luster on vessel surfaces; 3) bowl with rounded medial hip; 4) golden-brown trickle decoration on exterior; 5) light crazing is present; 6) heavy firing clouds are present.

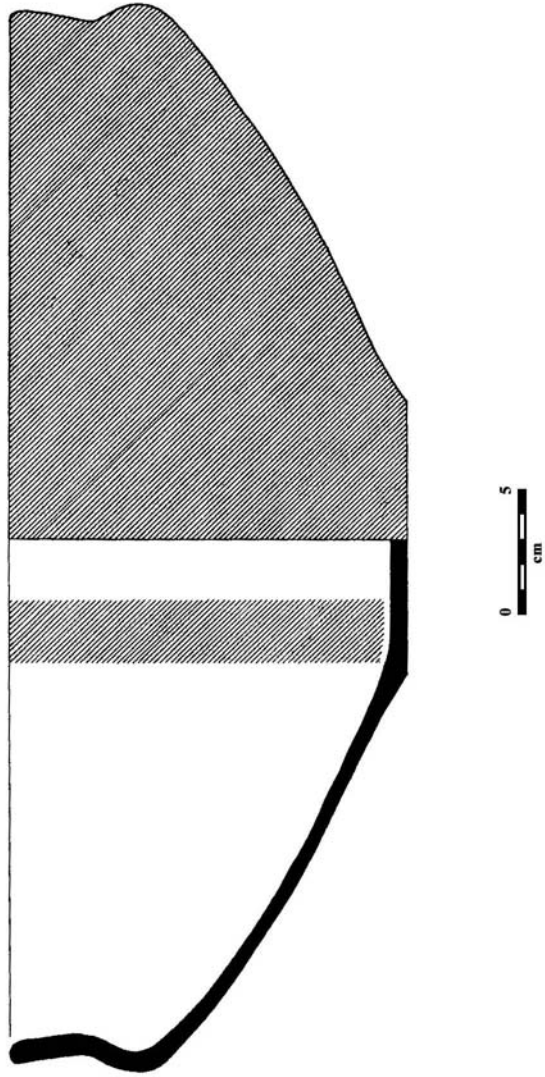


Figure 62: Cabro Red: Trickle Variety (LA 520/5) bowl.

PASTE, TEMPER, AND FIRING: The paste is differential in color with the interior being 2.5YR 5/8 (red) and the exterior being 10YR 7/3 (very pale brown). No carbon stain is present. It is moderately sorted (grains generally less than 1 mm in size) with temper material having a round to angular fracture. This vessel (sample #2000-4) was subjected to a petrographic analysis by Linda Howie-Langs (2002a:2). It belongs to the Grog Group. The paste is composed primarily of grog, crystalline calcite, and monocrystalline quartz. Lesser amounts of micrite, hematite nodules, chert, and plagioclase feldspar also occur. Brown mudstone, probably carbonate mudstone, was found in the paste. The grog is an added constituent. Biotite may also have been added to the paste recipe. This black or dark green form of mica is not available locally within the sustaining environs of Lamanai and, therefore, may have been imported as a tempering agent for this particular vessel. It is also possible that the vessel itself was imported to the site.

SURFACE FINISH AND DECORATION: A hard red slip color ranging in color from 2.5YR 4/8 (red) to 2.5YR 5/8 (red) was applied to the interior and exterior surfaces, excluding the base. According to Howie-Langs (2002a:2), microscopic analysis has shown that a thin layer of slip was applied to the surfaces of this vessel. Both surfaces are very well-smoothed and exhibit a very high burnish. Temper is visible through the slipped surfaces. Decoration consists of trickle lines running from at least the top of the medial hip to the base margin on the exterior surface. The lines are of varying width, but generally measure between 5.0-6.0 mm. They encircle the vessel and are golden-brown in color. The lines are quite faint due to the heavy black firing clouds that are prevalent across the exterior lower body and base. No Munsell reading on them because they are too faint. Light crazing occurs on both sides and can only be seen with hand lens. Firing clouds, black (2.5YR 2.5/0) and brown (10YR 5/3) in color, are extensive on both sides, obscuring the trickle decoration in places. Rootlet markings, white in color, also occur on each surface. Interestingly, during reconstruction two sherds were mended of completely different colors (one red and one black) which likely occurred as

a result of pieces being separated after deposition in the chultun and subjected to post-depositional processes.

FORM: Flaring, thin-sided bowl with slightly outflaring everted rim and medial hip. The hip is high on the vessel side and well-rounded. The lip is rounded. The base is small, flat, and exhibits a sharp angular margin. Height: 15.1 cm; Rim diameter: 42.5 cm; Base diameter: 10.5 cm; Rim thickness: 1.0 cm; Body thickness (below hip): 0.45 cm; Base thickness: 0.7 cm; Rim height: 2.9-3.4 cm; Weight 2,132 g.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This very hard and durable vessel had no visible incrustation or residue on either side. Some use wear on exterior base margin. Given the height, large diameter, and slipped interior surface, it probably functioned as a supra-family sized serving (i.e., feasting) vessel.

INTERSITE LOCATIONS: See LA 520/4 for distribution of this type across northern Belize.

VESSEL NUMBER: LA 520/6

TYPE: VARIETY NAME: Cabro Red: Trickle Variety

ESTABLISHED: Present study

GROUP: Cabro

WARE: Chunux Hard

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 63b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, hard red slip; 2) high luster on vessel surfaces; 3) bowl with slightly incurving rim; 4) interior rim has double red slip; 5) golden-brown trickle decoration on interior.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 10YR 6/4 (light yellowish brown) to 10YR 7/4 (very pale brown). No carbon stain is present. It has a medium texture (grains generally less than 1 mm in size) with temper material having around to angular fracture. The temper consists mainly of calcite, quartz, and hematite, but unidentified white and black particles occur as well. The paste has numerous voids likely caused by burned out organic material.

SURFACE FINISH AND DECORATION: A thin, hard red slip color ranging in color from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces. The double red slip on the interior rim is the same slip color that covers the entire vessel. On the exterior surface, between the rim and basal angle, the red slip has eroded slightly to a brown (7.5YR 5/6, 5/8), creating a mottled or variegated color. Both surfaces are smoothed with heavy (perhaps intentional?) lateral streaking on interior upper sides. Each side exhibits a high burnish. Decoration consists of a red overslip on the interior rim only. It produces a thicker slip, but not a darker slip color. Secondary decoration is of trickle lines running from the lip to at least below the basal angle on the interior surface only. These lines form a set of three and may occur as sets around the vessel interior. The lines hook to the left just below the basal angle. They are faint in

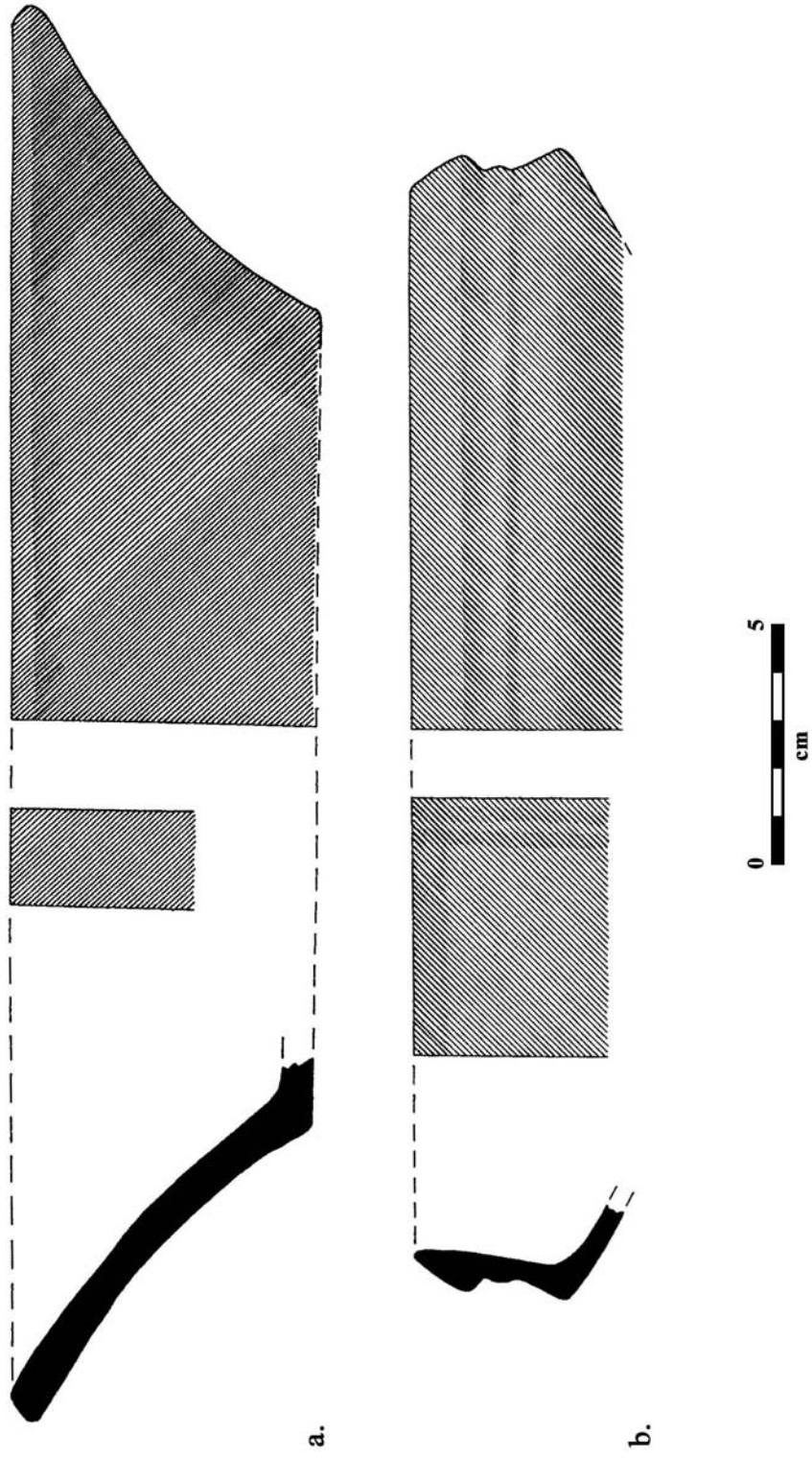


Figure 63: a) Cabro Red: Cabro Variety (LA 520/4) dish ; b) Cabro Red: Trickle Variety (LA 520/6) bowl. (b has red decoration, not orange as shown.)

appearance, primarily golden-brown in color, but are mottled due to the heavy black firing clouds that are present around the rim. Light crazing, rootlet markings, and firing clouds occur on both sides.

FORM: Incurving-sided bowl with sharp basal angle and pointed lip. The rim is exteriorly thickened with ridge below. The base is missing, but likely flat with angular margin. Height: 5.9+ cm; Rim diameter: 38.0 cm; Base diameter: n/a; Rim thickness: 1.15 cm; Body thickness: 0.6 cm; Base thickness: n/a; Width of ridge: 1.0 cm; Width of trickle lines: 0.66 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either surface. Some use wear on basal angle. Given the slightly restricted orifice, large diameter, and slipped interior surface, it probably functioned as a serving vessel for soups or stews to large groups.

INTERSITE LOCATIONS: See LA 520/4 for distribution of the type across northern Belize.

VESSEL NUMBER: LA 496/1, latest in sequence; postdates LA 520 and 544.

TYPE: VARIETY: Unnamed Brown-and-modeled

ESTABLISHED: Present study

GROUP: Aguacate?

WARE: Holmul Orange?

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Floral Park

ILLUSTRATION: Figures 64 and 65

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) brown slip on interior neck; 2) brown slip on exterior; 3) effigy spouted jar with ring base; 4) appliquéd bird head and wings.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 6/6 (reddish yellow) to 5YR 7/6 (reddish yellow). No carbon stain is present. It has a medium texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, and hematite, but unidentified white and black particles occur as well.

SURFACE FINISH AND DECORATION: A thin, hard, glossy brown slip centering on 7.5YR 5/6 (strong brown) was applied to the interior neck and to the exterior from the rim to the margin of the ring base. Both slipped surfaces are well-smoothed and exhibit a very high burnish. The unslipped interior is also smoothed, but lateral wiping marks are present. Temper is visible through thin slipped surfaces. Decoration consists of an applied bird head at the front of the vessel with two bulbous eyes. The beak is missing. There is a raised "bib" below the head. The wings are appliquéd at the sides with two curved projections (curved forward). Above the wings, on the vessel body, is a raised rib. The hole located at the rear indicates the presence of an unsupported, angled or canted spout. Rootlet marks, white in color, occur on both sides. No crazing. One large firing cloud, yellow to white in color, is located on exterior lower body. The thin brown slip has leached considerably on both surfaces.

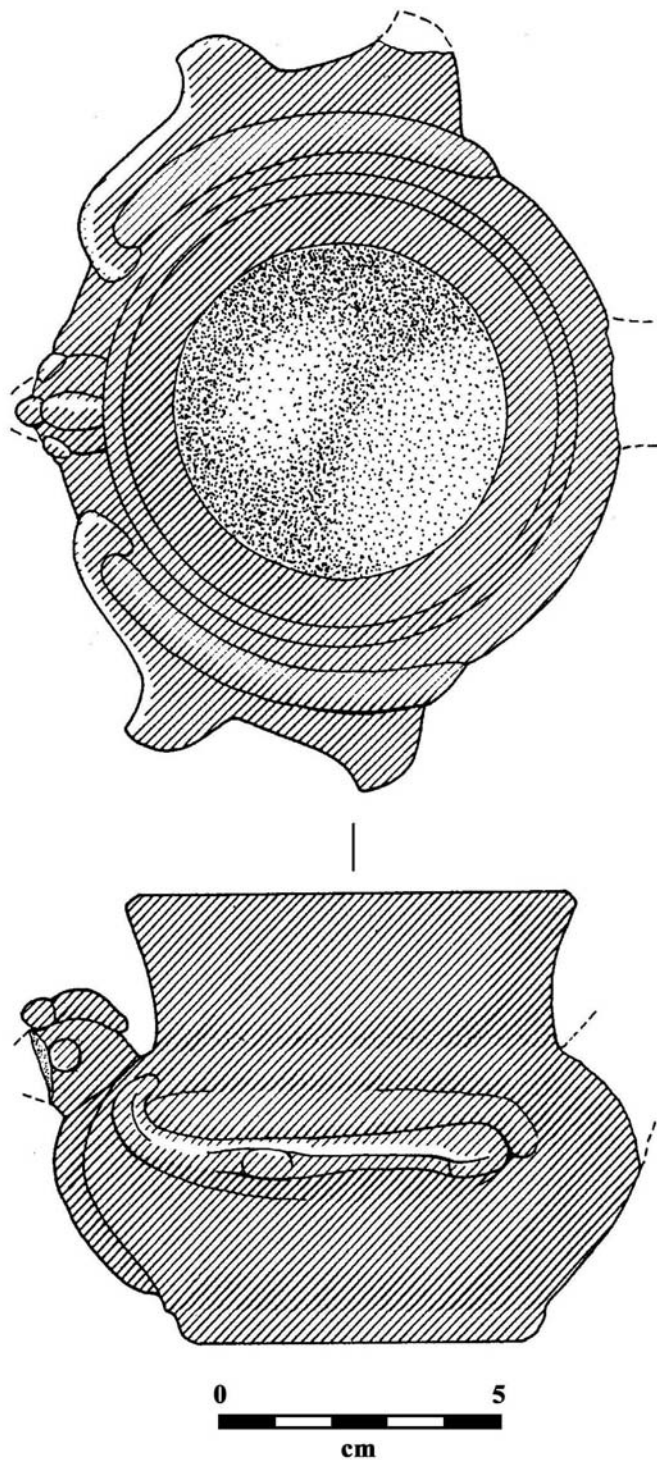


Figure 64: Unnamed Brown-and-modeled (LA 496/1) spouted effigy jar. (vessel has brown decoration, not orange as shown.)

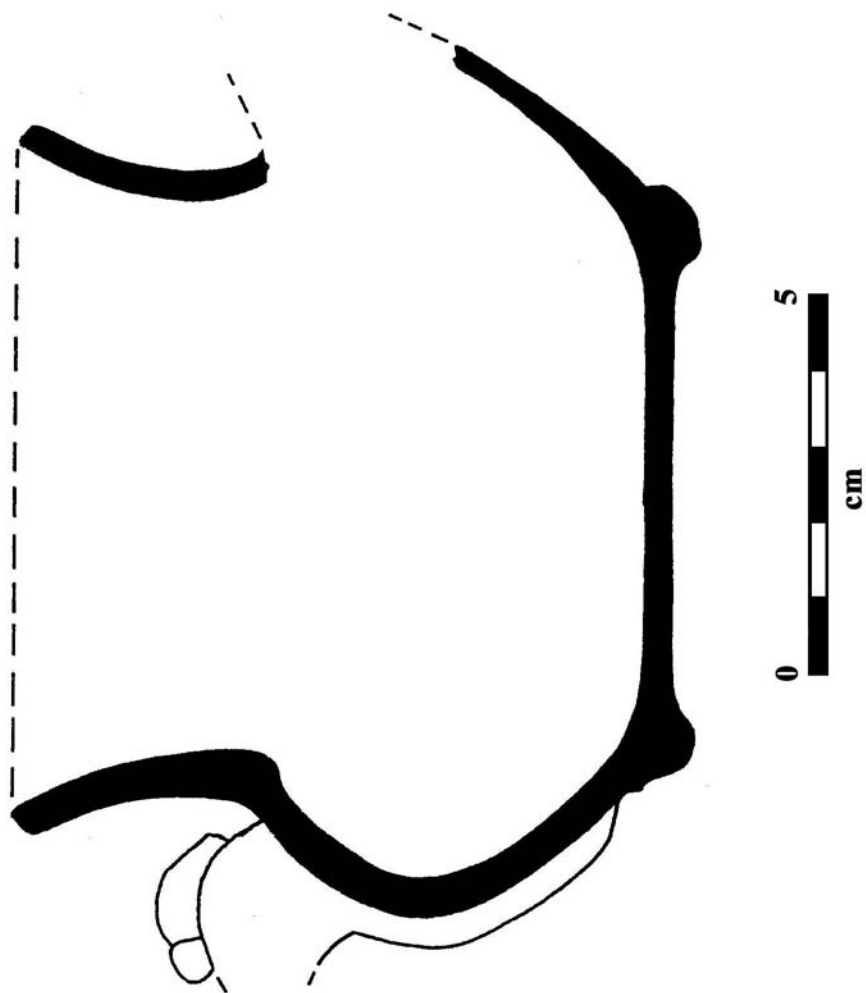


Figure 65: Unnamed Brown-and-modeled (L.A 496/1) spouted effigy jar.

FORM: Short, thin-sided spouted jar with slightly outflaring everted rim and squat body. The lip is beveled-out. The neck is short with a restricted orifice. The interior base is flat. The ring base is symmetrical in shape. Height: 8.65 cm; Rim diameter: 9.0 cm; Orifice diameter: 8.0 cm; Rim thickness: 0.5 cm; Body thickness: 0.2 cm; Base thickness: n/a; Neck height: 3.1 cm; Ring base height: 0.5 cm; Length of wings: 8.3 cm; Width of wings: 1.8 cm; Thickness of wings: 0.75 cm; Height of bird head: 2.1 cm; Width of bird head: 0.79 cm; Weight: 310 g.

APPENDAGES: The unsupported spout is angled out from the vessel body, probably in a canted position. Although missing, it probably never rose above the rim of the vessel. Diameter of spout (at base): 3.2 cm. No other measurements are possible.

CULTURAL SIGNIFICANCE: This thin-walled vessel had no visible incrustation or residue on either side. Some use wear is found on the margin of the ring base. Given the recent findings of cacao residues in some spouted vessels at Colha (see Powis et al. 2002), it is possible that this spouted jar was also used to contain liquid chocolate.

INTERSITE LOCATIONS: None noted for this bird effigy form, slip color, and surface treatment.

VESSEL NUMBER: LA 496/2

TYPE: VARIETY: Unnamed Red-rimmed Brown and Grooved-incised

ESTABLISHED: Present study

GROUP: Unspecified?

WARE: Unspecified?

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Floral Park

ILLUSTRATION: Figure 66

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) brown slip on interior neck; 2) brown slip on exterior; 3) spouted jar with ring base; 4) red slip on vessel lip and spout lip; 5) grooved-incised lines on exterior neck only.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 7.5YR 6/6 (reddish yellow) to 7.5YR 7/6 (reddish yellow). No carbon stain is present. It has a fine texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of tiny pieces of calcite and quartz, but unidentified white and light brown particles occur as well.

SURFACE FINISH AND DECORATION: A thin, hard, glossy brown slip centering on 10YR 5/4 (yellowish brown) was applied to the interior neck and to the exterior from the rim to the margin of the ring base. The spout is also slipped brown. The brown slip has been dripped (or spilled) across unslipped areas of the interior. Both slipped surfaces are very well-smoothed and exhibit a high burnish. The unslipped interior is also smoothed, but some lateral wiping marks are present. The base is also well-smoothed. Temper is visible through thin slipped surfaces. Decoration consists of a red (10R 4/8, 2.5YR 4/8) slip on the lip of the vessel and on the spout. Secondary decoration is of pre-slip grooved-incised lines, forming triangles, on the exterior neck. The lines run from the base of the rim to the base of the neck where there is a slight step at the neck/shoulder break. Rootlet marks, white in color, are extensive on both sides.

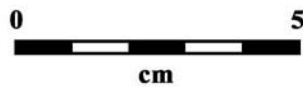
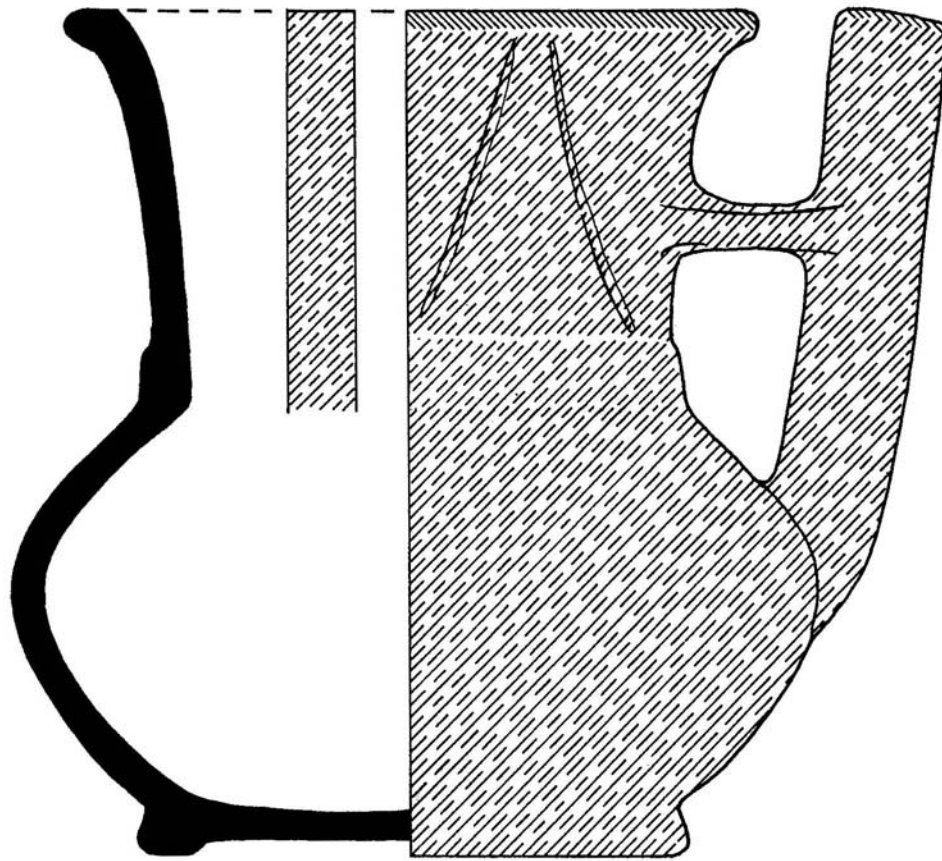


Figure 66: Unnamed Red-rimmed Brown and Grooved-incised (LA 496/2) spouted jar. (vessel has brown decoration on both sides, not buff as shown.)

No crazing. One large firing cloud, light gray in color, is located on exterior lower body between the base and spout. The thin brown slip has leached considerably on both surfaces.

FORM: Tall, thin-sided spouted jar with high vertical neck and slightly outflaring everted rim. The body is globular in shape. The lip is rounded with a somewhat flat rim. The interior base is flat. The ring base is symmetrical in shape. Height: 14.15 cm; Rim diameter: 12.4 cm; Orifice diameter: 8.7 cm; Base diameter: 10.2 cm; Rim thickness: 0.7 cm; Body thickness: 0.35 cm; Neck height: 6.7 cm; Ring base height: 0.7 cm; Weight: 648 g.

APPENDAGES: The spout is supported or bridged to the vessel at the neck. The spout is attached at the upper body and rises to just above the rim. The top of the spout is flat and round in cross-section. Height of spout: 10.9 cm; Spout distance (at rim): 1.4 cm; Spout rim diameter: 2.2 cm; Spout orifice diameter: 0.9 cm.

CULTURAL SIGNIFICANCE: This thin-walled vessel had no visible incrustation or residue on either side. Some use wear is found on the margin of the ring base. The red slip on the vessel lip and spout lip are worn. This vessel may have been used to contain liquid chocolate like some of the spouted vessels at Colha.

INTERSITE LOCATIONS: Two Unnamed Red-rimmed, Buff, spout-and-bridge jars (Vessel 1 and 3) from Protoclassic Tomb 2 at Chan Chich (Valdez 1998:79; Valdez and Houk 2000:131-132) are nearly identical to the Lamanai specimen. Also, one Sierra Red: Big Pond Variety vessel from Cuello (Pring 1977a: Figure 65h) is very similar in terms of form compared to the Lamanai specimen with the exception of the slip color and decoration.

VESSEL NUMBER: LA 496/3

TYPE: VARIETY: Puletan Red-and-unslipped: Puletan Variety

ESTABLISHED: Type and Variety named by Pring (1977a) at Cuello.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 67a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) red slip on interior neck; 2) red slip on exterior neck; 3) jar with slightly outflaring rim; 4) encircling row of dot punctations on exterior; 5) lower body is vertically striated.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 10YR 7/2 (light gray) to 10YR 8/2 (white). A thick gray (7.5YR 3/0) core is present in neck only. It has a medium texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, and hematite, but unidentified white and pink particles occur as well.

SURFACE FINISH AND DECORATION: A thin, hard red slip centering on 10R 4/6 (red) was applied to the interior rim and to the exterior from the rim to the

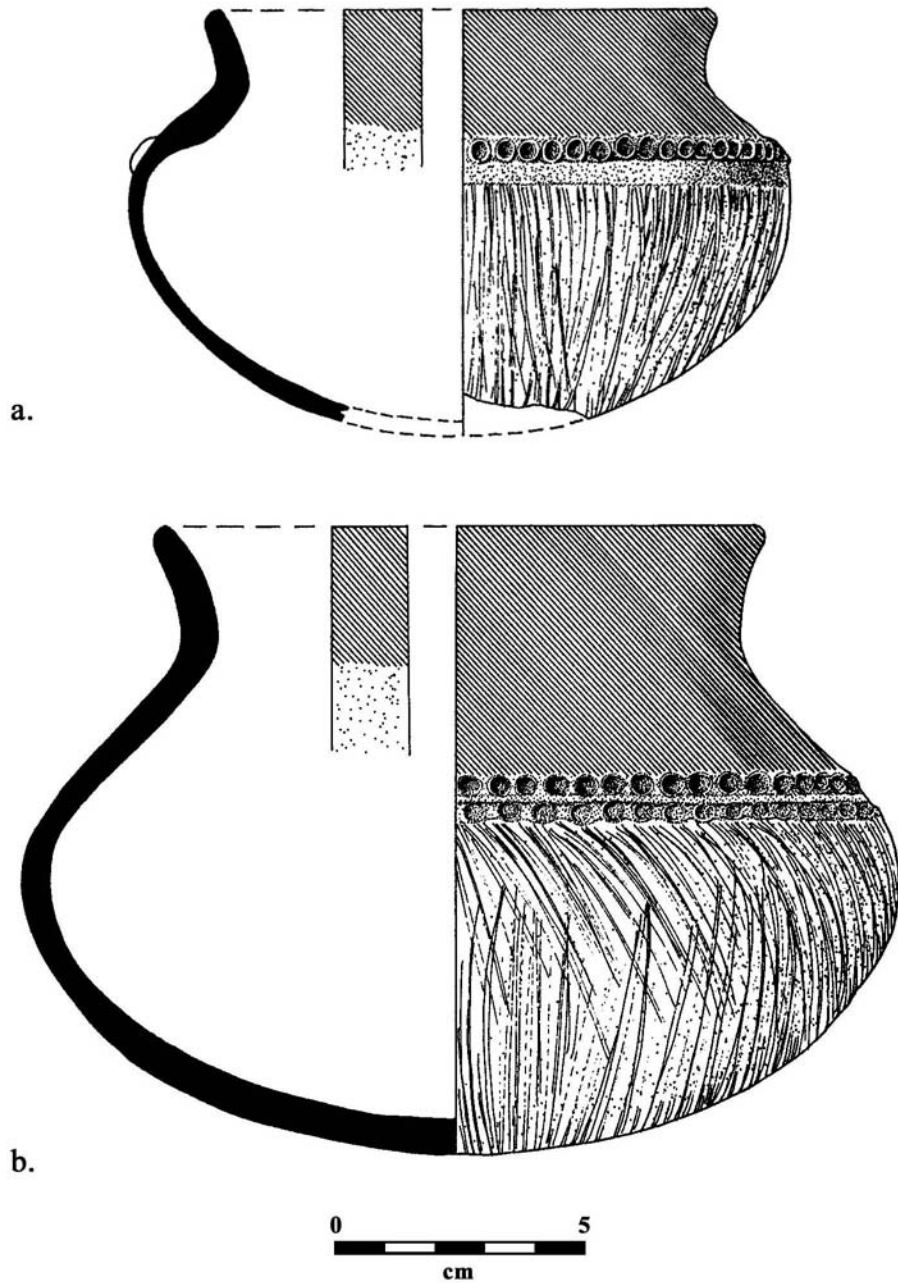


Figure 67: a) Puletan Red-and-unslipped: Puletan Variety (LA 496/3) jar;
b) Puletan Red-and-unslipped: Puletan Variety (LA 496/4) jar.

neck/shoulder break. The body portions on both sides were left unslipped. Red slip has been dripped (or spilled) across unslipped areas of the interior and exterior, including the punctations. Both sides are well-smoothed with some lateral wiping marks present. There are pieces of welled-up clay on the lower interior surface. Each side exhibits a medium burnish. Temper is visible through thin slipped surfaces. Decoration consists of a single encircling row of small dot punctations located at the neck/shoulder break. They appear to be made by hollow tool impressions that produced a ring with a raised dot in the center. Below the dot punctations the body is vertically striated from a multi-pointed tool. Just beneath the decoration is a wiping or smoothing mark that runs horizontally around the vessel. It is quite visible and in stark contrast to the vertical striations. One black firing cloud is located on the exterior base.

FORM: Small, thin-sided jar with slightly outflaring everted rim and squat body. The lip is rounded. The neck is short with a restricted orifice. The base is rounded. Height: 7.4+ cm; Rim diameter: 12.7 cm; Orifice diameter: 10.4 cm; Rim thickness: 0.55 cm; Body thickness: 0.3 cm; Base thickness: 0.45 cm; Neck height: 1.2 cm; Diameter of punctations: 0.45-0.6 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard thin-walled vessel had no visible incrustation or residue on either side. However, the exterior lower body is blackened and may have been caused from post-fire use. Given its small size, slightly restricted neck, and striated surface, it probably functioned as a water carrying vessel.

INTERSITE LOCATIONS: See LA 364/3 for distribution of this type across the Maya area. Examples from Kichpanha are similar to the Lamanai specimen (McDow 1997:61-64; Meskill 1992:Figure 11). At El Pozito, Granate Composite: Granate Variety is also reminiscent in style and form (Case 1982:Figure 3a). Another related type, Petroglyph

Red-rimmed, has been found in Protoclassic-Tzakol 1 deposits at Colson Point (Graham 1994:170-174) and at Petroglyph Cave (Reents 1980:159-161).

VESSEL NUMBER: LA 496/4

TYPE: VARIETY: Puletan Red-and-unslipped: Puletan Variety

ESTABLISHED: Type and Variety named by Pring (1977a) at Cuello.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 67b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) red slip on interior neck; 2) red slip on exterior neck; 3) jar with slightly outflaring rim; 4) encircling double row of dot punctations on exterior; 5) lower body is vertically striated.

PASTE, TEMPER, AND FIRING: The paste is uniform in color centering on 10YR 7/3 (very pale brown). A thin light gray core is present in the neck only. It has a medium texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified white particles occur as well.

SURFACE FINISH AND DECORATION: A thin, hard red slip centering on 10R 4/6 (red) was applied to the interior rim and to the exterior from the rim to the neck/shoulder break. The body portions on both sides were left unslipped. Red slip has been dripped (or spilled) across unslipped areas of the interior and exterior, including the punctations. Both sides are well-smoothed with some lateral wiping marks present. Each side exhibits a medium burnish. Temper is visible through thin slipped surfaces. Decoration consists of two encircling rows of small, closely-spaced dot punctations located at the neck/shoulder break with a small, thin ridge placed between them. The punctations on the bottom row are more lightly impressed. Below the dot punctations the body is vertically striated from a multi-pointed tool. Crazeing and rootlet markings occur on both slipped surfaces. Heavy black firing clouds are found on the interior rim as well as the exterior rim and lower body.

FORM: Small, thin-sided jar with slightly outflaring everted rim and squat body. The lip is rounded to slightly pointed. The neck is short with a restricted orifice. The base is rounded. Height: 12.4 cm; Rim diameter: 12.5 cm; Orifice diameter: 10.0 cm; Rim thickness: 0.7 cm; Body thickness: 0.5 cm; Base thickness: 0.58 cm; Neck height: 2.1 cm; Diameter of punctations: 0.35-0.7 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard thin-walled vessel had no visible incrustation or residue on either side. However, the entire exterior surface, except the slipped portion around the neck, is heavily blackened and may have been caused from post-fire use. Given its small size, slightly restricted neck, and striated surface, it probably functioned as a water carrying vessel.

INTERSITE LOCATIONS: See LA 364/3 and LA 469/3 for distribution of this type across the Maya area.

VESSEL NUMBER: LA 496/5

TYPE: VARIETY: Ixcanrio Orange-polychrome: Ixcanrio Variety

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated by Gifford (1976) at Barton Ramie.

GROUP: Aguacate

WARE: Holmul Orange

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Floral Park

ILLUSTRATION: Figure 68a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) glossy orange slip on interior with red and black lines at rim; 2) glossy orange slip on exterior with red and black designs across body; 3) tetrapod bowl with slightly outflaring everted rim and sharp basal angle; 4) hollow mammiform feet.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color centering on 2.5YR 6/6 (light red). A light gray core is present in some areas. It is moderately sorted (grains generally less than 1 mm in size) and grainy with temper material having a round to angular fracture. This vessel (sample #2000-14) was subjected to a petrographic analysis by Linda Howie-Langs (2002a:7). It belongs to the Micrite/Quartz Group. The paste is composed primarily of fine-grained sparry calcite,

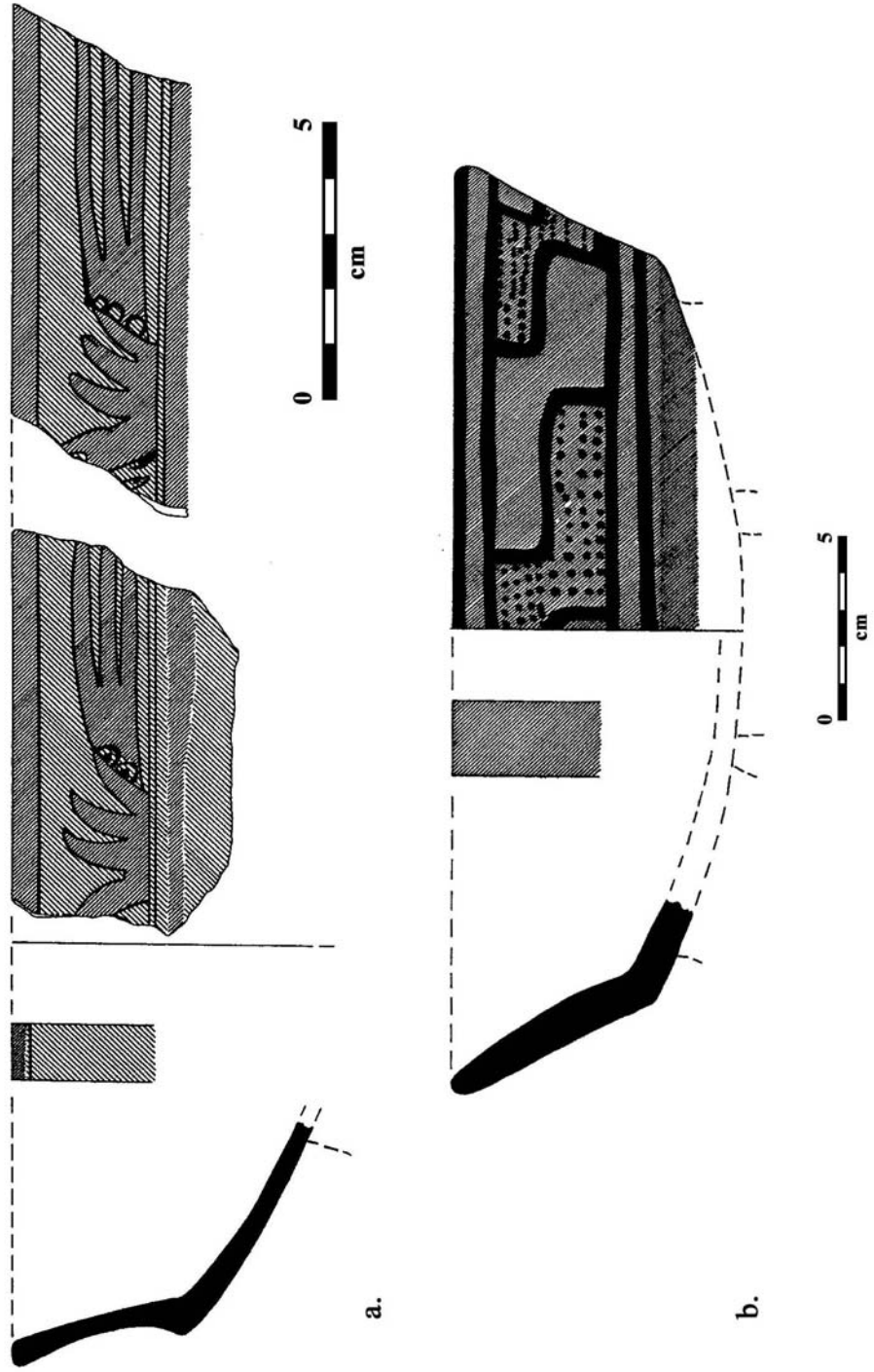


Figure 68: a) Ixcanrio Orange-polychrome: Ixcanrio Variety (LA 496/5) mammiform tetrapod bowl;
 b) Unnamed Black-on-red (LA 496/7) mammiform tetrapod bowl.

crystalline calcite, and micrite. Lesser amounts of hematite nodules (up to 2.5 mm in size), microcrystalline calcite, grog, and polycrystalline quartz also occur. One shell fragment was found in the paste. There is a tendency for the paste to flake at the edges. The paste contains many voids likely caused from burnt organic material. Distinctive argillaceous fragments were found in the paste recipe. These golden-brown colored (carbonate) mudstone fragments are not found locally within the sustaining environs of Lamanai and, therefore, may have been imported as a tempering agent for this particular vessel. It is also possible that the vessel itself was imported to the site.

SURFACE FINISH AND DECORATION: A hard, glossy orange slip ranging from 5YR 5/8 (yellowish red) to 5YR 6/8 (reddish yellow) was applied to the interior and exterior surfaces, including the feet and base. According to Howie-Langs (2002a:7), microscopic analysis has shown that a thin layer of slip was applied to the surfaces of this vessel. Both sides are very well-smoothed and exhibit a very high burnish. Some lateral smoothing marks are visible around base of feet. Decoration consists of a red (10R 4/8, 2.5YR 4/8) rim with black (7.5YR 2/0) line below it on the interior. The exterior rim has the same pattern. Below the exterior rim are two long-tailed birds, probably stylized macaws, in red with black outlining. There are “eye spots” at the head of the tailfeathers. The bird design rests on a thin black line above a second, with a red band located at the sharp basal angle. Rootlet markings are prevalent on both sides. No crazing. One small, localized firing cloud occurs around the mammiform foot.

FORM: Flaring-sided bowl with slightly outflaring everted rim and sharp basal angle. The rim is slightly exteriorly thickened. The lip is rounded. The base is rounded. Height (without feet): 8.7 cm; Rim diameter: 28.5 cm; Rim thickness: 1.05 cm; Body thickness: 0.8 cm; Base thickness: 0.66 cm.

APPENDAGES: Four large, hollow mammiform feet were broken off before deposition. Each one likely had at least one venting hole, possibly with rattles. They are located very close to the basal angle. Diameter of foot (at base): 6.5 cm.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either side. Given its flaring sides, shallow depth, and slipped interior surface, this beautifully decorated vessel probably functioned as a family sized serving vessel.

INTERSITE LOCATIONS: This type has been across the lowlands at many sites, including Altar de Sacrificios (Adams 1971), Barton Ramie (Gifford 1976), Colha (Valdez 1987), Edzna (Forsyth 1983), Kakalche (Graham 1994), Kichpanha (McDow 1997; Meskill 1992), Komchen (Andrews V 1988), La Lagunita (Ichon et al. 1988), Naj Tunich (Brady 1987; Brady et al. 1998), Santa Rita Corozal (Chase and Chase 1987), and Uaxactun (Smith and Gifford 1966).

VESSEL NUMBER: LA 496/7

TYPE: VARIETY: Unnamed Black-on-red

ESTABLISHED: Present study

GROUP: Cabro?

WARE: Chunux Hard?

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 68b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, hard red slip on vessel surfaces; 2) black slip in stepped fret designs on exterior; 3) tetrapod bowl with outflaring everted rim and sharp basal angle; 4) hollow mammiform feet.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 2.5YR 5/8 (red) to 2.5YR 6/8 (light red). A thick dark gray (2.5YR 3/0) core is present, especially at the feet. It has a medium texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper is well-sorted and consists mostly of calcite, quartz, and hematite (up to 4.7 mm in size), but unidentified white particles occur as well. The paste contains many voids likely caused from burned out organic material.

SURFACE FINISH AND DECORATION: A thin, hard, slightly lustrous red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, including the feet and base. Both sides are smoothed, but broad lateral wiping marks are present creating irregular walls. Each side exhibits a high burnish. Some temper is visible through thin red slipped surfaces. Decoration consists of crude stepped frets or angular “z” motifs filled with small irregular solid dots. There is a double line above and below the stepped frets. The upper line above the stepped frets is located on the exterior rim. No crazing and no firing clouds are present. The black slip is eroding or leaching away from red slip.

FORM: Flaring, thick-sided bowl with slightly outflaring everted rim and sharp basal angle. The lip is rounded to slightly pointed. The basal angle is uneven in shape. The base is rounded. Height (without feet): 7.8 cm; Rim diameter: 25.2 cm; Rim thickness: 0.75 cm; Body thickness: 1.05 cm; Base thickness: 0.96 cm; Width of black lines: 0.34-0.53 cm; Width of dots: 0.11-0.33 cm.

APPENDAGES: Four large, hollow mammiform feet were broken off before deposition. Each one likely had at least one venting hole, possibly with rattles. They are located very close to the basal angle. Diameter of foot (at base): 5.74 cm.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either side. Some use wear on lip. Given its flaring sides and slipped interior surface, this vessel probably functioned as a family sized serving vessel.

INTERSITE LOCATIONS: None noted.

VESSEL NUMBER: LA 496/8

TYPE: VARIETY: Puletan Red-and-unslipped: Puletan Variety

ESTABLISHED: Type and Variety named by Pring (1977a) at Cuello.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 69a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) red slip on interior neck; 2) red slip on exterior neck; 3) jar with slightly outflaring rim; 4) encircling row of dot or oval

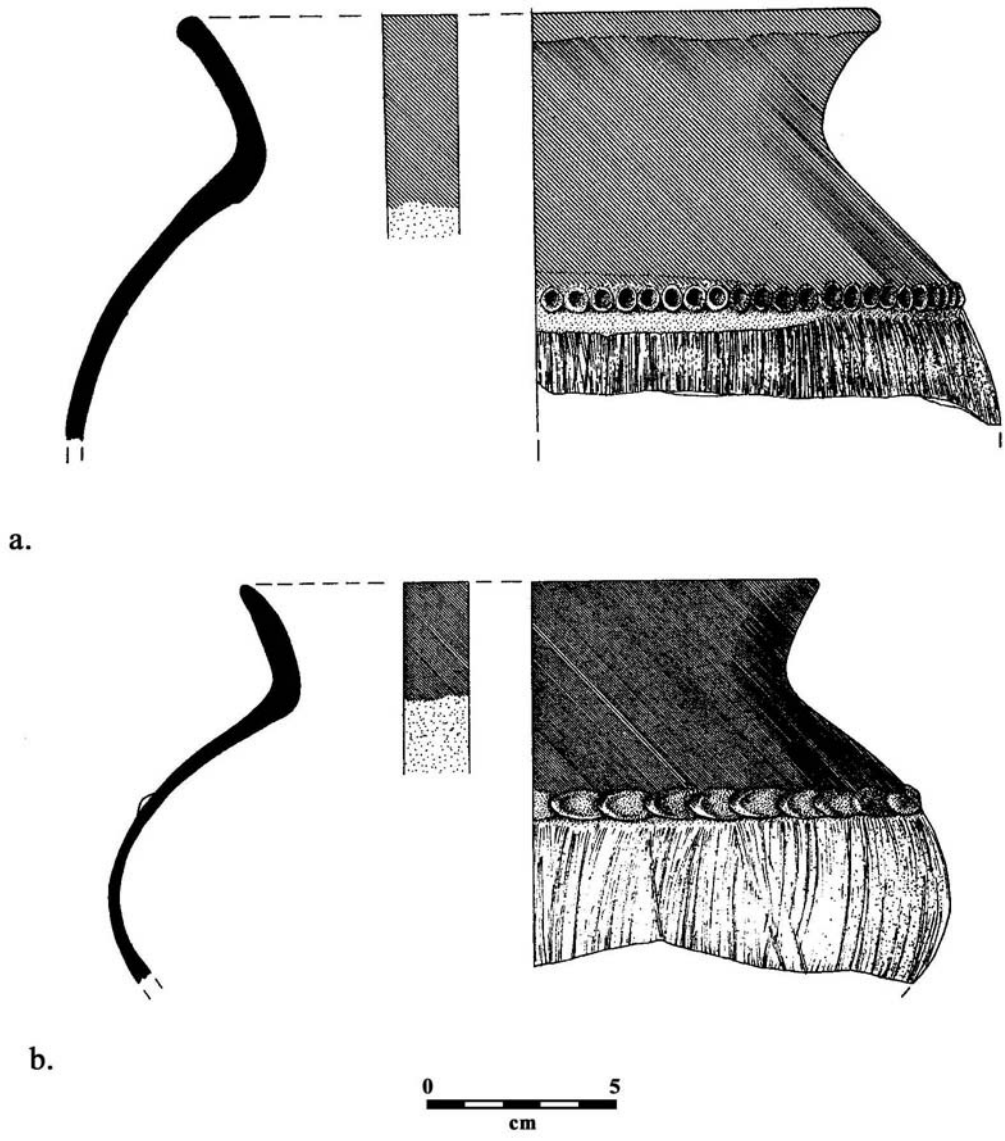


Figure 69: a) Puletan Red-and-unslipped: Puletan Variety (LA 496/8) jar;
b) Puletan Red-and-unslipped: Puletan Variety (LA 496/9) jar.

punctations on exterior; 5) lower body is vertically striated.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 7.5YR 7/3 (pink) to 10YR 7/3 (very pale brown). Gray edges occur from firing clouds. It has a coarse texture (grains generally less than 2.5 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, and hematite, but unidentified white, red, and pink particles occur as well. The paste contains many voids likely caused from burned out organic material.

SURFACE FINISH AND DECORATION: A thin, hard red slip ranging in color from 10R 4/6 (red) and 10R 4/8 (red) to 2.5YR 4/6 (red) to 2.5YR 4/8 (red) was applied to the interior rim and to the exterior from the rim to the neck/shoulder break. The body portions on both sides were left unslipped. Red slip has been dripped (or spilled) across unslipped areas of the interior and exterior, including the punctations. Both sides are smoothed with lateral wiping marks present, especially on interior body. Each side exhibits a medium burnish. Temper is visible through thin slipped surfaces. Decoration consists of a single encircling row of small dot or oval punctations located at the neck/shoulder break. Below the dot punctations the body is vertically striated from a multi-pointed tool. Just beneath the decoration is a wiping or smoothing mark that runs horizontally around the vessel. It is quite visible and in stark contrast to the vertical striations. Heavy crazing, rootlet markings, and leaching occur on both slipped surfaces. Small black firing clouds are found on the interior and exterior lower body.

FORM: Small, thin-sided jar with slightly outflaring everted rim and globular body. The rim is slightly exteriorly thickened. It also undulates in form. The lip is rounded. The neck is short with a restricted orifice. The base is rounded. Height: 10.7+ cm; Rim diameter: 18.0 cm; Rim thickness: 0.72 cm; Body thickness: 0.48 cm; Base thickness: n/a; Neck height: 3.3 cm; Length of punctations: 0.53-0.68 cm; Width of punctuations: 0.65-0.8 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard thin-walled vessel had no visible incrustation or residue on either side. Given its small size, slightly restricted neck, and striated surface, it probably functioned as a water carrying vessel.

INTERSITE LOCATIONS: See LA 364/3 for distribution of this type across the Maya area.

VESSEL NUMBER: LA 496/9

TYPE: VARIETY: Puletan Red-and-unslipped: Puletan Variety

ESTABLISHED: Type and Variety named by Pring (1977a) at Cuello.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 69b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) red slip on interior neck; 2) red slip on exterior neck; 3) jar with slightly outflaring rim; 4) encircling band of appliquéd impressed fillets on the exterior; 5) lower body is vertically striated.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 10YR 7/2 (light gray) to 10YR 7/3 (very pale brown). A thick black (2.5YR 2.5/0) core is present. It has a medium texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified white particles occur as well.

SURFACE FINISH AND DECORATION: A thin, hard red slip ranging from 10R 4/6 (red) to 2.5YR 4/6 (red) was applied to the interior rim and to the exterior from the rim to the neck/shoulder break. The body portions on both sides were left unslipped. Red slip has been dripped (or spilled) across unslipped areas of the interior and exterior, including the fillets. Both sides are well-smoothed with some lateral wiping marks present. Each side exhibits a medium burnish. Temper is visible through thin slipped surfaces. Decoration consists of an encircling band of appliquéd impressed fillets, actually oval bosses compressed from the right, at the neck/shoulder break. The fillets are placed horizontally and slightly overlap each other. Below the fillets the body is vertically striated with a multi-pointed tool. Rootlet markings occur on interior rim. Crazeing is found on both sides. Extensive black firing clouds are located on the exterior lower body.

FORM: Small, thin-sided jar with slightly outflaring everted rim and globular body. The lip is rounded. The neck is short with a restricted orifice. The base is rounded. Height: 11.4+ cm; Rim diameter: 17.0 cm; Rim thickness: 0.8 cm; Body thickness: 0.38 cm; Base thickness: 0.6 cm; Neck height: 3.2 cm; Length of each fillet: 1.3-2.5 cm; Width of each fillet: 0.87 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This thin-walled vessel had no visible incrustation or residue on either side. However, the exterior lower body is blackened and may have

been caused from post-fire use. Given its small size, slightly restricted neck, and striated surface, it probably functioned as a water carrying vessel.

INTERSITE LOCATIONS: See LA 364/3 for distribution of this type across the Maya area.

VESSEL NUMBER: LA 496/10

TYPE: VARIETY: Puletan Red-and-unslipped: Puletan Variety

ESTABLISHED: Type and Variety named by Pring (1977a) at Cuello.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 71a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) red slip on interior neck; 2) red slip on exterior neck; 3) jar with slightly outflaring rim; 4) encircling row of fingernail impressions on exterior; 5) lower body is vertically striated.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 7.5YR 7/2 (pinkish gray) to 7.5YR 8/2 (pinkish white). No carbon stain is present. It is poorly sorted (grains generally less than 2 mm in size) and grainy with temper

material having a round to angular fracture. This vessel (sample #2000-10) was subjected to a petrographic analysis by Linda Howie-Langs (2002a:5). It belongs to the Micrite/Quartz Group. The paste is composed primarily of crystalline calcite, sparry calcite. Lesser amounts of monocrystalline quartz and micrite also occur. One shell fragment was identified in the paste. There is a tendency for the paste to flake at the edges. Distinctive argillaceous fragments were found in the paste recipe. These golden-brown colored mudstone fragments are not found locally within the sustaining environs of Lamanai and, therefore, may have been imported, like LA 495/10 (sample #2000-14) as a tempering agent. It is also possible that the vessel itself was imported to the site.

SURFACE FINISH AND DECORATION: A hard red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior rim and to the exterior from the rim to the neck/shoulder break. According to Howie-Langs (2002a:5), microscopic analysis has shown that a thin layer of slip was applied to the surfaces of this vessel. The body portions on both sides were left unslipped. Red slip has been dripped (or spilled) across unslipped areas of the interior and exterior, including the fillets. The unslipped interior body is smoothed, but rough in spots. The exterior is well-smoothed with only a few wiping marks present. Each side exhibits a medium burnish. Temper is visible through thin slipped surfaces. Decoration consists of an encircling row of fingernail impressions. They are rather uniform in size and shape and are connected to each other. They were made while the clay was still wet and then slipped over. Below the impressions the body is vertically striated with a multi-pointed tool. Some leaching of the slip occurs on the exterior. Light crazing is found on both sides. Small black firing clouds are found on the exterior shoulder.

