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The Terminal Classic at El Mirador, Petén, Guatemala

Richard M. Allen

A thesis submitted to the Faculty of  
Brigham Young University  
in partial fulfillment of the requirements for the degree of  
Master of Arts

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## ABSTRACT

The Terminal Classic at El Mirador, Petén, Guatemala

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Recent excavations uncovered numerous small rooms constructed on top of the Danta Acropolis at El Mirador, Guatemala. The characteristics of the settlement and the material items indicated that it was a late occupation and lacked the features associated with large Maya polities and Classic Maya culture. This thesis focused on describing the continuities and changes that occurred from the Late Classic to the Terminal Classic at El Mirador based on the ceramic assemblage and architecture. Significant continuity and stability of the pottery making community is reflected in the ceramic assemblage. Additionally, it was desirable to gain an understanding of how the Terminal Classic occupation at El Mirador differed from other Maya cities. The comparisons show that on a general level, despite being a small settlement, El Mirador participated in many of the cultural patterns that characterize the Terminal Classic period. Two levels of ceramic production are postulated for the Late Classic period, one sustaining production of fine wares (polychromes) and the other sustaining production of basic production (utilitarian wares). The people inhabiting El Mirador in the Terminal Classic period were materially less well-off, and did not pursue activities associated with high culture as their counterparts did in larger cities. Nevertheless, they were not culturally isolated and they had access to trade items and small quantities of prestige goods.

Keywords: El Mirador, Terminal Classic, ceramic production, cultural continuity

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## Contents

Chapter 1: Introduction .....	1
Purpose.....	2
The Terminal Classic .....	7
Natural Setting, Previous Research, and Culture History.....	12
Prior Research.....	14
Site Culture History .....	18
Chapter 2: Ceramic