FORM: Small, thin-sided jar with outflaring everted rim and globular body. The lip is rounded to slightly pointed. The neck is short with a restricted orifice. The base is rounded. Height: 8.8+ cm; Rim diameter: 13.5 cm; Rim thickness: 0.65 cm; Body

thickness: 0.5 cm; Base thickness: n/a; Neck height: 2.4 cm; Length of fingernail impressions: 0.91-1.28 cm; Width of fingernail impressions: 0.13 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This thin-walled vessel had no visible incrustation or residue on either side. Given its small size, slightly restricted neck, and striated surface, it probably functioned as a water carrying vessel.

INTERSITE LOCATIONS: See LA 364/3 for distribution of this type across the Maya area.

VESSEL NUMBER: LA 496/11

TYPE: VARIETY: Guacamallo Red-on-orange: Grooved-incised Variety

ESTABLISHED: Type named by Gifford (1976) at Barton Ramie; Variety designated in present study.

GROUP: Aguacate

WARE: Holmul Orange

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Floral Park

ILLUSTRATION: Figure 70

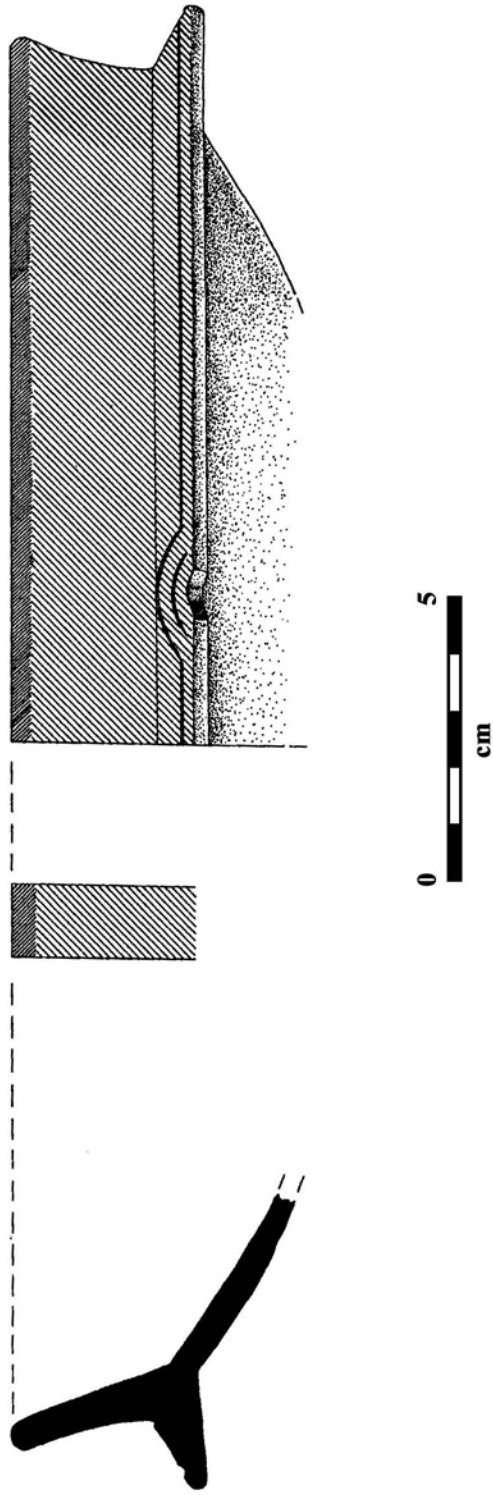


Figure 70: Guacamallo Red-on-orange: Grooved-incised Variety (LA 496/11) dish.

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, moderately hard, glossy orange slip on vessel surfaces; 2) dish with slightly outflaring everted rim and basal flange; 3) red slip on interior and exterior rim; 4) post-slip grooved-incised lines on flange.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color centering on 2.5YR 5/8 (red). A thick dark gray (2.5YR 4/0, 5/0) core is present. It has a medium texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, and hematite (up to 3.5 mm in size), but unidentified white particles occur as well. The paste contains many voids likely caused from burned out organic material.

SURFACE FINISH AND DECORATION: A thin, moderately hard, and slightly lustrous orange slip ranging from 2.5YR 5/8 (red) to 5YR 5/8 (yellowish red) was applied to the interior surface and to the exterior from the rim to flange edge. Below the flange the vessel was left unslipped. The slip is slightly streaky on the interior surface. Both sides are well-smoothed, but wiping marks occur under the flange. Each side exhibits a high burnish. Some temper is visible through the thin orange slipped surfaces. Decoration consists of a band of red slip on the interior and exterior rim. The width of the rim band on the interior is 1.0 cm and on the exterior it is 0.5 cm. Secondary decoration is of post-slip grooved-incised lines located at the top and edge of the basal flange. The lower line is broken by widely-spaced double-line semicircles which rise up toward the upper line. Light crazing is found and has resulted in some flaking. No firing clouds are present.

FORM: Flaring-sided dish with slightly outflaring everted rim and basal flange. The lip is rounded. The basal flange is wide and slightly downturned. The base is rounded. Height: 6.7+ cm; Rim diameter: 39.0 cm; Rim thickness: 0.85 cm; Body thickness: 0.55 cm; Base thickness: 0.68 cm; Width of flange: 2.2 cm; Thickness of flange (at body): 1.5 cm; Thickness of flange (at edge): 0.66 cm; Width of grooved-incised lines: 0.3 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either side. Some use wear on flange edge. Given its flaring sides, large diameter, and slipped interior surface, this vessel probably functioned as a family sized serving vessel.

INTERSITE LOCATIONS: None specifically for this variety, but the type occurs in minor amounts at a number of sites across the lowlands, including Barton Ramie (Gifford 1976), Edzna (Forsyth 1983), Kakalche (Graham 1994), Kichpanha (McDow 1997), Komchen (Andrews V 1988), Santa Rita Corozal (Chase and Chase 1987), and Watson's Island (Graham 1994). The vessel at Lamanai is very similar to Gifford's (1976) Camalote Variety at Barton Ramie due to the dark paste color, but has been designated differently because of the addition of grooved-incised lines on the flange.

VESSEL NUMBER: LA 496/12

TYPE: VARIETY: Ixcanrio Orange-polychrome: Ixcanrio Variety

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated by Gifford (1976) at Barton Ramie.

GROUP: Aguacate

WARE: Holmul Orange

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Floral Park

ILLUSTRATION: Figure 71b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, hard, glossy orange slip on interior; 2) thin, hard, glossy orange slip with red and black geometric designs on exterior; 3) thin-walled jar with short neck and direct rim.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 2.5YR 6/6 (light red) to 2.5YR 6/8 (light red). A thick gray (2.5YR 5/0) core is present. It has a fine texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The paste is hard and compact. The temper consists mostly of calcite and quartz, but unidentified white and black particles occur as well.

SURFACE FINISH AND DECORATION: A thin, hard, glossy orange slip centering on 2.5YR 5/8 (red) was applied to the interior neck and to the exterior at least to the upper body. The interior surface below the neck is left unslipped. Both sides are well-smoothed and exhibit a high burnish. Decoration consists of two thin black (2.5YR 2.5/0) lines on the neck that border black Ik symbols with a thick red (10R 4/6) encircling band located at the neck/shoulder break. On the shoulder, there are two thin black lines above widely separated geometric designs consisting of curved lines and stepped elements. No blemishes are found on either surface.

FORM: Small, rounded, thin-sided jar with short neck and vertical rim. The body is globular in shape. The lip is pointed. Although the base is missing, it is likely rounded. Height: 8.1+ cm; Rim diameter: 8.2 cm; Rim thickness: 0.5 cm; Body thickness: 0.4 cm; Neck height: 1.7 cm; Width of black lines: 0.24 cm; Width of red line: 0.5-0.6 cm.

APPENDAGES: None.

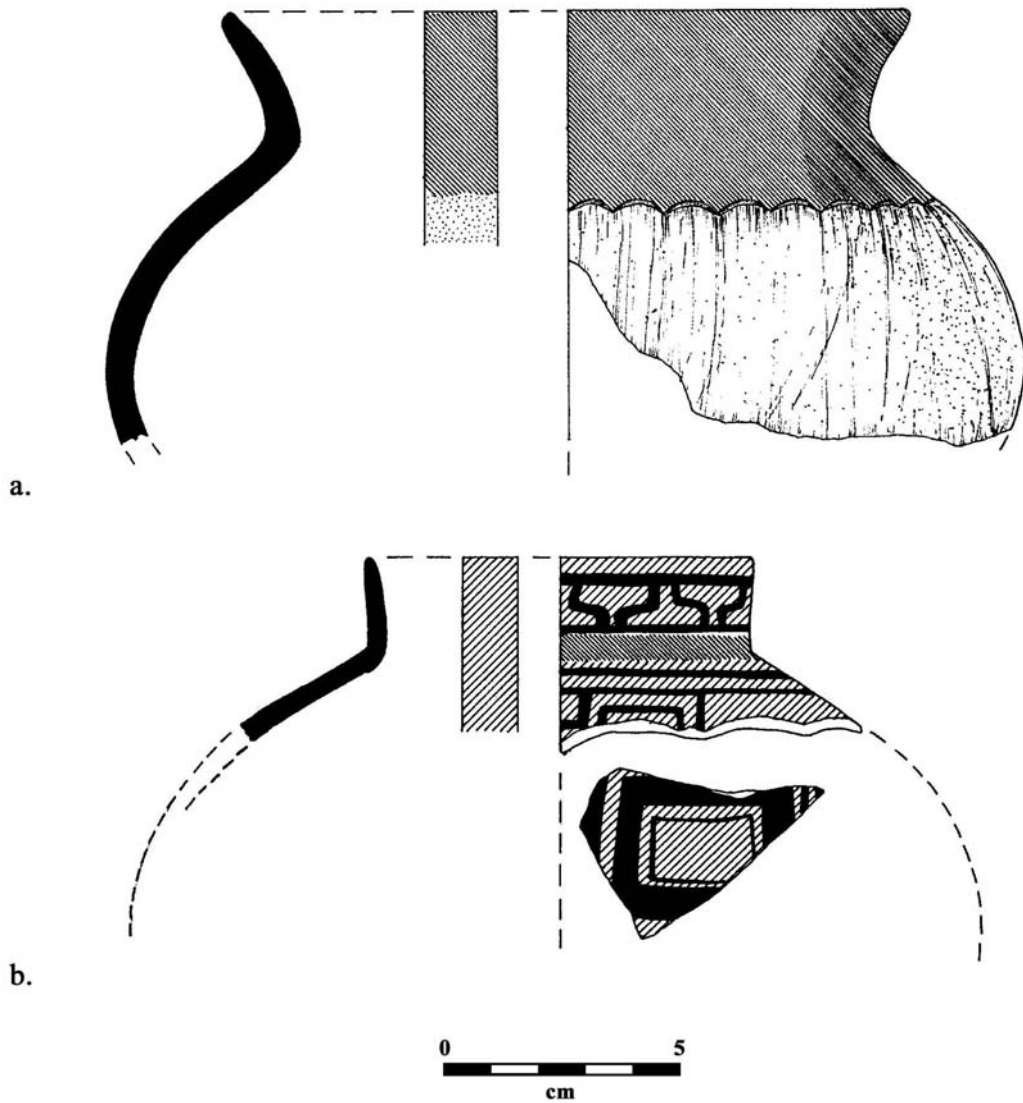


Figure 71: a) Puletan Red-and-unslipped: Puletan Variety (LA 496/10) jar; b) Ixcario Orange-polychrome: Ixcario Variety (LA 496/12) jar.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either side. Given its low neck, restricted orifice, and unslipped interior surface, this vessel probably functioned as a storage jar for dry goods.

INTERSITE LOCATIONS: See LA 496/5 for distribution of this type across the Maya lowlands.

VESSEL NUMBER: LA 496/13

TYPE: VARIETY: Puletan Red-and-unslipped: Puletan Variety

ESTABLISHED: Type and Variety named by Pring (1977a) at Cuello.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 72

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) red slip on interior neck; 2) red slip on exterior neck; 3) jar with slightly outflaring rim; 4) encircling band of appliquéd impressed fillets; 5) lower body is vertically striated.

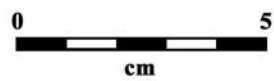
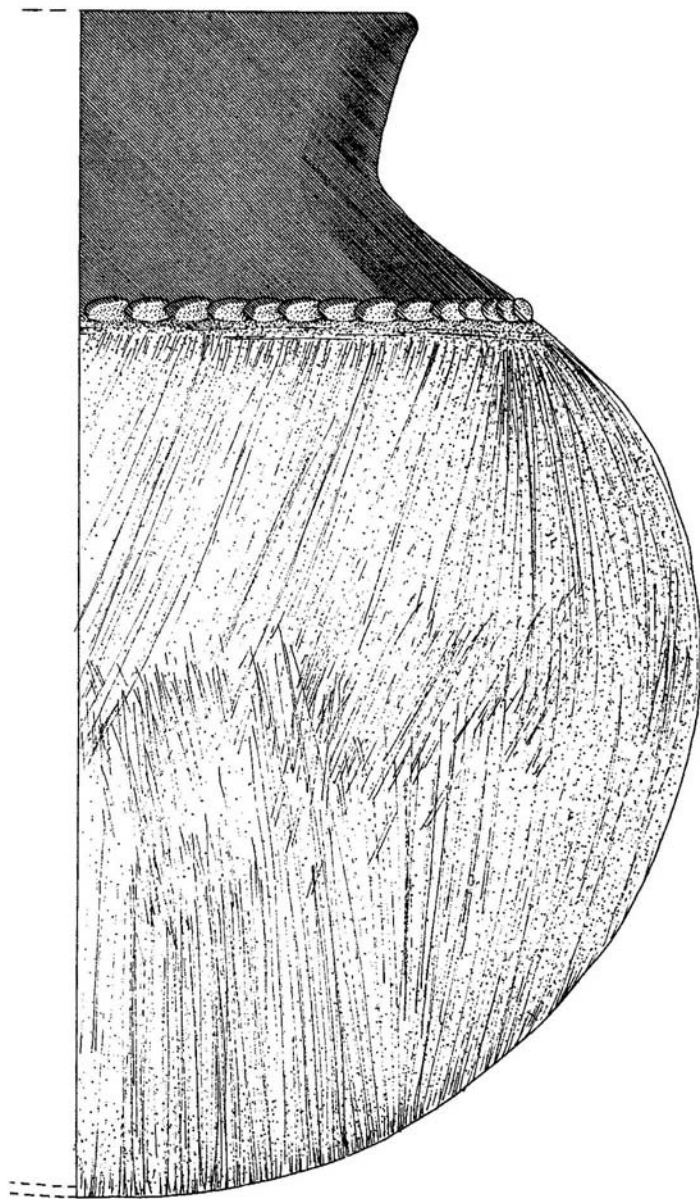


Figure 72: Puletan Red-and-unslipped: Puletan Variety (LA 496/13) jar.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color centering on 7.5YR 7/4 (pink). No carbon stain is present. It has a coarse texture (grains generally less than 3 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified white, black, red, and pink particles occur as well.

SURFACE FINISH AND DECORATION: A thin, hard red slip ranging in color from 2.5YR 3/6 (dark red) to 2.5YR 4/6 (red) and 2.5YR 4/8 (red) was applied to the interior rim and to the exterior from the rim to the neck/shoulder break. The body portions on both sides were left unslipped. Red slip has been dripped (or spilled) across unslipped areas of the interior and exterior, including the fillets. Both sides are well-smoothed with some lateral wiping marks present. Each side exhibits a medium burnish. Temper is visible through thin slipped surfaces. Decoration consists of an encircling band of appliquéd impressed fillets, actually oval bosses compressed from the right, at the neck/shoulder break. The fillets are placed horizontally and slightly overlap each other. Below the fillets the body is vertically striated from a multi-pointed tool. Heavy crazing is found on both sides and has resulted in flaking of the slipped surfaces. Extensive black firing clouds are located on the exterior lower body.

FORM: Large, thin-sided jar with slightly outflaring everted rim and rounded body. The lip is rounded. The neck is short with a restricted orifice. The base is rounded. Height: 35.1 cm; Rim diameter: 17.0 cm; Orifice diameter: 19.3 cm; Rim thickness: 0.78 cm; Body thickness: 0.45 cm; Base thickness: 0.77 cm; Neck height: 5.0 cm; Weight: 2,875 g.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This large, thin-walled vessel had no visible incrustation or residue on either side. However, the exterior lower body is blackened

and may have been caused from post-fire use. Given its large size, slightly restricted neck, and the unslipped interior surface, it probably functioned as a water storage vessel.

INTERSITE LOCATIONS: See LA 364/3 for distribution of this type across the Maya area.

VESSEL NUMBER: LA 496/14

TYPE: VARIETY: Cabro Red: Cabro Variety

ESTABLISHED: Type and Variety named by Robertson-Freidel (1980) at Cerros.

GROUP: Cabro

WARE: Chunux Hard

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 73a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, hard red slip; 2) slightly lustrous vessel surfaces; 3) bowl with flaring sides; 4) rootlet markings and firing clouds are present.

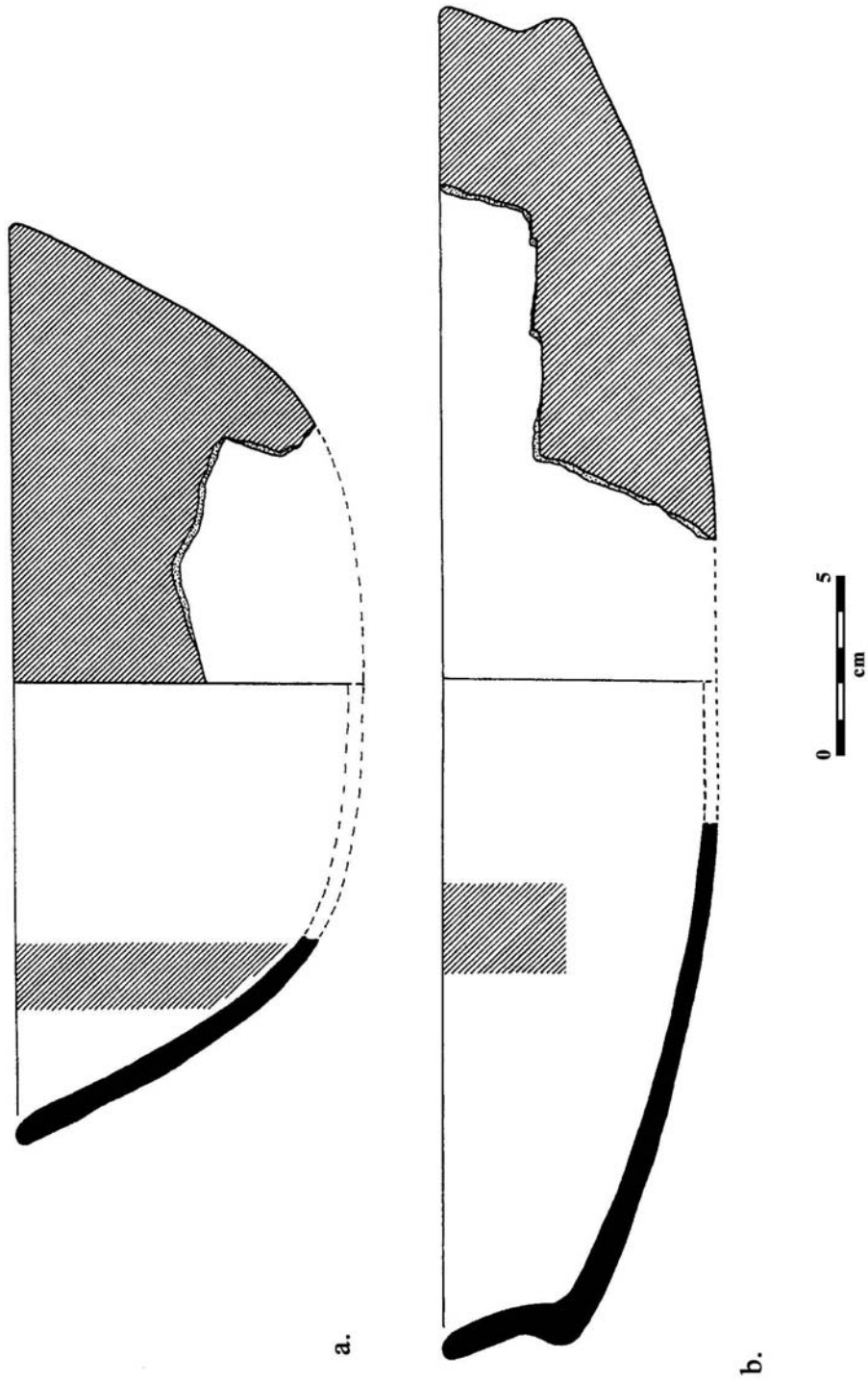


Figure 73: a) Cabro Red: Cabro Variety (LA 496/14) bowl; b) Unnamed Red-on-cream (LA 496/16) dish.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 6/6 (reddish yellow) to 7.5YR 6/6 (reddish yellow). A thick black (2.5YR 3/0) core is present. It has a medium texture (grains generally between 1-3 mm in size) with temper material having a round to angular fracture. The temper consists primarily of calcite and quartz. The paste contains a number of voids likely caused by burned out organic material.

SURFACE FINISH AND DECORATION: A thin, hard red slip ranging from 10R 4/6 (red) and 10R 4/8 (red) to 2.5YR 4/4 (reddish brown) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, including the base. The interior slip is slightly streaky. Both surfaces are smoothed, but lateral wiping marks create more unevenness on the exterior. Each side also exhibits a medium burnish. Temper is visible through the thin slipped surfaces. No decoration is present. Rootlet markings, white in color, are prevalent on both sides. Crazeing is light on each surface. Firing clouds, dark brown (7.5YR 3/2) in color, occur across the entire vessel.

FORM: Flaring, thin-sided bowl with rounded lip. The base is rounded. Height: 9.7 cm; Rim diameter: 25.7 cm; Base diameter: n/a; Rim thickness: 0.9 cm; Body thickness: 0.8 cm; Base thickness: 0.4 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This very hard and durable vessel had no visible incrustation or residue, but extensive blackening is found on both sides. Given the shape, thin walls, and blackened surfaces, it probably functioned as a cooking vessel. It may also have been used to warm or reheat foods.

INTERSITE LOCATIONS: See LA 520/4 for distribution of this type across the Maya lowlands.

VESSEL NUMBER: LA 496/15

TYPE: VARIETY: Chahmah Washed: Chahmah Variety

ESTABLISHED: Type and Variety named by Robertson-Freidel (1980) at Cerros.

GROUP: Paila

WARE: Uaxactun Unslipped

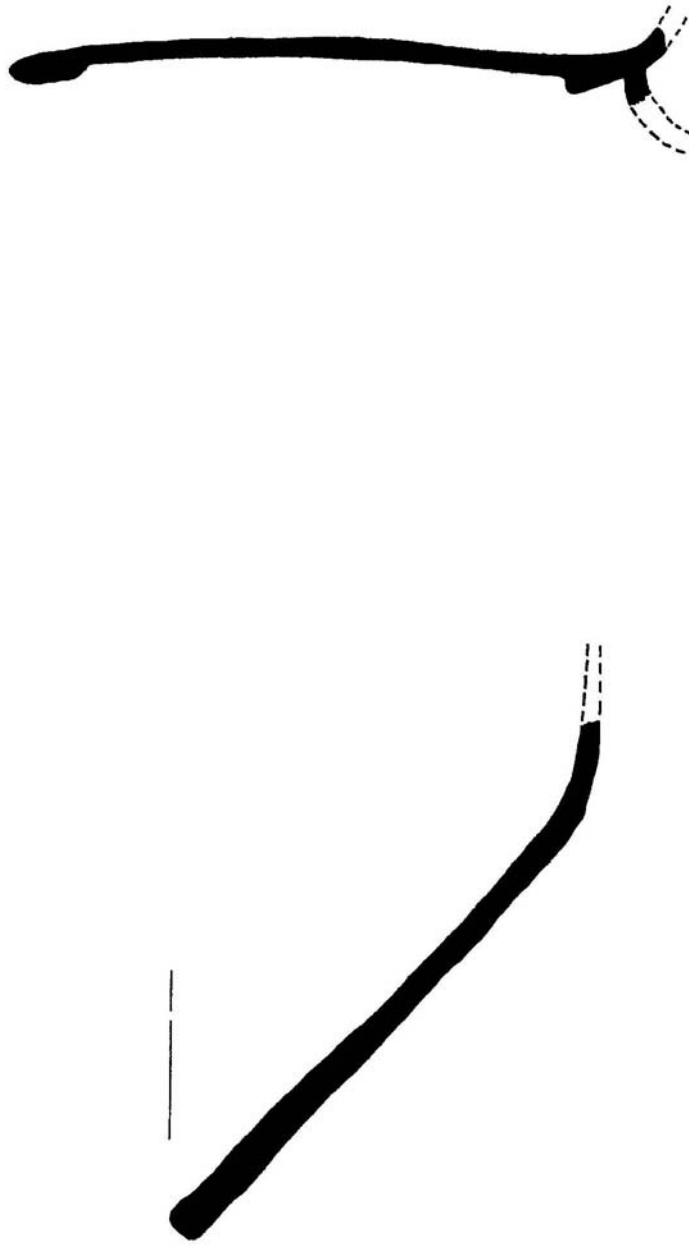
COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 74a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) roughly smoothed exterior; 2) thin wash on the interior and exterior; 3) large, flaring, thin-walled dish with direct rim; 4) cross-section on the sherds has a tendency to cleave; 5) thick dark gray core.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 10YR 6/2 (light brownish gray) and 10YR 6/3 (pale brown) to 10YR 7/2 (light gray) and 10YR 7/3 (very pale brown). A thick dark gray (2.5YR 3/0) to black (7.5YR 2/0) core is present. It has a fine-to-medium texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists of calcite, quartz, hematite, and some limestone (Linda Howie-Langs, personal communication, 1999). The paste contains a number of voids likely caused by burned out organic material. It is friable and the interior surface tends to cleave along a plane



a.

b.



Figure 74: a) Chahmah Washed: Chahmah Variety (LA 496/15) dish; b) Unnamed Cream-and-modeled (LA 496/18) vase.

running parallel to the body of the vessel (see Robertson-Freidel 1980:58-59).

SURFACE FINISH AND DECORATION: A thin, hard, red wash ranging from 10R 4/8 (red) to 10R 5/8 (red) was applied to the interior and exterior surfaces. When intact, the wash has a very slight luster; unfortunately, it is heavily eroded. The interior surface is well-smoothed while the exterior is rough, almost looking like concrete. It is poorly smoothed and numerous drag marks occur across it. Much of the exterior surface exhibits light raking in all directions. The exterior surface appears to have impressions of dirt and grass, likely from where the pot rested while it was being manufactured. Overall, the effect is one of expediency in producing this vessel. The temper is readily visible through the thin washed surface. No decoration is present. Rootlet marking and pitting occur on the interior surface.

FORM: Flaring, thin-sided dish with direct rim and rounded lip. The base is flat. Height: 8.5 cm; Rim diameter: ca. 34.0 cm; Rim thickness: 0.4-0.54 cm; Upper body thickness: 0.5 cm; Lower body thickness: 0.43 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This large, crudely-made vessel exhibited a thick incrustation on the interior surface which could be scraped off. Likewise, ten other sherds of the same type, albeit less complete than this vessel, also had incrustations on their interior surfaces. All of them likely served a domestic function and appear to be relatively disposable. The uniformity in size and shape of them indicates that they were used for a very specific function, perhaps in soaking corn in lime and water prior to consumption (Robertson-Freidel 1980:58-62; see also Graham 1994:155).

INTERSITE LOCATIONS: This type and variety have only been identified at Cerros (Robertson-Freidel 1980). The Lamanai specimens are very similar to these thin-walled,

crudely-fashioned, and friable vessels found at Cerros. Additionally, Graham (1994:153-156) has reported vessels of similar form and function, designated as Coconut Walk unslipped, at Watson's Island in the Stann Creek District; however, they date to Tzakol 3-Tepeu 1.

VESSEL NUMBER: LA 496/16

TYPE: VARIETY: Unnamed Red-on-cream

ESTABLISHED: Present study

GROUP: Cabro?

WARE: Chunux Hard?

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 73b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, hard red slip on interior and exterior; 2) cream underslip on interior; 3) glossy vessel surfaces; 4) dish with slightly outflaring everted sides; 5) thick dark gray core.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color centering on 7.5YR 7/4 (pink). A thick dark gray (2.5YR 4/0) core is present. It has a fine texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mainly of calcite and quartz, but unidentified light brown

particles occur as well. The paste contains a number of voids likely caused by burned out organic material.

SURFACE FINISH AND DECORATION: A thin, hard red slip ranging from 2.5YR 4/8 (red) to 2.5YR 5/8 (red) was applied to the interior and exterior surfaces, including the base. On the interior, there is a cream (5YR 8/2, 7.5YR 8/2) slip under the red slip. The cream underslip does not extend onto the exterior surface. The red slipped surfaces have eroded or leached to a golden-brown color (10YR 6/8, 7/8), especially on the basal portions of the vessel. Both sides are very well-smoothed and exhibit a high burnish. The cream underslip is very thin and non-lustrous. Some temper is visible through the thin slipped surfaces. No decoration is present. No crazing or firing clouds are present.

FORM: Flaring-sided dish with slightly outflaring everted rim and rounded basal angle. The lip is rounded. The base is slightly rounded. Height: 7.8 cm; Rim diameter: 38.0 cm; Rim thickness: 0.77 cm; Body thickness: 0.7 cm; Base thickness: 0.43 cm; Thickness at basal angle: 1.2 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either side. Given the large diameter and slipped interior surface, it probably functioned as a family sized serving vessel.

INTERSITE LOCATIONS: None noted for this type, but it shares stylistic affinities (e.g., a glossy red slip and the presence of a cream underslip) with Aguila Orange and La Compuerta Orange types (see Brady et al. 1998:24-25). However, the slip color is also identical to Cabro Red. It may be that the Lamanai specimen represents either an early temporal variety of Aguila Orange or a late temporal variety of Cabro Red.

VESSEL NUMBER: LA 496/17

TYPE: VARIETY: Monkey Falls Striated: Variety Unspecified

ESTABLISHED: Type named by Gifford (1976) at Barton Ramie; Variety designated in present study.

GROUP: Monkey Falls

WARE: Uaxactun Unslipped

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 75

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) red slip on interior neck; 2) red slip on exterior rim; 3) jar with high neck and slightly outflaring rim; 4) punctated-appliqued band encircling the vessel at mid-body; 5) horizontal striations on neck; 6) oblique criss-cross incised lines above band; 7) vertical striations above and below the appliqued band.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color centering on 10YR 8/4 (very pale brown). A thick dark gray (7.5YR 5/0) core is present. It has a medium texture (grains generally between 1-3.5 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified white, black, and pink particles occur as well.

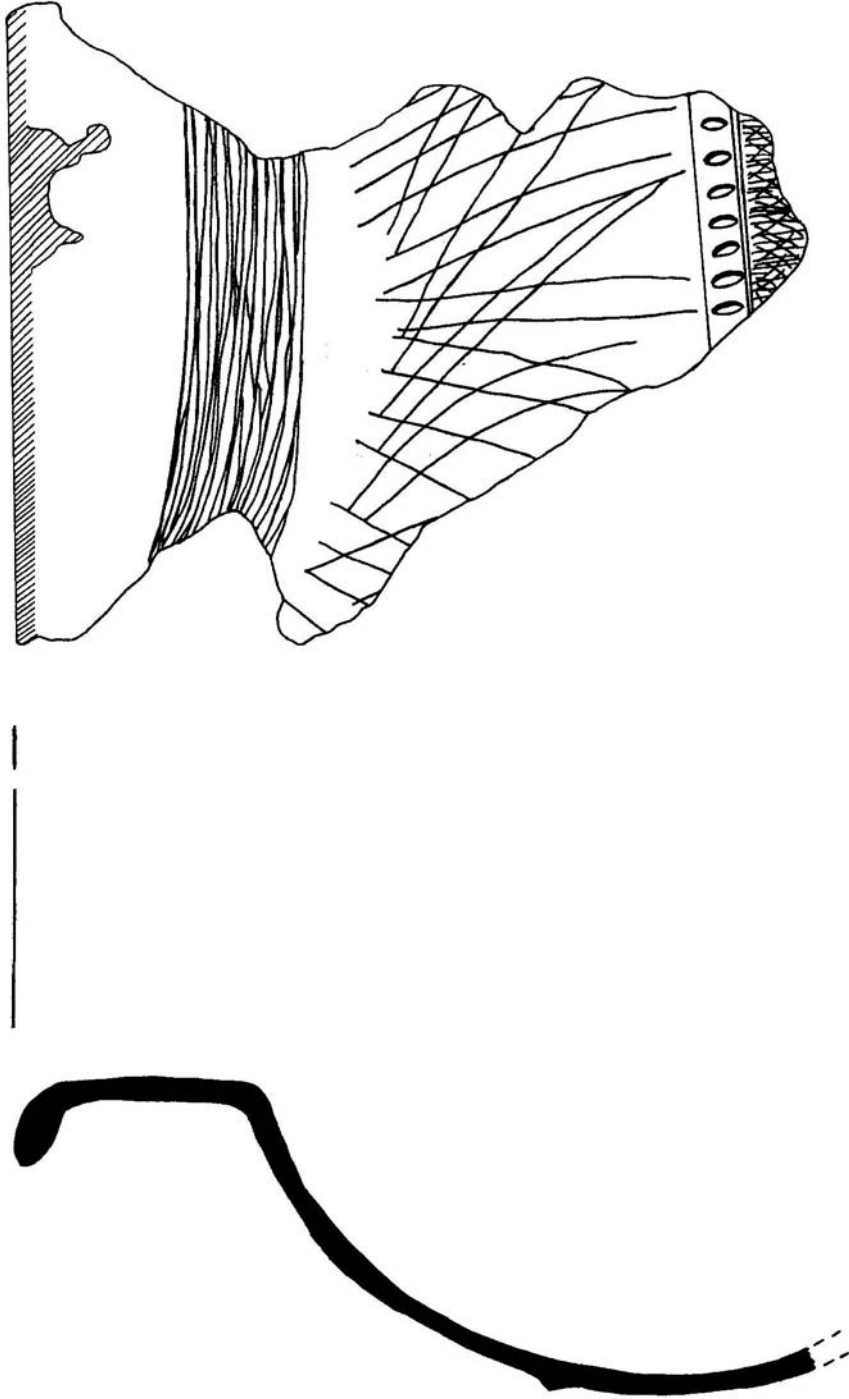


Figure 75: Monkey Falls Striated: Variety Unspecified (LA 496/17) jar.

SURFACE FINISH AND DECORATION: A thick, soft red slip centering on 10R 4/8 (red) was applied to the interior neck and to the exterior rim. The body portions on both sides were left unslipped. Red slip has been dripped (or spilled) down the slipped surfaces, including droplets on the exterior shoulder. The interior is well-smoothed with a medium burnish. Some temper is visible through the slipped surfaces. The exterior surface is completely decorated from the rim to the base. The decoration consists of a punctated-appliqued band encircling the vessel at mid-body. Using a tool, the linear punctations were pushed in from the left, leaving welled-up clay on the right side. There was no attempt made by the potter to wipe off this excess clay. Moreover, excess clay is also located above and below the appliqued band indicating further that no attempt was made to fully smooth the band to the vessel body. Other decoration consists of horizontal striations on the neck and vertical striations on the body, both above and below the appliqued band. Above the appliqued band, there are also deep incised lines, in a criss-cross pattern, executed above the vertical striations. Crazeing occurs and has resulted in flaking of the slipped surfaces. One large dark gray-to-black firing cloud was found on the exterior body.

FORM: Large, thin-sided jar with high neck and slightly outflaring everted rim. The body is globular in shape. The rim is slightly exteriorly thickened. The lip is rounded. The base is rounded. Height: 17.5+ cm; Rim diameter: 22.5 cm; Rim thickness: 1.17 cm; Body thickness: 0.5 cm; Base thickness: 0.5 cm; Width of appliqued band: 1.5 cm; Length of punctates: 1.0 cm; Width of punctates: 0.3 cm; Thickness at band: 0.65 cm; Width of grooved-incised lines: 0.1 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard thin-walled vessel had no visible incrustation or residue on either side. Given its large size, slightly restricted neck, and unslipped interior surface, it probably functioned as a dry storage vessel.

INTERSITE LOCATIONS: This type is found in minor amounts at a few lowland sites, including Barton Ramie (Gifford 1976) and K'axob (Lopez Varela 1996).

VESSEL NUMBER: LA 496/18

TYPE: VARIETY: Unnamed Cream-and-modeled

ESTABLISHED: Present study

GROUP: Flor?

WARE: Paso Caballo Waxy?

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 74b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, hard cream slip on interior and exterior; 2) very waxy and lustrous vessel surfaces; 3) vase with vertical sides and sharp basal angle; 4) modeling on the exterior lower body; 5) rootlet marking, crazing, and firing clouds are prevalent.

PASTE, TEMPER, AND FIRING: The paste ranges in color from 7.5YR 6/4 (light brown) and 7.5YR 7/4 (pink) to 10YR 7/4 (very pale brown) and 10YR 7/6 (yellow). A thick black is present below the basal angle. It is poorly sorted (grains generally less than 1 mm in size) with temper material having a round to angular fracture. This vessel (sample #2000-2) was subjected to a petrographic analysis by Linda Howie-Langs

(2002a:1). It belongs to the Grog Group. The paste is composed primarily of grog, crystalline calcite, and sparry calcite. Lesser amounts of monocrystalline quartz and chert also occur. The paste is very hard and compact and makes a clink sound when tapped on a hard surface.

SURFACE FINISH AND DECORATION: A hard, thick cream slip centering on 10YR 8/2 (white) was applied to the interior and exterior surfaces, including the base. According to Howie-Langs (2002a:1), microscopic analysis has shown that multiple layers of slip (at least four) were applied to the surfaces of this vessel resulting in a thick layer. Both sides are very well-smoothed and exhibit a very high burnish. Decoration consists of a modeled element that protrudes out below the basal angle on the exterior. The element is rounded and, therefore, may in fact be a foot scar for a hollow mammiform foot. Not enough of this element remains to be definitive. Extensive rootlet markings, white in color, occur on both sides. Craziing is prevalent as well, but has not resulted in flaking. Firing clouds, black (2.5YR 2.5/0), gray (5YR 6/1, 6/2, 7/1, 7/2), and tan (10YR 6/4, 7/6) in color, cover much of the cream slipped surfaces.

FORM: Vertical-sided vase with sharp basal angle and direct rim. The rim is exteriorly thickened. The lip is rounded. The base is missing, but it was probably flat. Height: 12.7+ cm; Rim diameter: 12.0 cm; Rim thickness: 0.6 cm; Body thickness: 0.55 cm; Base thickness: 0.4 cm; Thickness at basal angle: 0.77 cm; Thickness at protuberance: 0.94 cm.

APPENDAGES: Possibly three or four hollow mammiform feet(?).

CULTURAL SIGNIFICANCE: This very hard and durable vessel had no visible incrustation or residue on either side. Given the height, narrow orifice, and slipped interior surface, it probably functioned either as a serving vessel or as a drinking cup.

INTERSITE LOCATIONS: See LA 449/4 for distribution of this type across the lowlands. No known comparative specimens for this particular variety, but the form with mammiform feet may be very similar to Vessel 2 in Room 8 and Vessel 6 in Room 9 of Building B at Holmul (Hammond 1984:Figure 2).

VESSEL NUMBER: LA 496/19

TYPE: VARIETY: Puletan Red-and-unslipped: Puletan Variety

ESTABLISHED: Type and Variety named by Pring (1977a) at Cuello.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Not illustrated.

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) red slip on interior neck; 2) red slip on exterior neck; 3) jar with slightly outflaring rim; 4) encircling band of appliquéd impressed fillets; 5) lower body is vertically striated.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 7.5YR 7/2 (pinkish gray) to 7.5YR 7/3 (pink). A thick gray (2.5YR 3/0) core is present at rim only. It has a medium texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of

calcite and quartz, but unidentified white and light brown particles occur as well. The paste contains some voids likely caused from burned out organic material.

SURFACE FINISH AND DECORATION: A thin, hard red slip centering on 2.5YR 4/4 (reddish brown) was applied to the interior rim and to the exterior from the rim to the neck/shoulder break. The body portions on both sides were left unslipped. Red slip has been dripped (or spilled) across unslipped areas of the interior and exterior, including the fillets. Both sides are well-smoothed with some lateral wiping marks present. Each side exhibits a medium burnish. Temper is visible through thin slipped surfaces. Decoration consists of an encircling band of appliquéd impressed fillets, actually oval bosses compressed from the right, at the neck/shoulder break. The fillets are placed horizontally and slightly overlap each other, similar to LA 496/13. Below the fillets the body is vertically striated from a multi-pointed tool. Just beneath the decoration is a wiping or smoothing mark that runs horizontally around the vessel. It is quite visible and in stark contrast to the vertical striations. Heavy crazing is found on both sides and has resulted in flaking of the slipped surfaces. No firing clouds are present.

FORM: Small, thin-sided jar with slightly outflaring everted rim and globular body. The lip is rounded. The neck is short with a restricted orifice. The base is rounded. Height: 8.9+ cm; Rim diameter: 23.6 cm; Rim thickness: 1.06 cm; Body thickness: 0.48 cm; Neck height: 4.3 cm; Length of fillets: 1.54 cm; Width of fillets: 1.1 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard thin-walled vessel had no visible incrustation or residue on either side. Given its small size, slightly restricted neck, and striated surface, it probably functioned as a water carrying vessel.

INTERSITE LOCATIONS: See LA 364/3 for distribution of this type across the Maya area.

Chamber 2:

VESSEL NUMBER: LA 526/1, earliest in sequence; pre-dates LA 552, 521, and 524.

TYPE: VARIETY: Cabro Red: Cabro Variety

ESTABLISHED: Type and Variety named by Robertson-Freidel (1980) at Cerros.

GROUP: Cabro

WARE: Chunux Hard

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 76

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, hard red slip; 2) high luster on uneroded vessel surfaces; 3) bowl with basal angle.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 10YR 7/4 (very pale brown) to 10YR 8/4 (very pale brown). A thick gray core (2.5YR 4/0, 5/0) is present. It has a medium hard texture (grains generally less than 1

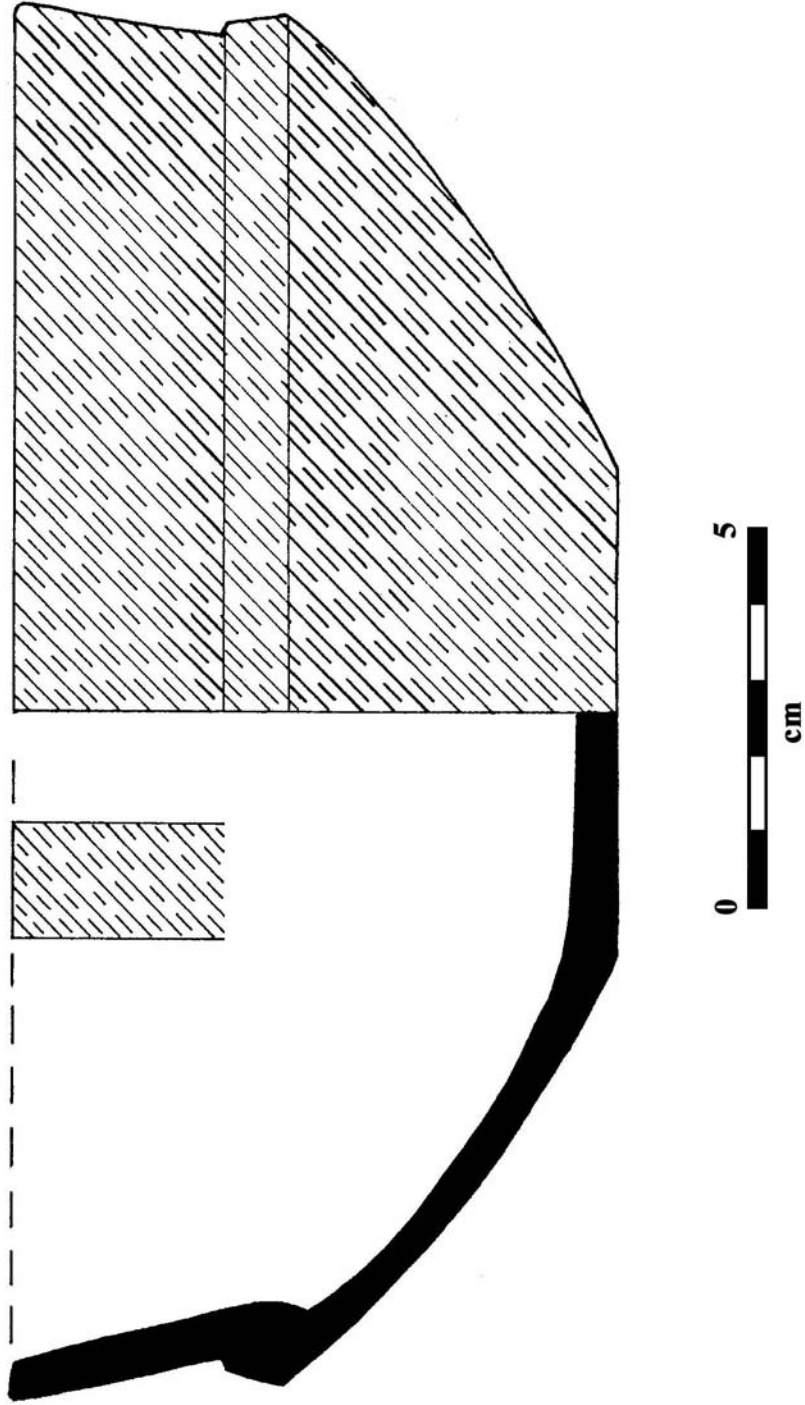


Figure 76: Cabro Red: Cabro Variety (LA 526/1) bowl. (vessel has red decoration on both sides, not buff as shown.)

mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified white and red particles occur as well. The paste has numerous voids likely caused from burned out organic material.

SURFACE FINISH AND DECORATION: A thin, hard red slip ranging from 10R 4/8 (red) to 2.5YR 4/8 (red) and 2.5YR 5/8 (red) was applied to the interior and exterior surfaces, excluding the base. The red slip has almost completely eroded away with the exception of the lip and minute traces across both surfaces. Both surfaces are well-smoothed but lateral wiping marks are visible, especially around basal angle. Each side exhibits a medium-high burnish. No decoration is present. Light crazing and rootlet marking was observed on both sides. Small firing clouds, black in color, occur on the rim.

FORM: Round-sided bowl with slightly outflaring everted rim and squared lip. The basal angle is truncated or squared. On the interior, there is a sharp angular margin opposite the basal angle. The base is small, flat, and exhibits a rounded base margin. Height: 7.6 cm; Rim diameter: 22.4 cm; Base diameter: 6.7 cm; Rim thickness: 0.6 cm; Body thickness: 0.6 cm; Base thickness: 0.68 cm; Thickness at basal angle: 1.1 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Pitting is found on the interior base. There is use wear on exterior base margin that has been ground down to the dark gray paste. Given the size and slipped interior surface, it probably functioned as a family sized serving vessel.

INTERSITE LOCATIONS: See LA 520/4 for distribution of this type across the Maya area.

VESSEL NUMBER: LA 526/2

TYPE: VARIETY: Liscanal Grooved-Incised: Trickle Variety

ESTABLISHED: Present study

GROUP: Cabro

WARE: Chunux Hard

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 77a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, hard red slip; 2) lustrous vessel surfaces; 3) dish with sharp basal angle; 4) grooved-incised line on exterior; 5) black trickle decoration on exterior red slip.

PASTE, TEMPER, AND FIRING: The paste is differential in color with the interior being 2.5YR 5/8 (red) and 2.5YR 6/8 (light red) and the exterior being 7.5YR 4/0 (dark gray) and 7.5YR 5/0 (gray). It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, and hematite, but unidentified brown particles occur as well.

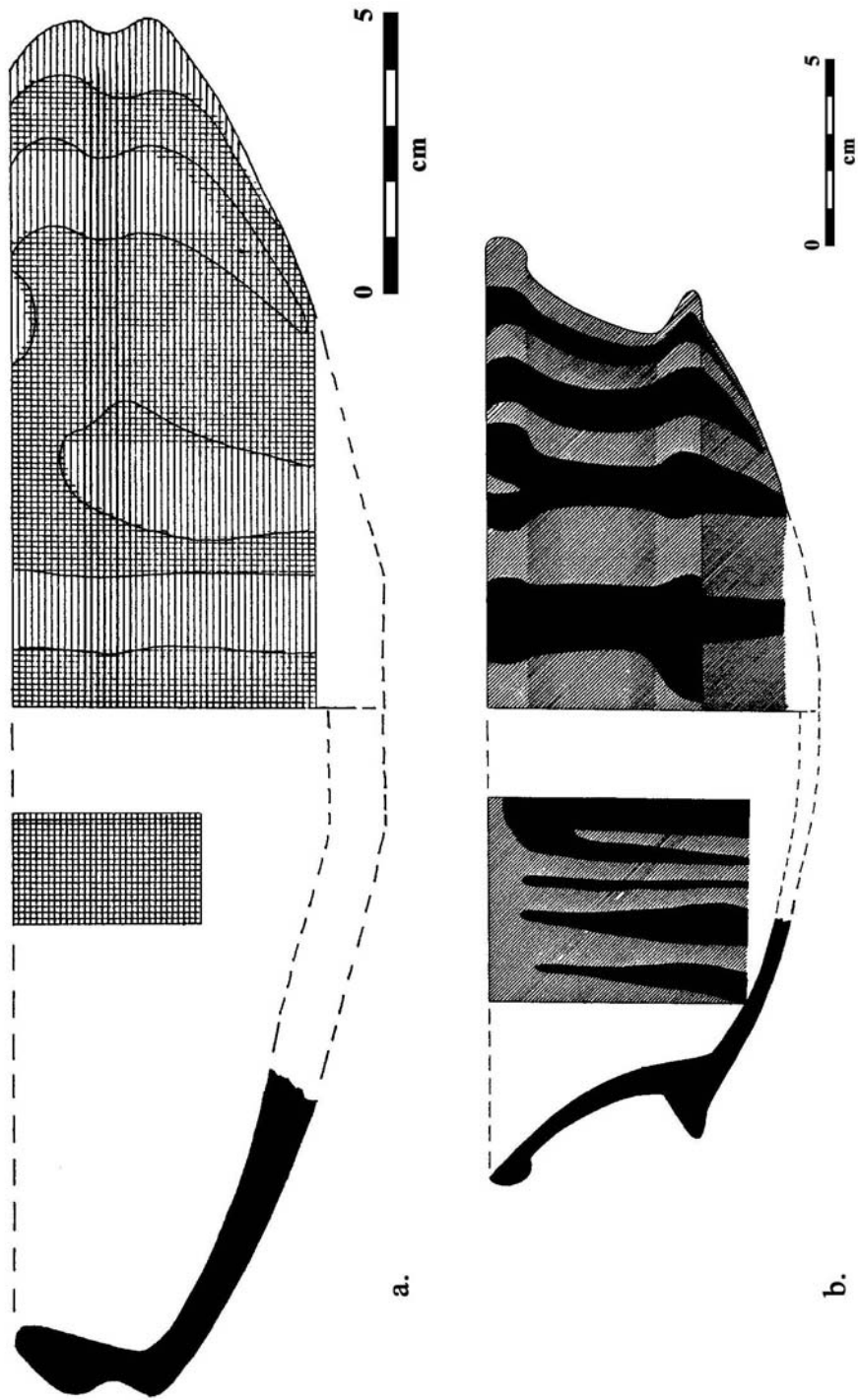


Figure 77: a) Liscanal Grooved-incised: Trickle Variety (LA 526/2) dish; b) Cabro Red: Trickle Variety (LA 526/3) dish. (a has red decoration on both sides, not brown as shown.)

SURFACE FINISH AND DECORATION: A thin, hard red slip ranging from 2.5YR 4/6 (red) and 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, including the base. Each side is well-smoothed and exhibits a high burnish. Decoration consists of a single, pre-slip grooved-incised line encircling the exterior rim. Secondary decoration is of trickle lines running from the lip to the base on the exterior surface only. The lines are golden-brown in color, but are blackened below the basal angle from either firing clouds or cooking activities. Light crazing occurs resulting in flaking of slipped surfaces.

FORM: Round-sided dish with incurving rim and sharp basal angle. The lip is pointed. The rim is exteriorly thickened. The base is flat to slightly rounded. Height: 6.6 cm; Rim diameter: 22.0 cm; Base diameter: n/a; Rim thickness: 1.1 cm; Body thickness: 0.9 cm; Width of grooved-incised lines: 1.02 cm; Width of trickle lines: 0.6 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: There is considerable blackening of the interior and exterior surfaces and may have resulted from cooking activities. If the darkened surfaces were not intentional and therefore the result of the firing process, then the vessel may have served as a family sized serving vessel.

INTERSITE LOCATIONS: See LA 520/2 for distribution of this type across the lowlands.

VESSEL NUMBER: LA 526/3

TYPE: VARIETY NAME: Cabro Red: Trickle Variety

ESTABLISHED: Present study

GROUP: Cabro

WARE: Chunux Hard

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 77b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, hard red slip; 2) high luster on uneroded vessel surfaces; 3) dish with outflaring rim and basal flange; 4) black trickle paint on interior and exterior sides; 5) crazing is present.

PASTE, TEMPER, AND FIRING: The paste is differentially fired with the interior being 2.5YR 5/8 (red) and 2.5YR 6/8 (light red) and the exterior being 10YR 6/4 (light yellowish brown) and 10YR 7/4 (very pale brown). It has a medium texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mainly of calcite and quartz, but unidentified white, black, and red particles occur as well. The paste has numerous voids likely caused by burned out organic material (high porosity).

SURFACE FINISH AND DECORATION: A thin, hard red slip color ranging in color from 2.5YR 3/6 (dark red) to 2.5YR 4/6 (red) was applied to the interior and exterior surfaces, including the flange. The exterior base was left unslipped. The red slip is heavily leached on both surfaces. Each side is well-smoothed and exhibits a high burnish. Some temper is visible through the slip. Decoration consists of black (2.5YR 2.5/0) trickle paint added to both vessel sides. The lines are wide, parallel to each other, and are dripped from the lip to the base. In most cases, the lines are rather equally

spaced, but a few run together. Light crazing and rootlet markings occur on both sides. One firing cloud occurs on exterior lower body to base.

FORM: Flaring-sided dish with outflaring everted rim and sharp basal angle. The lip is pointed. The rim is exteriorly folded. The basal flange is slightly downturned. The base is flat to slightly rounded. Height: 8.9 cm; Rim diameter: 32.0 cm; Rim thickness: 0.9 cm; Body thickness: 0.6 cm; Base thickness: 0.52 cm; Thickness of flange: 1.02 cm; Width of black trickle lines (interior): 0.7-2.3 cm; Width of black trickle lines (exterior): 1.5-2.2 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either surface. Some use wear on basal flange. Given the flaring sides, shallow depth, and slipped interior surface, it probably functioned as a family sized serving vessel for hot foods. The flange would have aided in carrying the contents.

INTER-SITE LOCATIONS: The Lamanai specimen is very similar to the Sierra Red dish with black trickle paint found in PD.87 at Tikal (Culbert 1993:Figure 140a). At the time, Culbert felt that this cache vessel was a unique example of trickle painting on Sierra Red, so he decided not to establish a new type for it. However, its occurrence on vessels with thin, hard red slips at Lamanai suggests it should be elevated to the varietal level within the Cabro Group.

VESSEL NUMBER: LA 526/4

TYPE: VARIETY NAME: Cabro Red: Trickle Variety

ESTABLISHED: Present study

GROUP: Cabro

WARE: Chunux Hard

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 78a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, hard red slip; 2) high luster on uneroded vessel surfaces; 3) bowl with sharp basal angle; 4) golden-brown trickle paint on exterior side; 5) trickled areas are more resistant to erosion.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 10R 5/8 (red) to 2.5YR 5/8 (red). A thick gray core occurs in the upper body, but too diffuse for a Munsell reading. It has a medium texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mainly of calcite, quartz, and hematite, but unidentified black particles occur as well. The paste has numerous voids likely caused by burned out organic material.

SURFACE FINISH AND DECORATION: A thin, hard red slip color ranging in color from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, including the base. Each side is very well-smoothed and exhibits a high burnish. Some temper is visible through the slip. Decoration consists of golden-brown trickle paint added to the exterior surface only. The lines are wide, parallel to each other, and are dripped from the lip to the base in a controlled manner. The lines are also thinly applied over the red slip and dull in color. On the exterior, only the trickled lines remain in most

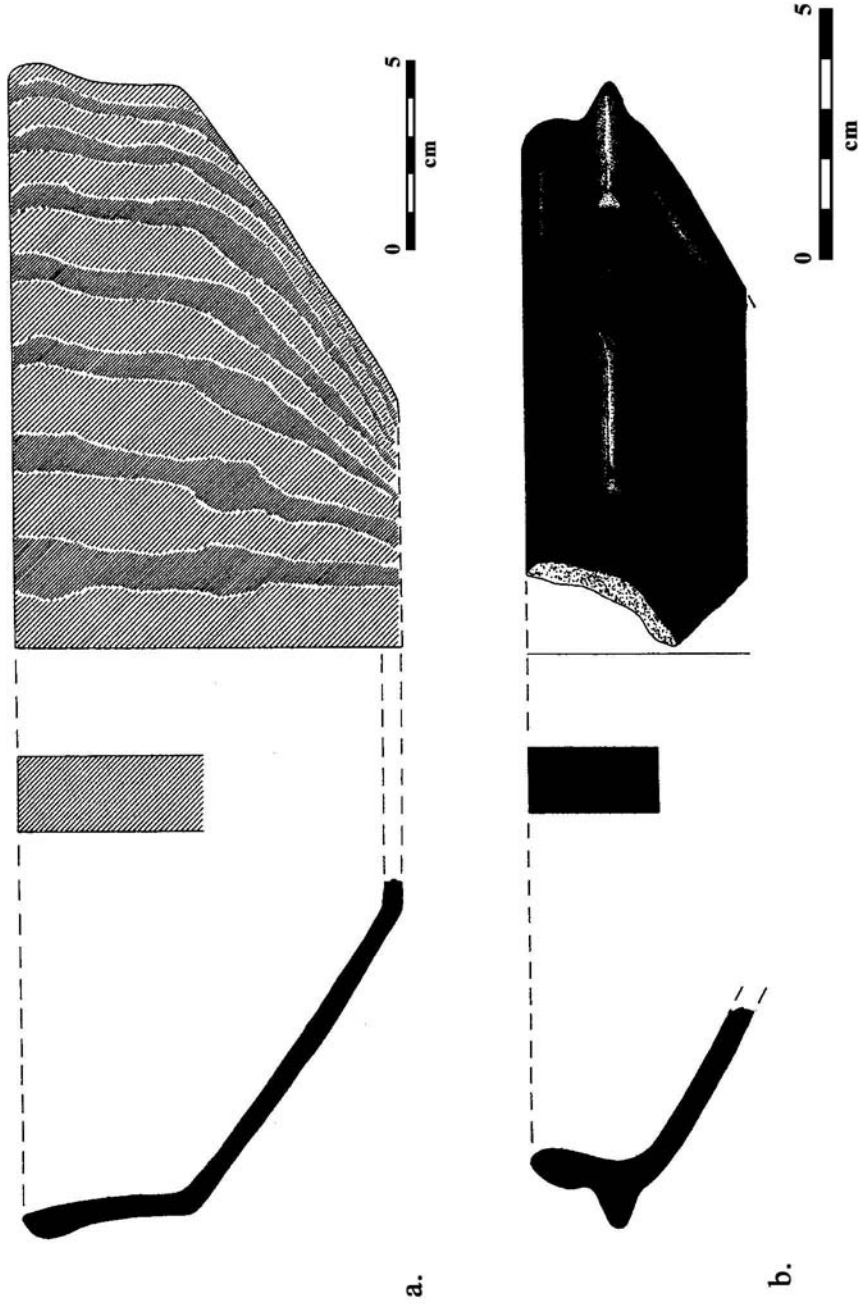


Figure 78: a) Cabro Red: Trickle Variety (LA 526/4) bowl; b) Polvero Black: Variety Unspecified (LA 526/5) dish. (a has golden-brown trickle decoration, not red as shown.)

portions as the intervening red slip has either leached or eroded away. Extensive firing clouds, black in color (2.5YR 2.5/0), are found primarily on the interior and exterior bases.

FORM: Flaring, thin-sided bowl with sharp basal angle. The lower sides are rounded with vertical walls above the basal angle. The lip is beveled-out. The rim is exteriorly folded. The base is flat and exhibits an angular margin. Height: 10.1 cm; Rim diameter: 30.3 cm; Base diameter: 13.5 cm; Rim thickness: 1.05 cm; Body thickness: 0.45 cm; Base thickness: 0.43 cm; Thickness at basal angle: 0.83 cm; Width of trickle lines: 0.2-1.6 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either surface. Some use wear on interior and exterior bases as well as around the basal angle. Given the vertical upper sides and slipped interior surface, it probably functioned as a serving vessel for soups and/or stews to family sized groups.

INTER-SITE LOCATIONS: See LA 520/1 for distribution across the Maya area. The Lamanai specimen is very similar to the Tuk Red-on-red Trickle type found at Cerros (Robertson-Freidel 1980:198-207). Both types are identical with regard to slip color, surface treatment, and nature of trickle decoration with the exception that the Lamanai vessel has applied with golden-brown trickled lines as opposed to the red trickled lines found on the Cerros vessels.

VESSEL NUMBER: LA 526/5

TYPE: VARIETY NAME: Polvero Black: Variety Unspecified

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated by Gifford (1976) at Barton Ramie.

GROUP: Polvero

WARE: Paso Caballo Waxy

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 78b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, hard black slip; 2) high luster on vessel surfaces; 3) rounded dish with notched medial flange; 4) no red tinges on either side; 5) crazing is present.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 10YR 6/4 (light yellowish brown) to 10YR 7/4 (very pale brown). A thick gray core (7.5YR 4/0, 5/0) occurs in the rim and flange. The upper body breaks away from the flange (roughly splitting flange), suggesting original joint. The paste is laterally roughened at the original joint to aid in sticking both pieces together while the clay was wet. It has a medium texture (grains generally between 1-5 mm in size) with temper material having a round to angular fracture. The temper consists mainly of calcite and quartz, but unidentified black, red, and gray particles (up to 5 mm in size) occur as well.

SURFACE FINISH AND DECORATION: A thin, hard black slip color ranging in color from 7.5YR 2/0 (black) to 2.5Y 2/0 (black) was applied to the interior and exterior surfaces, including the base. Both surfaces are very well-smoothed and exhibit a very

high burnish. Decoration consists of alternating broad notches and broad tabs on the flange. The notches are square in shape and encircle the flange. A shallow groove is present below the flange. Light crazing is found on both sides.

FORM: Round-sided dish with slightly incurving rim and medial flange. The lip is rounded. The rim is exteriorly thickened. The base is flat and exhibits an angular margin. Height: ca. 6.5 cm; Rim diameter: 28.0 cm; Rim thickness: 1.16 cm; Body thickness: 0.7 cm; Base thickness: n/a; Length of tabs: 5.1 cm; Width of tabs: 1.3 cm; Thickness of tab: 0.9 cm; Length of notch (located between tabs): 7.3 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either surface. Some use wear on medial flange. Given the incurving rim and slipped interior surface, it probably functioned as a serving vessel for soups and/or stews. The medial flange likely aided in carrying the hot liquid contents.

INTER-SITE LOCATIONS: See LA 480/2 for distribution across the Maya area

VESSEL NUMBER: LA 526/6

TYPE: VARIETY: Puletan Red-and-unslipped: Puletan Variety

ESTABLISHED: Type and Variety named by Pring (1977a) at Cuello.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 79

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) red slip on interior neck; 2) red slip on exterior neck; 3) jar with outflaring rim; 4) encircling band of appliquéd impressed fillets; 5) lower body is vertically striated.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color centering on 10YR 7/2 (light gray). A thick gray (10YR 5/1) core is present. It has a medium (and poorly sorted) texture (grains generally less than 2.5 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified red, black, white, and pink particles occur as well.

SURFACE FINISH AND DECORATION: A thin, hard red slip ranging from 10R 4/6 (red) and 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior rim and to the exterior from the rim to the neck/shoulder break. The body portions on both sides were left unslipped. Red slip has been dripped (or spilled) across areas of the interior and exterior, including the fillets. Both sides are well-smoothed with some lateral wiping marks present. Each side exhibits a low burnish. Decoration consists of an encircling band of appliquéd impressed fillets, actually oval bosses compressed from the left, at the neck/shoulder break. The fillets are placed horizontally and slightly overlap each other. Below the fillets the body is vertically striated with a multi-pointed tool. Just beneath the fillet is a wipe mark running horizontally around the vessel. It is quite visible and in stark contrast to the vertical striations. Light Crazeing and rootlet markings occur on both slipped surfaces. Firing clouds, black in color, are found on the lower

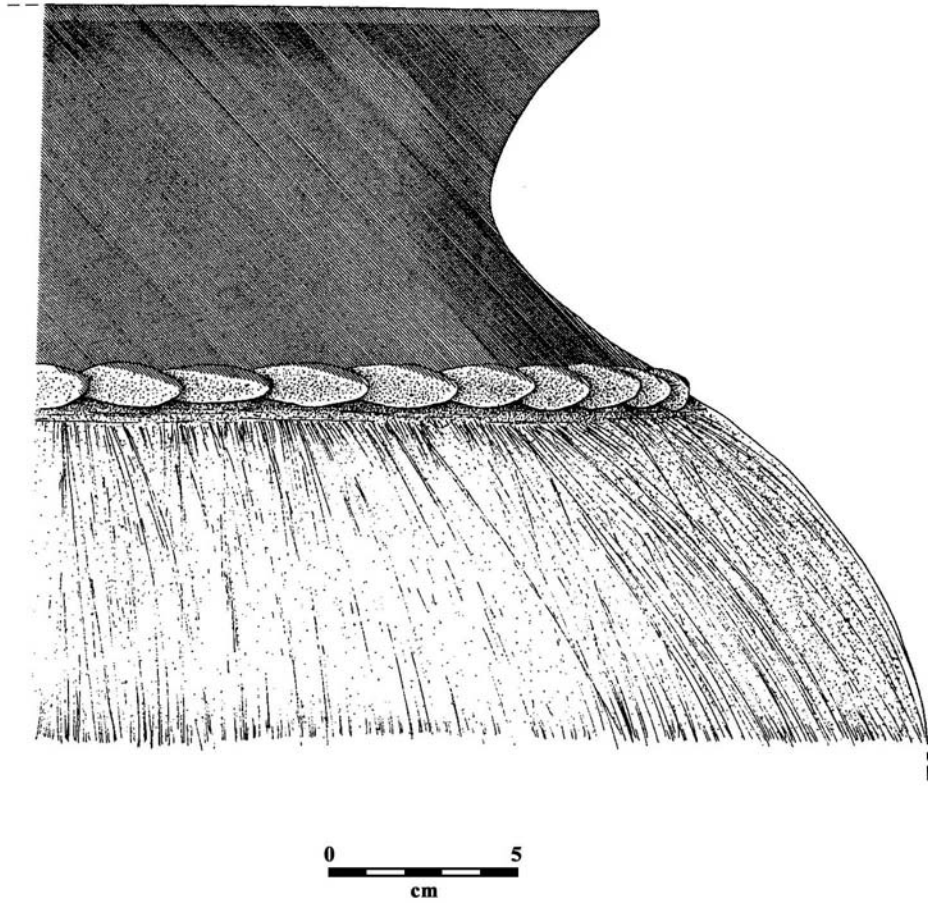


Figure 79: Puletan Red-and-unslipped: Puletan Variety (LA 526/6) jar.

body of both sides.

FORM: Thin-sided jar with outflaring everted rim. The lip is rounded. The neck is short with a restricted orifice. The base is rounded. Height: 16.5+ cm; Rim diameter: 40.0 cm; Orifice diameter: 33.5 cm; Rim thickness: 1.3 cm; Body thickness: 0.55 cm; Base thickness: 0.75 cm; Neck height: 9.0 cm; Length of each fillet: 3.45 cm; Width of each fillet: 1.64 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This thin-walled vessel had no visible incrustation or residue on either side. Given its large size, slightly restricted neck, and striated surface, it probably functioned as a water storage vessel.

INTERSITE LOCATIONS: See LA 364/3 for distribution of this type across the Maya area.

VESSEL NUMBER: LA 526/7

TYPE: VARIETY: Liscanal Grooved-Incised: Trickle Variety

ESTABLISHED: Present study

GROUP: Cabro

WARE: Chunux Hard

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 80

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, hard red slip; 2) lustrous vessel surfaces; 3) round bowl with basal angle and ring base; 4) grooved-incised lines on top of flange; 5) golden-brown trickle decoration on interior; 6) light crazing on both sides.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color centering on 5YR 6/8 (reddish yellow) A thick gray core is present at rim only; too diffuse for Munsell reading. It has a medium texture (grains generally less than 2 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, and hematite, but unidentified white, black, and red particles occur as well.

SURFACE FINISH AND DECORATION: A thin, hard red slip centering on 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, excluding the base. Both sides are well-smoothed, but lateral wiping marks are found on interior and exterior bases. Each side exhibits a medium-high burnish. Some temper is visible through the slip. Decoration consists of two horizontal, pre-slip grooved-incised lines located on top of the basal flange. The pattern of the lines is reminiscent of the double-line break motif. The flange encircles the vessel, but consists of two halves, each tapering in toward the vessel side. Additionally, golden-brown trickled lines have been added over the red slip on the interior surface only. The design consists of parallel, wavy lines running vertically from the lip to the center of the base. The lines are faint near the rim, but are recognizable. Although they are defined near the top of the vessel, they run together near the base. No Munsell reading on the trickled lines because they are nearly

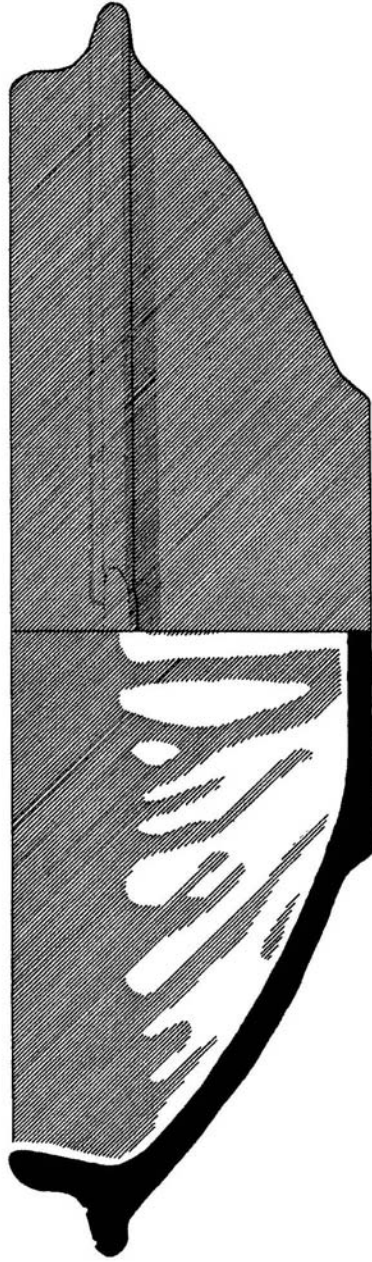


Figure 80: Liscanal Grooved-incised: Trickle Variety (LA 526/7) bowl. (white area represents golden-brown trickle decoration.)

transparent against the red slip color. Light crazing occurs on both sides which has resulted in flaking. One firing cloud, black and tan in color, is located on the exterior below the flange.

FORM: Rounded, thick-sided bowl with slightly incurving rim and horizontal basal flange. The lip is pointed. The ring base is flat and solid. Height: 9.5 cm; Rim diameter: 28.7 cm; Base diameter: 12.0 cm; Rim thickness: 1.08 cm; Body thickness: 0.64 cm; Ring base thickness: 1.07 cm; Thickness at flange: 1.0 cm; Width of grooved-incised lines: 0.1-0.3 cm; Width of trickled lines: 0.6-1.5 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either surface. Some use wear on the margin of the ring base. Given the interior slipped surface, it probably functioned as a family sized serving vessel for soups and/or stews. The flange would have aided in carrying hot liquids.

INTERSITE LOCATIONS: Few noted, but I have observed one bowl (BC 5714) from Protoclassic Tomb 5 at Blue Creek which exhibited similar modes (e.g., the thin, hard red slip; grooved-incised lines on top of flange; scalloping on edge of flange; trickle line decoration).

VESSEL NUMBER: LA 552/1, located between LA 521 and 526.

TYPE: VARIETY: Society Hall Red: Variety Unspecified

ESTABLISHED: Type named by Pring (1977a) at Cuello; Variety designated in present study.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 81

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) very thin, hard red slip or wash; 2) streaky slip on vessel surfaces; 3) dish with sharp medial angle; 4) light crazing and firing clouds are present.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 6/6 (reddish yellow) to 5YR 6/8 (reddish yellow). No carbon stain is present. It has a medium texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, and hematite, but unidentified white, black, and red particles occur as well.

SURFACE FINISH AND DECORATION: A very thin, hard red slip ranging in color from 10R 4/6 (red) and 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, excluding the base. The slip is laterally streaky in application, like other Society Hall Red types, but the thinness of the slip creates a wash effect. The slipped surfaces are also non-lustrous and non waxy. Both sides are smoothed, but lateral wiping marks are found across the vessel, especially around joint margins. Each side has been left unburnished, including the exterior base. Temper is readily visible

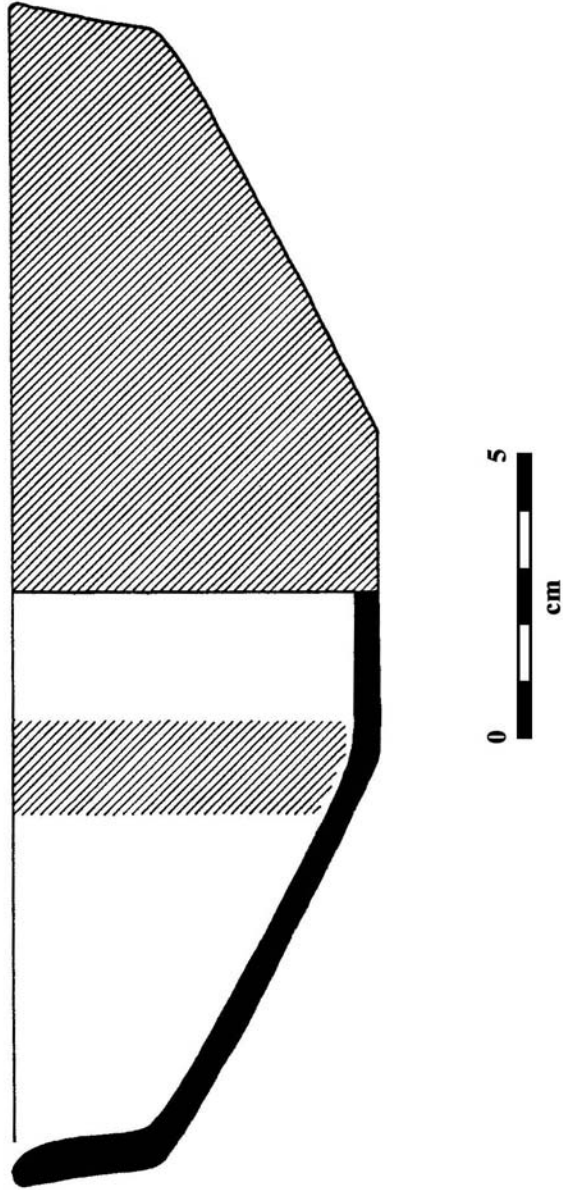


Figure 81: Society Hall Red: Variety Unspecified (LA 552/1) dish.

through the thin slip. No decoration is present. Light crazing and rootlet markings are found on both sides. Three small firing clouds, two black and one light brown in color, were found on the exterior surface.

FORM: Thin-sided dish with sharp medial angle and rounded lip. Flaring, lower sides with vertical walls above medial angle. The rim undulates markedly. Both the interior and exterior bases are irregularly shaped. The exterior base is small, flat, and exhibits an angular margin. The form of this vessel is identical to LA 340/1, 340/2, 356/1, 356/2, 732/1, and 732/2. Height: 6.4 cm; Rim diameter: 21.6 cm; Base diameter: 5.5 cm; Rim thickness: 0.74 cm; Body thickness: 0.3 cm; Base thickness: n/a; Weight: 44 g.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Some use wear on exterior base margin. The small size and slipped interior surface suggest it functioned as an individual serving/eating vessel.

INTERSITE LOCATIONS: No comparable specimens have been identified.

VESSEL NUMBER: LA 521/1, located between LA 552 and 524.

TYPE: VARIETY: Pahote Punctated: Pahote Variety

ESTABLISHED: Type and Variety named by Robertson-Freidel (1980) at Cerros.

GROUP: Cabro

WARE: Chunux Hard

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 82

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, hard double red slip; 2) very high luster on vessel surfaces; 3) jar with low neck and slightly outflaring everted rim; 4) dot punctations on exterior; 5) rootlet markings are present.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 7.5YR 6/6 (reddish yellow) to 7.5YR 7/6 (reddish yellow). No carbon stain is present. It is well-sorted (grains generally less than 0.5 mm in size), fine textured, and compact with temper material having a round to angular fracture. This vessel (sample #2000-12) was subjected to a petrographic analysis by Linda Howie-Langs (2002a:6). It belongs to the Relic Rhomb Group. The paste is composed primarily of relic or recrystallized rhombs of calcite or dolomite that have a 'micritic texture'. The size and shape of the rhombs are very consistent. Lesser amounts of monocrystalline quartz, hematite nodules, and crystalline calcite also occur. Some of the possible dolomite fragments are dark colored. Neither the paste nor the temper had any strong reaction to HCl acid. Given the amount of rhombic residual or degenerated calcite, it may have been imported from elsewhere in the region.

SURFACE FINISH AND DECORATION: A hard, glossy red slip centering on 2.5YR 4/8 (red) was applied to the interior neck and the exterior surface. According to Howie-Langs (2002a:6), microscopic analysis has shown that a thick layer of slip was applied to the surfaces of this vessel. It appears to have a distinct thinner top layer which is lying above a thicker layer in some areas. On the interior below slipped neck portion,

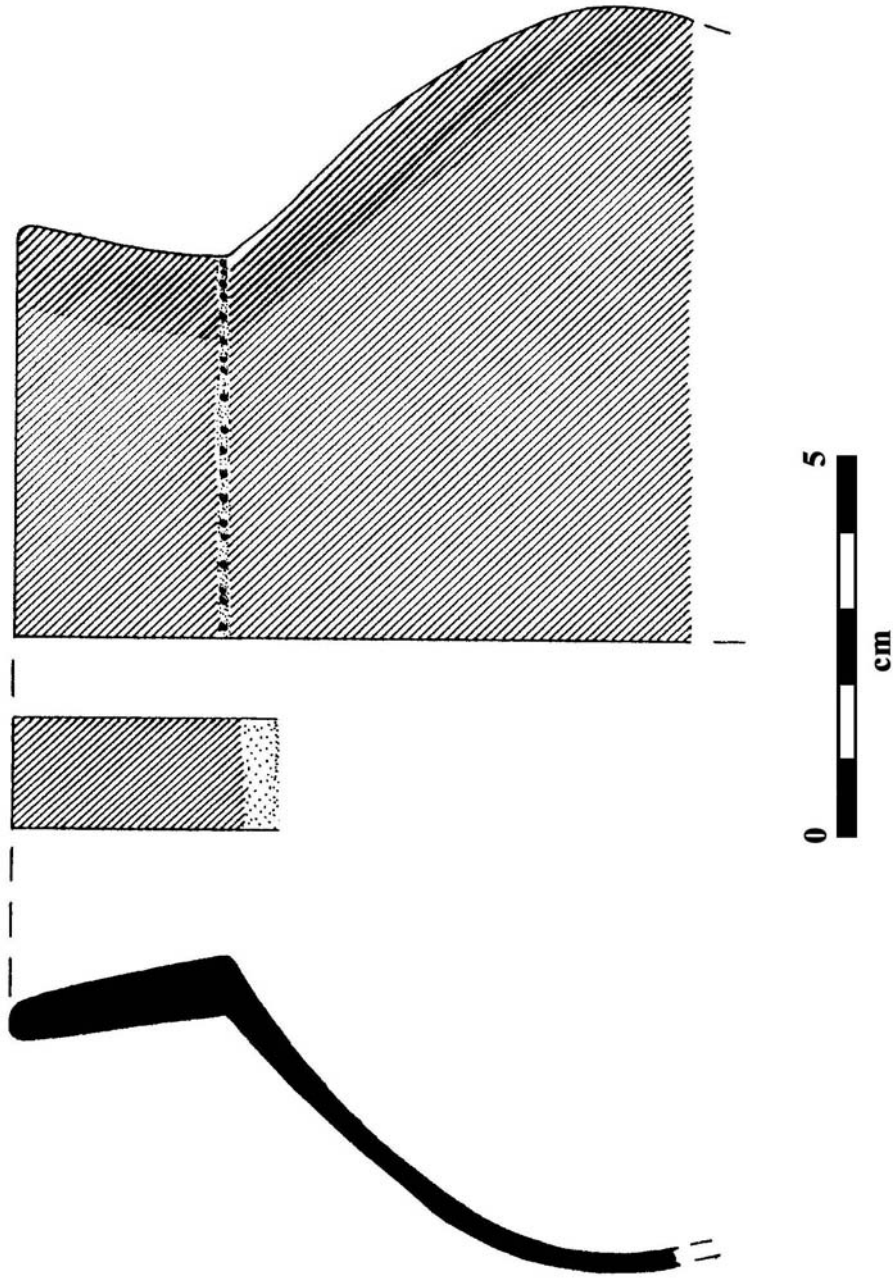


Figure 82: Pahote Punctated: Pahote Variety (LA 521/1) jar.

there are red drip marks running down to the shoulder area. Both sides are very well-smoothed and exhibit an exceedingly high burnish. Decoration consists of a single row of post-slip shallow dot punctations encircling the rim/neck break on the exterior surface. The dots are actually tiny gouges made from a pencil-point tool. The tool is trailed from the right to produce a slight groove, then it was pushed to the left to produce the gouge. The punctates are not evenly spaced around the vessel. Heavy rootlet markings on both slipped surfaces. No crazing or firing clouds.

FORM: Round, thin-sided jar with low neck and slightly outflaring everted rim. The lip is rounded. The rim is exteriorly thickened. The neck is restricted and has an angular margin. The base is missing, but is probably rounded. Height: 7.1+ cm; Rim diameter: 10.8 cm; Orifice diameter: 8.4 cm; Rim thickness: 0.6 cm; Body thickness: 0.3 cm; Neck height: 2.7 cm; Diameter of punctates: 0.2 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either side. Some use wear on the lip. Given the small size, restricted orifice, and unslipped interior surface, it likely functioned as a storage vessel for dry goods.

INTERSITE LOCATIONS: This type is known from Cerros (Robertson-Freidel 1980) and Colha (Valdez 1987). The only difference between LA 521/1 and those identified at Cerros is that the dot punctation on the Lamanai specimen was executed after it was already slipped.

VESSEL NUMBER: LA 521/2

TYPE: VARIETY NAME: Cabro Red: Trickle Variety

ESTABLISHED: Present study

GROUP: Cabro

WARE: Chunux Hard

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 83

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, hard red slip; 2) high luster on vessel surfaces; 3) tripod bowl with outflaring everted rim; 4) hollow mammiform feet; 5) golden-brown trickle paint on interior and exterior side; 6) firing clouds are prevalent.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 6/8 (reddish yellow) to 7.5YR 5/8 (strong brown). A thick gray core (10YR 4/1, 5/1) occurs at base only. It has a medium texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mainly of calcite, quartz, and grog, but unidentified white, black, and light brown particles occur as well.

SURFACE FINISH AND DECORATION: A thin, hard red slip color ranging in color from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, including the feet and base. Each side is very well-smoothed and exhibits a very high burnish. Temper is visible only in area of firing clouds. Decoration consists of golden-

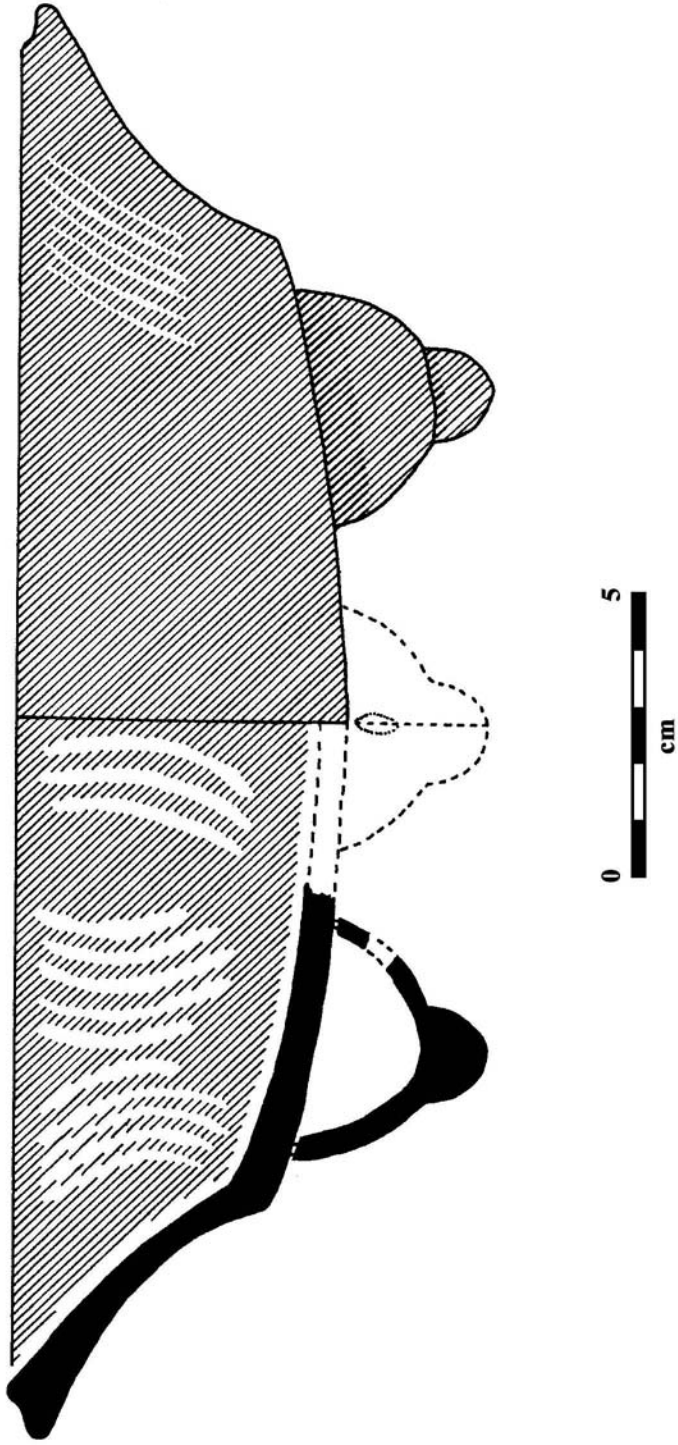


Figure 83: Cabro Red: Trickle Variety (LA 521/2) mammiform tripod bowl. (white area represents golden-brown trickle decoration.)

brown trickle paint added to the interior and exterior surfaces. On both sides, the parallel wavy lines, grouped in sets of six, run from the rim to the base margin. They are also thinly applied over the red slip and dull in color. The lines are quite faint due to the heavy black firing clouds that are prevalent across the entire vessel. In fact, the firing clouds obscure the trickle decoration in spots. Light crazing occurs on both sides and can only be seen with hand lens.

FORM: Flaring-sided bowl with outflaring everted rim and slightly concave lip. The base is flat to slightly rounded and exhibits a sharp angular margin. Height: 11.3 cm; Rim diameter: 32.0 cm; Base diameter: n/a; Rim thickness: 1.2 cm; Body thickness: 0.7 cm; Base thickness: 0.6 cm; Width of trickle lines (interior): 0.15-0.2 cm; Width of trickle lines (exterior): 0.25 cm.

APPENDAGES: Three hollow mammiform feet with very large nipple. One venting hole, facing towards the vessel center, was located on the side of each foot, but no clay pellets were found inside. The feet are located very close to the base margin. Height of feet: 3.9 cm; Width of foot at vessel base: 4.0 cm; Diameter of nipple: 0.85 cm.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either surface. Some use wear on bottoms of the feet. Given the flaring sides and slipped interior surface, it probably functioned as a family sized serving vessel.

INTER-SITE LOCATIONS: See LA 520/1 for distribution across the Maya area. The presence of mammiform feet expands the known repertoire of vessel forms for the Trickle Variety of Cabro Red types.

VESSEL NUMBER: LA 521/4

TYPE: VARIETY: Cabro Red: Cabro Variety

ESTABLISHED: Type and Variety named by Robertson-Freidel (1980) at Cerros.

GROUP: Cabro

WARE: Chunux Hard

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 84a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, hard red slip; 2) moderately high luster on uneroded vessel surfaces; 3) dish with flaring sides; 4) rootlet marking is prevalent.

PASTE, TEMPER, AND FIRING: The paste is differential in color with the interior being 7.5YR 7/3 (pink) to 7.5YR 7/4 (pink) and the exterior being 7.5YR 5/0 (gray) to 7.5YR 6/0 (gray). It has a medium texture (grains generally less than 1.5 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, and hematite (up to 3-4 mm in size), but unidentified white, black, and light brown particles occur as well. The paste contains a number of voids likely caused by burned out organic material.

SURFACE FINISH AND DECORATION: A thin, hard, moderately lustrous red slip ranging from 2.5YR 4/8 (red) and 2.5YR 5/8 (red) to 5YR 5/8 (yellowish red) was applied to the interior and exterior surfaces, excluding the base. The slipped surfaces are heavily leached. Both surfaces are smoothed with some lateral wiping marks present

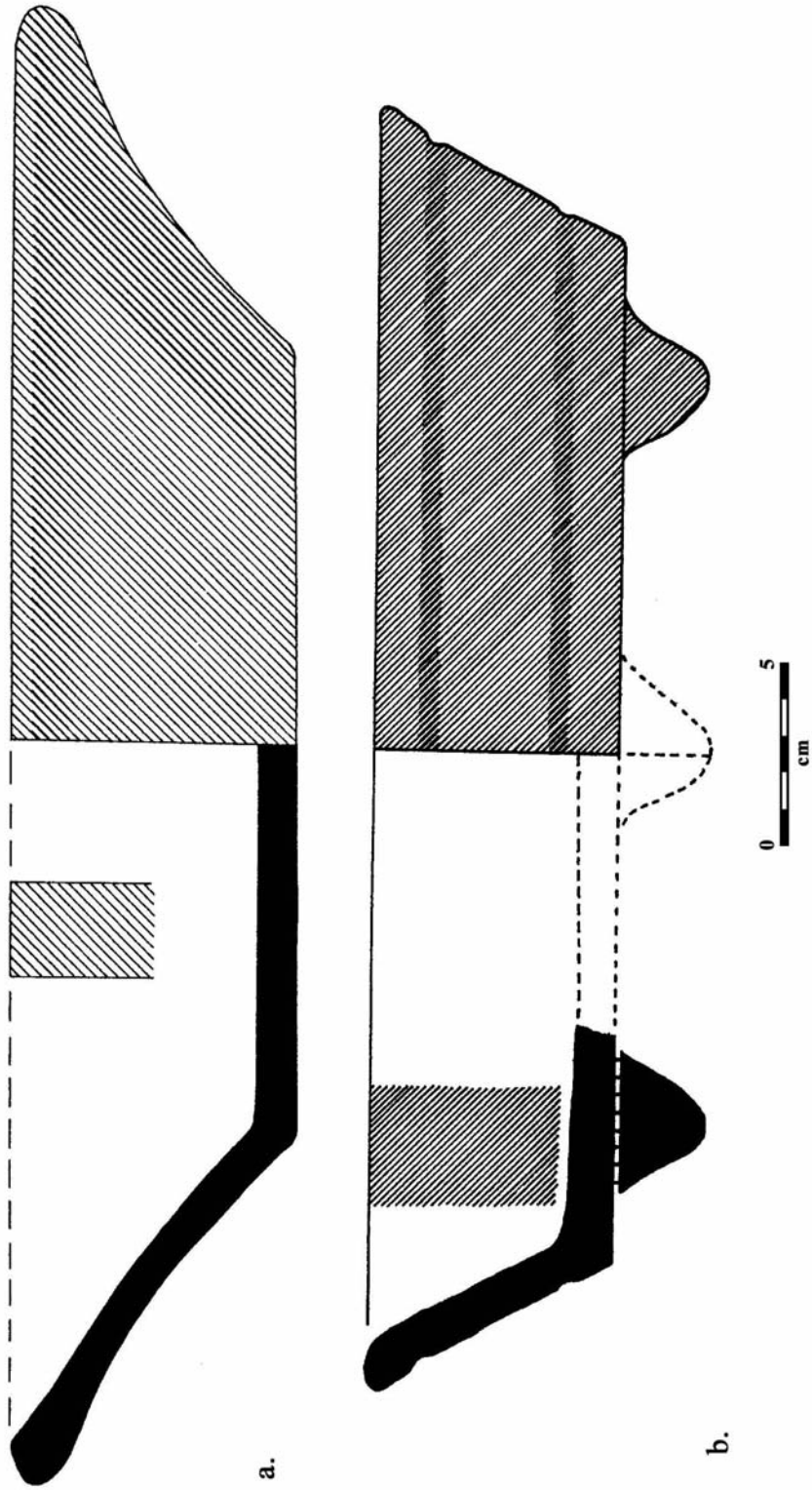


Figure 84: Cabro Red: Cabro Variety (LA 521/4) dish; b) Liscanal Grooved-incised: Liscanal Variety (LA 521/8) tripod dish.

on exterior rim and basal margin. The base is also smoothed. The lip and rim area are uneven in thickness which is probably the result of irregular smoothing. Each side exhibits a medium burnish. Temper is visible through the leached surfaces. No decoration is present. Considerable rootlet markings, white in color, occur on both sides. One firing cloud, gray in color, is located on the exterior base.

FORM: Flaring-sided dish with outflaring everted rim and pointed lip. The base is flat and exhibits a sharp angular margin. Height: 6.3 cm; Rim diameter: 30.0 cm; Base diameter: 14.0 cm; Rim thickness: 0.93-1.2 cm; Body thickness: 0.8 cm; Base thickness: 1.0 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either side. Given the flaring sides and slipped interior surface, it probably functioned as a serving vessel for family sized groups.

INTERSITE LOCATIONS: See LA 524/3 for distribution of type across the Maya area.

VESSEL NUMBER: LA 521/7

TYPE: VARIETY NAME: Liscanal Grooved-incised: Trickle Variety

ESTABLISHED: Present study

GROUP: Cabro

WARE: Chunux Hard

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Not illustrated.

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, hard double red slip; 2) high luster on vessel surfaces; 3) bowl with round sides; 4) grooved-incised line on exterior; 5) golden-brown trickle paint on interior and exterior side; 6) firing clouds are prevalent.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 7.5YR 7/3 (pink) to 7.5YR 8/3 (pink). A thick gray core (7.5YR 4/0, 5/0) is present. It has a medium texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mainly of calcite and quartz, but unidentified white particles occur as well. The paste contains a number of voids likely caused by burned out organic material.

SURFACE FINISH AND DECORATION: A thin, hard, glossy red slip color ranging in color from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces. Both red slips are the same red color. Each side is very well-smoothed and exhibits a very high burnish. Decoration consists of a single, pre-slip grooved-incised line encircling the exterior neck. Secondary decoration is of golden-brown trickle paint added to the interior and exterior surfaces. On both sides, the parallel wavy lines, grouped in sets of seven, run from the rim to the base margin. They are also thinly applied over the red slip and dull in color. The lines are faint and mottled due to the heavy black firing clouds that are prevalent across the entire vessel. In fact, the firing clouds obscure the trickle decoration in spots. Rootlet markings occur on both sides. Firing clouds, black and red in color, are extensive and cover much of the vessel.

FORM: Rounded, thick-sided bowl with slightly incurving rim and pointed lip. The rim is exteriorly thickened. The base is flat to slightly rounded. Height: 6.9+ cm; Rim diameter: 21.0 cm; Rim thickness: 1.2 cm; Body thickness: 0.85 cm; Base thickness: 0.57 cm; Width of grooved-incised line: 1.35 cm; Width of trickle lines on both sides: 0.5 cm; Width of trickle lines (exterior): 0.25 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either surface. Given the incurving sides and slipped interior surface, it probably functioned as a serving vessel.

INTER-SITE LOCATIONS: See LA 520/2 for distribution across the Maya area.

VESSEL NUMBER: LA 521/8

TYPE: VARIETY: Liscanal Grooved-incised: Liscanal Variety

ESTABLISHED: Type and Variety named by Robertson-Freidel (1980) at Cerros.

GROUP: Cabro

WARE: Chunux Hard

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 84b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, hard red slip; 2) high luster on uneroded vessel surfaces; 3) tripod dish with flaring sides; 4) grooved-incised lines on exterior.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color centering 10YR 6/4 (light yellowish brown). No carbon stain is present. It has a medium texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite and quartz, but unidentified white, black, and light brown particles occur as well.

SURFACE FINISH AND DECORATION: A thin, hard, and lustrous red slip centering on 2.5YR 5/8 (red) was applied to the interior and exterior surfaces, including the feet and base. The slipped surfaces are heavily leached to 10YR 5/8 (yellowish brown) in many spots. Both surfaces are smoothed with some lateral wiping marks present. The exterior base is rough to the rough with patches of welled-up clay. Each side exhibits a medium-high burnish. Some temper is visible through the leached surfaces. Decoration consists of pre-slip grooved-incised lines encircling the exterior side. One line is located at the rim and the other at the base. Rootlet markings occur on both sides. One firing cloud, black in color, is located on the interior base.

FORM: Flaring-sided dish with outflaring everted rim and rounded lip. The base is flat and exhibits a sharp angular margin. Height: 7.1 cm; Rim diameter: 31.0 cm; Base diameter: 24.0 cm; Rim thickness: 1.0 cm; Body thickness: 0.8 cm; Base thickness: 0.9 cm; Width of grooved-incised lines: 0.5 cm.

APPENDAGES: Three solid nubbin feet, all conical in shape. The feet are located very close to the base margin. Height of feet: 1.6 cm; Width of foot at vessel base: 3.0 cm.

CULTURAL SIGNIFICANCE: This hard and durable vessel had no visible incrustation or residue on either side. Use wear on bottom of feet. Given the flaring sides, shallow depth, and slipped interior surface, it probably functioned as a family sized serving vessel.

INTERSITE LOCATIONS: Very few comparisons have been noted in the region with the exception of vessels from Cerros, the type site for Liscanal Grooved-incised: Liscanal Variety (Robertson-Freidel 1980:158-173, Figure 17h-j, 20d, and 21c). A few examples have also been found at Colha (Valdez 1987).

VESSEL NUMBER: LA 521/9

TYPE: VARIETY NAME: Unnamed Red-rimmed Orange and Trickle

ESTABLISHED: Present study

GROUP: Aguacate

WARE: Holmul Orange

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Floral Park

ILLUSTRATION: Figure 85

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, hard orange slip; 2) high luster on vessel surfaces; 3) tripod bowl with slightly incurving rim; 4) golden-brown trickle

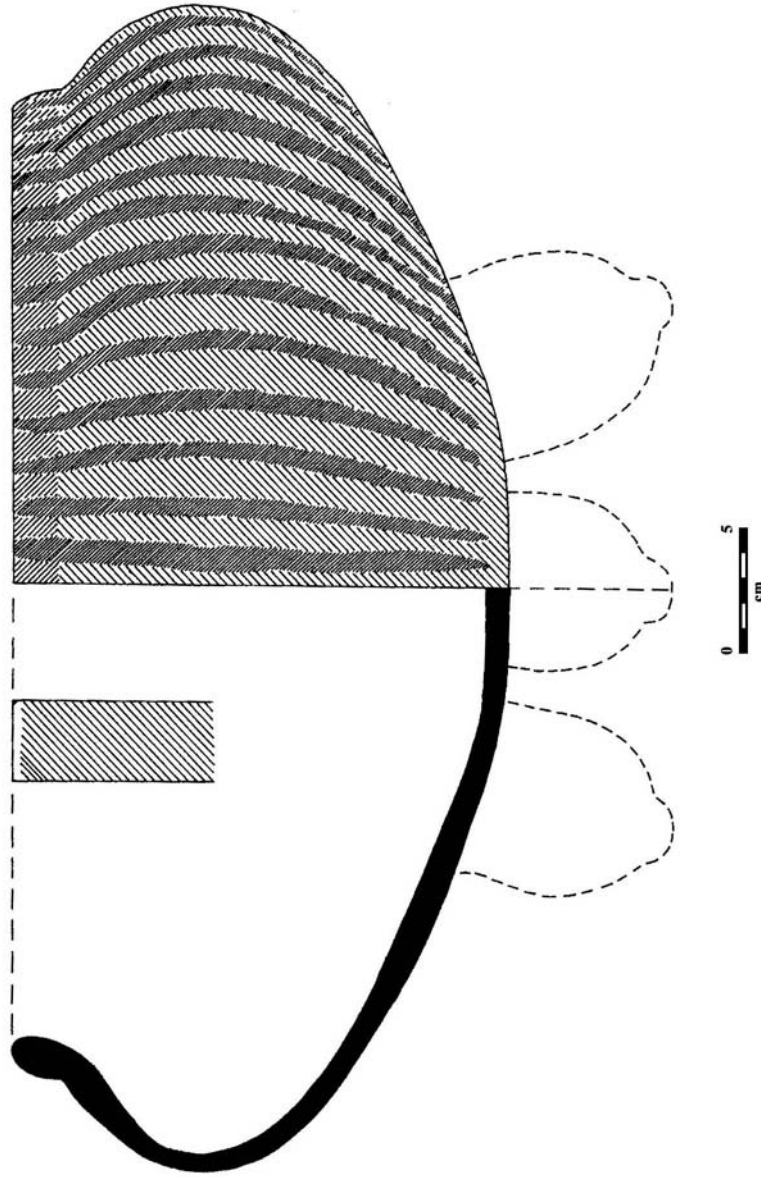


Figure 85: Unnamed Red-rimmed Orange and Trickle (LA 521/9) mammiform tripod bowl.
(vessel has golden-brown trickle decoration, not red as shownn.)

paint on exterior side; 5) red slip on rim; 6) hollow mammiform feet.

PASTE, TEMPER, AND FIRING: The paste is differential in color with the interior being 2.5YR 5/8 (red) and 2.5YR 6/8 (light red) and the exterior being 2.5YR 5/0 (gray) and 7.5YR 5/0 (gray). It is poorly sorted (grains generally less than 1 mm in size) with temper material having a round to angular fracture. This vessel (sample #2000-13) was subjected to a petrographic analysis by Linda Howie-Langs (2002a:6-7). It belongs to the Crystalline Calcite Group. The paste is composed primarily of large fragments of crystalline calcite. Lesser amounts of sparry calcite, monocrystalline quartz, and hematite nodules also occur. The crystalline calcite is an added constituent. The paste contains voids from burnt organic material.

SURFACE FINISH AND DECORATION: A hard, thick orange slip ranging in color from 2.5YR 5/8 (red) to 5YR 5/8 (yellowish red) was applied to the interior and exterior surfaces, including the feet and base. According to Howie-Langs (2002a:7), microscopic analysis has shown that multiple layers of slip were applied to the surfaces of this vessel. The orange slip is slightly laterally streaky on the interior. Each side is very well-smoothed and exhibits a very high burnish. Some temper is visible through the thin slipped surfaces. Decoration is of golden-brown (10YR 5/6, 5/8) trickle paint added to the exterior surface only. The lines are parallel, closely-spaced, slightly wavy, and run from the rim to the center of the base. At the rim the lines are vertical, but near the center base they begin to run diagonal. Secondary decoration consists of a red (10R 3/6, 4/6) slip placed on top of the orange slip on the interior and exterior rim. Rootlet marks and light crazing occur on both sides. One large firing cloud, black and tan in color, was found covering the exterior base. It discolored the trickle lines to a yellowish brown (10YR 5/4).

FORM: Round-sided bowl with slightly incurving rim and rounded lip. The neck is low and has a restricted orifice. The rim is exteriorly thickened. The base is flat to slightly

rounded. Height: 17.8 cm; Rim diameter: 24.9 cm; Maximum diameter at shoulder: 30 cm; Rim thickness: 0.93 cm; Body thickness: 0.5 cm; Base thickness: 0.7 cm; Rim height: 1.3 cm; Width of trickle lines: 0.35-0.7 cm.

APPENDAGES: Three hollow mammiform feet with very large nipple. One venting hole, facing towards the vessel center, was located on the side of each foot, but no clay pellets were found inside. Height of feet: 6.1 cm; Width of feet (at vessel base): 560 cm.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either surface. Some use wear on interior base. Given the incurving rim, restricted orifice, and slipped interior surface, it probably functioned as a serving vessel for family sized groups.

INTER-SITE LOCATIONS: None noted.

VESSEL NUMBER: LA 524/1, latest in sequence; above roof fall.

TYPE: VARIETY: Lagartos Punctated: Lagartos Variety

ESTABLISHED: Type and Variety named by Smith and Gifford (1966) at Uaxactun.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 86

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) red slip color; 2) lustrous and waxy vessel surfaces; 3) biconvex bowl with restricted orifice; 4) dot punctation on exterior; 5) light crazing and firing clouds are present.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 2.5YR 5/8 (red) to 2.5YR 6/8 (light red). A thin light gray core is present. It has a medium texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of calcite, quartz, hematite, and grog, but unidentified white, black, and red particles occur as well.

SURFACE FINISH AND DECORATION: A lustrous and waxy red slip ranging in color from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, excluding the base. The slip is relatively thick and hard, but can be scratched with fingernail. Both sides are smoothed with lateral wiping marks visible on the interior surface, likely a result of the restricted orifice. The exterior base is well-smoothed. Burnishing is low on the interior, but high on the exterior. Decoration consists of a single row of pre-slip dot punctations encircling the neck on the exterior surface. Two additional rows of dot punctations lie in a wide pre-slip groove located at the shoulder/body break. Some of the punctates are still filled with red slip. Light crazing is found on both sides and has resulted in some flaking. One firing cloud, black and tan in color, is located on exterior from base to angle.

FORM: Bowl with biconvex form and outflaring everted rim. The lip is pointed. Flaring lower sides rise to sharp angle from which upper walls curve inward to a very low and restricted neck. The base is flat and exhibits an angular margin. Height: 11.4

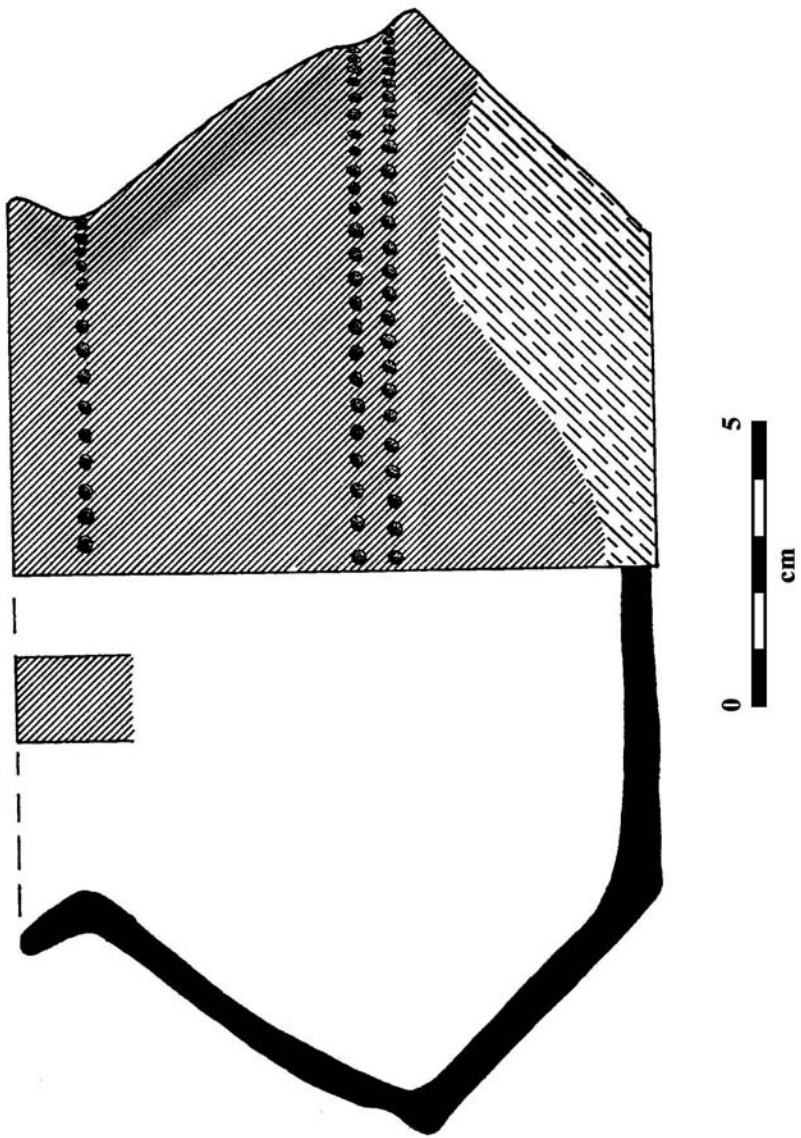


Figure 86: Lagartos Punctated: Lagartos Variety (LA 524/1) bowl.

cm; Rim diameter: 13.3 cm; Orifice diameter: 11.0 cm; Base diameter: 11.7 cm; Rim thickness: 0.7 cm; Body thickness: 0.5 cm; Diameter of punctations (at neck): 0.25-0.35 cm; Diameter of punctations (at shoulder): 0.21-0.35 cm; Weight: 870 g.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Some use wear on exterior base margin. The restricted orifice and slipped interior surface suggest it functioned as a storage vessel for dry substances. The size of the orifice would have helped to prevent spillage.

INTERSITE LOCATIONS: This is a minor type that has been found across the Maya area. It occurs with either pre-slip or post-slip punctations at such sites as Altar de Sacrificios (Adams 1971), Chan Chich (Valdez 1998:78); Colha (Valdez 1987), Cuello (Kosakowsky 1987; Pring 1977a), El Mirador (Forsyth 1989), Kichpanha (Meskill 1992), Mayapan (Smith 1971), Mirador (Forsyth 1986), Nohmul (1977a), Seibal (Sabloff 1975), Tikal (Culbert 1993), Uaxactun (Smith and Gifford 1966), Yaxchilan (Lopez Varela 1989), and the northeast Yucatan and Quintana Roo coast (Ball 1978). Two examples from Edzna are probably of this type (Forsyth 1983:61). At Cerros, Robertson-Freidel (1980:183-189) has identified a similar type, Pahote Punctate: Pahote Variety, which may be contemporaneous in date with Lagartos Punctated: Lagartos Variety.

STRUCTURE P8-27

Core of Primary Platform:

An axial trench, located at the west side, was placed into Structure P8-27, a low platform bordered by Structures P8-25, P8-26, P8-28, and P8-29. One ceramic vessel (LA 418/1) was recovered from the core of the original structure in the P8-27 sequence.

VESSEL NUMBER: LA 418/1

TYPE: VARIETY: Sierra Red: Variety Unspecified

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated by Gifford (1976) at Barton Ramie.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 87

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) red slip color; 2) soft, moderately thick slip on vessel surfaces; 3) flaring-sided bowl with slightly outflaring everted rim; 4) basal flange and ring base.

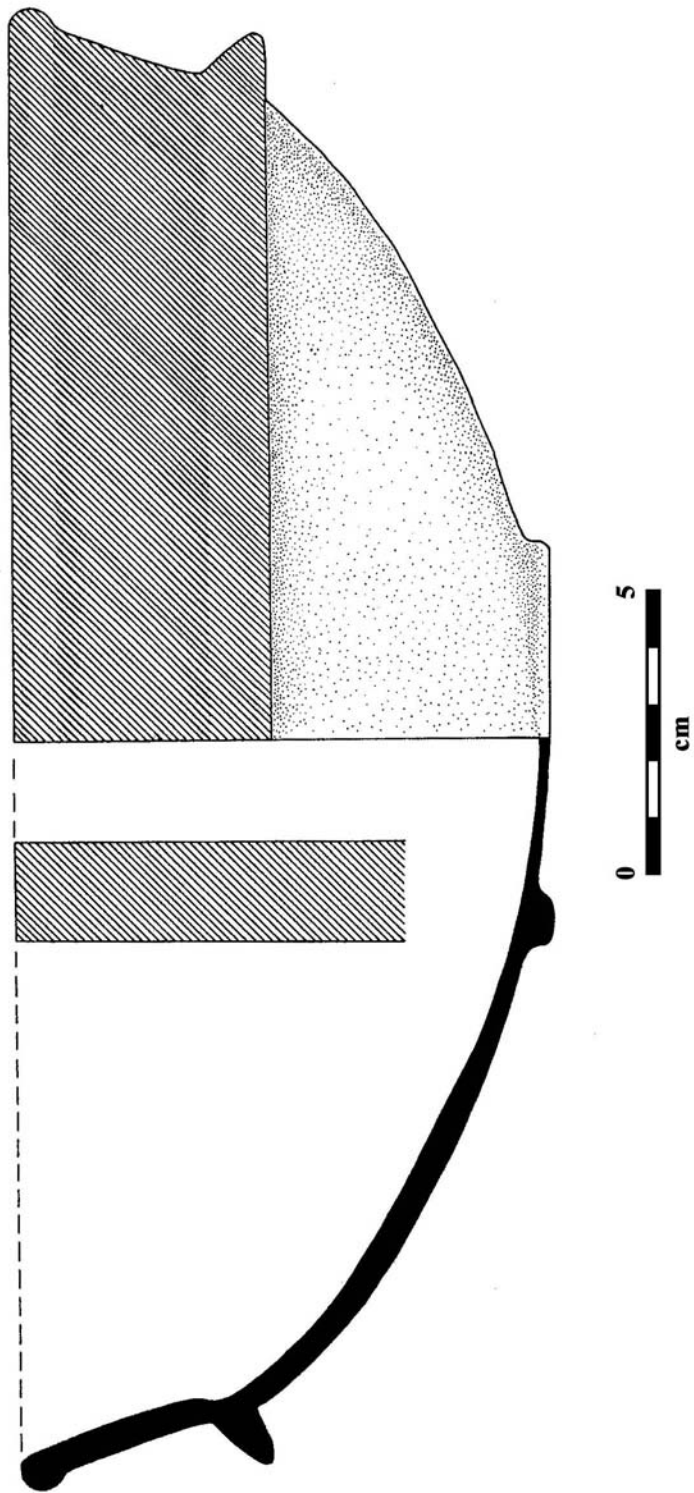


Figure 87: Sierra Red: Variety Unspecified (LA 418/1) bowl. (vessel has red decoration, not orange as shown.)

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 6/8 (reddish yellow) to 5YR 7/8 (reddish yellow). A thick black core (7.5YR 2/0 to 2.5YR 2.5/0) is present. It has a medium hard texture (grains generally less than 3 mm in size) with temper material having a round to angular fracture. The temper consists mostly of quartz and other white particles, but a small percentage was identified as calcite from an HCL acid test. One piece of chert debitage, 2 mm in size, was included in the paste.

SURFACE FINISH AND DECORATION: A somewhat soft and thick red slip ranging from 2.5YR 4/8 (red) to 2.5YR 5/8 (red) was applied to the interior and exterior surfaces, including the basal flange and base. The slip is slightly streaky in color, but does not achieve the prominent horizontal markings observed on Society Hall Red types. The surfaces are smoothed with visible lateral wiping marks present, especially at the junction between the vessel side and the basal flange. Each surface exhibits a high burnish. Both sides have extensive erosion of the slipped surfaces. Large, white temper particles are readily visible on through eroded slips. No decoration is present. Firing clouds, black in color, are found on the interior and exterior bases.

FORM: Flaring, thick-sided bowl with slightly outflaring everted with sharp basal flange and rounded lip. The lower sides are somewhat rounded before rising to a downturned basal flange. The rim is exteriorly thickened (i.e., slightly bolstered). Similarly, the interior surface, above the basal flange, is thickened. The ring base is irregularly shaped, small in size and height, and exhibits an angular base margin. Height: 16.3 cm; Rim diameter: 43.9 cm; Base diameter: 12.2 cm; Rim thickness: 1.16 cm; Body thickness: 0.96 cm; Base thickness: 0.5 cm; Width of flange: 1.7 cm; Thickness of flange: 1.18 cm; Ring base height: 0.4 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This hard and durable vessel showed some blackening of the interior base surface. The edge of the basal flange shows considerable wear. Given the large diameter, height, and slipped interior surface, it probably functioned as a serving vessel for hot soups and/or stews to supra-family sized groups, possibly in feasting events.

INTERSITE LOCATIONS: See LA 449/6 for distribution of this type across the Maya area. It is similar in form and slip color and treatment to LA 860/1. Both vessels are reminiscent of Rio Bravo Red types found at Dos Hombres and Ma'ax Na (Sullivan and Valdez 1996). In form, it is comparable to an intact vessel (379/1) found in the core of Structure F-8 at Altun Ha, dating to ca. 200-225 (Pendergast 1990:262, 264-265).

STRUCTURE P8-103

Burial P8-103/2:

A series of excavation units were placed in P8-103 revealing a long architectural sequence spanning Middle Preclassic times through the Terminal Classic or later. Burial P8-103/2 was found sealed by a burnt plaster floor associated with the second earliest structure in the P8-103 sequence. The earliest structure is dated to the Middle Preclassic period based on the recovery of four pottery vessels (LA 579/1-579/4) found in Burial P8-103/1; however, they are not reported in this study. The structure associated with Burial P8-103/2 was razed for Terminal Classic or later construction. Burial P8-103/2 is contemporaneous with the Protoclassic midden material found in Chultun P8-2 (LA 496, 520, 521, 524, 526, 544, and 552), located only a few meters to the south (Pendergast 1981d). Therefore, the structure was in use when the chultun was in use. P8-103/2 is a secondary burial, with no apparent lining or cap, which contained an adult (possibly male) extended in position and oriented in a northwest-southeast direction.

Accompanying the burial were three vessels (LA 732/1-732/3). Two of them (LA 732/1 and LA 732/2) were placed lip-to-lip.

VESSEL NUMBER: LA 732/1, inverted over LA 732/2.

TYPE: VARIETY: Sierra Red: Variety Unspecified (Red-and-black)

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated by Gifford (1976:88) at Barton Ramie.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 88a

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) Sierra Red slip color on exterior surface; 2) Polvero Black slip color on interior surface; 3) dish with sharp medial angle; 4) black trickle decoration on exterior red slip; 5) crazing is prevalent.

PASTE, TEMPER, AND FIRING: Very little paste information is available because the vessel is whole. On the surface, calcite, quartz, and unidentified white particles with a round to angular fracture are visible. The paste is soft and crumbly.

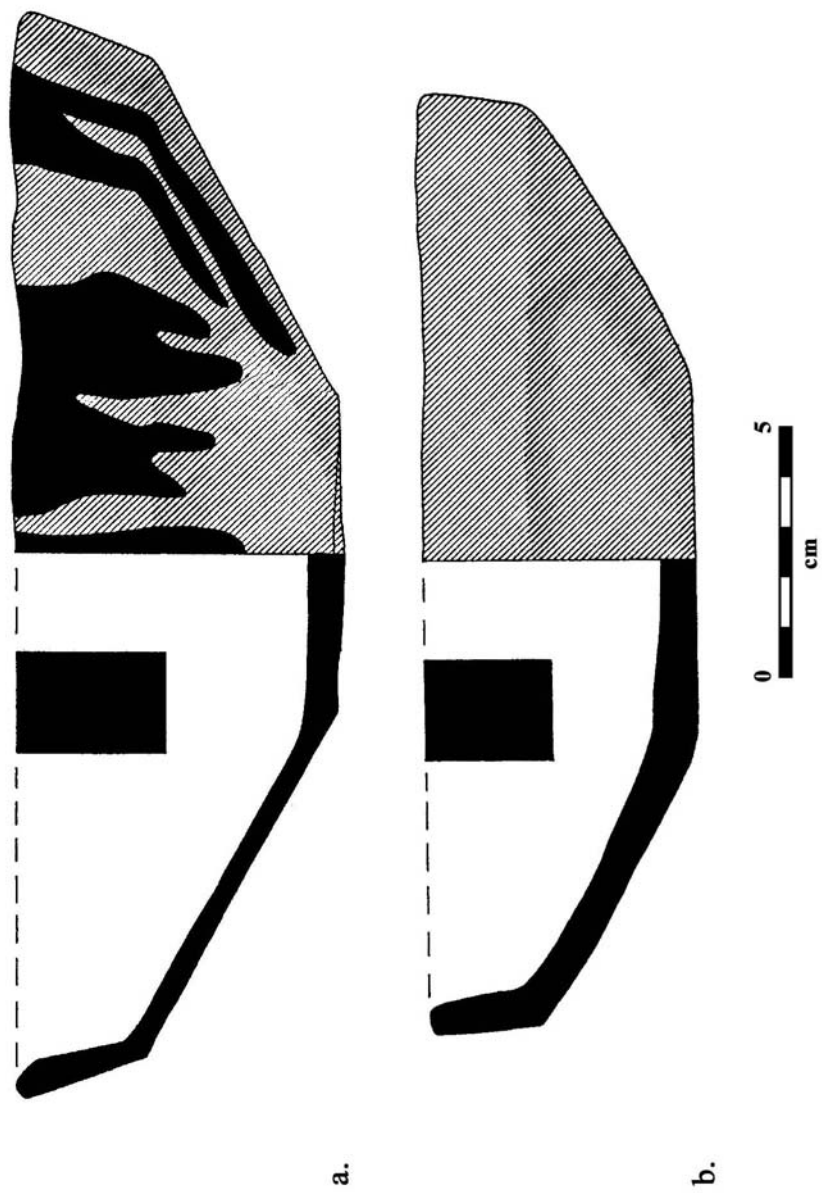


Figure 88: a) Sierra Red: Variety Unspecified (Red-and-black) (LA 732/1) dish; b) Sierra Red: Variety Unspecified (Red-and-black) (LA 732/2) dish.

SURFACE FINISH AND DECORATION: Both sides exhibit a different slip color. The exterior surface is relatively uniform in color ranging from 2.5YR 4/6 (red) to 2.5YR 4/8 (red). The interior surface is also relatively uniform in color ranging from 2.5YR 2.5/0 (black) to 7.5YR 2/0 (black). Both surfaces have a soft, slightly lustrous and waxy slip. The exterior base was left unslipped. Each side has been smoothed, but lateral wiping marks are extensive. Each side also exhibits a medium burnish. Temper is visible on the interior and exterior surfaces. Decoration consists of black drips or vertical lines running down the exterior red slipped surface. This black on red trickle decoration only covers one portion of the exterior, from rim to base margin. Crazeing is prevalent on both sides and has resulted in flaking. Leaching occurs on the interior base to the point where the black slip becomes red in color.

FORM: Thin-sided dish with sharp medial angle and rounded to slightly pointed lip. Flaring, lower sides with vertical walls above medial angle. The rim undulates markedly. Both the interior and exterior bases are irregularly shaped. The exterior base is small, flat to slightly rounded, and exhibits an angular margin. Overall, the vessel is poorly executed or irregularly potted. It was likely smoothed when it was too dry, producing corded surface. Therefore, the vessel tilts and cannot stand up straight. Height: 5.3-7.2 cm; Rim diameter: 21.9-22.3 cm; Base diameter: 7.6-8.3 cm; Rim thickness: 0.5 cm; Body thickness: 0.4 cm; Base thickness: n/a; Weight: 623 g.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Some use wear on exterior base margin. The exterior lower body has many scratch marks. The small size and slipped interior surface suggest it functioned as a ritual serving vessel. The soft paste, which created a porous surface, may have prevented this vessel from being used for liquid substances.

INTERSITE LOCATIONS: No comparable specimens have been identified.

VESSEL NUMBER: LA 732/2, under LA 732/1.

TYPE: VARIETY: Sierra Red: Variety Unspecified (Red-and-black)

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated by Gifford (1976:88) at Barton Ramie.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 88b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) Sierra Red slip color on exterior surface; 2) Polvero Black slip color on interior surface; 3) dish with sharp medial angle; 4) black trickle decoration on exterior red slip; 5) crazing is prevalent.

PASTE, TEMPER, AND FIRING: The paste has been completely reduced during the firing process which has produced a very thick black (7.5YR 2/0) core. It is poorly sorted (grains generally less than 1 mm in size) and grainy with temper material having a well-rounded to angular fracture. This vessel (sample #2000-8) was subjected to a petrographic analysis by Linda Howie-Langs (2002a:4). It belongs to the Micrite/Quartz Group. The paste is composed primarily of crystalline calcite, sparry

calcite, and monocrystalline quartz. Lesser amounts of hematite nodules, golden-colored fragments of mudstone, and plagioclase feldspar also occur. The paste is soft and crumbly like LA 732/1. It is also mottled brown and golden-yellow due to the application of a different slip color on each side.

SURFACE FINISH AND DECORATION: Both sides exhibit a different slip color. The exterior surface is relatively uniform in color ranging from 2.5YR 4/6 (red) to 2.5YR 4/8 (red). According to Howie-Langs (2002a:4), microscopic analysis has shown that a thin layer of slip was applied to the surfaces of this vessel. The interior surface is also relatively uniform in color ranging from 2.5YR 2.5/0 (black) to 7.5YR 2/0 (black). Both surfaces have a soft, slightly lustrous and waxy slip. The exterior base was left unslipped. Each side has been smoothed, but lateral wiping marks are extensive. Each side also exhibits a medium burnish. Temper is visible on the interior and exterior surfaces. Decoration consists of black drips or vertical lines running down the exterior red slipped surface. This black on red trickle decoration only covers one portion of the exterior, from rim to base margin. Crazeing is prevalent on both sides and has resulted in flaking. Leaching occurs on the interior base to the point where the black slip becomes red in color.

FORM: Thin-sided dish with sharp medial angle and rounded lip. Flaring, lower sides with vertical walls above medial angle. The rim undulates markedly. Both the interior and exterior bases are irregularly shaped. The exterior base is small, flat to slightly rounded, and exhibits an angular margin. Overall, the vessel is poorly executed and warped. Height: 5.3-5.7 cm; Rim diameter: 18.6 cm; Base diameter: 7.2 cm; Rim thickness: 0.6 cm; Body thickness: 0.5 cm; Base thickness: 0.5 cm; Weight: 386 g.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Some use wear on exterior base margin. The exterior lower body has many scratch marks. The small size and slipped interior surface suggest it functioned as an ritual serving/eating vessel.

INTERSITE LOCATIONS: No comparable specimens have been identified.

VESSEL NUMBER: LA 732/3, west side of LA 732/1.

TYPE: VARIETY: Sierra Red: Variety Unspecified

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated by Gifford (1976) at Barton Ramie.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 89

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) uniform red slip color; 2) soft, moderately thick slip on vessel surfaces; 3) flaring-sided dish with slightly outflaring everted rim; 4) basal flange; 5) crazing and firing clouds are prevalent.

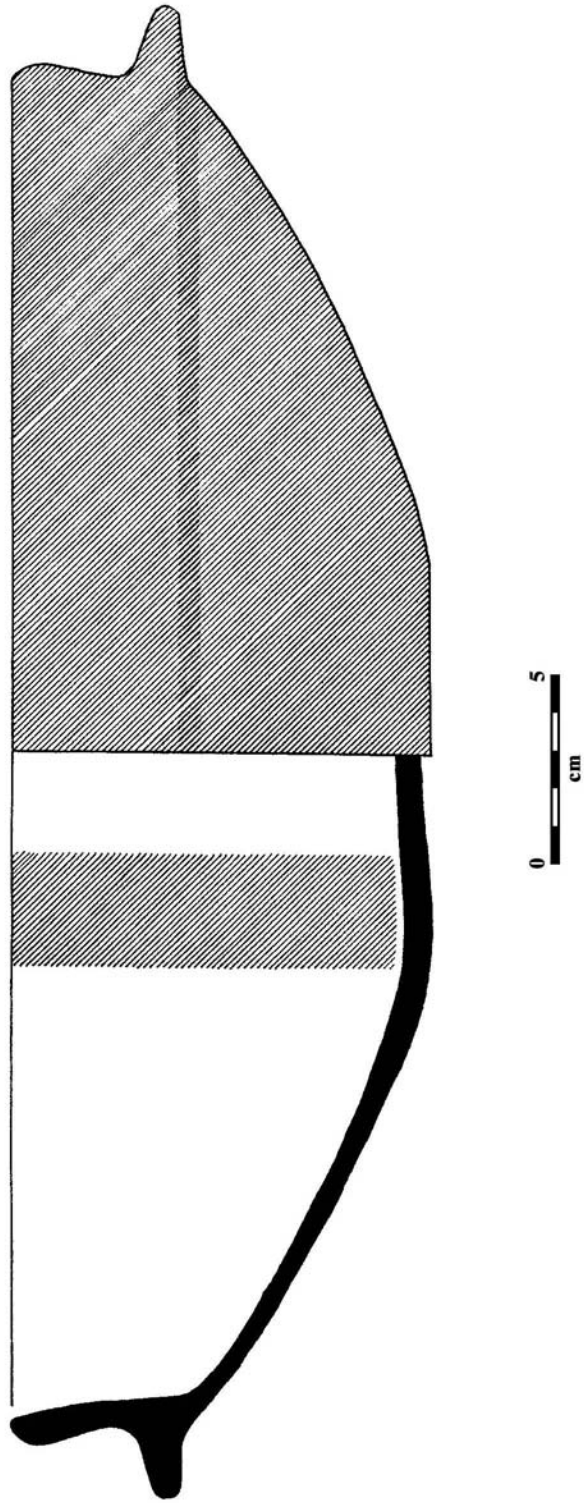


Figure 89: Sierra Red: Variety Unspecified (LA 732/3) dish.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 5YR 5/8 (yellowish red) to 7.5YR 5/8 (strong brown). A thick gray core is present. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having a round to angular fracture. The temper consists mostly of quartz, calcite, hematite, and grog, but unidentified white, black, and red particles occur as well. The paste contains voids from burned out organic material.

SURFACE FINISH AND DECORATION: A somewhat soft and thick red slip ranging from 2.5YR 4/8 (red) to 2.5YR 4/8 (red) was applied to the interior and exterior surfaces, including the basal flange. The exterior is slipped to the base margin. The surfaces are smoothed with lateral wiping marks present, especially at the junction between the vessel side and the basal flange. Each surface exhibits a high burnish. No decoration is present. Crazeing is prevalent on both sides and has resulted in flaking, particularly on the interior lower body and base. Firing clouds, golden brown and black in color, are found on the exterior lower body and base.

FORM: Flaring, thick-sided dish with slightly outflaring everted rim and basal flange. The lip is pointed. The rim is slightly exteriorly thickened. The base is slightly incurved and exhibits a rounded margin. Height: 11.1 cm; Rim diameter: 36.1 cm; Base diameter: 9.9 cm; Rim thickness: 1.1 cm; Upper body thickness: 0.46 cm; Lower body thickness: 0.6 cm; Base thickness: 0.9 cm; Width of flange: 2.0 cm; Thickness of flange: 1.0 cm; Weight 2,483 g.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Some use wear on exterior base margin. Given the large diameter, height, and slipped interior surface, it probably functioned as a ritual serving vessel.

INTERSITE LOCATIONS: See LA 449/6 for distribution of this type in the Maya area. It is similar in form and slip color and treatment to LA 860/1 and LA 418/1.

STRUCTURE P9-2

Core of the 3rd Platform:

An axial trench was excavated to probe the front (west) side of Structure P9-2. Three Late Preclassic architectural phases were uncovered. One nearly complete ceramic vessel (LA 236/1) was found in the lower part of the core of the third (or latest) of these Preclassic construction efforts. A second vessel (LA 442/1) was recovered from P9-2, but its location was the core of the outermost platform addition.

VESSEL NUMBER: LA 236/1

TYPE: VARIETY: Unnamed Cream-polychrome

ESTABLISHED: Present study

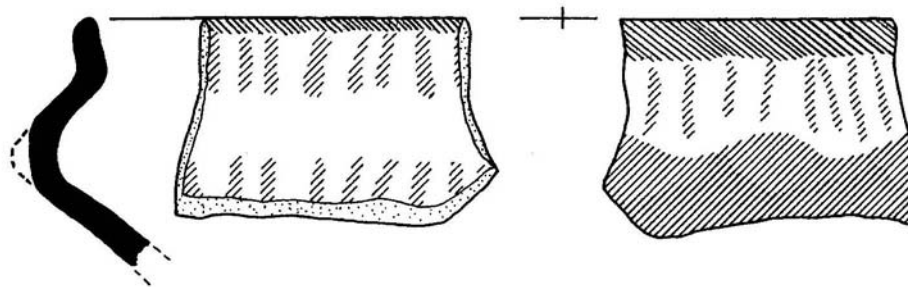
GROUP: Unspecified

WARE: Holmul Orange

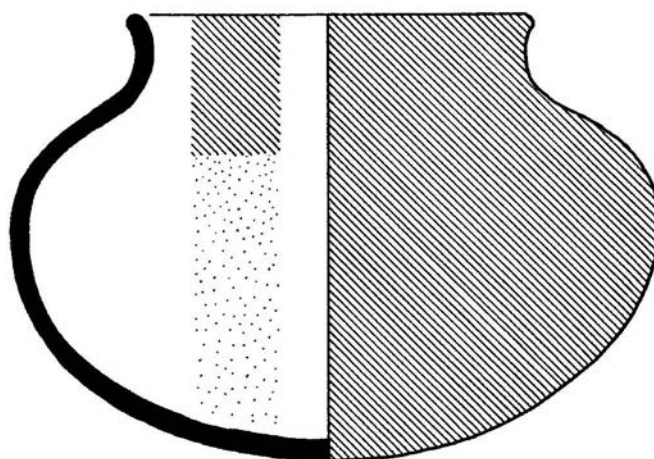
COMPLEX: late facet Zotz

SPHERE AFFILIATION: Floral Park

ILLUSTRATION: Figure 90a



a.



b.

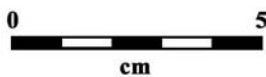


Figure 90: a) Unnamed Cream-polychrome (LA 236/1) bowl; b) Sierra Red: Variety Unspecified (LS 15) jar.

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) vessel interior and exterior surfaces have a thin cream slip with orange decorations; 2) red slip on vessel lip; 3) basal angle is deeply scalloped; 4) recurving-sided bowl with outflaring everted rim.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 7.5YR 6/6 (reddish yellow) to 5YR 7/6 (reddish yellow). No carbon stain is present. It is moderately sorted (grains generally less than 1 mm in size) with temper material having a sub-rounded to angular fracture. This vessel (sample #2000-3) was subjected to a petrographic analysis by Linda Howie-Langs (2002a:1). It belongs to the Quartz/Calcite Group. The paste is composed primarily of crystalline calcite and monocrystalline quartz. Lesser amounts of micrite, plagioclase feldspar, chalcedonic quartz also occur. Unidentified orange opaques are found in the paste. Biotite may also have been added to the paste recipe. This black or dark green form of mica is not available locally within the sustaining environs of Lamanai and, therefore, may have been imported as a tempering agent for this particular vessel. It is also possible that the vessel itself was imported to the site. There is black staining in the paste which is likely caused by burnt organic material.

SURFACE FINISH AND DECORATION: A hard, glossy cream slip centering on 5YR 7/4 (pink) was applied to the interior and exterior surfaces. According to Howie-Langs (2002a:1), microscopic analysis has shown that a thin layer of slip was applied to the surfaces of this vessel. It is uncertain if the area below basal angle on the exterior is slipped. Both sides are well-smoothed and exhibit a high burnish. Temper is visible through the slipped surfaces. Decoration consists of orange (5YR 6/8) lines located over a cream slip on the interior rim and lower body as well as on the exterior upper body. The lines are vertical, parallel, and slightly wavy. The vessel is secondarily decorated with a red (2.5YR 5/8) slip applied over the cream slip only on the lip. The red slip runs from the interior margin to just over the exterior margin of the lip. The lines on both sides begin at the red slipped portion of the lip. On the exterior, the lines end at the

basal angle. The basal angle is deeply scalloped, producing rounded projecting tabs. Light crazing on both sides has resulted some flaking of the slips. One small firing cloud, black in color, is located on the exterior lower body just below the basal angle.

FORM: Recurving-sided bowl (biconvex form) with sharp basal angle and outflaring everted rim. The vessel has a restricted orifice. The lip is pointed. The basal angle is somewhat rounded. The base is also probably flat. Height: 4.2+ cm; Rim diameter: ca. 17.0 cm; Rim thickness: 0.65cm; Body thickness: 0.7 cm; Base thickness: 0.56 cm; Thickness at basal angle: 0.9 cm; Length of lines: 1.4-1.7 cm; Width of lines: 0.18-0.46 cm; Width between projecting tabs: 3.0 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: It is a hard and durable vessel that exhibited no incrustation or residue on either surface. The slip on the basal flange is worn considerably. Although not complete, the restricted orifice and slipped interior surface suggest it probably functioned as an individual serving/eating vessel.

INTERSITE LOCATIONS: None noted.

VESSEL NUMBER: LA 442/1

TYPE: VARIETY NAME: Unnamed Red-on-orange

ESTABLISHED: Present study

GROUP: Aguacate

WARE: Holmul Orange

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Floral Park

ILLUSTRATION: Not illustrated.

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) orange slip on interior and exterior below basal flange; 2) red slip covers exterior above basal flange and extends to interior rim; 3) round-sided bowl with slightly incurving rim; 4) edge of basal flange is scalloped; 5) rootlet marking is prevalent on interior surface.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 7.5YR 5/6 (strong brown) to 7.5YR 6/6 (reddish yellow). A thin gray core is present. It has a medium hard texture (grains generally less than 1 mm in size) with temper material having around to angular fracture. The temper consists mainly of calcite, quartz, but unidentified black, red, and gray particles occur as well.

SURFACE FINISH AND DECORATION: A hard, glossy, uniform orange slip centering on 5YR 6/6 (reddish yellow) was applied to the interior surface below the rim as well as to the exterior surface below the basal flange. A hard, glossy, uniform red slip ranging in color from 10R 4/8 (red) to 2.5YR 4/8 (red) was applied to the exterior surface from slightly below the basal flange to just over the interior rim. The red slip is identical to a Sierra Red slipped surface. Both sides are well-smoothed and exhibit a medium-high burnish. Temper is visible through both slips. Decoration consists of scalloping on the edge of the basal flange. The scalloped decoration is regularly spaced around the vessel and produces projecting tabs. Rootlet marking, white in color, is prevalent on the interior surface. Light crazing is also the interior side.

FORM: Round, thick-sided bowl with slightly incurving rim and basal flange. The lip is rounded. The basal flange is squared. The base is flat and exhibits a rounded margin. Height: 11.2 cm; Rim diameter: 33.0 cm; Rim thickness: 1.06 cm; Body thickness: 0.7 cm; Base thickness: n/a; Thickness at basal flange: 1.8 cm; Distance of red slip over interior rim: 0.5 cm; Width between projecting tabs: 2.9 cm.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either surface. The slip on the basal flange is worn considerably. Given the slightly restricted orifice, large diameter, and slipped interior surface, it probably functioned as a serving vessel to family sized groups.

INTERSITE LOCATIONS: None noted.

LAMANAI SOUTH: MOUND II

Burial 2:

This burial was found in the eastern unit just to the east of Burial 1. It was placed outside of the platform, but capped by a plaster floor (Howard and Graham 1998:17). The poorly preserved remains of Burial 2 lay in an extended position with its head oriented to the north. No age or sex determinations were made. Two pottery vessels (LS 15, LS 162) accompanied the individual. Associated artifacts included a jade necklace consisting of one perforated tubular bead, one perforated oblong pendent, and some smaller fragments, as well as one small obsidian side-notched projectile point (Howard and Graham 1998:17). Both the jade necklace and the projectile point were found in the neck region.

VESSEL NUMBER: LS 15, placed over the cranium

TYPE: VARIETY NAME: Sierra Red: Variety Unspecified

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated in present study.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 90b

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, soft red slip on interior neck and exterior surface; 2) slightly waxy vessel surfaces; 3) rounded, thin-sided jar with slightly outflaring everted rim; 4) firing clouds are present.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 7.5YR 6/6 (reddish yellow) to 7.5YR 8/6 (reddish yellow). A thick dark gray (2.5YR 3/0) core is present. It has a fine texture (grains generally less than 0.5 mm in size) with temper material having around to angular fracture. The temper consists mainly of calcite, quartz, and grog, but unidentified gray particles occur as well.

SURFACE FINISH AND DECORATION: A thin, soft, slightly waxy red slip ranging from 10R 4/8 (red) to 10R 5/8 (red) was applied to the interior rim and neck and to the

exterior surface, including the base. The slipped surfaces on both sides are heavily eroded leaving only flecks of red slip, especially on the exterior body. The interior rim and neck are better preserved. Both sides are very well-smoothed and exhibit a low burnish. Temper is visible through the thin slipped surfaces. No decoration is present. Firing clouds, black in color (2.5YR 2.5/0), occur on the exterior lower body and base.

FORM: Small, rounded, uniformly thin-sided jar with low neck and slightly outflaring everted rim. The lip is rounded. The base is rounded. Height: 8.9 cm; Rim diameter: 8.1 cm; Rim thickness: 0.49 cm; Body thickness: 0.35 cm; Base thickness: 0.43 cm; Neck height: 0.5 cm; Weight: 217 g.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either surface. Some use wear on the exterior base. Given the thin, delicate walls, restricted orifice, and unslipped interior surface, it probably functioned as a ritual container for dry substances. Due to the round base, it was likely set into a mat holder of some sort since otherwise it is unstable.

INTERSITE LOCATIONS: None noted.

VESSEL NUMBER: LS 162, placed over the pelvic region.

TYPE: VARIETY NAME: Sierra Red: Variety Unspecified

ESTABLISHED: Type named by Smith and Gifford (1966) at Uaxactun; Variety designated in present study.

GROUP: Sierra

WARE: Paso Caballo Waxy

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Not illustrated.

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, soft red slip on interior neck and exterior surface; 2) slightly waxy vessel surfaces; 3) rounded, thin-sided jar with slightly outflaring everted rim; 4) firing clouds are present.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 7.5YR 6/6 (reddish yellow) to 7.5YR 7/6 (reddish yellow). A thick dark gray (2.5YR 3/0) core is present. It has a fine texture (grains generally less than 0.5 mm in size) with temper material having around to angular fracture. The temper consists mostly of calcite with minor amounts of quartz. Heavy calcite tempering is noticed based on the strong reaction to HCL.

SURFACE FINISH AND DECORATION: A thin, soft, slightly waxy red slip ranging from 10R 4/6 (red) to 10R 4/8 (red) was applied to the interior rim and neck and to the exterior surface, including the base. The slipped surfaces on both sides are heavily eroded leaving only flecks of red slip, especially on the exterior body. Both sides are very well-smoothed and exhibit a low burnish. Temper is visible through the thin slipped surfaces. No decoration is present. Firing clouds, black in color (2.5YR 2.5/0), occur on the exterior lower body and base.

FORM: Small, rounded, thin-sided jar with low neck and slightly outflaring everted rim. The body is globular in shape. The lip is rounded. The base is rounded. It is nearly

identical in form with LS 15. Height: 9.0 cm; Rim diameter: 8.3 cm; Rim thickness: 0.59 cm; Body thickness: 0.30 cm; Base thickness: 0.45 cm; Neck height: 0.5 cm; Weight: 397 g.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either surface. Some use wear on the exterior base. Given the thin walls, restricted orifice, and unslipped interior surface, it probably functioned as a ritual vessel for containing dry foods.

INTERSITE LOCATIONS: None noted.

Burial 3:

Like Burials 1 and 2, Burial 3 was found in the eastern unit. It was cut through a plaster floor, dating to the same time period as these other two burials. The individual in Burial 3 lay on its side in a semi-flexed position with the head oriented to the north. Due to poor preservation, no age and sex determinations were made. Accompanying the individual were three pottery vessels: a basal flanged bowl with black slip and post-slip incising on the top of the flange (LS 35); a small globular jar with a thin red slip on the interior neck and exterior surface; and a red-slipped tripod jar with incurved sides and mammiform feet with oblong vents (Howard and Graham 1998:19). All three of these vessels were found placed over the torso of the interred individual. The small globular jar is nearly identical to the two vessels (LS 111, LS 162) found in Burial 7. Beneath the globular jar lay two complete obsidian prismatic blades and one incomplete blade (Howard and Graham 1998:19). Neither of the two jars could be located for this study. Therefore, only LS 35 is described below.

VESSEL NUMBER: LS 35

TYPE: VARIETY: Liscanal Grooved-incised: Liscanal Variety

ESTABLISHED: Type and Variety named by Robertson-Freidel (1980) at Cerros.

GROUP: Cabro

WARE: Chunux Hard

COMPLEX: late facet Zotz

SPHERE AFFILIATION: Chicanel

ILLUSTRATION: Figure 91

PRINCIPAL IDENTIFYING ATTRIBUTES: 1) thin, hard red slip; 2) moderately lustrous vessel surfaces; 3) dish with basal flange and ring base; 4) post-slip grooved-incised lines on top of the flange; 5) crazing and firing clouds are prevalent.

PASTE, TEMPER, AND FIRING: The paste is relatively uniform in color ranging from 7.5YR 6/6 (reddish yellow) to 7.5YR 8/6 (reddish yellow). A thick black (7.5YR 2/0) core is present. It has a coarse texture (grains generally less than 3 mm in size) with temper material having a round to angular fracture. The temper consists mostly of quartz and calcite, but unidentified light brown particles occur as well.

SURFACE FINISH AND DECORATION: A thin, hard, moderately lustrous red slip ranging from 10R 4/4 (weak red) to 10R 4/6 (red) was applied to the interior and to the

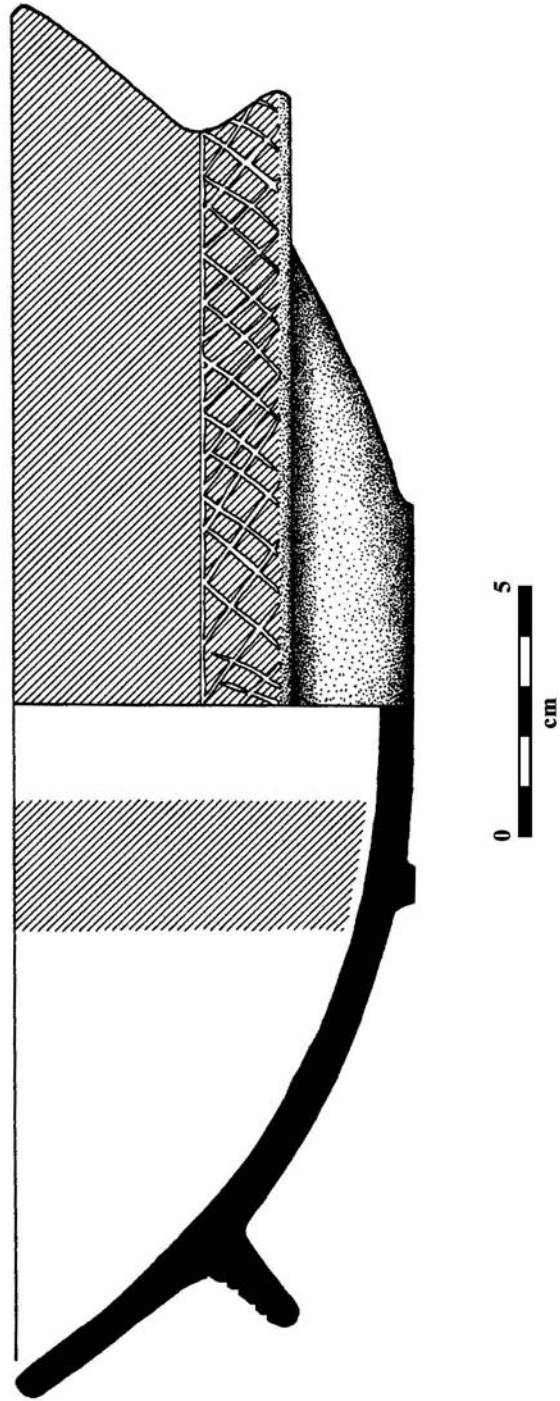


Figure 91: Liscanal Grooved-incised: Liscanal Variety (LS 35) dish.

exterior from the rim to the edge of the basal flange. The exterior lower body is unslipped. Across the vessel, the red slipped surfaces have been overfired to a dusky red (2.5YR 3/2) and dark reddish brown (2.5YR 3/3) color. The original red slip is only visible on the interior lower body and base. The overfiring and the presence of firing clouds have both contributed to the variegated surfaces. The slipped portions of the vessel are well-smoothed, but below the basal flange the surface is rough. In fact, the interior portion of the ring base contains pieces of welled-up clay. Each side exhibits a medium-high burnish. Temper is readily visible through both slipped surfaces. Decoration consists of post-slip grooved-incised lines located on top of the basal flange. At the body/flange junction there is an encircling line below which there is a cross-hatch pattern. The cross-hatching covers the entire width of the flange. The grooved-incised lines are crudely made. Heavy crazing is found on both sides. Firing clouds, black in color, occur and help to obscure the original red slipped surfaces.

FORM: Rounded, thick-sided dish with short, downturned basal flange and squared lip. The rim is direct. The interior base is rounded. The ring base is small, symmetrical, and exhibits an angular margin. Height: 8.0 cm; Rim diameter: 27.8 cm; Ring base diameter: 8.0 cm; Rim thickness: 0.71 cm; Body thickness: 0.64 cm; Base thickness: 0.7 cm; Ring base height: 0.4 cm; Ring base thickness: 1.06 cm; Width of flange: 2.0 cm; Thickness of flange: 0.6 cm; Width of flange: 1.9 cm; Width of grooved-incised lines: 0.15 cm; Weight: 1,089 g.

APPENDAGES: None.

CULTURAL SIGNIFICANCE: This vessel had no visible incrustation or residue on either side. Extensive use wear on exterior margin of ring base. There is considerable pitting on the interior base. Given the large diameter, shallow depth, and slipped interior surface, it probably functioned as a ritual serving vessel.

INTERSITE LOCATIONS: None noted. In terms of form the Lamanai vessel is similar to Lucha Incised types found at Barton Ramie (see Gifford 1976:Figure 88a), but the paste, slip color, and surface treatment are Protoclassic/Terminal Preclassic in date.

CHAPTER 7:

VESSEL FORM, FUNCTION, AND CULTURAL SIGNIFICANCE

INTRODUCTION

In recent years, ceramic research in the Maya area has adopted a number of approaches to help describe and explain ancient economic, social, political, and ideological organization. New trends in classification as well as those in chemical, statistical, petrographic, and iconographic studies have allowed researchers to expand beyond defining and refining site chronologies and to examine more fully the socioeconomic aspects of ancient Maya life (Valdez et al. 1999). Many of these lines of inquiry focus on pottery as a tool for understanding increasing economic differentiation. Maya ceramicists have become primarily concerned with pottery as a form of wealth and the role it played in promoting and maintaining social power among elite individuals. With an emphasis placed on the sociopolitical significance of ceramics for a small segment of the population, little recognition has been given to how Maya commoners, those who formed the majority of ancient Maya society, used pottery in their daily social and ritual activities (Brown 2001; LeCount 1999, 2001; Powis 1999).

One of the main goals of this preliminary study is to attempt to determine the functional nature of Late Preclassic pottery by defining the inventory and/or the range of activity sets (both domestic and ritual) associated with commoner contexts at Lamanai. To achieve this goal, there must be some discussion of what constitutes the pottery inventory found in elite contexts. This is necessary because so much more ceramic research has already been directed toward defining the archaeological signatures of elite contexts than non-elite ones, especially during the Classic period (Chase and Chase 1992).

In the first section, I briefly review past functional studies in the Maya area. This is followed by a description of the functional classes that were established as a result of my analysis of the Lamanai material. The resulting functional classes are

examined from the perspective of how they cross-cut ceramic types. In the final section, I compare ceramic types based on the context of the vessels that constitute the type (i.e., from either commoner or elite structures). Information derived by means of this comparative approach contributes to our understanding of which segment of the Lamanai community was utilizing which pottery and for what activities throughout the Late Preclassic period.

PREVIOUS RESEARCH ON VESSEL FUNCTION

Whereas functional studies have been performed on Classic period assemblages, few attempts have been made to examine vessel function as a means of gaining insight into the variability and patterning of pottery at the commoner level during the Preclassic period. Some notable exceptions include Altar de Sacrificios (Adams 1971), Cerros (Robertson 1983; Robertson-Freidel 1980), Chalchuapa (Sharer 1978), Cuello (Kosakowsky 1983), and K'axob (McAnany and Lopez Varela 1999). The Cerros study was particularly rigorous in that the material was subjected to a detailed analysis. Robertson-Freidel (1980) looked at function based primarily on context, but also on vessel form, surface treatment, paste, modes (e.g., medial ridges), and diagnostics of use (e.g., fire blackening and use wear patterns). She developed nine functional classes comprising stationary storage vessels, soaking vessels, mixing bowls, water vessels, dry storage vessels, serving dishes for hot and cold foods, buckets, eating and ritual offering bowls, and ritual vessels. The outcome was that Robertson (1983:140) was able to determine aspects of the functional significance of Late Preclassic (300 B.C. - A.D. 150) pottery at Cerros, such as the fact that, with respect to social status, elites used ceramics via functional variation to express social differentiation.

Generally speaking, ceramicists working in the Maya area have tended to establish only broad functional categories based on form and use wear patterns. These types of functional studies are somewhat limited because they depend entirely on use as inferred from vessel form, and thereby modern or ethnographic analogy, which may limit the full range of possibilities of usage (Adams 1971:138). Therefore, rather than

determining vessel function solely from vessel form, as has been the trend in the past (Deal 1998:59), there is an attempt with the Lamanai material to work from the contextual data to the establishment of functional classes or categories like those employed by Robertson-Freidel (1980) at Cerros. With regard to the archaeological context of recovery, Rice (1987a:211) has noted that “If a pot is found in a burial or a cache, or on a living surface in association with a cooking fire or with its contents intact, the function of that vessel - at least at the time it became a part of the archaeological record - is fairly clear.” Ericson et al. (1972:84) have also stated that:

relationships between primary function(s) of pottery and their physical properties can be established. Such information can be combined with contextual data within an archaeological site which allow the archaeologist to use pottery to indicate certain kinds of past behavior.

Therefore, my aim is to identify how pottery vessels from archaeological contexts were used. For example, in my study of the Lamanai material, if a thin-walled jar with a tall, restricted neck and strap handles is found in a primary midden, then it is thought to have been used for domestic and/or subsistence purposes. Additionally, vessel form, surface treatment, paste, and use wear patterns are used to help in further determining the specific activity of this pot within the domestic setting at the site. In other words, what activity was the jar being used for within this domestic context? Was it being used by the inhabitants to transport or store liquids, or possibly used in a multitude of activities? Jars of this shape and size are traditionally believed to have been used by the ancient Maya as domestic water carrying vessels, but since few studies have focused on using context as the main criterion, it remains unclear who were using these jars (e.g., commoners and/or elites) and for what range of activities (e.g., domestic and/or ritual).

FUNCTIONAL CLASSES OF POTTERY IDENTIFIED AT LAMANAI

As is the case among modern Maya, ceramic vessels in prehistoric times had a number of typical uses; these included cooking, food preparation, food serving and eating, dry food storage, liquid storage, liquid transport, and ritual (Beaudry-Corbett 2002:254; Clarke and Gosser 1995:214-216; Deal 1998:84-90; Hally 1986; 269-272; Hendon 1987:346-352; Henrickson and McDonald 1983: 631-634; Lesure 1998:20; Meskill 1992:165-170; Orton et al. 1993:217-228; Reents 1980:245-260; Reina and Hill 1978:24-28; Rice 1987a:208-210; Smith 1985:281, 1988:914; Thompson 1958:59-63). There are many factors that affect the ways in which ceramic vessels are manufactured, and vessels may have a wide range of secondary uses, including their placement in burials and caches. In general, relating vessel form to function is based on a number of observations. According to Lesure (1998:20):

Important use-related considerations that affect vessel design include required stability, transportability, type and volume of contents, accessibility of contents, manner in which contents are to be manipulated, duration of use, and duration of intervals between use. Specific aspects of vessel design related to these functional considerations include orifice size, shape of base, volume of pot, surface treatment, and special features such as rim modifications or spouts.

At Lamanai, I have been able to propose functions for all of the vessel forms (bowls, dishes, plates, jars, buckets, and vases) and to identify the contexts associated with the vessels (Table 7). The vessels and their functions include: cooking vessels, serving and eating vessels, processing vessels, soaking vessels, water carrying vessels, water storage vessels, dry storage vessels, and ritual vessels. Robertson-Freidel (1980:276) has pointed out that the Late Preclassic pottery recovered from Cerros did not “fulfill all of the necessary cooking or storage needs of which one could think.” Among the modern Maya, baskets and gourds of all shapes and sizes are used for many of the functions fulfilled by pottery (Deal 1998:89-90; Hendon 1987:349; Lischka 1978;

Table 7. Frequency of Vessel Forms by Context for the Late Preclassic Collection at Lamanai

Vessel Form	Midden	Burial	Cache	Core	Rock Feature	Sherd Feature	Hearth	Collapse
Everted bowls	14	2		3		4	1	
Vertical bowls	2	1		1				
Incurving bowls	5	2	1	2		1		
Everted dishes	16		5	6		7	2	1
Vertical dishes	4			1		1		
Incurving dishes	5				1			
Everted plates	13	3		6		1	1	
Everted buckets		2						
Everted jars	15	3		1				
Vertical jars	1	1						
Incurving jars	2	1						
Vertical vases			1					
Incurving vases	1							
Totals	78	15	7	20	1	14	4	1

Redfield and Villa Rojas 1962:36-37; Thompson 1958:146; Tozzer 1941:197; Villa Rojas 1945; Vogt 1970:54; Wisdom 1940:144). Therefore, from an archaeological perspective, we can never hope to recover the full repertoire of containers used by the ancient Maya, particularly those made of perishable materials such as wood, hide, cord, fibers, and gourds. Given the humid, tropical climate of the Maya lowlands, preservation of perishable containers is very poor due to high moisture content and soil conditions.

Listed below are a number of predicted archaeological correlates of vessel function. Traditionally, the archaeological correlates include the range of activities and the possible vessel forms that would be associated with these activities (see Table 8 for summary). All of the Late Preclassic vessels from Lamanai fit into these well-established functional classes. The information used in determining the functional nature of pottery incorporates ethnoarchaeological studies (Deal 1998:59; Longacre 1991; Skibo 1992), ethnographical and ethnohistorical accounts (Hendon 1987:349; Henrickson and McDonald 1983:635; Joesink-Mandeville 1976; Nelson 1985, 1991; Orton et al. 1993:218-220; Reina and Hill 1987; Rice 1987a:210; Sinopoli 1991:83-98; Smith 1985:280-281, 1988; Thompson 1958), painted and sculptural art (Benson 1975),

Table 8: Predicted archaeological correlates of vessel function.

Functional Category	Shape	Material	Surface Treatment and Decoration	Depositional Context	Frequency	Clues
Storage vessels	Restricted forms, orifice modified for pouring or closure; appendages for suspension or movement (tipping)	Variable (possible concern for low porosity)	Variable for display or messages; slip or glaze to reduce permeability	Dwellings (sometimes set into ground); trash middens	Low (low replacement); may be reuse of broken or old vessels	Residues of stored goods in pores
Cooking pots	Rounded, conical, globular, unrestricted; generally lacking angles	Coarse and porous, thin walls, thermal shock resistant	Little to none; surface roughening for handling ease	Dwellings, trash middens; rarely in special deposits (e.g., burials)	High (frequent replacement)	Patterns of exterior sooting or blackening; burned contents
Food preparation (without heat)	Unrestricted forms, simple shapes	Emphasis on mechanical strength; relatively coarse, dense	Variable; generally low	Dwellings, trash middens	Moderate?	Internal wear; abrasion or pitting
Serving	Unrestricted for easy access; often with handles; flat bases or supports for stability	May be fine	Generally high, for display or symbolic roles	Dwellings, trash middens, special deposits (burials, caches)	High (frequent use and replacement)	Sizes correspond to individual servings or group size
Transport	Convenient for stacking; handles; lightweight; restricted orifice	Emphasis on mechanical strength; dense, hard	Variable, generally low; slip or glaze to reduce permeability	Trash middens, non-domestic (market) areas	Variable	Uniform size or multiple units of size; residues of contents

Source: After Rice 1987:Table 7.2.

pictorial vessels (Houston et al. 1989; MacLeod 1990; Reents-Budet 1994; Stuart 1988; Taube 1989), experimental archaeological studies (Rice 1987a:211), and the archaeological context of recovery (Hally 1986; Rice 1987a:211; Robertson-Freidel 1980:263-274; LeCount 2001:946).

Cooking Vessels

The presence of blackened, carbonized areas on either the interior or exterior bodies of vessels indicates they functioned as cooking pots. Cooking pots are defined as having unslipped surfaces, outflaring everted rims, somewhat restricted necks, globular bodies, and round bases (Hally 1986:277, 281; Henrickson and McDonald 1983:631; Linton 1944; Rice 1987a:237; Wisdom 1940:140). The open mouth allows for easy access and the restricted neck prevents the contents from boiling over as well as reducing evaporation. Cooking pots come in all shapes and sizes, but jar forms predominate; large bowls may also have served as cooking pots (Linton 1944:372; Thompson 1958:61). Jars have round bases and thin walls for efficient heat transfer. Efficient heat transfer is also improved by the paste of the vessels, which is coarse and porous (Fry 1980:14; Lucero 1994:88). Cooking vessels may also have textured body surfaces to facilitate handling, and the textured surface also serves to dissipate the heat. Interior surfaces can be slippery to prevent sticking of foods. Reina and Hill (1978:148) found that modern Maya potters use a talc chlorite schist clay mixture as a slip or wash to create non-stick surfaces. Handles are also used to tie down lids covering contents. In general, cooking pots served domestic functions primarily, but ethnographic information indicates that modern Maya groups also used cooking vessels in rituals (Deal 1998:85).

At Lamanai, very few cooking vessels - as I have defined them above - have been recovered from Preclassic midden deposits (see Table 9 and Appendix B). This is not unusual, however, as an absence of cooking pots has also been recorded at other sites in the region. At Cerros, Robertson-Freidel (1980:277) noted that it is possible that

Table 9. Frequency of Ceramic Types by Vessel Function for the Late Preclassic Collection at Lamanai

Type	Eat/		Process	Soak	Water	Water	Dry	Ritual
	Cook	Serve			Carrying	Storage	Storage	
Accordian Incised: Variety Unspecified		1						
Alta Mira Fluted: Horizontally-fluted Variety		1						
Alta Mira Fluted: Variety Unspecified		2						1
Cabro Red: Cabro Variety	1	3						
Cabro Red: Trickle Variety		6					1	
Chahmah Washed: Chahmah Variety				1				
Ciego Composite: Dawson Creek Variety			1					
Flor Cream : Indian Church Variety		1						
Flor Cream: Variety Unspecified		1						1
Guacamallo Red-on-orange: Grooved-incised Variety		1						
Ixcantio Orange-polychrome: Ixcantio Variety		1					1	
Lagartos Punctated: Lagartos Variety							1	
Laguna Verde Incised: Grooved-incised Variety		6						1
Laguna Verde Incised: Variety Unspecified		1						
Lechugal Incised: Gouged-incised Variety		2						
Lechugal Incised: Grooved-incised Variety		3						1
Liscanal Grooved-incised: Liscanal Variety		1						1
Liscanal Grooved-incised: Trickle Variety		3					1	
Matamore Dichrome: Dichrome Variety		1						
Monkey Falls Striated: Variety Unspecified								1
Pahote Punctated: Pahote Variety							1	
Polvero Black: Polvero Variety								2
Polvero Black: Variety Unspecified		1						
Puletan Red-and-unslipped: Composite Variety	1							
Puletan Red-and-unslipped: Puletan Variety		1			6	2		
Quacco Creek Red: Quacco Creek Variety								2
Richardson Peak Red: Richardson Peak Variety		1					1	
Sierra Red: Ahuacan Variety								1
Sierra Red: Black-rimmed Variety (dichrome)		1						
Sierra Red: Sierra Variety		24	2					11
Sierra Red: Variety Unspecified		4	1				1	6
Sierra Red: Variety Unspecified (Red-and-black)								2
Sierra Red: Variety Unspecified (Red-double slip)		1	1					2
Society Hall Red: Society Hall Variety		3						
Society Hall Red: Variety Unspecified		1						
Unnamed Black-on-red		1						
Unnamed Black-on-red and Grooved-incised		1						
Unnamed Black, Punctated, and Unslipped		1						
Unnamed Brown-and-modeled		1						
Unnamed Buff-and-modeled								1
Unnamed Buff-and-plain	1							

Type	cook	Eat/ Serve	Process	Soak	Water Carrying	Water Storage	Dry Storage	Ritual
Unnamed Cream		1						
Unnamed Cream-and-modeled		1						
Unnamed Cream-over-red Incised		1						
Unnamed Cream-polychrome		1						
Unnamed Red-on-cream		1						
Unnamed Red-on-orange		1						
Unnamed Red-rimmed Brown and Grooved-incised		1						
Unnamed Red-rimmed Orange and Trickle		1						
Total	3	83	5	1	6	2	8	32

“if the fire was hot enough and sufficient oxygen was present, then the carbon would have burned off, leaving no deposit on the vessel.” This scenario could help explain the apparently low quantity of Preclassic cooking vessels at Lamanai. No jars were found, but two bowls (Cabro Red: Cabro Variety and Unnamed Buff-and-plain) and a dish (Puletan Red-and-unslipped: Composite Variety) recovered from domestic middens likely functioned as cooking vessels. The Puletan Red-and-unslipped type was associated with the hearth located below Structure N10-43.

Serving and Eating Vessels

Serving vessels and vessels containing individual food portions typically are open and shallow with flat, stable bases. Some flat-based vessels have solid or hollow supports. Bowls, dishes, and plates with outflaring everted and horizontal everted rim profiles make up the majority of serving and eating vessels (Thompson 1958:62). Vertical and incurving sided bowls and dishes and small jars with outflaring everted rims occur as well. They are usually open for easy access and visibility of the food (Rice 1987:240). They are also decorated, elaborately in some cases, probably reflecting their high visibility within the household (Fry 1980:5; Hendon 1987:349; Henrickson and McDonald 1983:632; LeCount 2001:945; Meskill 1992:168; Wisdom 1940:140). Serving and eating vessels vary greatly in size and tend to be made specifically for either individual use, use by a family, or use in feasts by more than one family (i.e., supra-family use). Rim diameters under 20 cm are generally considered to be for individual use while those over 20 cm are utilized for family and/or supra-family use (Henrickson and McDonald 1983:632; LeCount 2001:945; Robertson 1983:128). Thompson (1958:61) has stated that the form of small bowls and dishes is “almost identical to the half gourd which is extensively used for eating and drinking throughout tropical America.”

All vessels with flanges, whether labial, medial, or basal, are considered to be a part of this functional class. Flanges served not only in decorative displays, but functional ones as well. One of the advantages of having a flange is the ability to carry

it with the fingertips if the vessel and/or contents are hot (Forsyth 1983; Rice 1987:240; Robertson-Freidel 1980:287). The flange would also help with balancing and presenting (Fred Valdez, personal communication, 2002). Serving vessels usually have thin walls, fine-to-medium textured paste, and exhibit fairly large rim diameters relative to their height. All of them have smoothed interior surfaces that may or may not have been slipped. Slipped surfaces help to reduce permeability (Powis 1997:10-11, 17; Rice 1987a:240). In this way, food is less likely to stick to the surface.

Hollow, tubular spouts and gutter- or lip-spouts on vessels also aided in serving liquids. Spouted jars, resembling teakettles in shape, and pitchers were used in ancient Maya times for serving purposes. Modern Maya groups continue to use these forms (Reina and Hill 1978:28; Thompson 1958:42-43, 60-61). Regarding prehistoric use of some of these vessel types, recent findings from the site of Colha have definitively shown that spouted jars contained cacao (Powis and Hurst 2001; Powis et al. 2002). Residue analysis performed on samples collected from the interior surfaces of spouted vessels from that site have revealed that the vessels were used by the Preclassic Maya for mixing and/or pouring liquid chocolate drinks.

At Lamanai, serving and eating vessels dominate Late Preclassic assemblage and form 57% of the collection (see Table 9 and Appendix B). When divided by ceramic complex, serving and eating vessels comprise 58% of Lag, 64% of early facet Zotz, and 52% of late facet Zotz. Overall, there are many ceramic types represented in this category. Nearly 60% of these vessel forms belong to the Sierra Ceramic Group. Although Sierra Red: Sierra Variety and Sierra Red: Variety Unspecified are the ceramic types that comprise most midden contexts, there are also minor numbers of types, such as Accordion Incised: Variety Unspecified, Alta Mira Fluted: Variety Unspecified, Cabro Red: Trickle Variety, Flor Cream: Indian Church Variety, Ixcario Orange-polychrome: Ixcario Variety, Lechugal Incised: Grooved-incised Variety, Liscanal Grooved-incised: Trickle Variety, Matamore Dichrome: Matamore Variety, Puletan Red-and-unslipped: Composite Variety, and Society Hall Red: Society Hall Variety.

Vessels of various sizes and shapes make up this serving and eating inventory. Based on the size of the vessel and the presence of decoration, there are many more serving vessels recovered than eating vessels. Ethnographically, eating vessels are generally small and plain whereas serving vessels are larger and more elaborate than eating vessels in decoration. According to Lucero (1994:82), “serving vessels, of all domestic types, are the most likely to have decoration since they are the most publicly used vessels (e.g., for serving guests).” The labor devoted to burnishing, slipping, and other modes of decoration (e.g., incising, grooving, fluting, punctating, modeling) suggests that the display of these vessels was important. Both serving and eating vessels are most often represented in the Late Preclassic assemblage by everted, vertical-sided, and incurving-sided bowls, dishes, and plates. Given their open and shallow form, serving vessels are not particularly suited for serving anything with a high liquid content as the liquid would tend to spill over the sides in transport. Therefore, Robertson-Freidel (1980:287) has suggested that “pieces of meat, whole or parts of fish, salads or vegetables could have been effectively transported in the vessels.” Regardless of the kind(s) of food placed in these vessels, they permitted easy access to the contents inside.

Given the high frequency of serving vessels (80 out of 140 vessels) at Lamanai, an attempt was made to divide the vessels into specific size classes based on rim diameter. The categories included: individual size (under 20 cm), family size (between 20-40 cm), and supra-family size (over 40 cm) serving vessels. Vessel capacity (in milliliters) was also used as a way to measure the difference between serving sizes. At Ceren, Brown (2001:380) stated that individual serving vessels could hold, if completely filled, a “mean of 885 cc, or approximately 3.5 cups of food”. At Lamanai, 26 whole vessels were measured for their volume capacity and the results indicate that there was a considerable size range for Late Preclassic pottery, both in domestic and ritual contexts (see Table 15). Based on the evidence from Ceren, only four of the Lamanai vessels would fit into the category of individual serving vessels; Table 9 shows that most of the Lamanai vessels were most likely used for family sized

gatherings, and are therefore serving rather than eating vessels. Although not as frequent, supra-family sized vessels include both large outflaring everted shallow plates and large, deep bowls or basins.

Other large serving vessels include buckets which are similar to deep bowls in that they have high vertical walls and an outflaring everted rim. Morphologically, their unrestricted orifice, everted rim, slipped surfaces, and high walls would have allowed them to carry relatively large quantities that had a high liquid content such as soups and/or stews. Vessels with a double-slipped interior surface are also recovered in small quantities (n=4) at the site. Given their low height (under 6 cm), these shallow dishes could have also been used as eating vessels.

Processing Vessels

Flaring walled bowls and dishes of varying sizes with interior slipped surfaces and incurved or convex bases comprise this class of domestic vessels used for mixing, pounding, and holding. Generally, these vessels exhibit internal wear as well as abrasion and pitting. The incurved base, pronounced in many specimens, is typically worn on the exterior margin of these food processing or preparation vessels. Robertson-Freidel (1980:280) has suggested that “Such a wear pattern would be produced if pressure was applied to the vessel while it was rotated as is commonly done when mixing food. The convex base would reduce the area in contact with the surface on which the vessel rested, making it easier to rotate.” Mechanical stress was alleviated by medium-to-coarse paste. Given the low, flaring sides of the vessels, the food being mixed likely had a low liquid content, such as gruels and sauces or doughs for breads and cakes. Other kinds of vessels, such as spouted jars, may also belong to this functional class, especially in the preparation (e.g., frothing) of chocolate drinks (Powis et al. 2002).

At Lamanai, only five vessels functioned as food processing or preparing vessels (see Table 9 and Appendix B). They are all small dishes or plates with pronounced incurved bases. Each one has heavy use wear on their interior sides and

bases as well as on their exterior base margins. These processing vessels were of similar size and shape, ranging from 18-22 cm in diameter and 3.5 to 6 cm in height. All belong to the Sierra Group and include such types as Ciego Composite: Dawson Creek Variety, Sierra Red: Sierra Variety, Sierra Red: Variety Unspecified, and Sierra Red: Variety Unspecified (Red-double slip). As for spouted vessels, five of them have been recovered from Lamanai; three (Sierra Red: Sierra Variety, Sierra Red: Variety Unspecified, and Sierra Red: Variety Unspecified (Red-double slip) from burials, and two (Unnamed Brown-and-modeled and Unnamed red-rimmed Brown and Grooved-incised) from domestic middens. As mentioned above, preliminary analysis indicates that some of them contained liquid cacao (Powis et al. 2002), which may have been prepared by introducing air into the spout to froth the contents (McAnany et al. 1999:138). If the statement by McAnany et al. (1999:138) is correct, then spouted jars would have been used to prepare the beverages before serving them.

Soaking Vessels

Large, thin-walled dishes with flat bases make up this vessel category. These crudely-fashioned utilitarian vessels sometimes exhibit a wash on either the interior or exterior surface and have a paste that was fired as hard as cement. All soaking vessels exhibit exfoliation on the interior surface likely caused by the corrosive action of lime (Graham 1994:155; Robertson-Freidel 1980:279-280). It has been suggested that the ancient Maya may have used these vessels for soaking maize and/or beans for long periods of time prior to eating them. Robertson-Freidel (1980:279) has argued that the exfoliation is related to the use of the vessels as containers for lime and water to soak maize overnight. Graham (1994:153-155) has identified a functionally related vessel type, Coconut Walk unslipped, at the site of Watson's Island in the Stann Creek District of southern Belize and has suggested that it may have been used to mix lime with water for construction purposes. According to Graham (1994:155), the crudity of manufacture and apparent breakage after initial use suggested a very specific function as well as expendability for this vessel form. Production of salt cakes or a function related to the

production of lime from shells was suggested. Other researchers have since added support to the suggestion that this ceramic type was used in an evaporative or boiling salt-production complex in Classic and Postclassic times along the northern and southern coast of Belize (Valdez and Mock 1989; Valdez et al. 1995).

At Lamanai, only one vessel form functioned as a soaking container (see Table 9 and Appendix B). A large, flaring walled dish, identified as Chahmah Washed: Chahmah Variety, was used by the Late Preclassic inhabitants for soaking purposes. Rim sherds of ten other Chahmah Washed types have also been recovered and all share the same characteristic exfoliation on their interior surfaces. All 11 of these crudely-made pots were found alongside elaborate polychrome bowls and dishes and spouted jars inside the chultun midden. They are well-smoothed on the interior, but their exterior surface is rough, showing grass impressions. They are thin-walled (mean average is 0.3 cm) and have large rim diameters ranging from 34 to 40 cm. Given the wear across the exterior surfaces, the soaking process may have occurred while the vessels sat in the ground.

Water Carrying Vessels

Small jars with narrow orifices, thin walls, globular bodies, and flat bases characterize this functional class (Hendon 1987:349; Henrickson and McDonald 1983:633-634; Redfield and Villa Rojas 1962:36; Thompson 1958:59; Wisdom 1940:140). Their size and shape is designed for mobility and easy handling. Jars with a tall, restricted neck and a rim diameter under 20 cm are generally considered to be water carrying vessels (Lucero 1994:91; see also Deal 1998:84). The narrow orifice, coupled with a lid, would have prevented spillage of the liquid contents during transport. These vessels have hard and dense pastes for mechanical strength. The interior surface is well-smoothed. The interior and/or exterior surface may also have been slipped to retain moisture. The presence of strap handles and striations on the exterior body aids in prevention of spillage when hand-held (Rice 1987a:240). Lids would also have been affective against spillage.

At Lamanai, one ceramic type is associated with water carrying or transport. A total of six Puletan Red-and-unslipped vessels were found in the chultun midden (see Table 9 and Appendix B). They are all small jars with low, flaring rims and globular bodies. Their rim diameters range from 13 to 24 cm with the height of one vessel reaching 12.4 cm. Puletan Red-and-unslipped types have thin walls, red slipped necks, and heavy vertical striations running down the exterior lower body. The size and shape of these jars conform to modern and archaeological specimens used in water transport.

Water Storage Vessels

Morphologically, these vessels are very similar to water carrying jars except that they are larger in size and have thicker walls for strength and stability (Hendon 1987:349; Reina and Hill 1978:26; Thompson 1958:60). Another difference is that storage jars generally do not have strap handles; however, handles may occur for suspension purposes or to tie down lids that cover the contents of the jar (Rice 1987a:240). Water storage jars also have globular bodies, outflaring everted rims, and well-smoothed interior surfaces. Like carrying vessels, their interior and/or exterior surfaces may have been burnished or slipped to retain moisture. Rim diameters on water storage jars are larger (over 20 cm in diameter) than those on water carrying vessels because the wider mouth allows easier filling and access to the contents through dipping (Henrickson and McDonald 1983:633).

At Lamanai, one ceramic type is also associated with water storage and it is the same vessel form that is used for water carrying (see Table 9 and Appendix B). The only difference is that they are much larger in size and shape (and volume) with a rim diameter up to 40 cm and a vessel height up to 35 cm. Only two vessels of this type have been found and they were recovered from the chultun midden. Of interest is the presence of striations on these large storage jars. The striations may have helped in grasping the vessel if it were moved or tilted to remove water from the bottom. At Cerros, similar water storage jars with striations, labeled as Sapote Striated: Chacah Variety, have also been found (Robertson 1983:123-124).

Dry Storage Vessels

This class is made up of low, flaring-necked jars of varying sizes (Deal 1998:87; Rice 1987:241; Thompson 1958:60). Dry storage vessels can have either globular bodies with round bases or short, squat bodies with round bases. Rim diameters are between 10-30 cm (Robertson 1983:124-125). According to Robertson-Freidel (1980:124), the “low necks would make it difficult to pour liquid contents and would not inhibit spilling.” Fitted lids were placed over the restricted orifices. In many cases, bowls were placed over the mouth to protect the contents (Henrickson and McDonald 1983:632; Rice 1987a:240; Sheets 1992:51, 86, 107). They generally lack handles. At Ceren, Brown (2001:377; see also Beaudry-Corbett 2002:256) has recently commented that large jars without handles is interpreted as “related to a household’s need for long-term food storage.” Dry storage jars have well-smoothed interior surfaces as well as burnished and/or slipped surfaces to reduce porosity and permeability. The variation in size and shape of these jars indicate that some of them could hold large amounts of dry foodstuffs such as maize and beans as well as squash and achiote seeds (see Brown 2001:374), whereas other specimens could only have held dry substances in small amounts, such as seasonings or spices. Large bowls with incurving sides, flat bases, and lug handles were also used for storage purposes (Thompson 1958:61).

At Lamanai, eight ceramic types are associated with dry storage, including Cabro Red: Trickle Variety, Ixcanrio Orange-polychrome: Ixcanrio Variety, Lagartos Punctated: Lagartos Variety, Liscanal Grooved-incised: Liscanal Variety, Monkey Falls Striated: Variety Unspecified, Pahote Punctated: Pahote Variety, Richardson Peak Red: Richardson Peak Variety, and Sierra Red: Variety Unspecified (see Table 9 and Appendix B). Seven of the eight vessels are derived from midden contexts. Of the eight vessels, seven of them are jars and one is a carinated bowl form. The jars are small with either outflaring, vertical, or incurving rim profiles. Rim diameters on these jars range between 7.8 and 26.5 cm, but the majority of them have small orifices under 14 cm. Vessel heights for the jars range between 8.4 and 11.4 cm. Only the Richardson Peak Red: Richardson Peak Variety exhibited lug handles; it was also the only jar not to have

been slipped on the interior surface. Furthermore, with the exception of the Richardson Peak Red: Richardson Peak Variety and Sierra Red: Variety Unspecified jars, the other dry storage vessels were finely-made and highly decorated with trickle lines, punctations, striations, and geometric designs painted in multiple slip colors. The carinated jar form with punctations around the neck is very similar to a dry storage vessel found at Cerros (Robertson 1983:125).

Ritual Vessels

In general, ritual vessels are specialized forms that are restricted in function and reserved for specific activities (Deal 1998:52; McGee 1990:45). They are generally distinguishable from utilitarian vessels by a number of criteria (see section on Identifying Commoner and Elite Contexts). Archaeologically, they are recovered primarily in burials and caches belonging to both commoners and elites. Furthermore, certain vessel forms, like vases, have been linked almost exclusively with Classic period elite ritual activity. For example, vases have been identified with consumption of cacao (Colas et al. 2002; Houston et al. 1989; Reents-Budet 1994; Stuart 1988), political rituals (LeCount 2001), and funerary contexts (Coe 1978:11; Lucero 1994:94).

At Lamanai, the ritual vessels are derived from commoner burials and elite burials and caches, dating to all three facets. Twelve different ceramic types were found in these special deposits (see Table 9 and Appendix B). Small jars with incurving and outflaring rims occur in Lechugal Incised, Quacco Creek, Sierra Red: Sierra Variety, Sierra Red: Variety Unspecified, and Sierra Red: Variety Unspecified (Red-double slip). Outflaring-everted and horizontally-everted dishes, bowls, plates, and buckets also occur in Alta Mira Fluted: Variety Unspecified, Laguna Verde Incised: Grooved-incised Variety, Liscanal Grooved-incised: Liscanal Variety, Polvero Black: Polvero Variety, Sierra Red: Ahuacan Variety, and Sierra Red: Sierra Variety. Many of the ritual vessels exhibit either elaborate forms such as spouted jars (LA 449/2 and LA 449/6) or elaborate decoration such as crocodile imagery as seen on the Unnamed Buff-and-modeled bowl (LA 449/3).

IDENTIFYING COMMONER AND ELITE CONTEXTS

The question of identifying "commoner" versus "elite" contexts must be briefly addressed before proceeding with a functional interpretation of the Late Preclassic ceramic types at Lamanai. Traditionally, the criteria used by archaeologists to distinguish elite pottery from commoner pottery has been: (1) the superior quality of manufacture of the vessels; (2) the relative concentration of whole vessels recovered; (3) execution of design and technique; (4) the variation of types; (5) the esoteric form (such as masks, drums, and effigy vessels) of the pottery; and (6) the evidence of vessel forms which are analogous to modern wealth/status forms (see Chase and Chase 1992). Additionally, Adams (1971:139) defined ceremonial and status pottery as "all finely made pottery whose decoration, by its symbolic nature, may indicate ritual or status functions." He included the following type classes: mortuary vessels, drums, incense burners, cult effigies, and trade exotics (Adams 1971:139).

During the course of my study it became obvious that using the traditional criteria mentioned in the preceding paragraph to identify elite pottery from commoner pottery may not be possible for the dataset from Lamanai. While some of the traits listed in Chase and Chase (1992) could be used to a certain degree (e.g., numbers 1-3, 6), the other two (numbers 4 and 5) presented problems because elite and commoner pottery exhibited both of these traits at the site. Furthermore, a few of the pottery types (e.g., drums and incense burners) listed by Adams (1971:139) could not be employed because these forms were not recovered in the Lamanai Preclassic collection. Therefore, aspects of both trait lists mentioned above are used in my study in concert with the degree of elaborateness of architecture and burials.

Using a combination of approaches has alleviated potential problems with identifying elite and commoner pottery at Lamanai. Based on excavations in residential structures during the Classic period at the site, it appeared that "elite" vessels were not restricted to elite individuals; quite elaborate ceramics occurred in distinctly "non-elite" contexts. Because of this distribution, it may be dangerous to define a structure as an elite residence on the basis of ceramic content alone, and equally dangerous to identify

the depositors of the material as elite (David Pendergast, personal communication, 1999). As a result, it may be better to base identification of elite contexts on the basis of architecture, although this approach is not devoid of problems either. At times, a deposit is clearly associated with an elite structure. For example, in a major temple such as N10-43, whatever the nature of the ceramics may be one can assume the deposit was placed there by members of the elite. The opposite is probably to be assumed in "low-status" structures, in which the structure suggests that the users were non-elite, no matter how elaborate the pots may be.

The difficulty lies in structures that are of considerable complexity in form and of considerable size, but are clearly residential. Where is the dividing line between commoner and elite when it comes to architectural characteristics such as size and complexity? Determining whether a structure was the residence of members of the elite or commoners is quite likely to be somewhat arbitrary, and it is hard in such circumstances to avoid being affected by the ceramics, which may not be a good basis for decision-making (David Pendergast, personal communication, 1999). This is why every effort has been made in this study to use architectural context, degree of elaboration in architecture and burials, and the presence/absence of luxury goods (e.g., jade, greenstone, marine shells, pyrite mirrors, stingray spines, and decorated pottery) to provide information on distinguishing non-elite from elite and domestic from ritual areas of the site (see LeCount 2001:938).

THE STUDY COLLECTION AND ITS ANALYSIS

This section provides the background on which comparisons of ceramic types are made for commoner and elite contexts. The Late Preclassic material from Lamanai is derived from 14 separate structures and seven different contexts (Table 10). The

Table 10. Late Preclassic Domestic and Ritual Activity Areas for Commoners and Elite Structures at Lamanai

Structure/Feature	Context	Function of Deposit	Time Period
N10-2	Sherd Feature 1	Domestic/Elite	early facet Zotz
N10-9	Core below Lowest Floor	Domestic/Elite	Lag
N10-27	Cache N10-27/3	Ritual/Elite	early facet Zotz
N10-43	Cache N10-43/2	Ritual/Elite	early facet Zotz
N10-43	Cache N10-43/5	Ritual/Elite	Lag
N10-43	Cache N10-43/6	Ritual/Elite	early facet Zotz
N10-43	Hearth 1	Domestic/Commoner	Lag
N10-43	Rock Feature 1	Domestic/Commoner	Lag
N10-43	Core of 2nd	Elite	early facet Zotz
N11-7	Core of Primary Platform	Domestic/Elite	late facet Zotz
N12-13	Cache YDL II-7	Ritual/Elite	Lag
P8-2	Midden in Chamber 1	Domestic/Commoner	late facet Zotz
P8-2	Midden in Chamber 2	Domestic/Commoner	late facet Zotz
P8-9	Collapse Debris in 4th	Domestic/Elite	Lag
P8-9	Burial P8-9/1	Ritual/Elite	Lag
P8-9	Burial P8-9/2	Ritual/Elite	Lag
P8-9	Burial P8-9/3	Ritual/Elite	Lag
P8-9	Burial P8-9/5	Ritual/Elite	Lag
P8-9	Burial P8-9/6	Ritual/Elite	Lag
P8-11	Core of Primary Platform	Domestic/Elite	Lag
P8-11	Midden in Core of Primary Addition	Domestic/Elite	Lag
P8-11	Midden against Platform Face of 1 st	Domestic/Elite	Lag
P8-11	Midden on Floor of 1 st	Domestic/Elite	Lag
P8-14	Core of Primary Platform	Domestic/Elite	early facet Zotz
P8-14	Cache P8-14/1	Ritual/Commoner	early facet Zotz
P8-27	Core of Primary Platform	Domestic/Commoner	late facet Zotz
P8-103	Burial P8-103/2	Ritual Commoner	late facet Zotz
P9-2	Core of 3 rd Platform	Domestic/Elite	late facet Zotz
Harbor	Secondary Midden	Domestic/Commoner	early facet Zotz
Lamanai South	Burial 2	Ritual/Commoner	late facet Zotz
Lamanai South	Burial 3	Ritual/Commoner	late facet Zotz
Lamanai South	Burial 7	Ritual/Commoner	late facet Zotz

contexts have been classified into categories that reflect patterns of deposition. Vessels from middens, burials, caches, and core were recovered from both commoner and elite contexts. However, the ceramic material from the hearth and rock feature are considered commoner contexts only, while the pottery from the sherd feature represented an elite context only.

Of the 140 vessels, 81 were recovered from nine elite structures (N10-2, N10-9, N11-7, N12-13, N-10-27, N10-43 [inside pyramidal structure], P8-9, P8-11, and P9-2) and 59 were recovered from four commoner structures (N10-43 [below pyramidal structure], P8-14, P8-27, and P8-103), as well as the chultun (P8-2), the Harbor Unit, and Lamanai South. Therefore, based on the above criteria of Adams (1971) and Chase and Chase (1992), 58% of the Late Preclassic collection at Lamanai is recovered from elite contexts while the remaining 42% are derived from commoner contexts. It should be pointed out that Structure N10-43 has both elite and commoner contexts. This is possible because prior to the erection of the 33 meter high pyramidal structure in early facet Zotz times (ca. 100 B.C.), this same location served as the loci for a small residential community dating to the earlier Lag Complex (400-200 B.C.). The location of N10-43 is one of the few excavated structures at the site to have undergone such a dramatic change in function during the last two centuries B.C.

Six general vessel forms are present in the Late Preclassic collection (Table 11). They include 49 dishes, 39 bowls, 24 plates, 24 jars, two buckets, and two vases. These categories can be further divided into 15 subcategories and are listed in Table 12 with their frequencies throughout the Late Preclassic. Of the forms present, everted or unrestricted dishes, bowls, and plates are the most common, making up almost two-thirds (60.8%) of the Late Preclassic collection. Outflaring-everted dishes and bowls occur throughout both complexes, increasing in frequency from Lag to late Zotz times. Horizontally-everted dishes and bowls disappear by early facet Zotz. Plates have a slightly different temporal distribution with both outflaring-everted and horizontally-everted types fading out in the early facet of the Zotz Complex.

Table 11. Frequency of Vessel Forms in the Late Preclassic Collection at Lamanai

Vessel Form	Frequency (n)	Percentage (%)
Bowls	39	28.0
Dishes	49	35.0
Plates	24	17.1
Jars	24	17.1
Buckets	2	1.4
Vases	2	1.4
Total	140	100

Table 12. Frequency of Vessel Forms by Complex for the Late Preclassic Collection at Lamanai

Vessel Form	Lag	Early Zotz	Late Zotz	Total
Outflaring-everted bowls	5	4	11	20
Horizontal-everted bowls	4	-	-	4
Vertical-sided bowls	-	2	2	4
Incurving-sided bowls	4	2	5	11
Outflaring-everted dishes	5	14	8	27
Horizontal-everted dishes	10	-	-	10
Vertical-sided dishes	-	2	4	6
Incurving-sided dishes	4	-	2	6
Outflaring-everted plates	10	4	-	14
Horizontal-everted plates	9	1	-	10
Outflaring-everted buckets	2	-	-	2
Outflaring-everted jars	5	-	14	19
Vertical-necked jars	-	1	1	2
Incurving-necked jars	1	-	2	3
Vertical-sided vase	-	-	1	1
Incurving-sided vase	-	1	-	1
Total	59	31	50	100

More restricted vessel forms like vertical-sided and incurving-sided dishes and bowls are less prominent, but constitute 19.3% of the Late Preclassic assemblage. Although not as dominant in the collection as everted forms, they do continue to be produced throughout both complexes. No vertical-sided or incurving-sided plates were recovered.

Jars are also represented forming 17.1% with both spouted and unspouted types being present. A total of five jars had spouts, of which one was bridged. Only two of the 24 jars had handles. In the Lamanai collection, jars are not well-represented in early Chicanel (Lag) times, but become quite prominent by the Protoclassic (Zotz) period.

The remaining forms, buckets (1.4%) and vases (1.4%), are infrequent in the collection. Outflaring-everted buckets occur exclusively in Lag times. Vases do not occur until early facet Zotz and continue with a very low frequency throughout late Zotz times. However, tall, cylindrical vases are found in much larger quantities in the Early Classic (Sac Ceramic Complex) period at the site.

In the commoner assemblage of 59 vessels, five of the six vessel forms are represented with both buckets being recovered from elite burials only. Outflaring-everted and horizontally-everted dishes, bowls, and plates are found in the highest frequencies (25 out of 59), or 42.4%, in the commoner assemblage. Thirty percent of the assemblage is dominated by jars. Incurving-sided dishes and bowls are represented by eight specimens, or 13.5%, and vertical-sided dishes and bowls are represented by seven vessels, or 12%. Table 13 shows the range and mean rim diameter and height measurements for each vessel form identified in the commoner collection.

In the elite assemblage of 81 vessels, all six vessel forms are present. In the elite assemblage, 60 of these vessels, or 74.1%, are considered outflaring-everted and horizontally-everted dishes, bowls, and plates. Incurving-sided dishes and bowls are represented by nine specimens, or 11.1%, of the total collection. There are six jars forming 7.5%, and three vertical-sided dishes and bowls forming 3.7% of the collection. The last specimen identified is a vase with incurving sides. Table 14 shows the range

and mean rim diameter and height measurements for each vessel form identified in the elite collection.

By comparison, both Tables 13 and 14 show vessel forms between the commoner and elite collections are not significantly different in terms of rim diameter or height with the exception of everted dishes, bowls, and plates. Although there are nearly twice as many everted or open forms in the elite collection, they are wider and taller, on average, in the commoner collection. The information suggests that both groups utilized a wide variety of vessel sizes for domestic and ritual activities; however, elite vessels were of similar or smaller size than commoner ones. Jars are also more plentiful in the commoner collection. The difference in size between these collections is negligible. Similarly, vessel wall thickness for each group is very small with the commoner collection having a mean of 0.53 cm and the elite collection having a mean of 0.58 cm.

The vessel capacity study conducted on 26 of the whole vessels from Lamanai provided additional results regarding elite and commoner serving sizes. Of the 26 vessels, 18 were identified as elite and eight as commoner. The breakdown is presented in Table 15 and clearly demonstrates that both elites and commoners had vessels of variable sizes, ranging from small, individual sized dishes, bowls, and plates to large, supra-family sized bowls, buckets, and jars. Volumetrically, vessels associated with elite contexts (mean of 1,840 ml) had higher capacities than commoner ones (mean of 1,293 ml). Although, there are more than twice as many elite vessels in this study, dishes belonging to both groups shared a similar size range.

Approximately 68% of the commoner vessels are decorated compared to 35% of the elite vessels during both complexes. Both assemblages are generally highly polished and slipped either red, black, cream, orange, or a combination of them. They are decorated with incising, grooving, fluting, applied-modeling, punctations, striations, trickle lines, dichromy, and polychromy. The Late Preclassic collection exhibited a number of modeled vessels in the zoomorphic shapes of birds (n=4). Three of the four

Table 13. Mean Diameter of Vessel Forms for Late Preclassic Elite and Commoner Pottery at Lamanai

Vessel Form	Elite			Commoner		
	n	range	mean	n	range	mean
Everted dishes, bowls, plates	60	14-44	22.6	25	13.3-52.4	31.5
Incurving-sided dishes and bowls	8	10.5-33	23.6	9	15.4-38	21.5
Vertical-sided dishes and bowls	3	21.2-41.3	28.2	7	9.2-42.4	24.6
Jars	6	7.8-26.5	15.5	18	8.1-40	14.9
Buckets	2	18.4-27.6	23			
Vases	1	14.3	14.3	1	12	12
Total	80			60		

Table 14. Mean Height of Vessel Forms for Late Preclassic Elite and Commoner Pottery at Lamanai

Vessel Form	Elite			Commoner		
	n	range	mean	n	range	mean
Everted dishes, bowls, plates	60	2.5-11.6	4.0	25	3.5-16.3	8.3
Incurving-sided dishes and bowls	8	5.5-12.4	9.0	7	6.5-17.8	8.9
Vertical-sided dishes and bowls	3	6.4-12.6	9.3	8	5.7-15.1	9.2
Jars	5	8.1-17.5	13.3	7	8.6-35.1	14.4
Buckets	2	12.1-13.9	13			
Vases	1	14.3	14.3			
Total	79			47		

Table 15. Volume (in milliliters) of Late Preclassic Elite and Commoner Vessels at Lamanai, Belize

Vessel Type	Elite	Commoner
Outflaring-everted bowls	970	1705
	1160	
Vertical-sided bowls	1845	
Incurving-sided bowls	1885	775
	3715	
Outflaring-everted dishes	1340	2345
	1585	
	2690	
Vertical-sided dishes	1005	730
		1155
		1265
Outflaring-everted plates	385	
	2265	
Outflaring-everted spouted jars	560	390
	2175	1205
	2405	
Incurving-sided jars	2695	
Outflaring-everted bucket	1665	
	4235	
Incurving-sided vase	3225	

bird effigy vessels (LA 367/1, 421/1, and 748/1) are found in the elite collection and date to Lag times. The other bird vessel (LA 496/1) is spouted and slipped brown. It was recovered from the midden in the chultun (P8-2) which is considered a commoner deposit. One crocodile effigy vessel (LA 449/3) also dates to the Lag Complex. It was recovered from an elite burial and is important because it represents the first evidence of crocodile imagery at the site, perhaps related to the name of the site Lama'anayin ("submerged crocodile"), which was the ancient name of the community (Pendergast 1981a:32). All of the effigy vessels are elaborate and finely made, particularly the spouted vessel from the chultun.

In early facet Zotz, surface decorations applied to elite vessels included concentric horizontal streaky marks painted on the surfaces of Society Hall Red bowls and dishes (n=4), as well as red crosses painted on the base of Sierra Red plates (n=5). According to McAnany et al. (1999:139-140), these cross motifs could represent an

early example of the quadripartite motif or Kan cross. At Lamanai, the five vessels with cross motifs (LA 355/8, 421/7, 440/9, 440/10, and 440/16) come from midden deposits in the same structure. Two of the five vessel bottoms with red crosses also exhibited a painted circle creating a five pointed cross, like the vessels recovered from Late Preclassic burials at K'axob (McAnany et al. 1999:Figure 8a). Freidel et al. (1993:59-122) have interpreted variations of this motif in Classic period monumental art as symbolic of the world tree and the Milky Way. Interestingly, none of the Kan cross motifs at Lamanai were found on vessels recovered from commoner contexts and, therefore, may be linked to elite control of certain "power" symbols.

A COMPARISON OF COMMONER AND ELITE CERAMIC TYPES

In the previous sections, specific functions have been advanced for the Late Preclassic vessels from Lamanai. The distribution of types over functionally distinct loci at the site has been used as the basis for suggesting the social functions of the types. When the ceramic data from elite and commoner contexts is correlated there are a number of preliminary results that signify internal changes within the inventory from Lag to late Zotz times. For example, some types are found in both elite and commoner contexts while others are restricted to a specific segment of the community. In Lag times, certain types are only found in elite contexts (e.g., spouted jars), but are later only recovered in commoner ones. Furthermore, types only found in ritual contexts in the Lag Complex are recovered in midden contexts by late facet Zotz times. Therefore, it appears that there is a decrease over time in the number of functionally specialized types at Lamanai.

In Lag times, the majority of types that were recovered came from elite contexts with the exception of Puletan Red-and-unslipped type pottery which was derived exclusively from commoner structures (Appendix C). Types shared by both groups include Laguna Verde Incised: Grooved-incised Variety and Sierra Red: Sierra Variety. These types were recovered from domestic contexts within commoner and elite structures. All ritual vessels in the Lag Complex are derived from elite structures. They

are monochrome in color and are either plain or highly decorated with incising, fluting, modeling, and punctations. Inside a few of the Lag burials (e.g., Burial P8-9/1, P8-9/6) were vessels that contained jade and shell beads.

In early facet Zotz, there is a slight increase in the number of ceramic types identified with commoner domestic contexts, including a Flor Cream: Variety Unspecified type and an Unnamed Cream-over-red Incised type (Appendix C). While these types are not necessarily more elaborate than Lag Complex pottery, they become larger. The Flor Cream type is a serving/eating vessel and is the largest plate, measuring 53 cm in diameter and 3.5 cm in height, recovered at Lamanai during either complex. There are a few types that are restricted to elite structures at this time and they include such types as Alta Mira Fluted, Laguna Verde Incised, Matamore Dichrome, and Society Hall Red. Only one type, Sierra Red: Variety Unspecified, is shared by both groups. In terms of ritual vessels, there is an overall decrease in their occurrence at the site, but an increase in the number derived from commoner structures relative to elite ones. Vessels included in commoner burials and caches now occur as frequently as in elite contexts. In both cases, Sierra Group pottery is most often incorporated into these special deposits. However, caches found in elite structures often contained other items, including beads and figurines made out of marine shell and jade.

In late Zotz times, the number of vessels recovered from commoner contexts rises markedly, due in part, to the high frequency found in the chultun midden. In addition to their higher numbers, there is also an increase in their size, shape, quality of manufacture, and elaborateness of decoration. Most of the technological experimentation and artistic expression occurring at this time is observed in the pottery coming from the chultun (Powis et al. 2002). Some of the finest quality vessels found anywhere at the site were thrown into the chultun during this Protoclassic period, including bowls with trickle line decoration, polychrome dishes with mammiform feet, small jars with high polished slips, and composite vessels painted with more than one slip color and a combination of either striations, punctations, or grooved-incisions (Appendix C). The pottery found in elite contexts at this time is also made of fine

quality, but its range in style and variation is lacking compared to that found in the chultun. Only two types are restricted to elite use and they include an Unnamed Cream polychrome bowl with Orange trickle decoration and an Unnamed Red-on-orange bowl, both found in pyramidal Structure P9-2. As in the previous two periods, there are only a minor number of types shared by both groups. In fact, only the Sierra Red: Variety Unspecified type is shared, occurring in core contexts. Ritual pottery is found only in commoner contexts and consists of either hard red slips (e.g., Liscanal Grooved-incised: Liscanal Variety) or soft red slips (e.g., Sierra Red: Variety Unspecified and Sierra Red: Variety Unspecified). Interestingly, these vessels are of much poorer quality than the serving/eating and storage vessels found in the chultun midden.

A few trends have been recognized throughout the Late Preclassic at Lamanai with regards to distribution of types in elite and commoner contexts. However, it should be pointed out that my observations are preliminary in scope because of the uneven frequency of types found within each complex. In general, most of the vessels in the Lag Complex are recovered from elite contexts whereas in the late facet of the Zotz Complex most of the pottery comes from commoner contexts.

Sierra Group pottery is consistently recovered from all contexts through the Late Preclassic at the site, including such types as Sierra Red: Sierra Variety and Sierra Red: Variety Unspecified. Polvero Black types also continue throughout, but in very small quantities. Also, the Puletan Red-and-unslipped type occurs only in commoner contexts while the Alta Mira Fluted and Sierra Red: Variety Unspecified (Red-double slip) types occur only in elite ones. In Lag times, Society Hall Red is identified as an elite type, but by late Zotz times, it has become associated with a commoner context – the chultun midden.

Through time, ritual pottery decreases in elaborateness. For example, ritual pottery in the Lag Complex is found in elite contexts only and consists of both plain and highly decorated types with incising, fluting, punctating, and modeling. By early Zotz times, vessels from commoner burials and caches consist exclusively of plain monochrome types. By late Zotz times, ritual pottery continues to lack decoration with

only occasional incising or application of a second slip to vessels found in commoner burials. Overall, the major shift with regard to pottery across both complexes occurs not in ritual types, but in domestic and subsistence types. Elite pottery from domestic contexts in Lag times is fairly elaborate, but by late Zotz times, domestic pottery types in commoner structures become even more elaborate with exceptionally finely made dichrome and polychrome vessels being produced. These temporal changes in the ceramic inventory, while subtle in many cases, are indicative of social processes that operated during the Late Preclassic period at Lamanai.

DISCUSSION

During the Late Preclassic period at Lamanai there was a considerable variety of vessels that satisfied many domestic and ritual requirements for both elites and commoners. Each vessel form was associated with a specific range of functions. Certain groups of vessels were likely used in distinct activity sets, as seen with contemporary Maya highland groups. Today, as in the past, activity sets consisted of a group of vessels that served a specific activity, were associated with a specific activity area, and were stored together near their area of use (Deal 1998:84; see also Sheets 1992). Generally speaking, in modern Maya households there are three kinds of activity sets, including vessels for food preparation and serving, water procurement and storage, and ritual activities (Culbert 1965; Deal 1998:84; Reina and Hill 1978:25-28). At Lamanai, the variety of vessels used in each of these three kinds of activity sets has been observed for the Late Preclassic period.

There are a number of fine quality vessels found in both elite and commoner contexts at Lamanai, such as in household middens and special deposits. They are typically bowls and jars and their predominance is consistent with the situation today, and may have served a similar range of domestic and ritual functions. The abundance of fine quality wares probably reflects the highly developed ritual system that required most Preclassic households to keep on hand quantities of finer serving vessels (Evon Vogt, personal communication, 1999). In the Protoclassic, this is exemplified with the

production of trickle line decoration and dichrome and polychrome wares. Some of the finest vessels recovered the Late Preclassic were recovered from the chultun midden. The Protoclassic polychrome bowls, dishes, and jars, for example, exhibit geometric designs and stylized images of birds painted in red, black, and orange. Given the amount of excavation at Lamanai, it is surprising to see few polychromes excavated from Protoclassic elite contexts.

One explanation may be sampling bias or error. It may also be that the principle of placing cached offerings along the primary axis of ceremonial buildings was not followed in the Lamanai community during the Preclassic. As Pendergast (1998:56) has stated:

neither architectural size and complexity nor the degree of change wrought by modifications was necessarily reflected in primary axis offerings of an appropriately sumptuous nature, or even the presence of an offering in any form.

Another explanation for a lack of elaborate pottery in elite contexts may be that variations in activity sets, the use of pots for ritual and domestic functions, did not seem to be markedly different within structures during the Late Preclassic period. Additionally, the variations in the types of vessels represented within these activity sets may be minor between elite and commoner groups. For example, there has been the tendency in Maya archaeology to equate the presence of polychrome pottery with elite status. This inference probably has resulted from the prominent place of polychromes in high-status burials and in ceremonial contexts such as caches (Beaudry 1983:183). Nevertheless, there is evidence that polychromes were not restricted to the elite, but were available to commoner households not closely associated with any one particular major center. At the Classic period sites of Barton Ramie (Willey et al. 1965:350-351), Ceren (Beaudry 1983:183; Sheets 2000:224), Copan (Webster and Gonlin 1988:187), and Tikal (Culbert 1974:183) polychrome pottery has been recovered from numerous commoner households. According to Culbert (1974:65), even the most remote households at Tikal during the Late Classic regularly used hand-painted polychrome

pottery for serving food, and the vessels used for domestic activities like food storage and carrying water were the products of specialized manufacturers.

The viewpoint here is that certain types of pottery, like polychrome vessels, may not be the best marker of wealth for either Preclassic or Classic period Maya society (see Haviland and Moholy-Nagy 1992:54; Lohse and Kosakowsky 2001:435). If polychrome vessels are used as the criterion for determining wealth and status in Maya society, it should be based primarily on more than "presence of" polychrome vessels recovered from "elite" or "commoner" contexts. The criteria should be amplified and qualified to include such differences as execution of design and technique of the painted and printed surfaces (Julia Kappelman, personal communication, 1999).

Generally, there is a positive correlation between status-level context and pictorial/hieroglyphic complexity and artistic (painting) quality of polychrome pottery. However, this does not hold true when we are discussing the quality of vessel formation and firing. The highest quality vessel formation abilities are seen in pottery from all socio-economic and political contexts (Reents-Budet 1998:71-72). Further, there are anomalies in the archaeological record where we find sherds of the highest painting quality in less than elite contexts. Likewise, we find poorly painted "elite" service ware in the highest socio-economic and political contexts. The site of Buenavista, located in western Belize, is one of the best examples of this inverse correlation (Reents-Budet et al. 2000). So, the picture is much more complicated than we would like if we wanted to make simplistic statements about ancient Maya polychrome pottery.

Given the variety of contexts in which polychrome pottery occurs, other indicators such as better construction, size, and elaborateness of architecture, presence of multiple structures within household, percentage of polychrome wares versus percentage of plain wares, involvement in craft activities, inclusion of imported ceramic wares and exotic items such as jade in burials, and burial construction may be better measures reflecting household wealth (Chase and Chase 1992:54; Hendon 1991; Flannery and Marcus 1994:333-339; LeCount 2001:938; Smith 1987).

CONCLUSIONS

The preliminary data on the Late Preclassic collection from Lamanai suggest that there was considerable variability in ceramic content within commoner and elite households. Based on ceramic content, there does not seem to be a significant difference in the frequency and variety of ceramic types and forms identified in elite and commoner contexts and domestic and ritual contexts at the site during the Late Preclassic. From commoner structures occupied during the Protoclassic (early and late Zotz facets), polychrome dishes have been recovered in midden deposits and plain bowls have been found burials and caches. In elite structures, finely made serving bowls and plates have been found in middens and plainware has been recovered from caches and burials.

It may be, like recent ethnoarchaeological investigations in the Maya highlands of Chiapas have indicated, that most domestic ritual pottery types are undecorated plainwares and that finely made decorated wares served both ritual and domestic functions (Deal 1988:61). Therefore, the distribution of fine quality, decorated pottery versus plainware, which has often been used by archaeologists as an indicator of economic status, may not be a reliable indicator for status or wealth in ancient Maya society. Smith (1987) has demonstrated the potential problems associated with making simple correlations between household wealth and status. He states that there are a large number of complicating factors such as family size, developmental cycle, and the professions/specialized activities of household members (Smith 1987). Other factors, such as patterns of use and re-use and the borrowing of pottery by family and neighbors for both short-term and long-term periods should also be considered.

CHAPTER 8:

SYNTHESIS, INTERPRETATION, AND CONCLUSIONS

INTRODUCTION

This chapter examines the ceramic development at Lamanai during the Late Preclassic period. It focuses on intra-site patterning and inter-site comparisons. My ceramic discussion will address the developmental sequence of the Preclassic period, starting with the Mesh Complex dating to the Middle Preclassic and ending with the Sac Complex dating to the Early Classic. By doing so, I will be providing a clearer picture of ceramic history at the site from initial occupation through the Preclassic to Classic transition where ruling dynasties began establishing bases of power relations.

The first section presents, in a sequential fashion, the local development of the pottery at Lamanai, including the Mesh, Lag, Zotz, and Sac Ceramic Complexes. The Late Preclassic collection is then compared to other sites in northern Belize in order to observe any general trends through time and space. In the last section, I look at how the ceramic material at Lamanai is related to, or integrated with, other sites in the Maya lowlands with similar pottery assemblages.

LOCAL CERAMIC DEVELOPMENT AT LAMANAI

The Mesh Complex

The earliest evidence for ceramic material at Lamanai dates to the late Middle Preclassic (600-400 B.C.) period. To date, Structures N9-56, N9-10, N10-43, P8-9, P8-11, and P8-12, located in both the northern and central areas, have revealed pottery dating to the late facet of the Mesh Complex (Pendergast 1980a, 1980b, 1981a:42). This complex is represented primarily by mixed deposits, although a pure deposit (Burial P8-103/1) was uncovered from Structure P8-103. The early Maya inhabitants of the site

built their structures on ground located just above the bedrock surface. They consisted of simple house platform construction. This community, situated beside the lagoon, had access not only to an abundance of potable water, but also to such aquatic species like freshwater fish, shellfish, and turtles. These resources may have been a prime attractant for initial settlement at Lamanai. Moreover, the placement of the community at the entry point from the river into the lake might have also been calculated to make a statement about political and/or religious authority.

Trace-element and stable-isotopic analyses of skeletal material show that they were agriculturalists who diet consisted, in part, of cultivated plants including maize. Their diet was further supplemented by a mixture of terrestrial herbivores (e.g. deer, peccary) as well as marine and freshwater fish and shellfish (Coyton et al. 1999; Powis et al. 1999:372; White and Schwarcz 1989). Few non-ceramic artifacts have been recovered from the site dating to this period. The ceramic material recovered from structures across the site indicates that the potters were technologically proficient. The late Mesh wares show considerable sophistication and, most likely, centuries of earlier practice and experience for use in a variety of domestic and ritual functions.

Although a number of structures have yielded late Middle Preclassic sherds, there were too few of them to determine the nature and range of variation within this complex with any degree of confidence. Consequently, the late facet of the Mesh Complex does not constitute a functionally complete ceramic complex. Despite the limited number of ceramics, it is clear that the Mesh Complex is closely related to the Mamom-horizon complexes previously reported for other lowland sites.

In addition to the sherd material, four whole vessels have been recovered from a burial in Structure P8-103, situated in the north part of the site; Chultun P8-2 is located beside this structure. This burial represents the earliest ritual deposit at the site and was associated with a house platform. The vessels in Burial P8-103/1 include two Juventud Red: Variety Unspecified bowls (LA 579/1, 579/4), one Chunhinta Black: Variety Unspecified effigy bowl (LA 579/2), and one Guitarra Incised: Grooved-incised Variety dish (LA 579/3) (Figure 92). No other grave goods were found. Petrographic analysis

was conducted two of these burial vessels (LA 579/2 [sample #17] and 579/4 [sample #5]) (Howie Langs 2002a; Powis et al. 2002).

Given the limited number of sherds and whole vessels forming this complex, it is difficult to state with any certainty if there is any earlier pottery at the site. Though earlier Maya occupation is known in the region (Andrews 1990; Hammond 1977; Hammond et al. 1979; Kosakowsky 1987; Kosakowsky and Pring 1998; Lopez Varela 1996; Pring 1977a; Reese and Valdez 1987; Valdez 1987, 1998; Valdez and Houk 2000), there is, to date, no evidence for such occupation at Lamanai; however, the recovery of wood stratigraphically associated with corn pollen from the Harbor, with a radiocarbon date of 1500 B.C., may indicate an earlier occupation at the site (Pendergast 1998:56). Future research may help to clarify whether or not Lamanai was inhabited as early as Chan Chich, Colha, Cuello, K'axob, Kichpanha, and Nohmul.

Based on the ceramic material I have examined, the Mesh Complex at Lamanai consists primarily of waxy slipped monochromes. Red and black slipped types predominate the assemblage. Few unslipped vessels have been encountered. No dichromes have been recovered. The pastes were generally medium to coarse tempered (grain size up to 5.0 mm) and poorly sorted. These grainy pastes contained such primary mineralogy as sparry calcite, crystalline calcite, monocrystalline quartz, chalcedonic quartz, hematite nodules, and micrite. Microscopic analysis conducted on one of the vessels (LA 579/4) from Burial P8-103 has indicated that the clay used in its manufacture was procured from a pit located behind Structure N10-9. This information argues that this particular vessel was made on-site using local clays obtained from the central area of the site (Powis et al. 2002).

The slips are thick and soft; however, microscopic analysis on the two vessels (LA 579/2 and 579/4) from Burial P8-103/1 has indicated that thin slips were also employed (Howie-Langs 2002a:3, 9). Vessel forms were simple and generally restricted to bowls and dishes with either rounded, flaring, or carinated sides. Tecomate forms were rare in the assemblage. Rims were varied with either direct, slightly everted, or

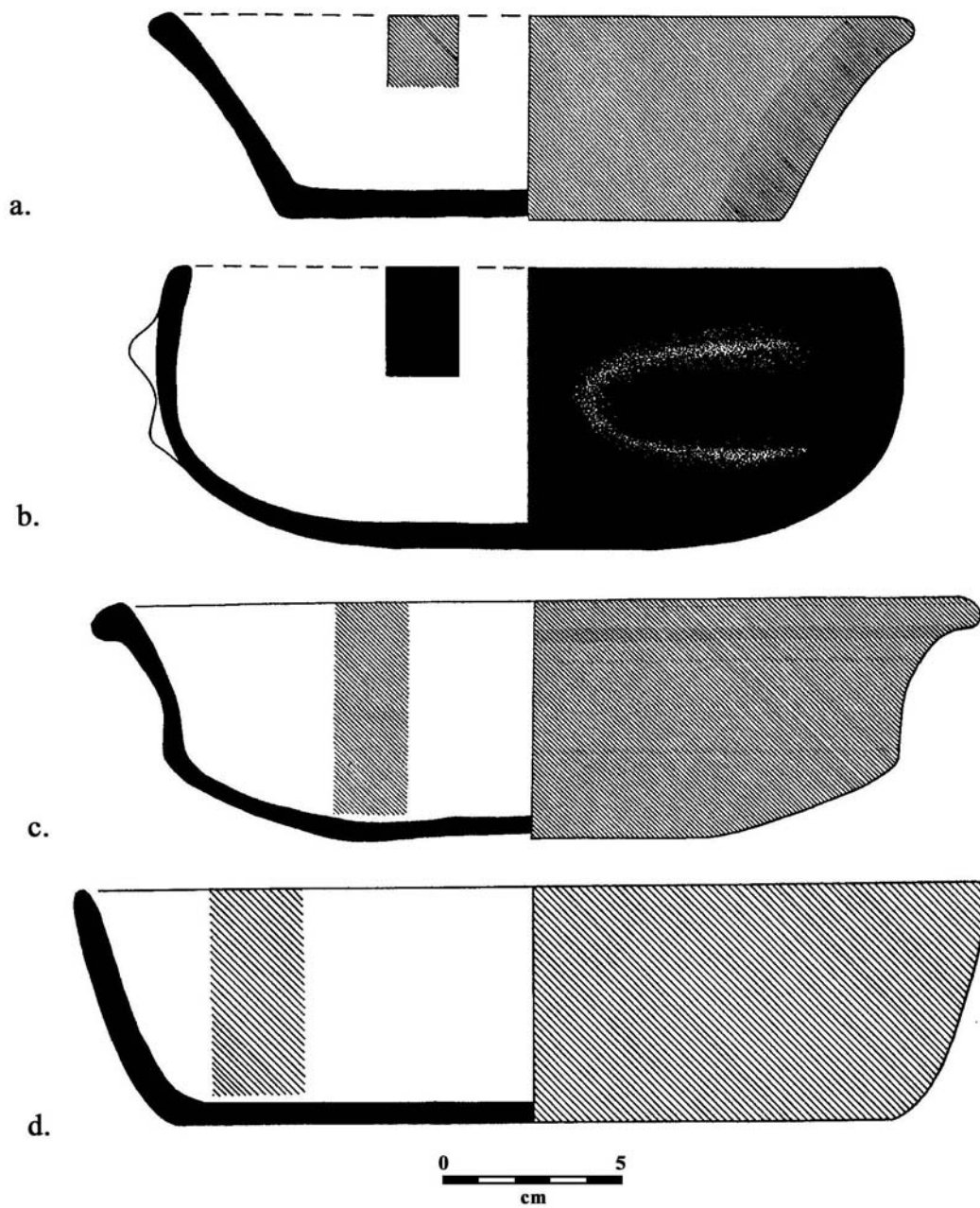


Figure 92: a) Juventud Red: Variety Unspecified (LA 579/1) bowl; b) Chunhinta Black: Variety Unspecified (LA 579/2) effigy bowl; c) Guitarra Incised: Grooved-incised Variety (LA 579/3) dish; d) Juventud Red: Variety Unspecified (LA 579/4) bowl.

horizontally everted profiles. The bases are either flat or slightly incurved. Unsupported spouted jars also occur. Of the few specimens analyzed, decoration consisted of either circumferential incising and grooved-incising or modeling (e.g., animal effigies in the shapes of birds). One distinctive motif, the double-line break with both lines breaking to the edge of the rim, was found on the Guitarra Incised: Grooved-incised Variety dish in Burial P8-103/1.

Other diagnostic decorative modes of late Mamom times, such as chamfering, gadrooning, and fluting were minimally observed. Stucco decoration, a diagnostic mode for this period, is absent from Lamanai. At Nakbe, nearly 10% of the late Middle Preclassic assemblage exhibited stucco decoration on vessel exteriors (Richard Hansen, personal communication, 2001). Crazing, rootlet markings, and firing clouds, all diagnostic of this time period, were prevalent on most of the pottery. Preliminary analysis indicates that, like the ceramics at El Mirador (Forsyth 1989:125), the slipped pottery of the Mesh Complex is distinguished from the later Lag Complex primarily by differences in vessel form and decoration rather than by changes in paste or surface treatment (see Powis et al. 2002). Given the paucity of Mesh Complex ceramics, it could be interpreted that there was a small and insignificant occupation at Lamanai during Middle Preclassic times, but architectural remains suggest otherwise. Dispersed settlement is found throughout the northern and central areas of the site, covering an area nearly two kilometers in length (in a strip development) from north to south along the margin of the lagoon. More excavations are needed to determine how extensive or continuous Middle Preclassic occupation was within these two zones.

The Lag Complex

Across the site, Mesh deposits are stratigraphically overlain by ceramics of the Lag Ceramic Complex. Unmixed deposits of the Lag Ceramic Complex occur in many structures at Lamanai, including Structures N10-9, N10-43, N12-13, P8-9, P8-11, and P8-27. Lag represents a continuation of the preceding Mesh Complex. It is the earliest

of two ceramic complexes dating to the Late Preclassic period. The Lag Complex, dating to 400-100 B.C., relates to the widespread Chicanel Ceramic Sphere. Although Lag ceramics developed out of the earlier Mesh Complex without apparent discontinuity, there are more architectural contexts from where they are recovered and the frequency of types also increases. The rise in the number of contexts may be attributed to the nature of Pendergast's excavation strategy, but the quantity and distribution of ceramics during Lag times appears to be a reflection of the intensity of occupation at the site.

At present, it is unclear how nucleated settlement may have been within the northern and central areas in the late facet of the Mesh Complex. However, by Lag times, it appears that the Lamanai community underwent a series of changes, many of them probably related to rapid growth. Evidence derived primarily from ceramic distributions strongly suggests that the site experienced an increase in population growth at this time. Architecturally, this is a period of immense building activity. In addition to construction in the northern and central areas, we see for the first time the erection of platforms in the same area as the Spanish Churches. Furthermore, not only are more structures of different size and shape being built at this time, but their functions also shift from being primarily domestic in nature. Small pyramidal structures are being constructed in the northern zone (e.g., Structure P8-9), as well as in the Central Zone (e.g., Structure N10-43). By the end of the Lag Complex, ca. 100 B.C., Structure N10-43 was raised more than 30 m in height serving a communal and ceremonial function, not a residential one. Clearly, as Pendergast (1981a:42) has pointed out, Structure N10-43 is the "product of the labor of a community of considerable size under the control of a powerful elite group." It is also at this time that monumental masks adorned one of the earliest construction efforts in the Structure N9-56 sequence; the masks closely resemble those found on Structure 5C-2nd at Cerros (Freidel 1979:45-46; Pendergast 1981b:96).

An increase in construction activity and consumption of ceramic and non-ceramic materials implies an overall increase in population growth and food production.

Maize agriculture became more important at this time as evidenced from the isotopic analysis conducted on individuals buried in Structures P8-9 and P8-103. White and Schwarcz (1989:463) have stated that there was a heavier dependence on maize at this time. Maize processing implements like manos and metates are also recovered in a variety of contexts. Terrestrial herbivores were also important to the diet. Similarly, marine and freshwater fish and shellfish were consumed, but not in large enough quantities to register an isotopic distinction in human bone. It appears, then, that during this period there is a transformation from a relatively small, homogeneous community to one, which became larger in size and density, more dependent on maize agriculture, and increasingly differentiated in terms of social and/or economic position.

During Lag times, we have a much clearer picture of the ceramic inventory used by the early Late Preclassic Maya for both domestic and ritual purposes. In Chapter 7, I presented a number of ceramic types identified with utilitarian and non-utilitarian functions. Ritual activity increased at this time not only with the number of burials, but cached offerings occur as well (Pendergast 1998). In Structure N10-43, Cache N10-43/5 was placed within the platform core as a dedicatory offering to a new construction phase. It contained a number of unidentified bird carcasses placed inside a Sierra Red: Sierra Variety dish. While some offerings included foodstuffs such as birds, others ritual deposits, like burials, included modified marine (*Marginella* sp., *Oliva* sp.) and freshwater (*Pomacea* sp., *Nephronia* sp.) shells and an obsidian core. These non-ceramic artifacts indicate that the inhabitants of the Lag community had access to non-local items from the Caribbean Sea to the east and the Guatemalan Highlands to the south either through direct exploitation or trading networks.

The Lag Ceramic Complex is based on the lack of late Middle Preclassic types and the presence of new ceramic traditions. Both the presence and absence of certain types, forms, and modes helped to establish the beginning date for the Lag Complex at ca. 400 B.C. Although this complex is defined by strong innovations such as the labial flange, there is a continuation of certain traits like thick, soft, and waxy slipped surfaces that are diagnostic of the Mesh Complex.

The paste recipes for pottery in this complex are varied. Most vessels have a fine to medium (grain size less than 1 mm in size) textured paste with a round to angular fracture. They are generally moderately to poorly sorted. The primary mineralogy includes crystalline calcite, sparry calcite, monocrystalline quartz, chalcedonic quartz, grog, hematite nodules, micrite, chert, and plagioclase feldspar (Powis et al. 2002). Obvious added constituents to the paste recipes were crystalline calcite, grog, and organic remains. An examination of the paste in a Flor Cream type dish (LA 440/2) found in Structure P8-11, located in the northern part of the site, matches clay samples recently taken from a pit located behind Structure N10-9, located in the Central Precinct area. This information argues that potters, from Mesh times onward, continued to use local clays from around the site when producing their wares (Powis et al. 2002). Overall, the slips are both thick (e.g., LA 440/2, 449/2, 449/6) and thin (e.g., 364/2, 480/1) and may have been the product of either a single application (e.g., LA 449/2, 449/6) or multiple applications (e.g., LA 440/2) (Howie-Langs 2002a).

The Lag ceramics are represented by a variety of forms, decorative techniques and designs, and paste recipes. Based on preliminary analysis, most if not all of the pottery manufactured at this time was locally made. Potters produced a broad repertoire of ceramic vessels that were very well made and highly varied; much more so than in the earlier Mesh Complex. The majority of vessels in this complex consist of highly polished serving vessels. The predominant slipped pottery belongs to red monochrome wares of the Sierra Group, forming nearly 75% of the Lag assemblage. Sierra Group pottery developed out of the earlier Juventud Group of the Middle Preclassic period. The red monochromes, with both single and double slipped surfaces, are followed in importance by black (Polvero Group) and cream (Flor Group) slipped monochromes. All of the Polvero Group vessels exhibit red-tinging to the black slipped surfaces and may be considered a diagnostic trait of the complex. Pottery belonging to the Chicago and Sapote Groups are noticeably absent from this complex. Unslipped types of the Richardson Peak Ceramic Group occur, but are rare.

Although dichromes are minimally represented (e.g., Sierra Red: Black-rimmed Variety), there are two examples in which portions of a vessel have been slipped red and the rest of the surface has been left unslipped. In both cases, these “red-on-natural” vessels as Forsyth (1983:183) designates them, have been identified as belonging to the Puletan Red-and-unslipped type at Lamanai. This type is generally associated with later Late Preclassic assemblages, but its occurrence in Lag times may indicate an early precursor at the site.

In terms of vessel form, this complex is characterized by flaring-sided and round-sided bowls, dishes, and plates with either flat, rounded, or incurving bases. Rim profiles are predominantly everted with thickened or bolstered rims. A number of vessels exhibited labial flanges. These flanges may be oriented in either a horizontal or downturned position. Some of the vessels with flanges also manifest small rim protuberances; these applied pieces are typically found on bird effigy vessels representing wings or tails. Other vessel forms include medial-ridge bowls, carinated bowls, composite silhouette vessels, incurving-sided bowls and dishes, large and medium-sized buckets, short-necked jars, and large and small spouted jars. Tecomate-like bowls occur in low frequencies at this time. Handles are found on a few jars of varying sizes, but they are generally uncommon in Lag times. In sum, the diversity and elaboration of vessel and rim form is unequalled in any other ceramic complex at Lamanai, with the possible exception of the late facet of the Zotz Complex (Protoclassic period).

The most prominent form of decoration included pre-slip incising and grooved-incising, but punctations, applied-modeling, gadrooning, and fluting (both vertical and horizontal) are present as well. A few bowls and dishes exhibited post-slip gouge-incising. Incised decoration consisted of single or multiple lines running either vertically or horizontally across the vessel. In some instances, the incised lines encircled the upper surfaces of thickened or everted rims. Punctations were always located at mid-body and consisted on a single encircling row of linear dots. Other minor, but distinctive, modes of decoration are gadrooning and fluting. They are found on the

globular bodies of spouted vessels and give a gourd- or cacao-like appearance to them. Some of the most elaborate vessels were decorated with applique-modeling. Modeled vessels in the zoomorphic shapes of birds and crocodiles were found in different contexts at the site. In addition to the modeling, these same vessels were also secondarily decorated with striations or post-slip gouged-incised lines.

The Zotz Complex (early facet)

At the beginning of this period, ca. 100 B.C., noticeable changes occur at Lamanai. Although some of these changes appear to be subtle, others are conspicuous in their representation. For example, the pottery of the early facet of the Zotz Ceramic Complex is considerably less elaborate in form and decoration compared to earlier times. Furthermore, it is at this time when Structure N10-43, for example, undergoes a dramatic transformation from serving as a domestic residential locus for Lag inhabitants to one that served a communal and ceremonial function for early Zotz residents with the construction of a 33 m high temple pyramid.

Early facet Zotz Complex deposits are derived from a number of structures across the site, including Structures N9-56, N10-2, N10-27, N10-43, P8-14, and Mound II of Lamanai South. Mixed deposits with early facet Zotz pottery were also found in excavated structures with late facet Zotz Complex pottery. The ceramics produced between 100 B.C. and A.D. 150 at Lamanai developed out of the Lag Ceramic Complex. They continue to belong to the Chicanel Ceramic Sphere. Occupation at this time is more dispersed than in earlier periods as all three major settlement areas (north, central, and south) show evidence of construction activity. Based on architectural and ceramic data, the Lamanai community continued to grow during these two and one half centuries with structures ranging from small house platforms to large pyramids being built. With site enlargement and increased population comes a heavier reliance on maize agriculture (Coyston et al. 1999; White and Schwarcz 1989). Faunal evidence from a number of structures as well as from the Harbor investigations indicates that the

Maya were continuing to exploit such terrestrial animals as deer and peccary and freshwater gastropods and pelecypods (Norbert Stanchly, personal communication, 1999). Marine fish remains (e.g., parrotfish) have also been identified at the site (Powis 2000b).

From a social and economic standpoint, not only were the elite at Lamanai pooling resources for the construction of monumental architecture, but there was also an obvious increase in public ritual activity, especially with the placement of cached offerings in these temple pyramids. The inclusion of ceramic vessels in caches, both on and off the primary axis, was a standard practice at Lamanai (Pendergast 1998:57). Jade and/or modified marine (e.g., *Spondylus* sp.) shells were included in each of the caches recovered during this time period. Their inclusion indicates that the elite had continued or sustained access to nonlocal items. Despite the fact that jade and other imported materials were not found in copious amounts in the caches, Pendergast (1981a:42) has argued, based on architectural evidence alone, that Lamanai was a very important Preclassic center, and “with this importance must have come links with both neighboring and distant areas.”

The ceramic inventory for the early facet of the Zotz Complex is not as varied as that of the preceding complex. In comparison, fewer types and varieties were noted, but an overwhelming majority of them belong to the Sierra Group. Additionally, the ceramics of this complex exhibit a narrower range of variation in terms of vessel form and decoration; applied-modeled effigy vessels are no longer recovered in deposits of this period. In early facet Zotz times, there is the first appearance of medial flanges and small, solid, tetrapodal nubbin feet. Overall, vessel size is smaller and shallower. Some forms, like deep bowls or buckets and tecomates, completely disappear. In other cases, certain diagnostic forms of the period, like mushroom stands and florero vases, do not occur at all. This complex is dominated by monochrome slipped serving vessels with some bowls, dishes, and plates having rim diameters exceeding 40 and 50 cm. The majority of vessels have flaring sides with flat bases; although a few exhibited round or slightly incurving ones. Many vessels still exhibited open forms with outflaring everted

rims replacing horizontally everted ones of the previous period. New forms introduced in this period include tapering cylindrical vases and small slipped jars without spouts.

As mentioned above, Sierra Group pottery is predominate in this assemblage. Very few Polvero Group and Flor Group ceramics were found in early facet Zotz deposits. However, when these two slip colors are found they typically occur on bichrome or dichrome types like Matamore Dichrome and Unnamed Cream-over red Incised. The Society Hall Red type with its concentric horizontal streaky marks makes its first appearance at the site. Although this ceramic type has been reported from a number of nearby sites (e.g., Cerros, Chan Chich, Colha, Cuello, K'axob, Kichpanha), its occurrence at Lamanai is low (n=3). Even the three specimens identified in the Lamanai assemblage are poor imitations of those found at other northern Belize sites. It appears, then, that this type never became popular at the site, instead potters favored monochromes with very little decoration.

During this time, slips still maintained some degree of waxiness, but they are becoming slightly harder and glossier, especially at the end of the period around A.D. 150. Microscopic analysis of one vessel, a Matamore Dichrome type (LA 125/6), indicated that multiple layers of slip were applied before firing (Howie-Langs 2002a). In terms of decoration, only pre-slip incising, grooved-incising, and vertical fluting were employed. The grooves become wider and deeper at this time. Striations on jars are rare. No Usulután-like decoration is found during this complex and, therefore, its absence defines the end date for the Lag complex around ca. 100 B.C.

The paste recipes for the early facet Zotz Complex are similar to earlier periods at Lamanai. They continue to be varied with pastes being both hard and compact (e.g., LA 125/1-125/14) and soft and friable (e.g., LA 356/1-356/2, LA 1127/2, LA 1128/1). Grain size and shape are also variable ranging from 1-3 mm in size; however, one piece of calcite measured 9 mm. The primary mineralogy included sparry calcite, crystalline calcite, monocrystalline quartz, grog, hematite nodules, micrite, and mudstone (Howie-Langs 2002a; Powis et al. 2002). Both crystalline calcite and sparry calcite were added as tempering agents.

Overall, there are two main points to make about the pottery of this period. First, the pottery is rather uniform and plain with red monochrome pottery being the dominant group. Vessel forms also appear to be somewhat restricted. It seems that this period is even more conservative in production in terms of form and style than in Lag times. This conservatism is reflected in the near absence of plastic decoration to the surfaces of the vessels. There is a clear departure from the kinds of decoration (e.g., applied-modeling) that were placed on Lag pottery. Second, by the beginning of the late facet of the Zotz Complex, ca. A.D. 150, decoration once again becomes widespread with new and elaborate styles as well as forms being produced. So, at the same time that the potters of the early facet of the Zotz Complex were continuing with certain Lag ceramic traditions, there are signs that they were beginning to blend traits by the end of the period. Such ceramic changes set the stage for the next complex, a period of innovation when an influx of wares with Protoclassic components were produced.

The Zotz Complex (late facet)

Dating between A.D. 150-250, the late facet of the Zotz Complex represents the Protoclassic period at Lamanai. In general, the Late Preclassic would have extended to A.D. 250, but given the strong presence of Floral Park ceramics at the site a separate complex was posited for the period beginning ca. A.D. 150. Along with the significant changes observed in the ceramics of this time, the site itself continues to grow and evolve by maintaining a high level of activity and a diversity of external contacts. Both small-scale residential architecture and large pyramidal structures (requiring substantial labor investments) continue to be built. In terms of settlement, structures with earlier occupation continue to be modified and refurbished (e.g., P8-103), as well as new ones (e.g., N11-7, P8-27, P9-2, P9-25) being erected in all three zones of the site. Based on available excavation data, there is no abandonment of structures or areas of the site as evidenced at Cerros (Freidel 1979:42), located further up the New River. In fact, construction of the largest platform ever constructed at Lamanai occurred sometime

during this period. The platform, Structure P9-25, was situated across from the Harbor. It measured 90 m x 110 m on the top and approximately 18 m in height. Two of the small pyramidal built on top of the platform yielded ceramics dating exclusively to the Protoclassic and Early Classic periods (Pendergast 1981b:98).

The increase in settlement and population at this time must have rested on a solid economic base. Both White and Schwarcz (1989:463) and Coyston et al. (1999:230-232) have stated that at the transition between the Preclassic and Classic periods, the inhabitants of Lamanai relied on corn as the dominant element in their diet. Moreover, there is evidence that they were still consuming a mixture of C³ and C⁴ foods (Coyston et al. 1999:230). Archaeological and zooarchaeological data from the midden in Chultun P8-2 have provided further information on the Protoclassic diet. Large quantities of animal bone and many thousands of freshwater snails (*Pomacea* sp.) were recovered from this subterranean feature (Pendergast 1981c, 1981e).

The ceramic material of this complex shares both the conservative nature of the previous period, and the adoption of new and elaborate forms typical of Protoclassic wares (Brady et al. 1998). The late facet of the Zotz Complex can be summed up as a period of innovation when new elements like polychromes, mammiform tetrapod feet, and ring bases are introduced. Significant changes in slip technology become apparent at this time with temperature control in firing, kiln construction, drafting controls, source clay choice, and slip formulae (Graham 1986:45-46; see also Graham 1994:326-330). Consequently, wares were transitioning to a harder and glossier surface appearance. However, it should be stressed that the conservative practice of applying softer and waxier slips continues on more traditional Chicanel types like Sierra Red. Therefore, a strong overlap existed between types defined for both the Late Preclassic (Chicanel Sphere) and the Protoclassic (Floral Park Sphere). As stated in Chapter 6, 56% of all the vessels produced at this time consisted of Chicanel-style pottery. The remaining ones exhibited different traits (e.g., basal flanges, glossy wares), of which many are the precursors to the later Early Classic (Sac Complex) period. At present, no Protoclassic ceramics have been found in pure deposits.

At Lamanai, the midden deposit in Chultun P8-2 provides a good example of the mixing of types belonging to both Chicanel and Floral Park Spheres. Of the 39 whole and complete vessels found in the chultun, half consisted of types belonging to the Chicanel Sphere while the remaining ones belonged to the Floral Park Sphere. Their co-occurrence strongly supports the notion that older ceramic traditions of Chicanel wares (e.g., Sierra Red, Puletan Red-and-unslipped, Society Hall Red) were continually being produced alongside newer ceramic traditions of Floral Park wares (e.g., Cabro Red, Liscanal Grooved-incised: Trickle Variety, Ixcanrio Orange-polychrome, Guacamallo Red-on-orange).

In late facet Zotz times, there is a tremendous repertoire of vessels being made, mostly for serving purposes. For example, bowls are now made with large, hollow mammiform feet, spouted jars are produced with bridge supports and ring bases, and bowls and dishes are manufactured with basal breaks or basal flanges. In some cases, solid nubbin feet are still found, but they are larger and manifest teats. Some vessel forms, typical of other sites, are not recovered at Lamanai like mushroom stands and florero vases. Overall, vessel size is larger with flaring sides and outflaring everted rims. All of the vessels have either a flat or rounded base; the latter shape is dominant on jar forms.

Redwares continue to form the bulk of the pottery in this period. Unslipped pottery is rare. Despite the addition of bichromes and polychromes, monochrome red pottery remains most popular with both the potters and the rest of the community at Lamanai. Cabro and Sierra Group pottery are followed by Aguacate Group pottery in importance. The few identifiable Aguacate Orange types fit within the range of the Holmul Orange Ware. Polvero Group pottery is rare and the Flor Group may be represented by only one single type. Despite the high frequency of redwares, only one Society Hall Red type has been identified. The majority of red slipped pottery falls between Cabro Red, Liscanal: grooved-incised, Puletan Red-and-unslipped, and Sierra Red types. Of note, the red slip applied to Puletan Red-and-unslipped is most similar to Cabro Group pottery, not Sierra Group pottery where it is currently placed. Maya

ceramicists have traditionally placed the Puletan Red-and-unslipped type within the Sierra Group (Pring 1977a). However, at Lamanai, its red slip is much harder and thinner than that found on Sierra Red types. Therefore, with further analysis, it may be that the Puletan Red-and-unslipped type should be moved into the Chunux Hard Ware where Cabro Red has been placed.

On average, these types are highly decorated with either incising, grooved-incising, punctations, striations, or controlled trickle lines; in many cases a combination of these decorative techniques are used. Although potters at the site have adopted many diagnostic modes of the Protoclassic period, Usulután decoration is not one of them. Instead, straight- and wavy-line trickle decoration with black or golden-brown lines positively painted on top of red surfaces, occurs with greatest frequency. Red slipped jars occur in their highest frequency, and jars with polychrome slips are introduced in this period.

In essence, there is a continuation of earlier practices of incising and grooved-incising, but there is also a shift now toward painting vessel surfaces with multiple slip colors. This is achieved through the process of producing harder, thinner, and glossier slipped surfaces as observed in Chunux Hard Ware (e.g., Cabro Red type). These technological attributes lead into the Early Classic period Peten Gloss Wares. Furthermore, the production of polychrome vessels could not have been made possible without significant advances made in slip technology whereby slips lose their distinctive waxiness. Microscopic analysis of several Protoclassic vessels has indicated that multiple layers of slip were thinly applied to vessel surfaces (e.g., LA 496/15, 520/3, 521/1, 521/9) (Howie-Langs 2002a).

The paste recipes for the late facet Zotz Complex were similar to earlier periods in that they remain varied. Most of the pastes were hard, moderately sorted, and densely packed (e.g., 496/15), but others were soft and friable (LA 1128/1). Grain size and shape are also variable ranging from 1-5 mm in size. The primary mineralogy included sparry calcite, crystalline calcite, monocrystalline quartz, chalcedonic quartz, hematite nodules, micrite, mudstone, chert, shell, plagioclase feldspar, and organic remains

(Howie-Langs 2002a; Powis et al. 2002). Microscopic analysis conducted on LA 496/10, found in Chultun P8-2, indicates that it too shared strong characteristics with the clay obtained from a pit located behind Structure N10-9. Although this vessel was produced locally from clays mined on site, other vessels like LA 521/1, a Pahote Punctated: Pahote Variety jar, were imported to Lamanai from other sites in the region such as Altun Ha (Howie-Langs 2002a). An examination of the Ixcantio Orange-polychrome tetrapod bowl (LA 496/5) found in the midden inside Chultun P8-2 has indicated that the clay used in its manufacture was procured from the Harbor. Clay samples taken in 2001 from the bottom of an excavation unit (Op.99-2) in the Harbor match the characteristics observed in the paste recipe used to produce LA 496/5. This information indicates that this particular vessel was made on site using local clays obtained from a source located approximately half a kilometer to the south (Powis et al. 2002). Furthermore, the fact that it was locally produced and deposited in a commoner context is significant because this polychrome bowl is arguably the finest quality vessel produced at Lamanai during the Protoclassic period.

The ending date for this ceramic complex is somewhat problematical. For example, there are a number of vessels that exhibit Chicanel red slips with Protoclassic trickle line decoration and Early Classic basal flanges. Consequently, the sharing of these modes makes it difficult to know with any degree of certainty whether or not the late facet of the Zotz Complex should terminate at A.D. 250 or continues into the 5th Century as Brady et al. (1998) have recently suggested for some sites.

The Sac Complex

By the Early Classic, it is evident that Lamanai follows the path of growth and prosperity laid out from earlier times. Dynamic changes in terms of settlement, architecture, and ceramic traditions continue between A.D. 250-600. Unmixed deposits in large-scale architecture are found in the northern, central, and southern areas of the site at this time. Structures N9-56, N10-43, and P9-25, among others, are modified and

reconfigured. Some of them have yielded elite tombs like Structure N9-56. In the platform of N9-56, two tombs, both dating to the 5th Century, were recovered (Pendergast 1981a:38-40, 1981b:96-97). Each contained a variety of perishable (e.g., textile and wooden artifacts) and non-perishable (e.g., polychrome vessels and a lidded slab-footed blackware cylinder) grave goods.

Although no formal analysis has been conducted on the ceramic material dating to this period, some preliminary observations can be made. The Early Classic assemblage at Lamanai is not as large as the Protoclassic one, but is still relatively diverse. Ceramic forms and styles underwent a substantial change from those produced in the earlier Protoclassic period. While certain elements like hard, glossy slips prevail into the Early Classic, different vessel forms such as tall, blackware cylinders begin to appear, similar to the one from the elite tomb of the female ruler in Structure N9-56. The slab-footed cylinder with applied “screwheads” and a bell handle shows strong influence from Teotihuacan in central Mexico (David Pendergast, personal communication, 1999). Although the assemblage is small, few other vessels with decoration have been found. Such common modes as basal flanges are not particularly common either in this period. Sac Complex pottery consists primarily of orange and red monochrome wares as well as a few polychrome wares; both black and cream slipped ceramics are rare at this time. Monochrome slipped pottery is represented by large, plain round-sided bowls which resemble mixing bowls. These mixing bowls were consistently found as pairs in caches in Structure N9-56 (Pendergast 1981a:40). Only a few orange wares, in the shapes of dishes and bowls, were unearthed in the excavations. These vessels contained both geometric and naturalistic motifs, such as birds, painted with black and red lines. Relatively few of these polychrome vessels were produced at Lamanai during this period. Similarly, elaborately painted cylinders for which many Southern Lowland sites are famous seem to be virtually absent at the site.

Overall, the pottery from this ceramic complex shares affinities with earlier Late Preclassic and Protoclassic types as well as with later Classic period material, especially with regard to the dominance of monochrome slipped pottery; this trend continues

throughout the Terminal Classic and Postclassic periods. These continuities strongly suggest a local ceramic development for the pottery at Lamanai with few imports; although petrographic analysis may provide evidence to the contrary.

LAMANAI IN A REGIONAL CONTEXT

Ceramically, the Late Preclassic ceramic sequence at Lamanai is closely linked to other sites in northern Belize. Each site is fully participating in the Chicanel Ceramic Sphere. Despite the differences in geography, the similarities between the local ceramic assemblages indicate a close-knit regional sequence. Although the pottery was typologically and modally similar across the entire area, the ceramic material at Lamanai was made primarily from locally available resources. A similar situation has been identified at Cuello and Nohmul (Jones 1986:79-80), K'axob (Angelini 1998:274; Bartlett et al. 2000:130), Kichpanha (Meskill 1992:171-172; Reese-Taylor et al. 1993), and San Jose (Shepard 1939:251-277). Preliminary microscopic evidence from Lamanai indicates that on-site potters were using a wide variety of local clay sources, including those from the Harbor and from behind Structure N10-9. Of note, the use of the clay source located behind Structure N10-9 suggests that potters mined this same pit for centuries (from Mesh to Zotz times), presumably for its properties, like the high content of sparry calcite.

This localized production does not mean that certain types were not being traded across northern Belize and beyond. Clearly, one type found at Lamanai (Pahote Punctated: Pahote Variety [521/1]) was an imported ware from further east, possibly near or at the site of Altun Ha (Powis et al. 2002). However, to what extent types were being traded is not yet fully known. In addition to ceramic types being traded, slips and paste recipes were also likely to have been exchanged among neighboring communities (Graham 1986). At Kichpanha, Meskill (1992:172) stated that the slip found on the Puletan Red-and-unslipped type may have been acquired from a separate clay source than the paste body; hence the slip may have been a traded item. At Lamanai, one

Puletan Red-and-unslipped vessel (LA 496/10) was analyzed microscopically and the results indicate that it was produced from clays obtained from a pit located behind Structure N10-9. However, further testing is required to confirm whether or not different components of this vessel (e.g., slip, paste, temper) were being acquired from, manufactured at, or traded to different locations.

Although northern Belize sites were participating in the Chicanel Sphere, it does not mean that every site possessed the same ceramic inventory of types and varieties. It is clear during Lag and Zotz times that some regional types were not being produced at Lamanai, or if they were, their presence was minimal. For example, most sites in the region have produced variable quantities of Chicago Orange, Escobal Red-on-buff, Hillbank Red, Matamore Dichrome, Sapote Striated, and Society Hall Red (Kosakowsky 1987; Kosakowsky and Pring 1998; Kosakowsky and Sagebiel 1999; Lopez Varela 1996; McDow 1997; Meskill 1992; Pring 1977a; Robertson-Freidel 1980; Valdez 1987; Williams-Beck 1997). However, at Lamanai these types are rarely found (see Tables 4-6). One explanation may be that the potters of Lamanai were more conservative in the types of ceramics they produced than their neighbors. If so, why? What are the reasons for Lamanai as one of the larger and more populous sites to produce such a restricted number of pottery types compared to other sites in the region? Did the conservativeness of Lamanai's ceramic traditions have any impact on any other sites, large or small, in the region? These are difficult questions to answer, but given the nature and extent of the different types (and frequencies) found at different sites in the region it is unlikely that one site (i.e., Lamanai) would have impacted the others to any significant extent with the exception of satellite communities.

However, one of the answers to Lamanai's conservativeness may lie in its strong commitment to community identity. Recently, Bartlett and McAnany (1999:19) have stated that as pottery became more homogeneous throughout the Preclassic period "potters found ways to express the unique identity of their community both in vessel form and surface treatments." To some degree, this notion may hold true for potters producing wares at sites across northern Belize, including Lamanai. Therefore, in

addition to manufacturing such ceramic type standards as Sierra Red, Laguna Verde Incised, Puletan-Red-and-unslipped, Flor Cream, and Polvero Black, potters also produced vessels with unique decorative designs, paste recipes, and forms. At Lamanai, this may have involved making bird and crocodile effigy pots which were found on such types as Lechugal Incised: Gougged-incised Variety (LA 355/1) and Unnamed Buff-and-modeled (LA 449/3).

Like many sites in northern Belize the ceramic uniformity of early Chicanel times was beginning to unravel in the last century B.C. with the appearance of traits that defined Protoclassic wares. At this time, ceramic development is marked by a period of technological experimentation and artistic expression (Brady et al. 1998; Graham 1986; Meskill 1992; Pring 1977b:143). Between 100-50 B.C. and A.D. 250-400, sites in the region followed different trajectories. Not all northern Belize sites produced the same diagnostic modes of the Floral Park Ceramic Sphere. Why some sites exhibited a stronger Protoclassic component compared to other sites is not fully understood at this time (Brady et al. 1998; Case 1982; Forsyth 1983; Kosakowsky 2001; Meskill 1992; Powis 2001b; Pring 1977a; Valdez 1987).

The sites of Blue Creek, Cerros, Chan Chich, Colha, Cuello, El Posito, K'axob, Kichpanha, Nohmul, Pulltrouser Swamp, San Jose, Santa Rita, and Lamanai produced varying amounts of Protoclassic ceramics (see Meskill 1992:Table 3). More specifically, the sites of Blue Creek, Cerros, Chan Chich, Colha, El Posito, Kichpanha, Nohmul, and Lamanai have produced more of this material than the sites of Aventura, Chan Chen, Cuello, and Pulltrouser Swamp. These differences may be a product of excavation strategy, but it may also be that those sites producing sizable amounts of Protoclassic pottery were somehow tied more directly, either economically or politically, into the prevailing current of activity or influence in Maya society; those that did not participate were "falling away from the mainstream of society and holding to a much more traditional system" (Valdez 1987:244-245). Valdez (1998:82) goes on to state that:

for sites demonstrating a Late Preclassic occupation there were two paths of development towards the end of the period. Some sites maintained a rather conservative occupation that remained “Late Preclassic” while others became involved in a sphere of interaction represented by innovative developments called “Protoclassic”...Several sites that maintained their conservative stance ended in occupation by A.D. 250. Other sites following the new developments or trends grew with the Protoclassic and transitioned into the Early Classic.

Many of the sites in the region with Protoclassic wares seem to cluster between the New River and Rio Hondo basins. According to Meskill (1992:190), the “concentrations of sites may also indicate areas of developing technology, or production related to Protoclassic ceramics.”

As in early Chicanel (Lag Complex) times, some Protoclassic (late Zotz Complex) ceramic types were more popular than others. In northern Belize, imitation usulután wares like Escobal Red-on-buff, Repasto Black-on-red, Sarteneja Usulután, Savannah Bank Usulután were made, but with limited frequency. Although the sites of Blue Creek, Cerros, Colha, Cuello, and Kichpanha produced some of these types, their frequencies were generally less than 1% of the total Protoclassic assemblage. Both lowland and highland (true resist) wares are even less frequently reported across the region. At Lamanai, usulután wares are extremely rare, although modally analogous wares like lowland trickle are more common. Given the frequency of trickle line or controlled “dribble” decoration (on Chunux Hard Wares) at the site (see Tables 4-6), it may have been a preferred decorative mode over other lowland usulután-related wares. The production of trickle wares at Lamanai is akin to that observed at other regional sites like Blue Creek, Cerros, and Colha. The connection between Cerros and Lamanai may have been closer due to their proximity along the same waterway. These two sites may signal not only a sharing of specific ceramic types and modes, but also of trade items moving up and down the New River. However, Lamanai may not have been the only site in close contact with the trading port of Cerros during this time period.

According to Kosakowsky and Valdez (1982:8), the evidence from the Late Formative at Colha suggests:

that it is closely associated with the elaboration of ceramic decoration reported by Robertson at Cerros. Starting in the C'oh and continuing in the Tulix complex at Cerros, there is elaborate trickle decoration similar to pottery of the Late Formative at Tikal. It is possible that Cerros' nodal position on a trading network linking the Yucatan peninsula, northern Belize, and the central Peten, explains this ceramic affiliation. Furthermore, the emergence of Colha as a major lithic manufacturing and exporting center in the Late Formative may have tied Colha into this network, while bypassing smaller Late Formative sites such as Cuello.

It is difficult to ascertain the sphere of influence for controlled trickle line decoration at Lamanai and, by extension, across northern Belize. Clearly, some sites in northern Belize were producing more of it than others. Although this important decorative mode had a limited temporal distribution in the region, it would be interesting to determine whether or not its regional development was related to closer links with such Yucatecan sites as Becan, Calakmul, Kohunlich, and Rio Bec rather than with Tikal and other central Peten sites.

CERAMIC INTEGRATION WITH THE MAYA LOWLANDS

Recent research has revealed that many of the traditional cultural hallmarks of Classic Maya civilization (A.D. 250-900) seem to have had their origins in the preceding Preclassic (1000 B.C. - A.D. 250) period. In particular, there are strong indications that the Maya made the transition from a relatively egalitarian to ranked and stratified society during this early period of cultural development (Adams and Culbert 1977; Awe 1992; Cheetham 1998; Hammond 1992; Hansen 1992; Healy and Awe 1995). It is now generally accepted that it was sometime between the latter part of the Middle Preclassic and the early part of the Late Preclassic, ca. 600-300 B.C., that

several of the diagnostic traits of complex culture were first established (Hammond 1986:403; Marcus 1983:461; Sharer 1992:131; Valdez 1987:258).

During these three centuries there was an increase in population size and density, the construction of monumental architecture, the development of craft specialization, the rise of regional and interregional trade and exchange, the reliance on maize agriculture, the intensification of agricultural practices (e.g., canals), the forming of religious and political institutions, and the participation in a uniform ceramic sphere. The site of Lamanai was fully participating in this process of cultural elaboration and the Lag Complex exemplifies this complexity that developed almost equally everywhere in the Southern Maya lowlands. From a ceramic standpoint, this site was integrated not only on a regional level, but its involvement with other lowland sites is evidenced by the trading of non-ceramic items such as jade, obsidian, granite, and marine shell.

On a regional level, the ceramic traditions of Lamanai mirrored that of nearby sites with the strong presence of Sierra, Flor, and Polvero Group pottery. Exceptions are found with such notable groups as Chicago, Escobal, and Sapote. The presence/absence of certain ceramic groups at Lamanai does not diminish the site's inclusion within the Chicanel Ceramic Sphere identified throughout northern Belize and the rest of the Maya lowlands. The production of Sierra Red pottery clearly establishes ties between the disparate regions of the lowlands not only because of the consistency of the color and application of the slip, but also in the form and function of the vessels (Valdez 1987:258). Why the potters at Lamanai chose to produce so much Sierra, Flor, and Polvero Group pottery at the exclusion of such widespread regional and inter-regional groups like Chicago, Escobal, and Sapote are not yet known. It is possible that the potters of Lamanai were, at varying times, more tied at the modal level than at the type and group level. This may help to explain why such widespread regional types like Society Hall Red and pan-lowland types like Sapote Striated are not recovered in any appreciable quantities at Lamanai; this reinforces the notion that community identity

was established or being maintained through the manufacture of site specific ceramic types and varieties.

From Lag to Zotz times, there is a continuation of ceramic developments at the site. Lamanai produces types that are both similar to the other lowland sites (e.g., Sierra Red, Monkey Falls Striated) as well as being unique (e.g., Cabro Red: Trickle Variety, Liscanal Grooved-incised: Trickle Variety) to the site itself. Like many lowland sites, Lamanai produces both Chicanel Sphere and Floral Park Sphere ceramics throughout the Protoclassic period. While many of the horizon markers occur, no functionally complete Floral Park complex has been identified at Lamanai. For example, only minimal quantities of Ixcario Orange-polychrome, Guacamallo Red-on-orange, and Aguacate Orange types have been recovered from any deposit at Lamanai. Furthermore, other diagnostic types like lowland usulutans (e.g., Caramba Red-on-orange, Escobal Red-on-buff, Sarteneja Usulután, Savannah Bank Usulután), lowland trickles (e.g., Zapatista Trickle-dichrome), and lowland resists (e.g., Repasto Black-on-red) are not found at Lamanai. This same pattern is found at other lowland sites (Brady et al. 1998; Forsyth 1983, 1989; Kosakowsky 2001; Meskill 1992; Pring 1977a; Valdez 1987).

Because so many sites have produced deposits that are limited in distribution and variable in context (Kosakowsky 2001:88), it is difficult to determine what constitutes a functionally complete Floral Park ceramic complex. In some cases the Protoclassic material is extensive, being derived from both architectural and special deposits. In other cases, only a single sherd or vessel is found to define its presence. At Lamanai, less than 50% of the vessels (18 of 39) recovered in late Zotz times (A.D. 150-250) belonged to the Floral Park Sphere. Is this representative of a subcomplex or a functionally complete complex? Forsyth (1989:129) has stated that the Protoclassic period at El Mirador was complex, varied, and amorphous. The same description is echoed at many other lowland sites, including Lamanai. Based on petrographic analysis, the ceramic tradition of the Protoclassic period at Lamanai is seen as a local development, a fusion of Chicanel and Floral Park wares. This information strongly argues for the Protoclassic period as being representative of a subcomplex at the site.

Future work will clarify this issue of whether or not the influx of new modes during the late Zotz Ceramic Complex was limited in scope or was manifested by significant deposits that represents a functionally complete complex.

FINAL CONSIDERATIONS

The research presented in this dissertation has focused on the Late Preclassic Maya ceramics from the northern Belize site of Lamanai. The goals of my research have been to present the typological, contextual, chronological, and functional interpretations of this material. The Lamanai ceramics have been compared to other sites in the region and elsewhere across the Maya lowlands in order to identify general patterns in Late Preclassic ceramic development.

Materials reported in my analysis were largely based on Pendergast's excavations from 1974-1986; subsequent investigations at Lamanai South (1996-1997) and in the harbor area (1998-2001) have added to this known ceramic inventory. The ceramic collection is made up of a total of 140 whole and complete vessels. They were recovered from multiple contexts (e.g., burials, caches, middens) in a variety of structures located across the northern, central, and southern areas of the site.

The typology for the Late Preclassic ceramics at Lamanai conformed to the basic tenets of the type:variety-mode approach. I used existing type names wherever possible, but, at times, new ones were created (see Tables 4-6). Additionally, modal and contextual analyses were integrated into my analysis. One of the most important aspects of my analysis was to present the ceramic data in a different format. In my presentation, I chose to place more emphasis on the reporting of contextual units for types, not groups, of pottery. By placing the specific contextual information with each vessel description I eliminated many of the problems established by previous researchers who often described intra-site locations only at the group level. This lumping provided little to no information about where each type was recovered thereby limiting inter-site comparisons. My approach, therefore, has maintained the groupings of vessels that had

meaning to the Maya when they were originally deposited. The combination of taxonomic, modal, and contextual analyses has produced useful information not only about the ceramics themselves, but also about understanding the general cultural behavior in Maya society during the Late Preclassic period.

The chronology for the Late Preclassic period at Lamanai is based on relative dating of the ceramic collection with other sites in the region, including Cerros, Colha, Cuello, K'axob, Kichpanha, and Nohmul, among others. The Late Preclassic has generally been separated into two facets, an early and a late one. However, three temporal divisions, forming two complexes, were devised for the ceramic material at Lamanai. The two complexes are comprised of the Lag Ceramic Complex (400-100 B.C.) and the Zotz Ceramic Complex (early facet 100 B.C. – A.D. 150; late facet A.D. 150-250). Spanning nearly seven centuries, both of these complexes represent a developmental progression from ceramic homogeneity to ceramic variability. The culmination of technological experimentation and artistic expression in Protoclassic times led to the production of Early Classic (Tzakol) polychromes. In a recent article on the ceramics of Cuello, Kosakowsky and Pring (1998:64) have remarked that “By the end of the Preclassic...Experimentation in vessel form, slip color, and texture...and the increased use of dichromes and trichromes presage the Classic-period polychromes, while lacking the stylistic sophistication of later pottery.” The site of Lamanai was clearly involved in these innovative developments or trends and participated in this sphere of interaction that grew and transitioned into the Early Classic period.

The temporal divisions created for the Late Preclassic period at Lamanai were based primarily on changes in vessel form, decorative technique and design, slip color and texture, and paste recipe. No radiocarbon material has yet been analyzed to further refine the beginning and ending dates for either complex. Overall, the changes observed in the ceramics conformed very well to those identified at other regional sites. In particular, Cerros, Colha, and Kichpanha have established three facets for the Late Preclassic and my research at Lamanai has drawn considerably from these earlier

studies. Further away, the three facets of the Late Preclassic at Tikal also helped with tying down the relative dates at Lamanai.

Identifying vessel function was also an integral component of my research. Using archaeological, ethnographical, and ethnoarchaeological studies, I examined how different segments of the Lamanai community may have used their pottery in different social and ritual contexts. Analysis of both elite and commoner pottery assemblages indicates that during the Late Preclassic few forms, styles, or types remained exclusively in the possession of either group. In other words, the types found in elite and commoner contexts were not mutually exclusive. For example, archaeologists have traditionally identified polychrome pottery as an elite marker, but, at Lamanai, this situation does not occur as evidenced by the recovery of finely-made polychrome wares in commoner contexts. Vessel capacity or volumetric studies further aided in determining serving and storage sizes for both segments of the Lamanai community.

In sum, the site of Lamanai grew to become one of the pre-eminent sites in the region during the Late Preclassic period. The types of ceramics produced at the site were similar to those found at other nearby sites. It was a period of intense sharing of ceramic traits and, as Angelini (1998:286) has noted, the potters of this time “were artisans with experience and skill in producing pottery in a number of shapes and sizes and with a repertoire of technological approaches.” Despite the common inventory there were differences at the site level. At Lamanai, some types or groups of pottery, typical of the Chicanel Sphere, were not produced. Why this happened is not yet clear, but it is curious to note, given Lamanai’s size and importance, that its ceramic traditions maintained a conservative stance rather than one which introduced or instituted new forms and styles to the rest of the region. Regardless of whether or not it played a major or minor role in ceramic development during the Late Preclassic period, the site of Lamanai produced pottery throughout the Classic, Postclassic, and Historic periods without apparent discontinuity. Therefore, my analysis of the material from this particular period forms an integral part of the ceramic history of the site. And, given the extraordinary long history of occupation, each time period that is studied provides a

clearer picture of life for the inhabitants of Lamanai, the region of northern Belize, and the Maya lowlands.

FUTURE RESEARCH

Although a considerable amount of ceramic research on the Preclassic Maya has been conducted, there are a number of topics that need to be more fully addressed, including ceramic context, function, and technology. Other areas also include residue analysis for identifying the actual contents of vessels and use-wear analysis for determining specific functions for pottery. Ceramicists and archaeologists working in northern Belize should also look toward the Yucatan Peninsula for ceramic connections and ties during the Preclassic period. There is a tendency for researchers to be Peten-focused when studying early pottery from this region. However, we may find more in common (typologically and modally) with the material being produced to the north than previously recognized. It is possible that from its earliest days Lamanai had close links with Mexicanized areas such as the Yucatan, links that helped the community much later during the collapse (Elizabeth Graham and Dorie Reents-Budet, personal communications, 2001).

Another avenue of research is trying to link some of the ceramic changes and blendings found at Lamanai, and at other nearby sites, with other greater regional and inter-regional developments, such as the founding of ruling dynasties at Tikal, the collapse of El Mirador, the decline of Cerros, and the introduction of Tzakol phase ceramics across the lowlands (Julia Kappelman, personal communication, 2002). Clearly, Lamanai is responding in some way to these changes, and actually responding in an interesting way, with the increased innovation of ceramics during the Protoclassic, following a very conservative phase. What does this imply economically and socio-politically? Why do some sites exhibit a stronger Protoclassic component than other sites? Could the concentration of sites with Protoclassic material in northern Belize indicate areas of developing technology, or production related to Protoclassic ceramics?

More work is needed to help flesh out a broader picture of the Late Preclassic/Early Classic transition in northern Belize. By mapping these ceramic changes we would be able to better understand the origins and directions of the social, political, and ideological changes underlying the Classic period.

APPENDIX A: LISTING OF CERAMIC TYPE:VARIETY BY GROUP

The Lag Ceramic Complex: 400-100 B.C.

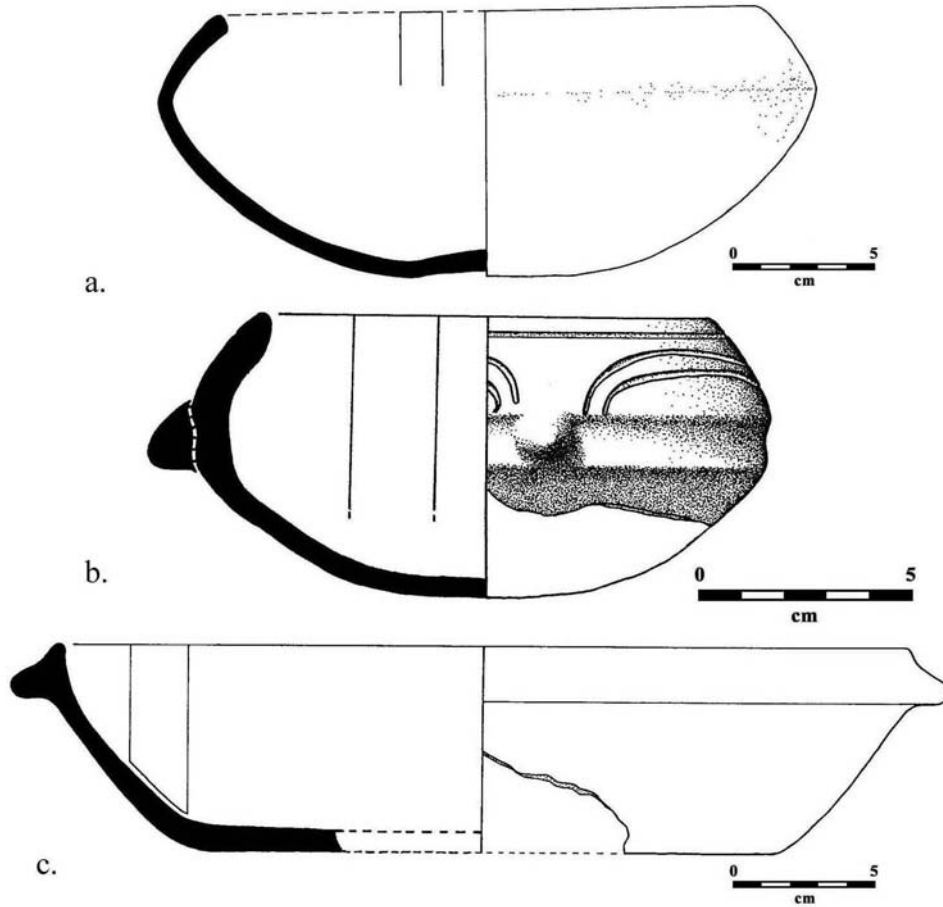


Figure A1: Flor Ceramic Group: a) Accordion Incised: Variety Unspecified (LA 355/2); b) Flor Cream: Indian Church Variety (LA 440/2); c) Flor Cream: Variety Unspecified (LA 449/4).

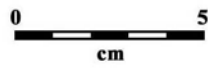
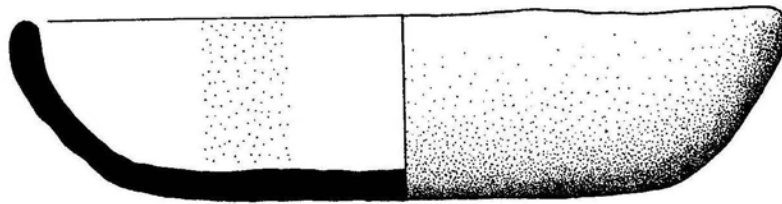


Figure A2: Paila (?) Ceramic Group: Unnamed Buff-and-plain (LA 421/12)

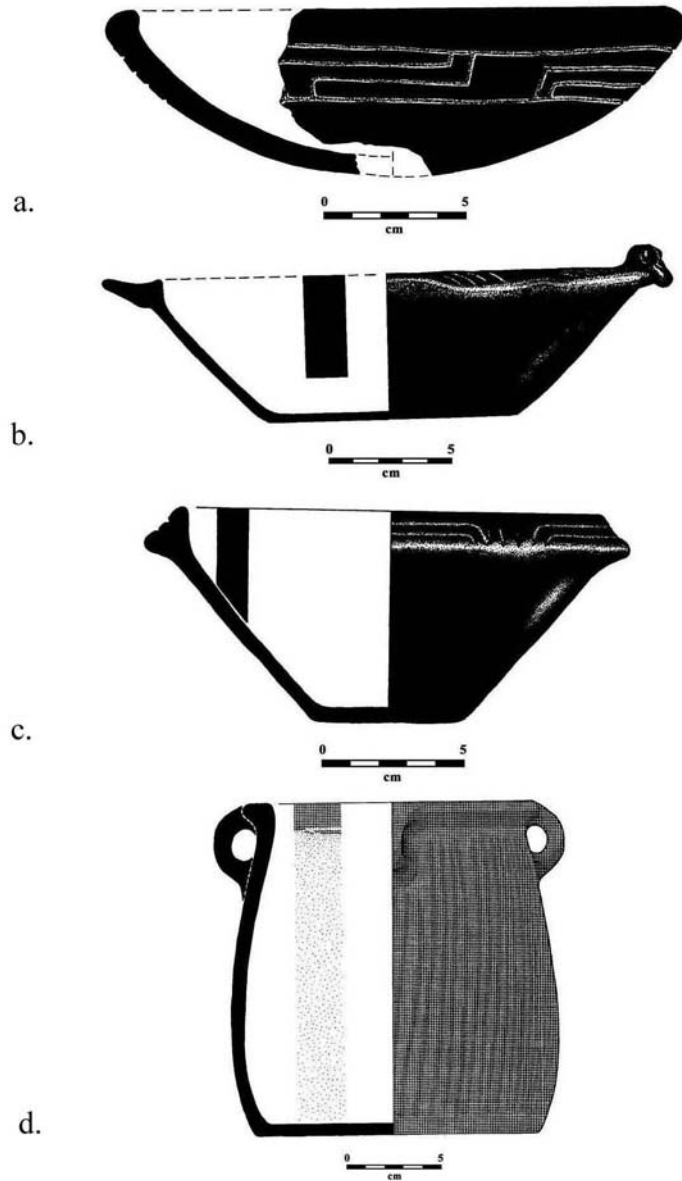


Figure A3: Polvero Ceramic Group: a-b) Lechugal Incised: Gouged-incised Variety (LA 355/1 and LA 367/1); c-d) Lechugal Incised: Grooved-incised Variety (LA 748/1 and 480/1).

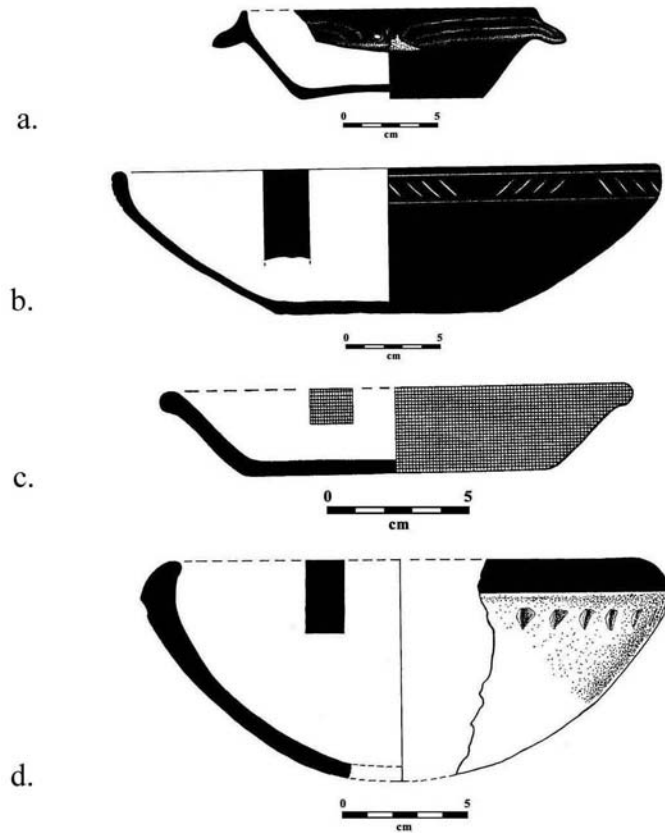


Figure A4: Polvero Ceramic Group: a-b) Lechugal Incised: Grooved-incised Variety (LA 421/1 and LA 421/2); c) Polvero Black: Polvero Variety (LA 480/2); d) Unnamed Black, Punctated, and Unslipped (LA 355/5).

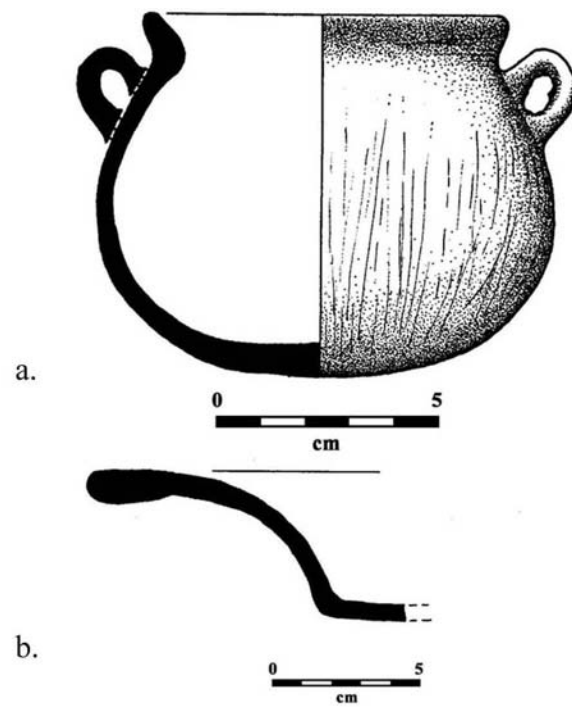


Figure A5: Richardson Peak Ceramic Group: a-b)
Richardson Peak Unslipped: Richardson Peak
Variety (LA 355/9 and LA 355/10).

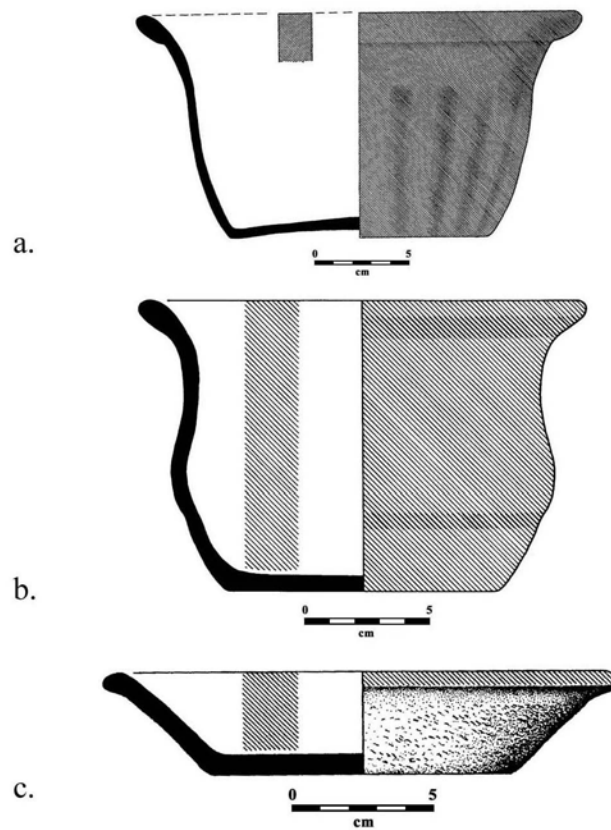


Figure A6: Sierra Ceramic Group: a) Alta Mira Fluted: Variety Unspecified (LA 454/1); b) Alta Mira Fluted: Horizontally-fluted Variety (LA 440/8); c) Ciego Composite: Dawson Creek Variety (LA 421/3).

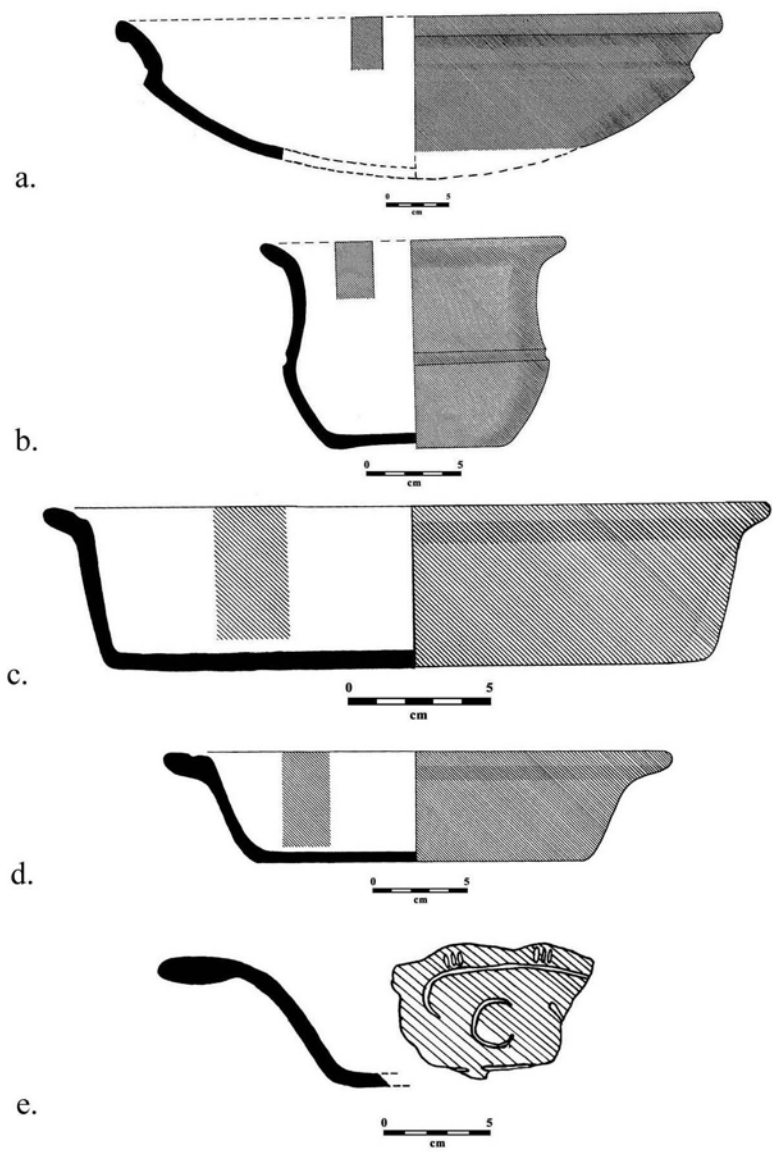


Figure A7: Sierra Ceramic Group: a-e) Laguna Verde Incised: Grooved-incised Variety (LA 364/2, LA 479/2, LA 435/2, LA 355/11, and LA 421/13).

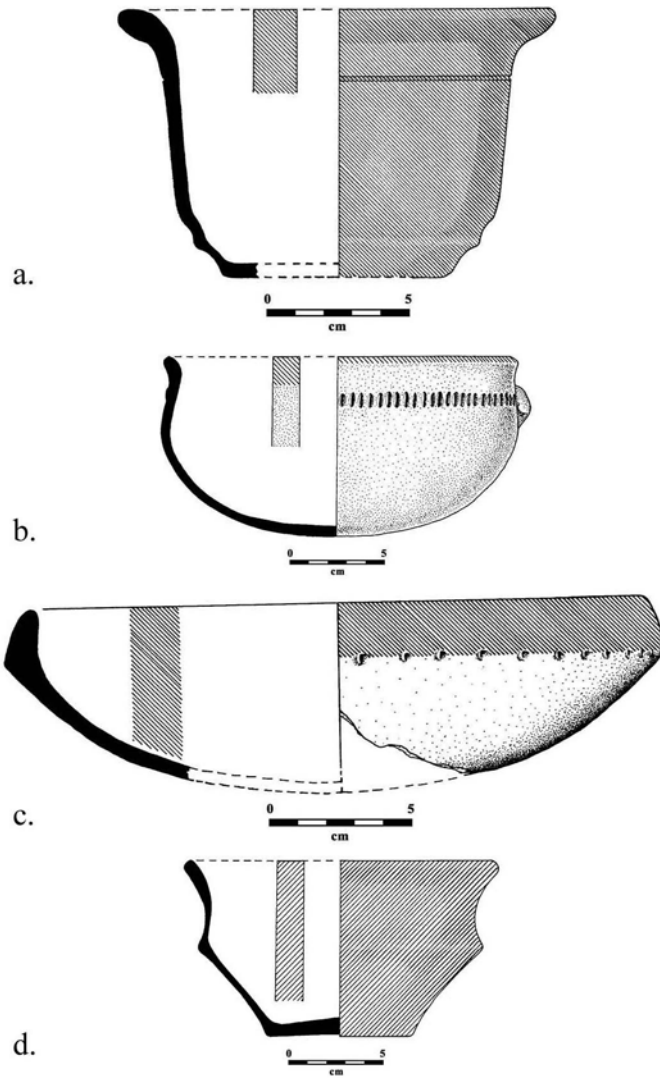


Figure A8: Sierra Ceramic Group: a) Laguna Verde Incised: Variety Unspecified (LA 355/4); b) Puletan Red-and-unslipped: Composite Variety (LA 364/3); c) Puletan Red-and-unslipped: Puletan Variety (LA 372/1); d) Sierra Red: Ahuacan Variety (LA 449/5).

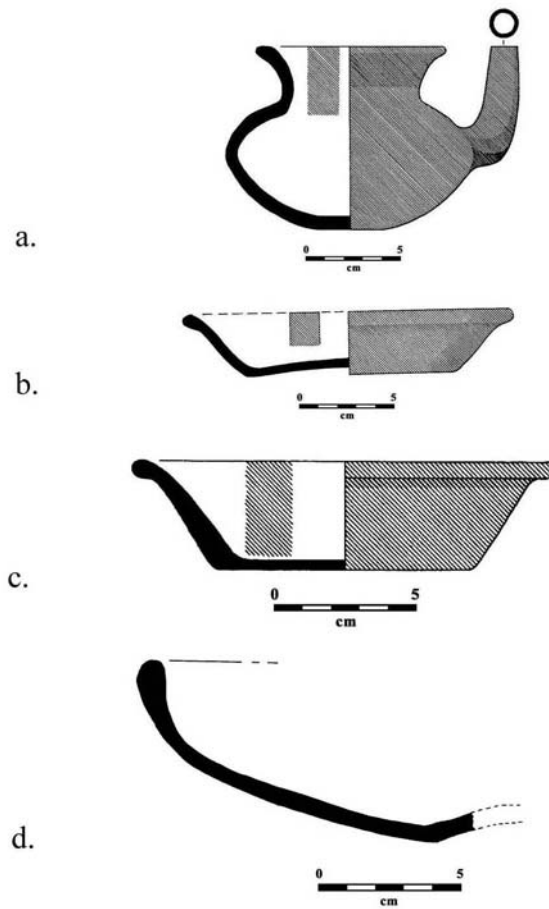


Figure A9: Sierra Ceramic Group: a-d) Sierra Red: Variety Unspecified (Red-double slip) (LA 481/2, LA 479/2, LA 367/2, and LA 440/15).

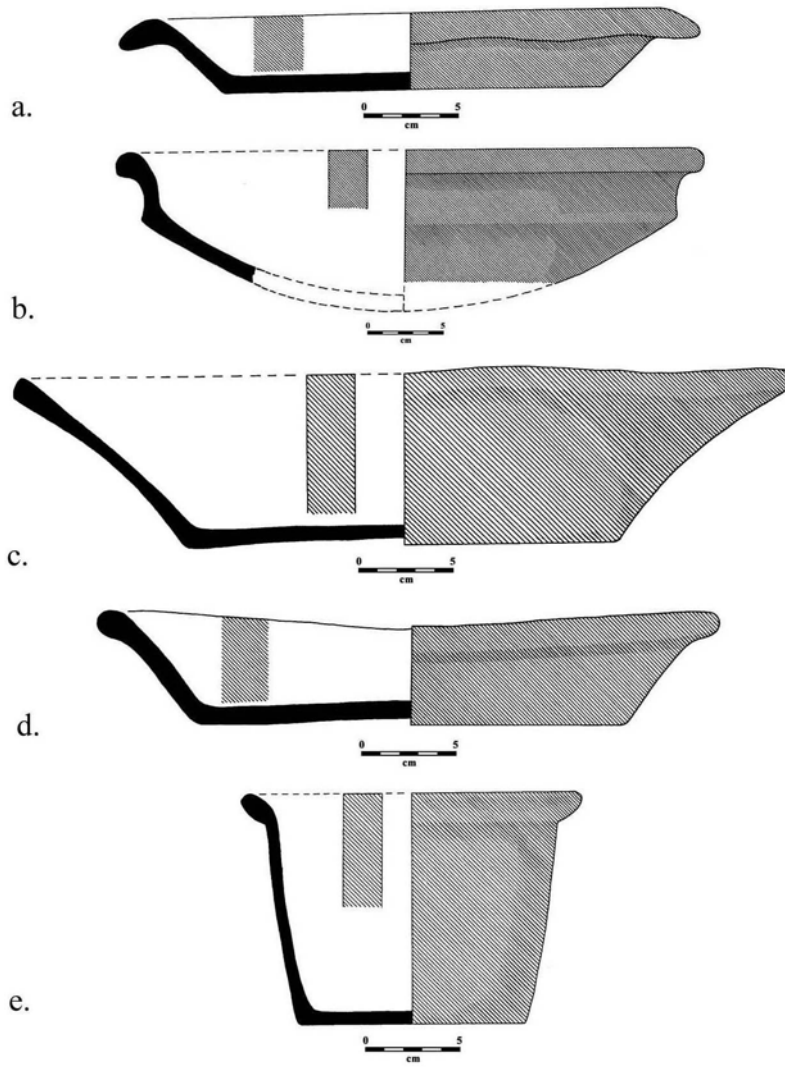


Figure A10: Sierra Ceramic Group: a-e) Sierra Red: Sierra Variety (LA 364/1, LA 364/4, LA 357/1, LA 481/1, and LA 449/1).

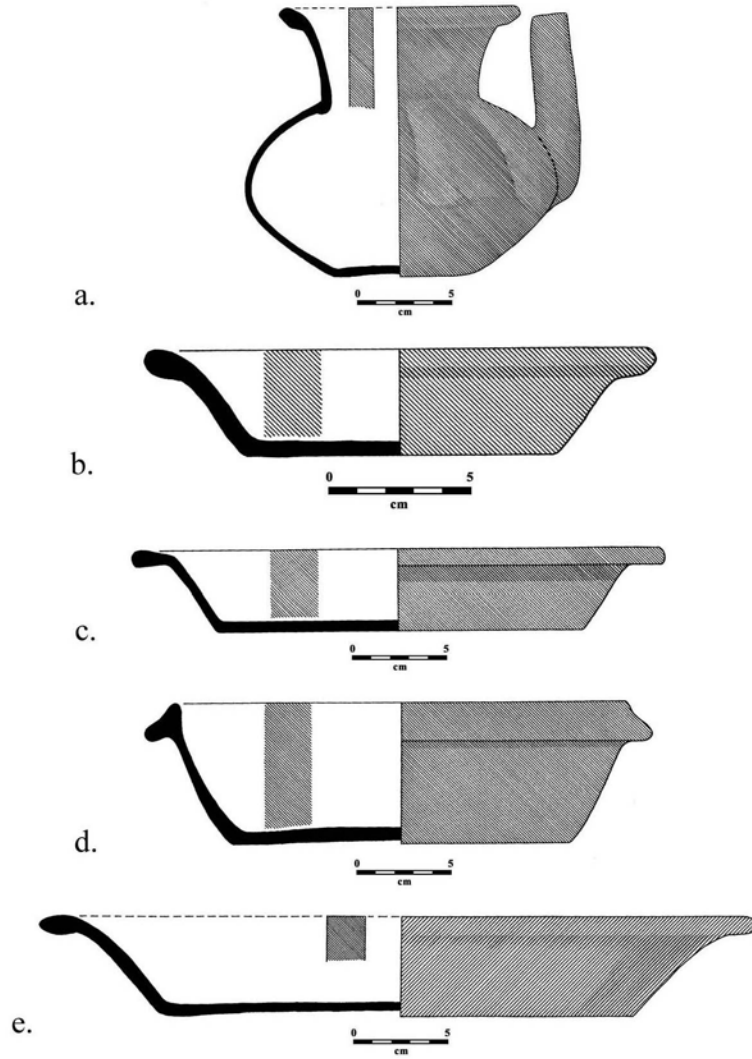


Figure A11: Sierra Ceramic Group: a-e) Sierra Red: Sierra Variety (LA 449/2, LA 355/3, LA 421/7, LA 421/8, and LA 421/10).

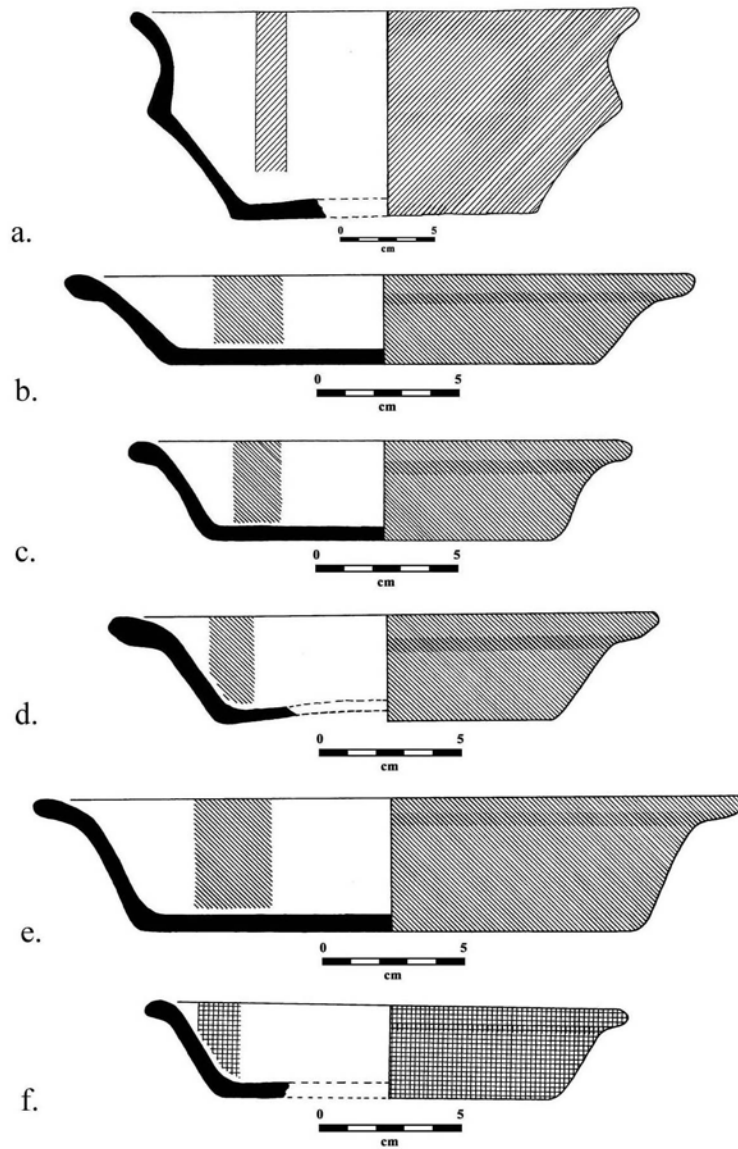


Figure A12: Sierra Ceramic Group: a-f) Sierra Red: Sierra Variety (LA 440/4, LA 440/5, LA 440/6, LA 440/9, LA 440/10, and LA 440/11).

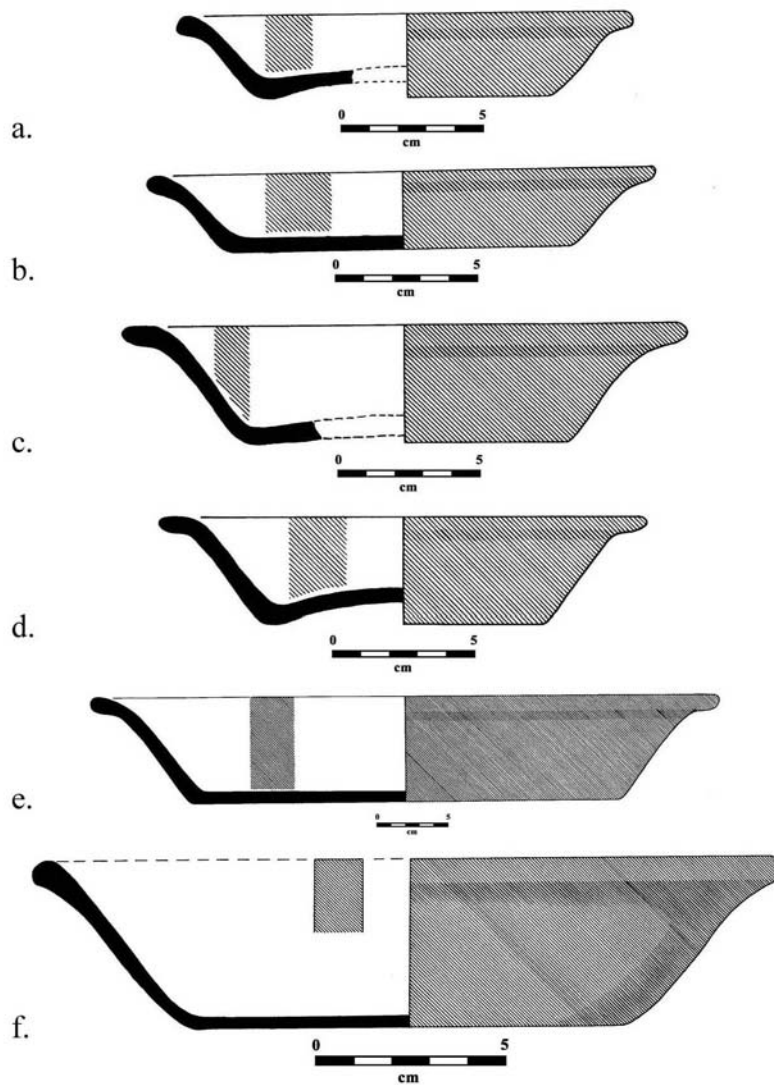


Figure A13: Sierra Ceramic Group: a-f) Sierra Red: Sierra Variety (LA 440/12, LA 440/13, LA 440/14, LA 16, LA 440/17, and LA 801/1).

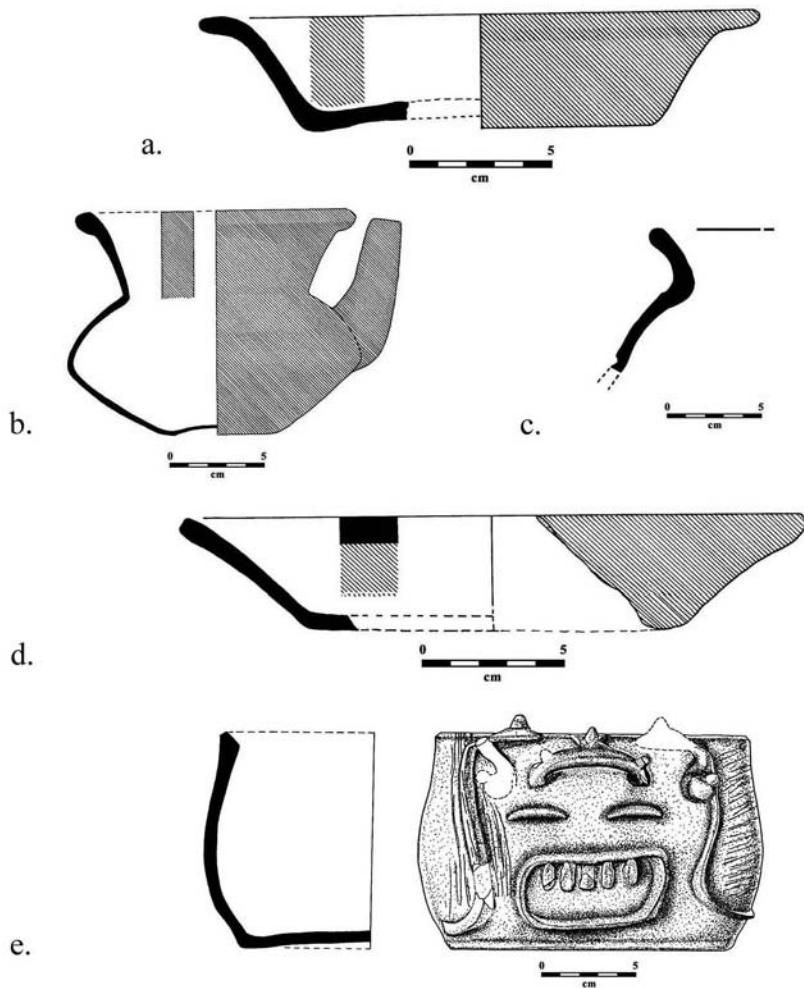


Figure A14: Sierra Ceramic Group: a) Sierra Red: Sierra Variety (LA 355/8); b-c) Sierra Red: Variety Unspecified (LA 449/6 and LA 421/11); d) Sierra Red: Black-rimmed Variety (LA 440/7); Unspecified Ceramic Group: e) Unnamed Buff-and-modeled (LA 449/3).

The Zotz Ceramic Complex (early facet): 100 B.C. - A.D. 150

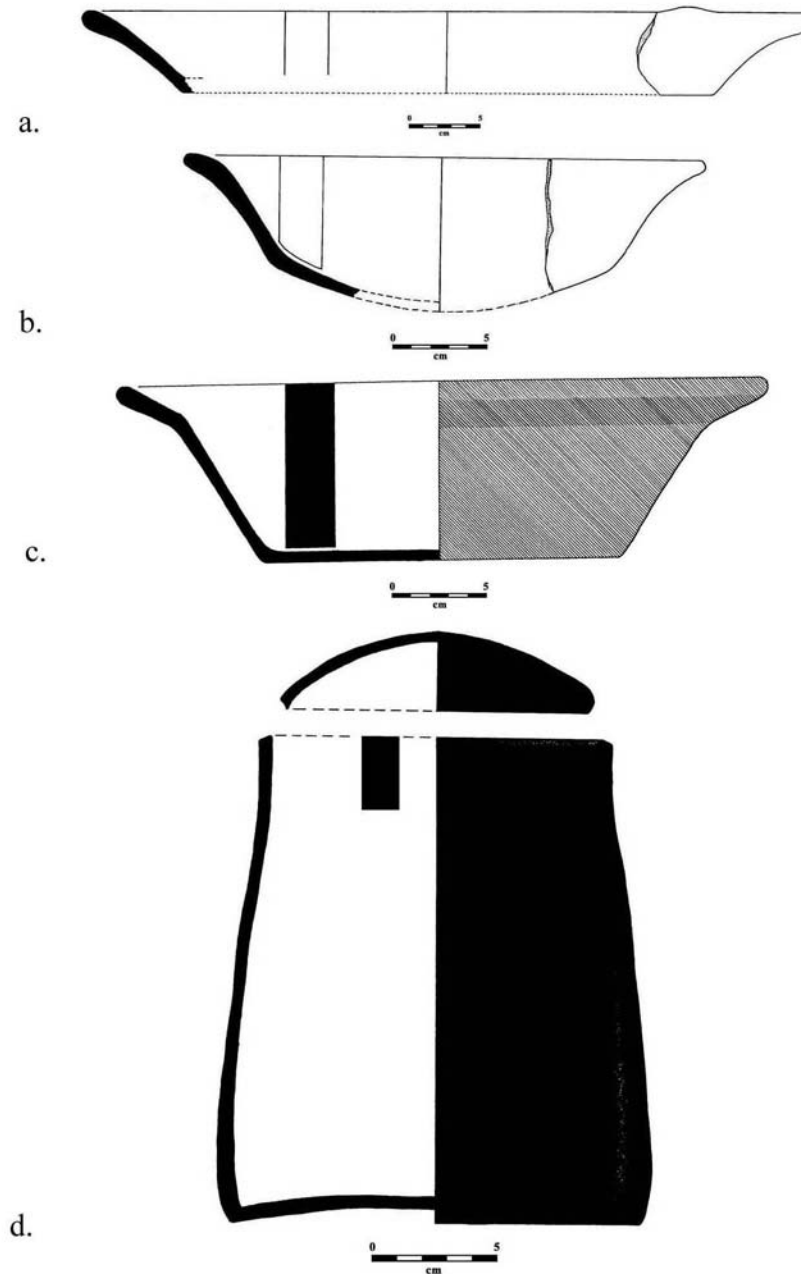


Figure A15: Flor Ceramic Group: a) Flor Cream: Variety Unspecified (LA351/5); b) Unnamed Cream (LA 125/13); Matamore Ceramic Group: c) Matamore Dichrome: Matamore Variety (LA 125/6); Polvero Ceramic Group: d) Polvero Black: Polvero Variety (LA 385/1a&1b).

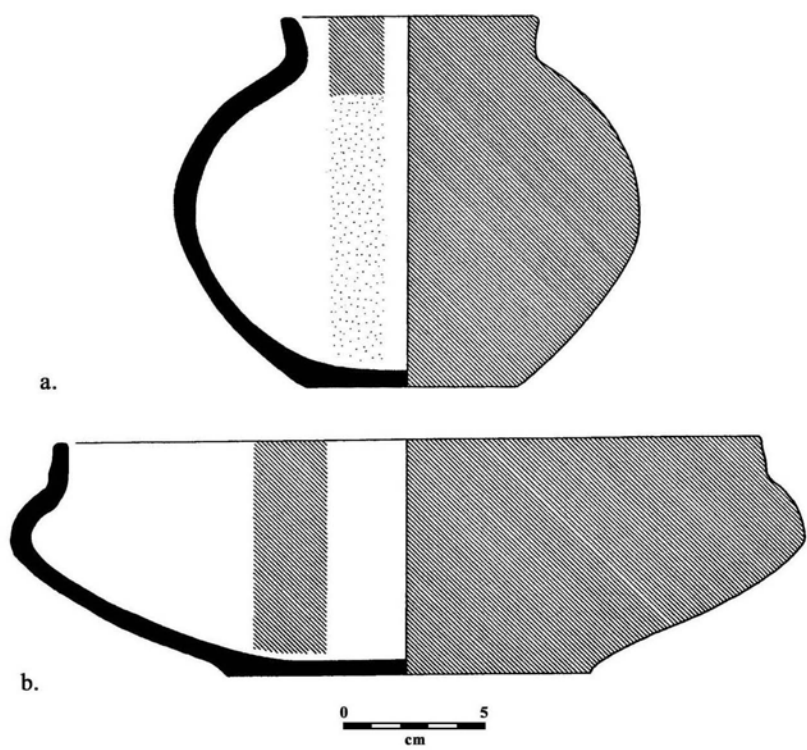


Figure A16: Quacco Creek Ceramic Group: a-b) Quacco Creek Red: Quacco Creek Variety (LS 111 and LA 164).

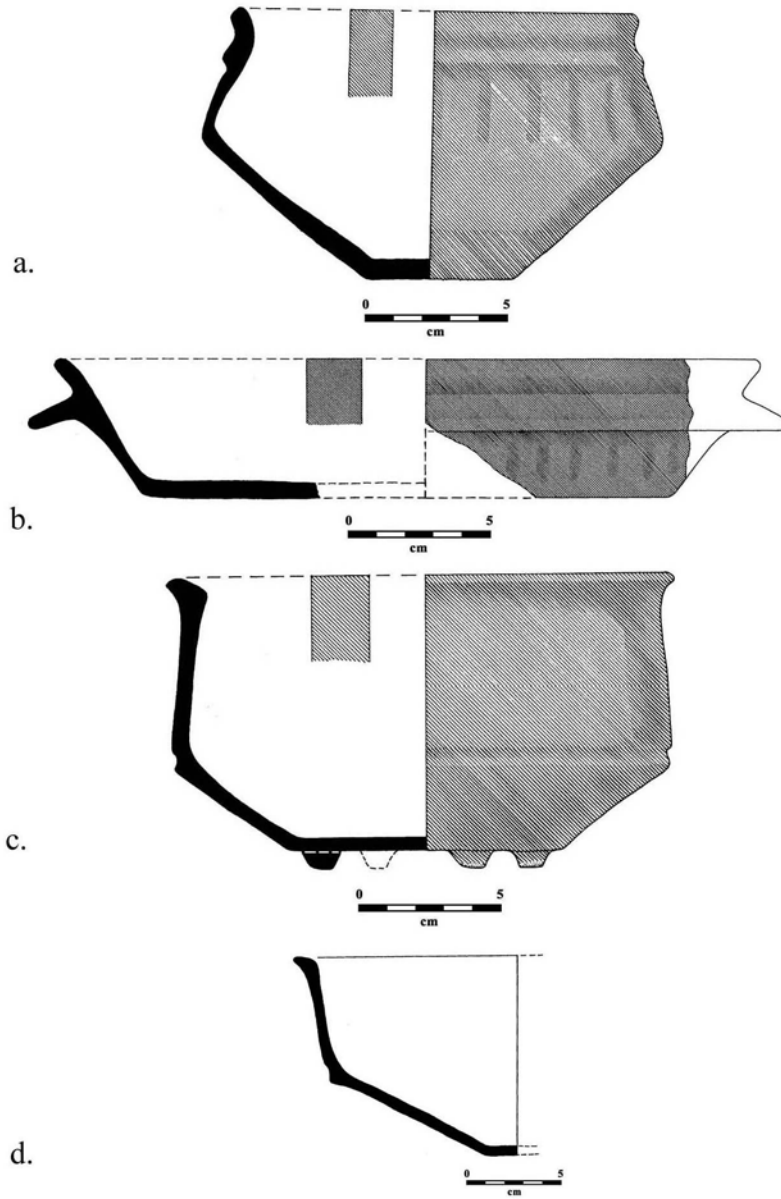


Figure A17: Sierra Ceramic Group: a-b) Alta Mira Fluted: Variety Unspecified (LA 125/2 and LA 125/5); c-d) Laguna Verde Incised: Grooved-incised Variety (LA 125/1 and LA 125/14).

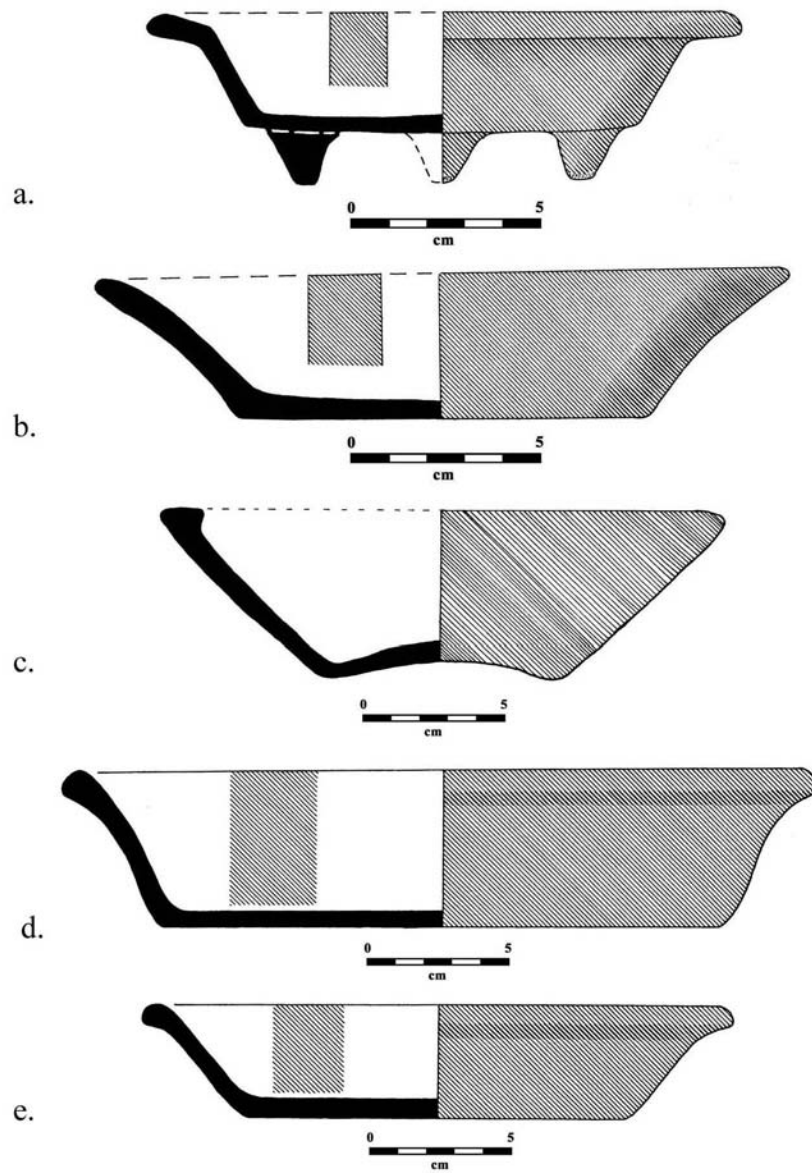


Figure A18: Sierra Ceramic Group: a-e) Sierra Red: Sierra Variety (LA 125/3, LA 125/4, LA 125/7, LA 434/2, and LA 434/3).

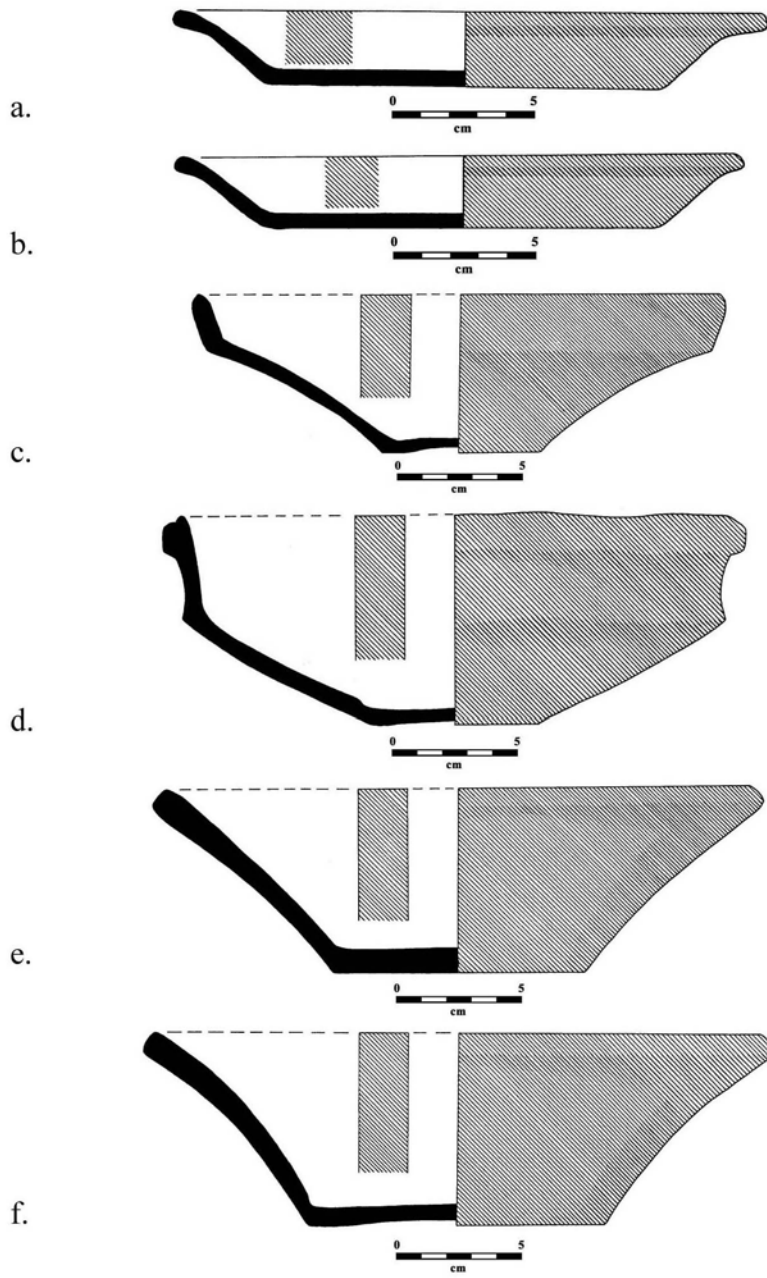


Figure A19: Sierra Ceramic Group: a-f) Sierra Red: Sierra Variety (LA 434/4, LA 434/5, LA 340/1, LA 340/2, LA 340/3, and LA 340/5).

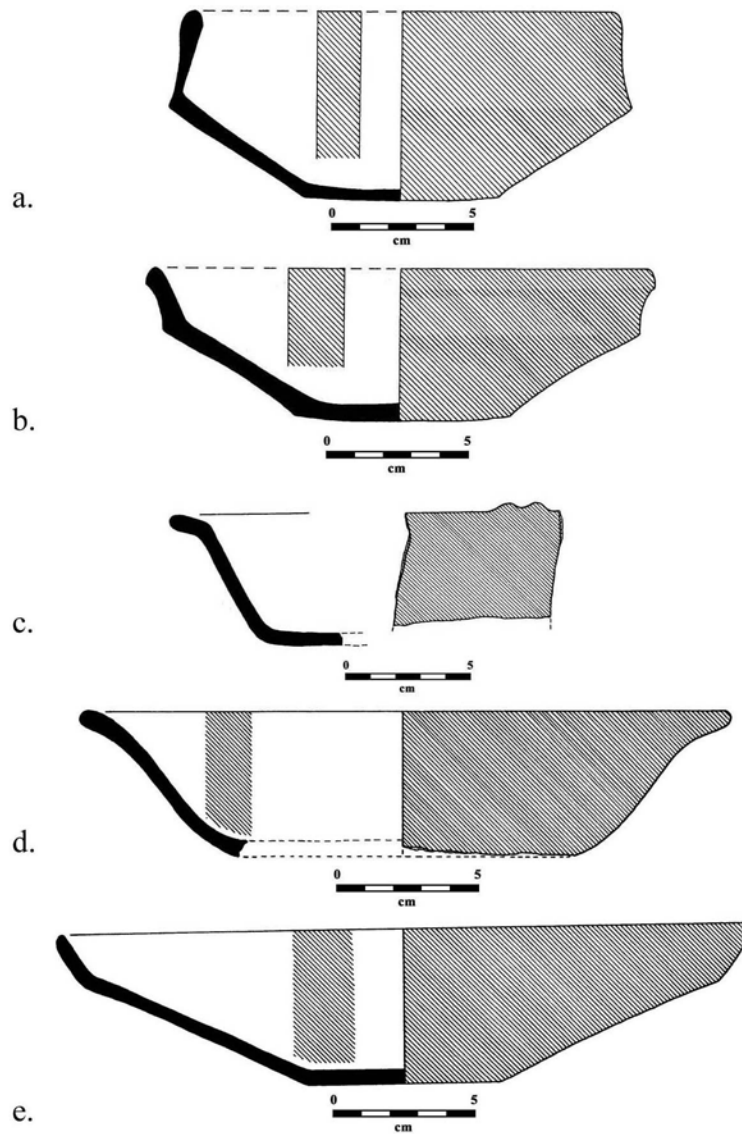


Figure A20: Sierra Ceramic Group: a-b) Sierra Red: Sierra Variety (LA 356/1 and LA 356/2); c-e) Sierra Red: Variety Unspecified (LA 125/12, LA 792/1, and LA 1127/2).

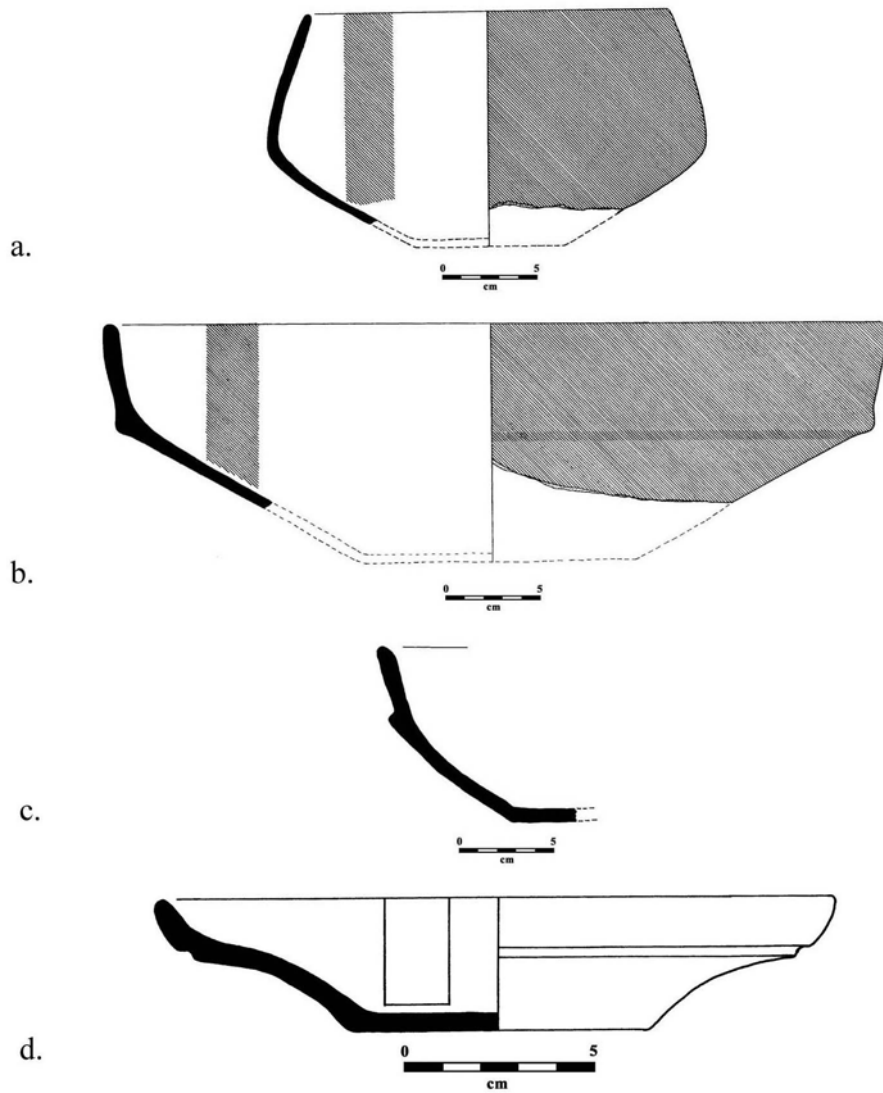


Figure A21: Sierra Ceramic Group: a-c) Society Hall Red: Society Hall Variety (LA 125/8, LA 125/9, and LA 125/10); d) Unnamed Cream-over-red Incised (LA 1128/1).

The Zotz Ceramic Complex (late facet): A.D. 150-250

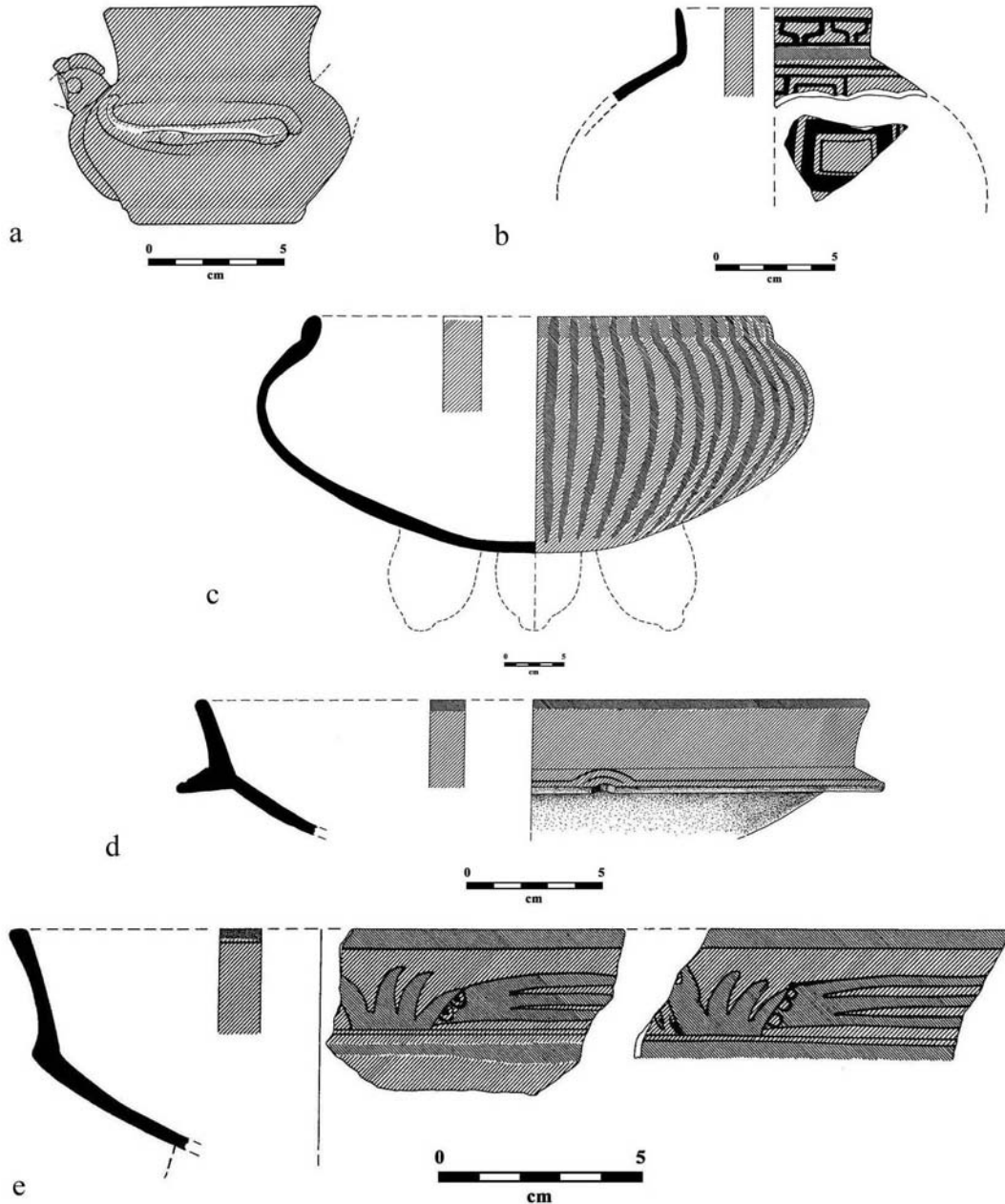


Figure A22: Aguacate Ceramic Group: a) Unnamed Brown-and-modeled (LA 496/1); b and e) Ixcanrio Orange-polychrome: Ixcanrio Variety (LA 496/12 and LA 496/5); c) Unnamed Red-rimmed Orange and Trickle (LA 521/9); d) Guacamallo Red-on-orange: Grooved-incised Variety (LA 496/11).

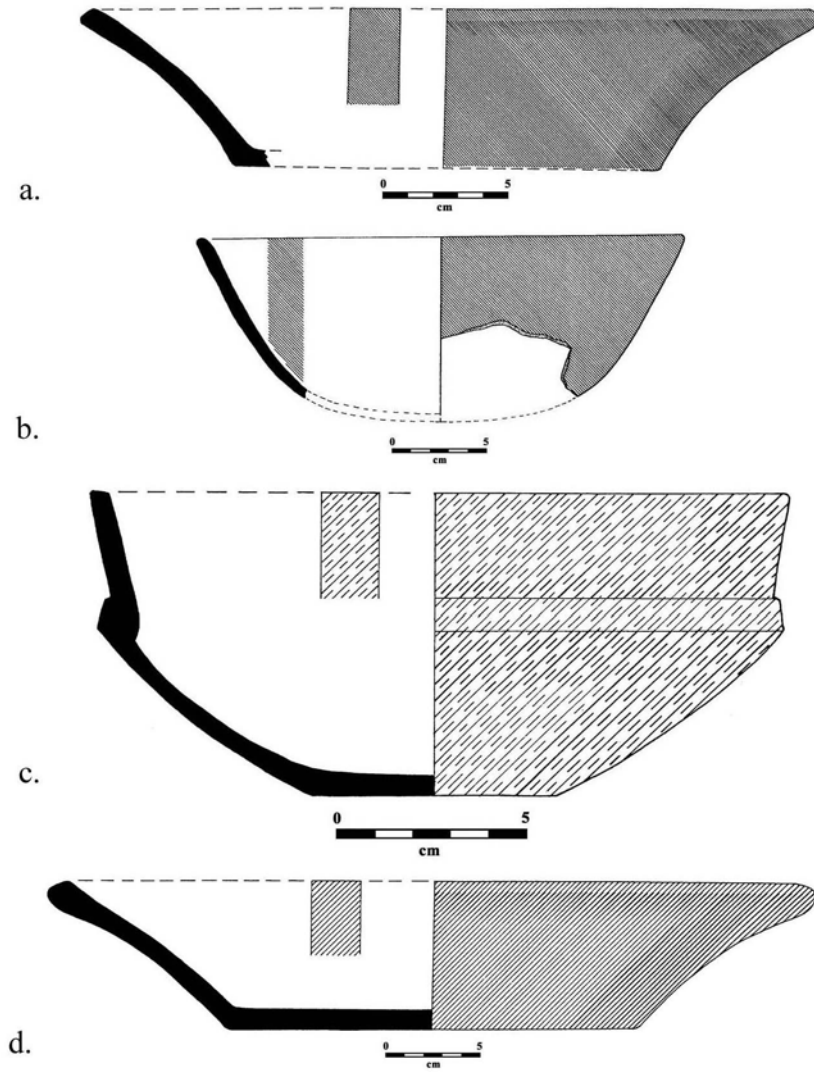


Figure A23: Cabro Ceramic Group: a-d) Cabro Red: Cabro Variety (LA 520/4, LA 496/14, LA 526/1, and LA 521/4). Vessel c has red decoration on both sides, not brown as shown.

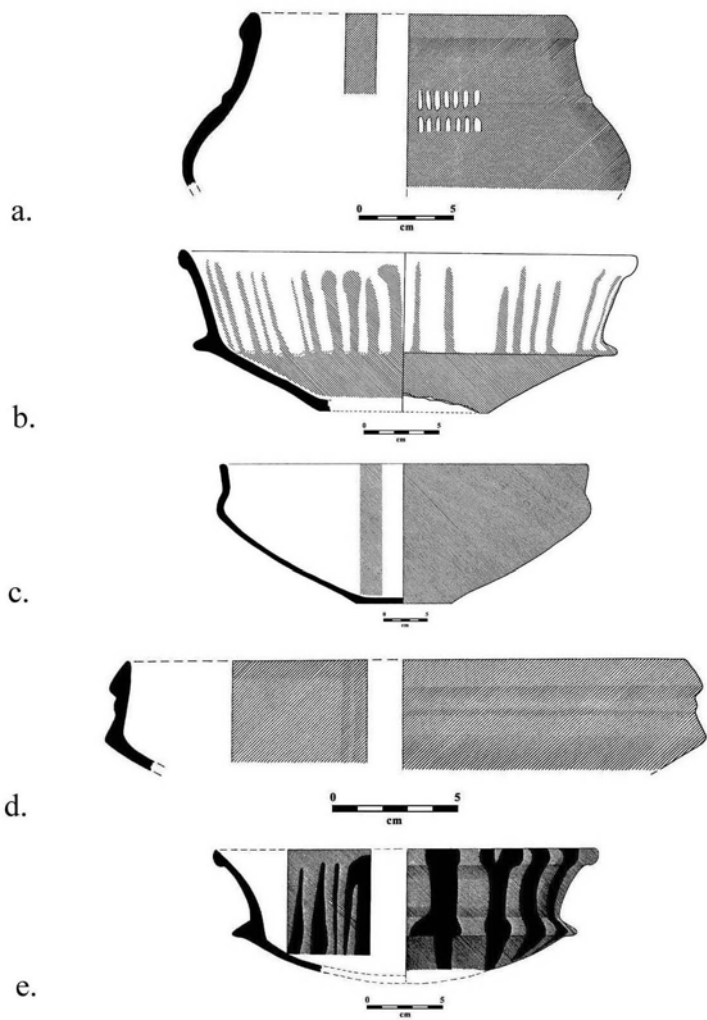


Figure A24: Cabro Ceramic Group: a-e) Cabro Red: Trickle Variety (LA 520/1, LA 520/3, LA 520/5, LA 520/6, and LA 526/3).

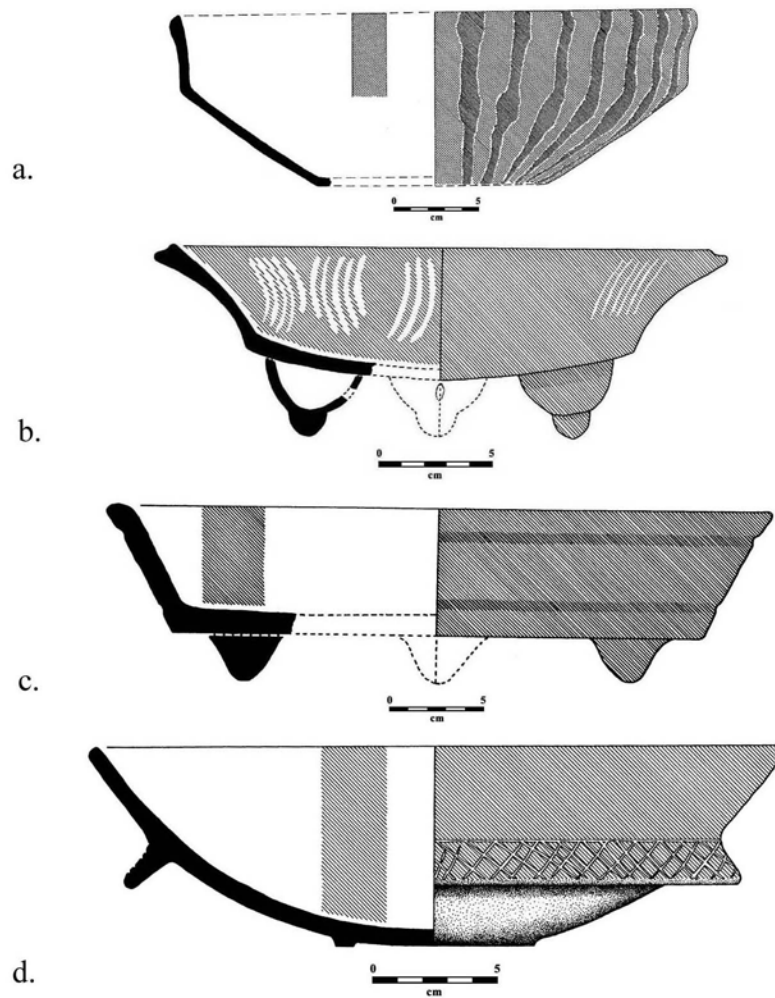


Figure A25: Cabro Ceramic Group: a-b) Cabro Red: Trickle Variety (LA 526/4 and LA 521/2); c-d) Liscanal Grooved-incised: Liscanal Variety (LA 521/8 and LS 35).

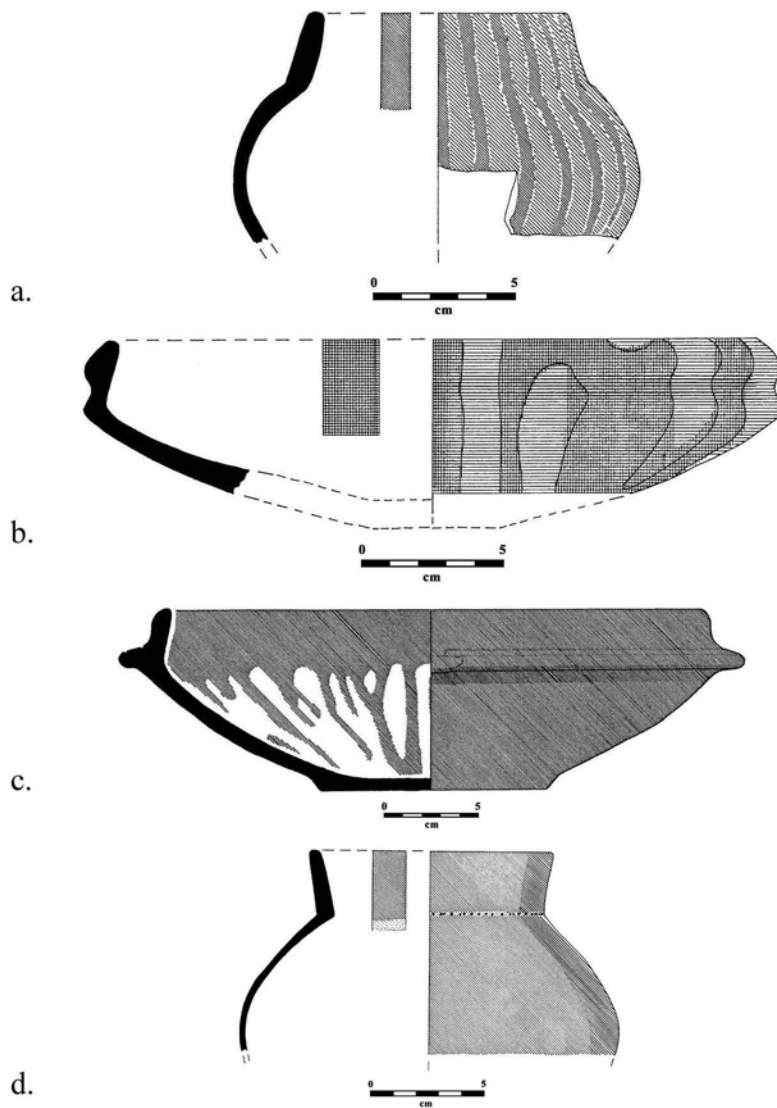


Figure A26: Cabro Ceramic Group: a-c) Liscanal Grooved-incised: Trickle Variety (LA 520/2, LA 526/2, and LA 526/7); d) Pahote Punctated: Pahote Variety (LA 521/1).

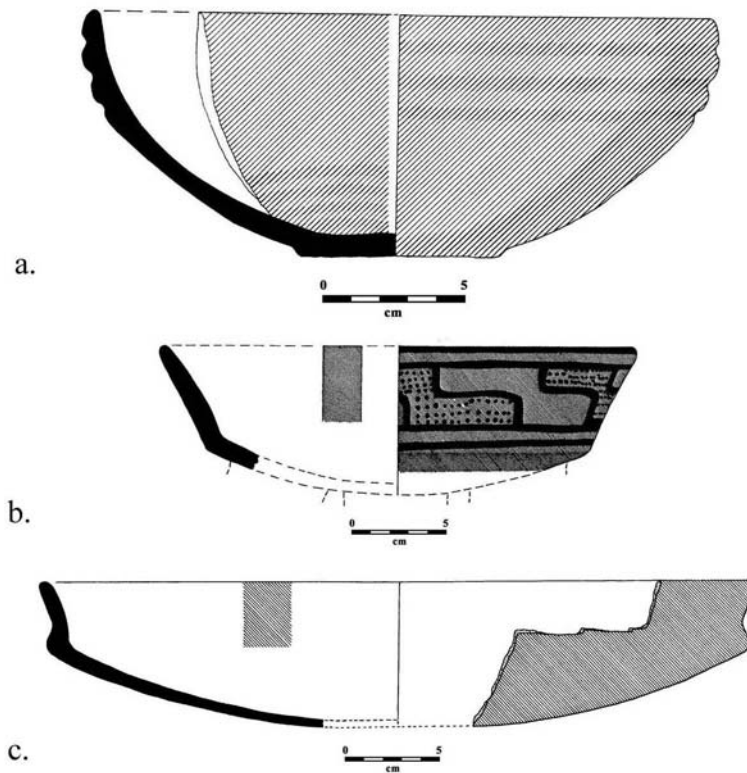


Figure A27: Cabro (?) Ceramic Group: a) Unnamed Black-on-red and Grooved-incised (LA 544/1); b) Unnamed Black-on-red (LA 496/7); c) Unnamed Red-on-cream (LA 496/16).

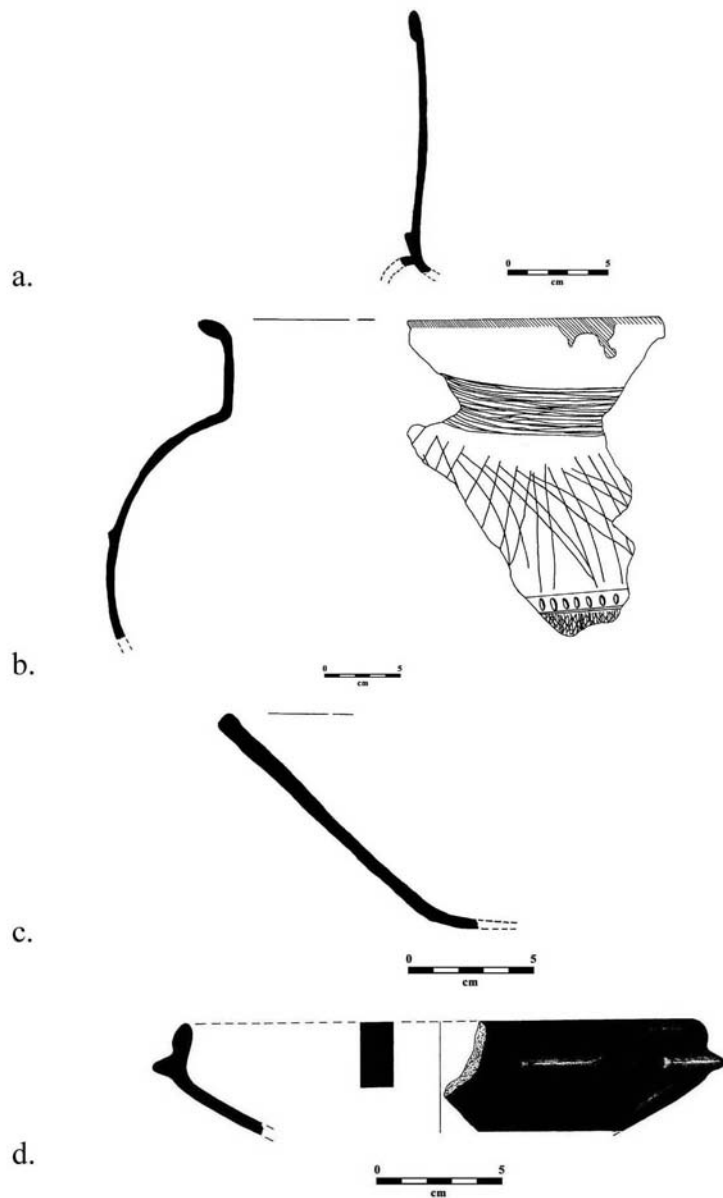


Figure A28: Flor (?) Ceramic Group: a) Unnamed Cream-and-modeled (LA 496/18); Monkey Falls Ceramic Group: b) Monkey Falls Striated: Variety Unspecified (LA 496/17); Paila Ceramic Group: c) Chahmah Washed: Chahmah Variety (LA 496/15); Polvero Ceramic Group: d) Polvero Black: Variety Unspecified (LA 526/5).

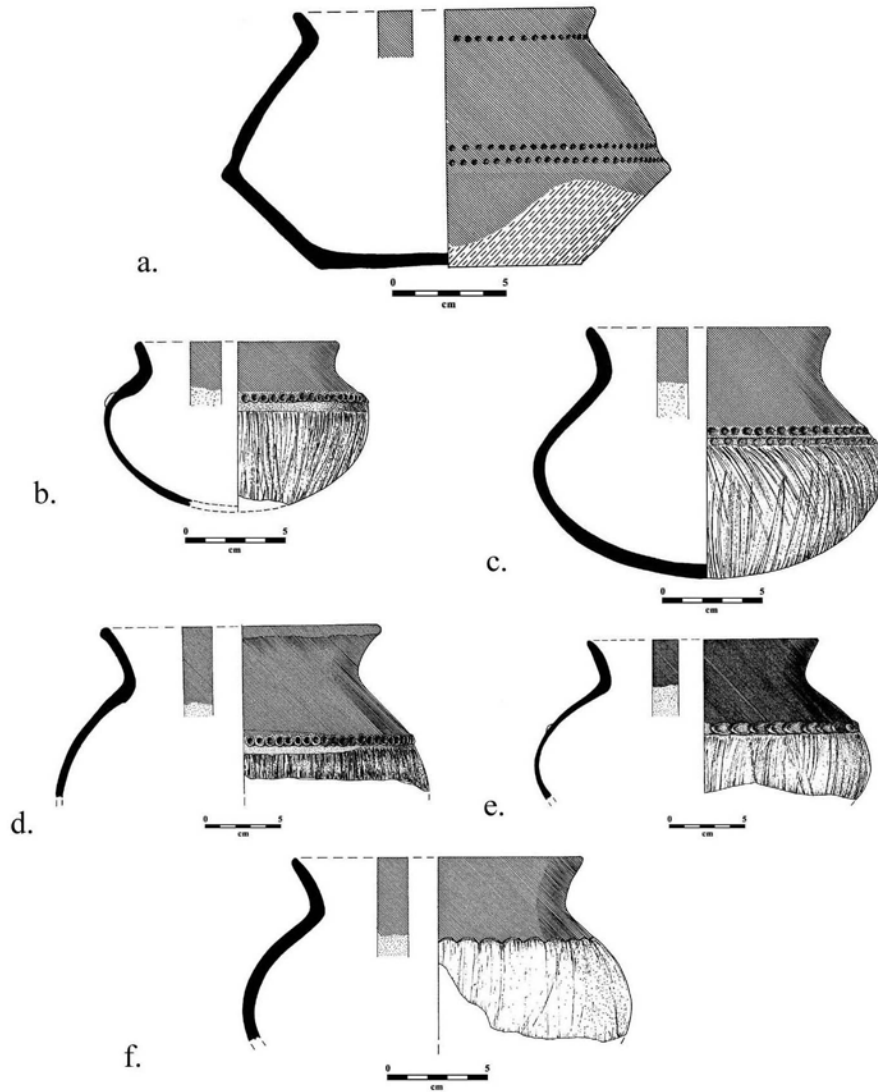


Figure A29: Sierra Ceramic Group: a) Lagartos Punctated: Lagartos Variety (LA 524/1); b-f) Puletan Red-and-unslipped: Puletan Variety (LA 496/3, LA 496/4, LA 496/8, and LA 496/9).

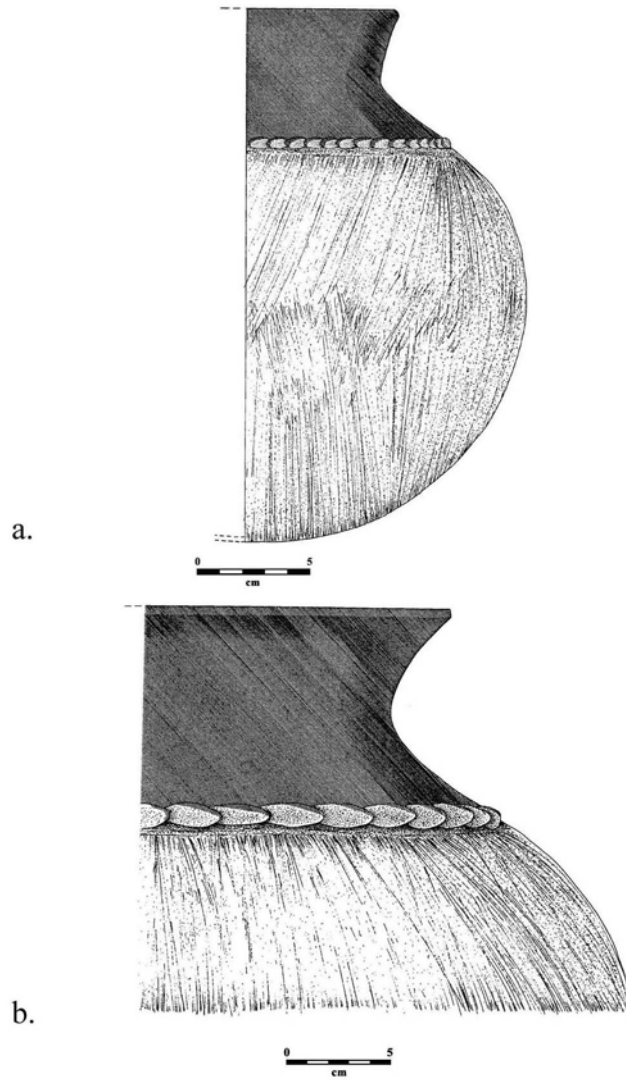


Figure A30: Sierra Ceramic Group: a-b) Puletan Red-and-unslipped (LA 496/13 and LA 526/6).

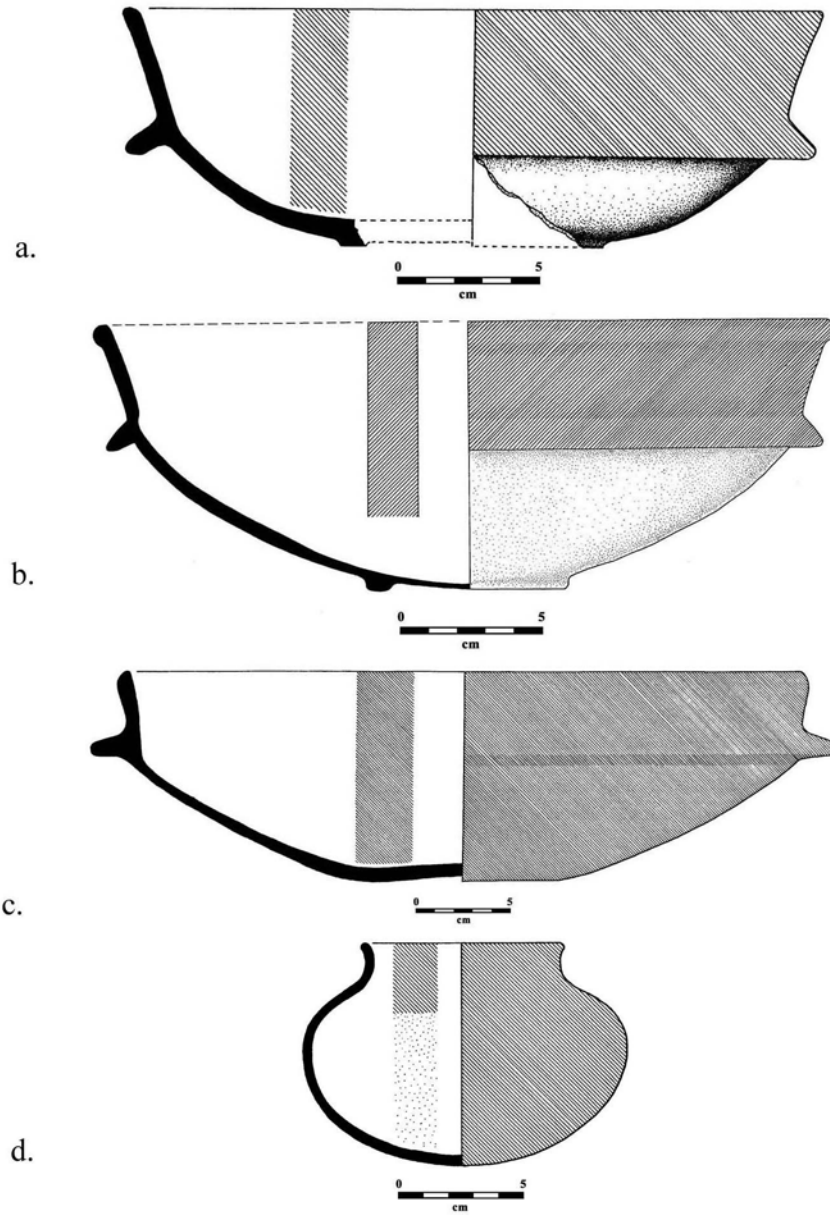


Figure A31: Sierra Ceramic Group: a-d) Sierra Red: Variety Unspecified (LA 860/1, LA 418/1, LA 732/1, and LS 15).

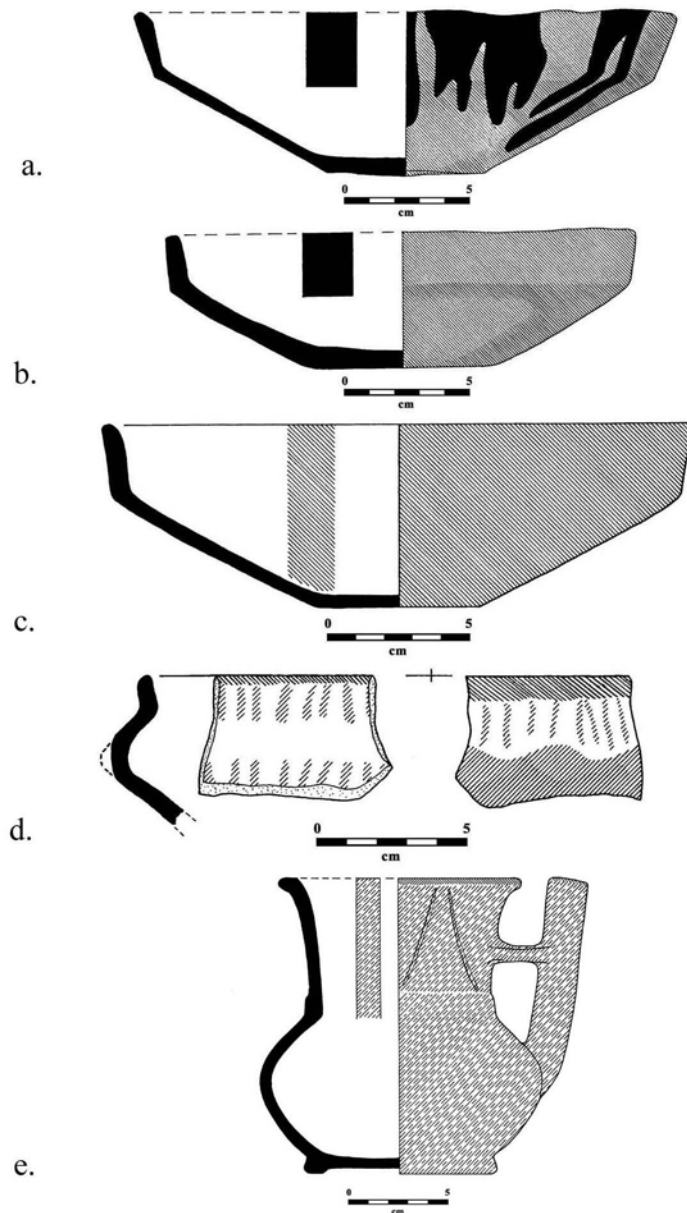


Figure A32: Sierra Ceramic Group: a-b) Sierra Red: Variety Unspecified (Red-and-black) (LA 732/1 and LA 732/2); c) Society Hall Red: Variety Unspecified (LA 552/1); Unspecified Ceramic Group: d) Unnamed Cream-polychrome (LA 236/1); e) Unnamed Red-rimmed Brown and Grooved-incised (LA 496/2).

APPENDIX B: VESSEL FORMS, TYPES, AND THEIR FUNCTIONS

Lot #	Height	Rim Diam	Body Thick	Form	Function	Type
15	8.9	8.1	0.35	jar	ritual	Sierra Red: Variety Unspecified
35	8	27.8	0.64	dish	ritual	Liscanal Grooved-incised: Liscanal Variety
111	13	9.2	0.52	jar	ritual	Quacco Creek Red: Quacco Creek Variety
162	9	8.3	0.3	jar	ritual	Sierra Red: Variety Unspecified
164	8.3	24.7	0.6	bowl	ritual	Quacco Creek Red: Quacco Creek Variety
1127/2	5.5	24.5	0.45	dish	serving/eating	Sierra Red: Variety Unspecified
1128/1	3.5	17.9	0.53	plate	serving/eating	Unnamed Cream-over-red Incised
125/1	10.5	18	0.5	bowl	serving/eating	Laguna Verde Incised: Grooved-incised Variety
125/10	9.1	26	0.8	bowl	serving/eating	Society Hall Red: Society Hall Variety
125/11		32	0.85	dish	serving/eating	Sierra Red: Sierra Variety
125/12	5.3	30	0.6	plate	serving/eating	Sierra Red: Variety Unspecified
125/13	8.1	28	0.73	dish	serving/eating	Unnamed Cream
125/14	10.5	24	0.55	bowl	serving/eating	Laguna Verde Incised: Grooved-incised Variety
125/2	9.5	14	0.7	bowl	serving/eating	Alta Mira Fluted: Variety Unspecified
125/3	4.4	15.7	0.46	dish	serving/eating	Sierra Red: Sierra Variety
125/4	3.8	18.1	0.9	dish	serving/eating	Sierra Red: Sierra Variety
125/5	7.7	32	0.65	dish	serving/eating	Alta Mira Fluted: Variety Unspecified
125/6	9.5	34	0.5	dish	serving/eating	Matamore Dichrome: Matamore Variety
125/7	5.9	20.1	0.5	dish	processing	Sierra Red: Sierra Variety
125/8	12.4	19.2	0.6	bowl	serving/eating	Society Hall Red: Society Hall Variety
125/9	12.6	41.3	0.9	dish	serving/eating	Society Hall Red: Society Hall Variety
236/1		17	0.7	bowl	serving/eating	Unnamed Cream-polychrome
340/1	6.4	21.2	0.51	dish	ritual	Sierra Red: Sierra Variety
340/2	9	22.1	0.5	bowl	ritual	Sierra Red: Sierra Variety
340/3	7.4	23.6		dish	ritual	Sierra Red: Sierra Variety
340/5	7.8	24.6		dish	ritual	Sierra Red: Sierra Variety
351/5	5.7	52.4	0.93	plate	serving/eating	Flor Cream: Variety Unspecified
355/1	5.9	18.8	0.9	dish	serving/eating	Lechugal Incised: Gouged-incised Variety
355/10	5	30	0.6	plate	serving/eating	Richardson Peak Unslipped: Richardson Peak Variety
355/11	5	30	0.7	plate	serving/eating	Laguna Verde Incised: Grooved-incised Variety
355/2	6.7	10.5	0.5	bowl	serving/eating	Accordion Incised: Variety Unspecified
355/3	3.7	17.1	0.7	dish	serving/eating	Sierra Red: Sierra Variety
355/4	9.5	15.3	0.5	bowl	serving/eating	Laguna Verde Incised: Variety Unspecified
355/5	8.9	18.7	0.7	bowl	serving/eating	Unnamed Black, Punctated, and Unslipped
355/8	4	20	0.6	plate	processing	Sierra Red: Variety Unspecified
355/9	8.4	7.8	0.3	jar	dry storage	Richardson Peak Unslipped: Richardson Peak Variety
356/1	6.5	15.4	0.3	bowl	ritual	Sierra Red: Sierra Variety
356/2	5.9	18.5	0.58	dish	ritual	Sierra Red: Sierra Variety
357/1	7.8	31.8	0.53	dish	ritual	Sierra Red: Sierra Variety
364/1	4.1	26.9	0.9	plate	serving/eating	Sierra Red: Sierra Variety
364/2	9.2	38	0.95	dish	serving/eating	Laguna Verde Incised: Grooved-incised Variety
364/3	9.5	18.5	0.4	bowl	cooking	Puletan Red-and-unslipped: Composite Variety

Lot #	Height	Rim Diam	Body Thick	Form	Function	Type
364/4	9	29.5	1	dish	serving/eating	Sierra Red: Sierra Variety
367/1	7.6	22.3	0.5	bowl	serving/eating	Lechugal Incised: Gouged-incised Variety
367/2	3.7	15.3	0.9	dish	serving/eating	Sierra Red: Variety Unspecified (Red-double slip)
372/1	6.7	21.8	0.64	dish	serving/eating	Puletan Red-and-unslipped: Puletan Variety
385/1	20.2	14.3	0.5	vase	ritual	Polvero Black: Polvero Variety
418/1	16.3	43.9	0.96	bowl	serving/eating	Sierra Red: Variety Unspecified
421/1	5	15.5	0.6	bowl	serving/eating	Lechugal Incised: Grooved-incised Variety
421/10	6.3	37	0.6	plate	serving/eating	Sierra Red: Sierra Variety
421/11		26.5	0.5	jar	dry storage	Sierra Red: Variety Unspecified
421/12	5.5	18	0.8	dish	cooking	Unnamed Buff-and-plain
421/13	6.6	27.3	0.6	dish	serving/eating	Laguna Verde Incised: Grooved-incised Variety
421/2	7.6	28.5	0.7	dish	serving/eating	Lechugal Incised: Grooved-incised Variety
421/3	3.7	17.7	0.7	dish	processing	Ciego Composite: Dawson Creek Variety
421/7	4.1	27	0.5	plate	serving/eating	Sierra Red: Sierra Variety
421/8	7	23.3	0.8	dish	serving/eating	Sierra Red: Sierra Variety
434/2	5.6	26	0.7	dish	serving/eating	Sierra Red: Sierra Variety
434/3	4.1	20	0.57	dish	serving/eating	Sierra Red: Sierra Variety
434/4	2.6	21	0.54	plate	serving/eating	Sierra Red: Sierra Variety
434/5	2.5	19.7	0.6	plate	serving/eating	Sierra Red: Sierra Variety
435/2	5.7	25.7	0.76	dish	serving/eating	Laguna Verde Incised: Grooved-incised Variety
440/10	4.3	25.2	0.67	plate	serving/eating	Sierra Red: Sierra Variety
440/11	3	17	0.7	plate	serving/eating	Sierra Red: Sierra Variety
440/12	2.8	16	0.75	plate	serving/eating	Sierra Red: Sierra Variety
440/13	2.7	18	0.62	plate	serving/eating	Sierra Red: Sierra Variety
440/14	4.1	20.1	0.6	plate	serving/eating	Sierra Red: Sierra Variety
440/15	6	22	0.7	dish	processing	Sierra Red: Variety Unspecified (Red-double slip)
440/16	3.7	17.2	0.6	dish	serving/eating	Sierra Red: Sierra Variety
440/17	7.6	44	1.16	plate	serving/eating	Sierra Red: Sierra Variety
440/2	7.1	29	0.65	dish	serving/eating	Flor Cream: Indian Church Variety
440/3	4	14	0.5	dish	serving/eating	Sierra Red: Sierra Variety
440/4	9.5	16.5	0.4	bowl	serving/eating	Sierra Red: Sierra Variety
440/5	3.9	22	0.7	plate	serving/eating	Sierra Red: Sierra Variety
440/6	3.3	18	0.45	plate	serving/eating	Sierra Red: Sierra Variety
440/7	4	21.8	0.73	plate	serving/eating	Sierra Red: Black-rimmed Variety (dichrome)
440/8	11.6	18	0.55	bowl	serving/eating	Alta Mira Fluted: Horizontally-fluted Variety
440/9	3.6	19	0.65	plate	processing	Sierra Red: Sierra Variety
442/1	11.2	33	0.7	bowl	serving/eating	Unnamed Red-on-orange
449/1	12.1	18.4	0.55	bucket	ritual	Sierra Red: Sierra Variety
449/2	16.8	14.9	0.4	jar	ritual	Sierra Red: Sierra Variety
449/3	11.6	16.6	0.6	bowl	ritual	Unnamed Buff-and-modeled
449/4	11.5	22.7	1	bowl	ritual	Flor Cream: Variety Unspecified
449/5	9.3	16.8	0.4	bowl	ritual	Sierra Red: Ahuacan Variety
449/6	14.5	18.8	0.4	jar	ritual	Sierra Red: Variety Unspecified
449/7	4.2	28	0.45	dish	ritual	Sierra Red: Variety Unspecified

		Rim	Body			
Lot #	Height	Diam	Thick	Form	Function	Type
454/1	13.9	27.6	0.5	bucket	ritual	Alta Mira Fluted: Variety Unspecified
479/1	3.3	17.4	0.5	plate	ritual	Sierra Red: Variety Unspecified (Red-double slip)
479/2	11.1	15.9	0.35	bowl	ritual	Laguna Verde Incised: Grooved-incised Variety
480/1	17.5	15.5	0.6	jar	ritual	Lechugal Incised: Grooved-incised Variety
480/2	3	16.6	0.62	plate	ritual	Polvero Black: Polvero Variety
481/1	4.9	32.1	0.8	plate	ritual	Sierra Red: Sierra Variety
481/2	9.3	10.1	0.3	jar	ritual	Sierra Red: Variety Unspecified (Red-double slip)
496/1	8.65	9	0.2	jar	serving/eating	Unnamed Brown-and-modeled
496/10		13.5	0.5	jar	water carrying	Puletan Red-and-unslipped: Puletan Variety
496/11		39	0.55	dish	serving/eating	Guacamallo Red-on-orange: Grooved-incised Variety
496/12		8.2	0.4	jar	dry storage	Ixcanrio Orange-polychrome: Ixcanrio Variety
496/13	35.1	17	0.45	jar	water storage	Puletan Red-and-unslipped: Puletan Variety
496/14	9.7	25.7	0.8	bowl	cooking	Cabro Red: Cabro Variety
496/15	8.5	34	0.43	dish	soaking	Chahmah Washed: Chahmah Variety
496/16	7.8	38	0.7	dish	serving/eating	Unnamed Red-on-cream
496/17		22.5	0.5	jar	dry storage	Monkey Falls Striated: Variety Unspecified
496/18		12	0.55	vase	serving/eating	Unnamed Cream-and-modeled
496/19		23.6	0.48	jar	water carrying	Puletan Red-and-unslipped: Puletan Variety
496/2	14.15	12.4	0.35	jar	serving/eating	Unnamed Red-rimmed Brown and Grooved-incised
496/3		12.7	0.3	jar	water carrying	Puletan Red-and-unslipped: Puletan Variety
496/4	12.4	12.5	0.5	jar	water carrying	Puletan Red-and-unslipped: Puletan Variety
496/5		28.5	0.8	bowl	serving/eating	Ixcanrio Orange-polychrome: Ixcanrio Variety
496/7		25.2	1.05	bowl	serving/eating	Unnamed Black-on-red
496/8		18	0.48	jar	water carrying	Puletan Red-and-unslipped: Puletan Variety
496/9		17	0.38	jar	water carrying	Puletan Red-and-unslipped: Puletan Variety
520/1		16.8	0.9	jar	dry storage	Cabro Red: Trickle Variety
520/2		9	0.5	jar	dry storage	Liscanal Grooved-incised: Trickle Variety
520/3	10.5	30.4	0.7	bowl	serving/eating	Cabro Red: Trickle Variety
520/4	6.3	30.1	0.75	dish	serving/eating	Cabro Red: Cabro Variety
520/5	15.1	42.5	0.45	bowl	serving/eating	Cabro Red: Trickle Variety
520/6		38	0.6	bowl	serving/eating	Cabro Red: Trickle Variety
521/1		10.8	0.3	jar	dry storage	Pahote Punctated: Pahote Variety
521/2	11.3	32	0.7	bowl	serving/eating	Cabro Red: Trickle Variety
521/4	6.3	30	0.8	dish	serving/eating	Cabro Red: Cabro Variety
521/7		21	0.85	bowl	serving/eating	Liscanal Grooved-incised: Trickle Variety
521/8	7.1	31	0.8	dish	serving/eating	Liscanal Grooved-incised: Liscanal Variety
521/9	17.8	24.9	0.5	bowl	serving/eating	Unnamed Red-rimmed Orange and Trickle
524/1	11.4	13.3	0.5	bowl	dry storage	Lagartos Punctated: Lagartos Variety
526/1	7.6	22.4	0.6	bowl	serving/eating	Cabro Red: Cabro Variety
526/2	6.6	22	0.9	dish	serving/eating	Liscanal Grooved-incised: Trickle Variety
526/3	8.9	32	0.6	dish	serving/eating	Cabro Red: Trickle Variety
526/4	10.1	30.3	0.45	bowl	serving/eating	Cabro Red: Trickle Variety
526/5	6.5	28	0.7	dish	serving/eating	Polvero Black: Variety Unspecified

		Rim	Body			
Lot #	Height	Diam	Thick	Form	Function	Type
526/6		40	0.55	jar	water storage	Puletan Red-and-unslipped: Puletan Variety
526/7	9.5	28.7	0.64	bowl	serving/eating	Liscanal Grooved-incised: Trickle Variety
544/1	8.5	22	0.85	bowl	serving/eating	Unnamed Black-on-red and Grooved-incised
552/1	6.4	21.6	0.3	dish	serving/eating	Society Hall Red: Variety Unspecified
732/1	7.2	22.3	0.4	dish	ritual	Sierra Red: Variety Unspecified (Red-and-black)
732/2	5.7	18.6	0.5	dish	ritual	Sierra Red: Variety Unspecified (Red-and-black)
732/3	11.1	36.1	0.6	dish	ritual	Sierra Red: Variety Unspecified
748/1	7.4	15	0.64	bowl	serving/eating	Lechugal Incised: Grooved-incised Variety
792/1	5.2	23.3	0.45	dish	ritual	Sierra Red: Variety Unspecified
801/1	7	31.2	0.5	dish	ritual	Sierra Red: Sierra Variety
860/1	8.3	24.8	0.6	bowl	serving/eating	Sierra Red: Variety Unspecified

APPENDIX C: VESSEL FORMS, TYPES, AND THEIR CONTEXTS BY GROUP

Lag Complex					
Structure	Context	Lot #	Form	Group	Type
N10-9	Core below Lowest Floor	748/1	bowl	Polvero	Lechugal Incised: Grooved-incised Variety
N10-43	Hearth 1	364/1	plate	Sierra	Sierra Red: Sierra Variety
		364/2	dish	Sierra	Laguna Verde Incised: Grooved-incised Variety
		364/3	bowl	Sierra	Puletan Red-and-unslipped: Composite Variety
		364/4	dish	Sierra	Sierra Red: Sierra Variety
N10-43	Rock Feature 1	372/1	dish	Sierra	Puletan Red-and-unslipped: Puletan Variety
N10-43	Cache N10-43/5	357/1	dish	Sierra	Sierra Red: Sierra Variety
P8-9	Burial P8-9/5	481/1	plate	Sierra	Sierra Red: Sierra Variety
		481/2	jar	Sierra	Sierra Red: Variety Unspecified (Red-double slip)
P8-9	Burial P8-9/3	479/1	plate	Sierra	Sierra Red: Variety Unspecified (Red-double slip)
		479/2	bowl	Sierra	Laguna Verde Incised: Grooved-incised Variety
P8-9	Burial P8-9/1	480/1	jar	Polvero	Lechugal Incised: Grooved-incised Variety
		480/2	plate	Polvero	Polvero Black: Polvero Variety
P8-9	Burial P8-9/6	449/1	bucket	Sierra	Sierra Red: Sierra Variety
		449/2	jar	Sierra	Sierra Red: Sierra Variety
		449/3	bowl	Unspecified	Unnamed Buff-and-modeled
		449/4	bowl	Flor	Flor Cream: Variety Unspecified
		449/5	bowl	Sierra	Sierra Red: Ahuacan Variety
		449/6	jar	Sierra	Sierra Red: Variety Unspecified
		449/7	dish	Sierra	Sierra Red: Variety Unspecified
P8-9	Burial P8-9/2	454/1	bucket	Sierra	Alta Mira Fluted: Variety Unspecified
P8-9	Collapse Debris in 4th	435/2	dish	Sierra	Laguna Verde Incised: Grooved-incised Variety
P8-11	Core of Platform	355/1	dish	Polvero	Lechugal Incised: Gougged-incised Variety
		355/2	bowl	Flor	Accordian Incised: Variety Unspecified
		355/3	dish	Sierra	Sierra Red: Sierra Variety
		355/4	bowl	Sierra	Laguna Verde Incised: Variety Unspecified
		355/5	bowl	Polvero	Unnamed Black, Punctated, and Unslipped
		355/8	plate	Sierra	Sierra Red: Variety Unspecified
		355/9	jar	Richardson	Richardson Peak Unslipped: Richardson Peak Variety
355/10	plate	Richardson	Richardson Peak Unslipped: Richardson Peak Variety		
P8-11	Midden in Platform	355/11	plate	Sierra	Laguna Verde Incised: Grooved-incised Variety
		367/1	bowl	Polvero	Lechugal Incised: Gougged-incised Variety
		367/2	dish	Sierra	Sierra Red: Variety Unspecified (Red-double slip)
P8-11	Midden against Platform	421/1	bowl	Polvero	Lechugal Incised: Grooved-incised Variety
		421/2	dish	Polvero	Lechugal Incised: Grooved-incised Variety
		421/3	dish	Sierra	Ciego Composite: Dawson Creek Variety
		421/7	plate	Sierra	Sierra Red: Sierra Variety

Structure	Context	Lot #	Form	Group	Type
		421/8	dish	Sierra	Sierra Red: Sierra Variety
		421/10	plate	Sierra	Sierra Red: Sierra Variety
		421/11	jar	Sierra	Sierra Red: Variety Unspecified
		421/12	dish	Paila?	Unnamed Buff-and-plain
		421/13	dish	Sierra	Laguna Verde Incised: Grooved-incised Variety
P8-11	Midden on Floor of 1st	440/2	dish	Flor	Flor Cream: Indian Church Variety
		440/3	dish	Sierra	Sierra Red: Sierra Variety
		440/4	bowl	Sierra	Sierra Red: Sierra Variety
		440/5	plate	Sierra	Sierra Red: Sierra Variety
		440/6	plate	Sierra	Sierra Red: Sierra Variety
		440/7	plate	Sierra	Sierra Red: Black-rimmed Variety (dichrome)
		440/8	bowl	Sierra	Alta Mira Fluted: Horizontally-fluted Variety
		440/9	plate	Sierra	Sierra Red: Sierra Variety
		440/10	plate	Sierra	Sierra Red: Sierra Variety
		440/11	plate	Sierra	Sierra Red: Sierra Variety
		440/12	plate	Sierra	Sierra Red: Sierra Variety
		440/13	plate	Sierra	Sierra Red: Sierra Variety
		440/14	plate	Sierra	Sierra Red: Sierra Variety
		440/15	dish	Sierra	Sierra Red: Variety Unspecified (Red-double slip)
		440/16	dish	Sierra	Sierra Red: Sierra Variety
		440/17	plate	Sierra	Sierra Red: Sierra Variety
N12-13	Cache YDL II-7	801/1	dish	Sierra	Sierra Red: Sierra Variety
Early Facet Zotz Complex					
N10-2	Sherd Feature 1	125/1	bowl	Sierra	Laguna Verde Incised: Grooved-incised Variety
		125/2	bowl	Sierra	Alta Mira Fluted: Variety Unspecified
		125/3	dish	Sierra	Sierra Red: Sierra Variety
		125/4	dish	Sierra	Sierra Red: Sierra Variety
		125/5	dish	Sierra	Alta Mira Fluted: Variety Unspecified
		125/6	dish	Matamore	Matamore Dichrome: Matamore Variety
		125/7	dish	Sierra	Sierra Red: Sierra Variety
		125/8	bowl	Sierra	Society Hall Red: Society Hall Variety
		125/9	dish	Sierra	Society Hall Red: Society Hall Variety
		125/10	bowl	Sierra	Society Hall Red: Society Hall Variety
		125/11	dish	Sierra	Sierra Red: Sierra Variety
		125/12	plate	Sierra	Sierra Red: Variety Unspecified
		125/13	dish	Flor	Unnamed Cream
		125/14	bowl	Sierra	Laguna Verde Incised: Grooved-incised Variety
N10-27	Cache N10-27/3	792/1	dish	Sierra	Sierra Red: Variety Unspecified
N10-43	Core of 2nd	434/2	dish	Sierra	Sierra Red: Sierra Variety

Structure	Context	Lot #	Form	Group	Type
		434/3	dish	Sierra	Sierra Red: Sierra Variety
		434/4	plate	Sierra	Sierra Red: Sierra Variety
		434/5	plate	Sierra	Sierra Red: Sierra Variety
N10-43		340/1	dish	Sierra	Sierra Red: Sierra Variety
		340/2	bowl	Sierra	Sierra Red: Sierra Variety
		340/3	dish	Sierra	Sierra Red: Sierra Variety
		340/5	dish	Sierra	Sierra Red: Sierra Variety
N10-43	Cache N10-43/6	385/1	vase	Polvero	Polvero Black: Polvero Variety
P8-14	Core of Platform	351/5	plate	Flor	Flor Cream: Variety Unspecified
P8-14	Cache P8-14/1	356/1	bowl	Sierra	Sierra Red: Sierra Variety
		356/2	dish	Sierra	Sierra Red: Sierra Variety
Harbor	Midden off Str. P9-25	1127/2	dish	Sierra	Sierra Red: Variety Unspecified
		1128/1	plate	Sierra	Unnamed Cream-over-red Incised
Lam South	Burial 7	111	jar	Quacco Creek	Quacco Creek Red: Quacco Creek Variety
		164	bowl	Quacco Creek	Quacco Creek Red: Quacco Creek Variety
Late Facet Zotz Complex					
N11-7	Core of Platform	860/1	bowl	Sierra	Sierra Red: Variety Unspecified
P8-2	Chultun Chamber 1	544/1	bowl	Cabro?	Unnamed Black-on-red and Grooved-incised
		520/1	jar	Cabro	Cabro Red: Trickle Variety
		520/2	jar	Cabro	Liscanal Grooved-incised: Trickle Variety
		520/3	bowl	Cabro	Cabro Red: Trickle Variety
		520/4	dish	Cabro	Cabro Red: Cabro Variety
		520/5	bowl	Cabro	Cabro Red: Trickle Variety
		520/6	bowl	Cabro	Cabro Red: Trickle Variety
		496/1	jar	Aguacate?	Unnamed Brown-and-modeled
		496/2	jar	Unspecified?	Unnamed Red-rimmed Brown and Grooved-incised
		496/3	jar	Sierra	Puletan Red-and-unslipped: Puletan Variety
		496/4	jar	Sierra	Puletan Red-and-unslipped: Puletan Variety
		496/5	bowl	Aguacate	Ixcario Orange-polychrome: Ixcario Variety
		496/7	bowl	Cabro?	Unnamed Black-on-red
		496/8	jar	Sierra	Puletan Red-and-unslipped: Puletan Variety
		496/9	jar	Sierra	Puletan Red-and-unslipped: Puletan Variety
		496/10	jar	Sierra	Puletan Red-and-unslipped: Puletan Variety
		496/11	dish	Aguacate	Guacamallo Red-on-orange: Grooved-incised Variety
		496/12	jar	Aguacate	Ixcario Orange-polychrome: Ixcario Variety
		496/13	jar	Sierra	Puletan Red-and-unslipped: Puletan Variety
		496/14	bowl	Cabro	Cabro Red: Cabro Variety
		496/15	dish	Paila	Chahmah Washed: Chahmah Variety
		496/16	dish	Cabro?	Unnamed Red-on-cream
		496/17	jar	Monkey Falls	Monkey Falls Striated: Variety Unspecified
		496/18	vase	Flor?	Unnamed Cream-and-modeled
		496/19	jar	Sierra	Puletan Red-and-unslipped: Puletan Variety

Structure	Context	Lot #	Form	Group	Type
P8-2	Chultun Chamber 2	526/1	bowl	Cabro	Cabro Red: Cabro Variety
		526/2	dish	Cabro	Liscanal Grooved-incised: Trickle Variety
		526/3	dish	Cabro	Cabro Red: Trickle Variety
		526/4	bowl	Cabro	Cabro Red: Trickle Variety
		526/5	dish	Polvero	Polvero Black: Variety Unspecified
		526/6	jar	Sierra	Puletan Red-and-unslipped: Puletan Variety
		526/7	bowl	Cabro	Liscanal Grooved-incised: Trickle Variety
		552/1	dish	Sierra	Society Hall Red: Variety Unspecified
		521/1	jar	Cabro	Pahote Punctated: Pahote Variety
		521/2	bowl	Cabro	Cabro Red: Trickle Variety
		521/4	dish	Cabro	Cabro Red: Cabro Variety
		521/7	bowl	Cabro	Liscanal Grooved-incised: Trickle Variety
		521/8	dish	Cabro	Liscanal Grooved-incised: Liscanal Variety
		521/9	bowl	Aguacate	Unnamed Red-rimmed Orange and Trickle
		524/1	bowl	Sierra	Lagartos Punctated: Lagartos Variety
P8-27	Core of Platform	418/1	bowl	Sierra	Sierra Red: Variety Unspecified
P8-103	Burial P8-103/2	732/1	dish	Sierra	Sierra Red: Variety Unspecified (Red-and-black)
		732/2	dish	Sierra	Sierra Red: Variety Unspecified (Red-and-black)
		732/3	dish	Sierra	Sierra Red: Variety Unspecified
P9-2	Core of the Platform	236/1	bowl	Unspecified	Unnamed Cream-polychrome
		442/1	bowl	Aguacate	Unnamed Red-on-orange
Lam South	Burial 2	15	jar	Sierra	Sierra Red: Variety Unspecified
		162	jar	Sierra	Sierra Red: Variety Unspecified
Lam South	Burial 3	35	dish	Cabro	Liscanal Grooved-incised: Liscanal Variety

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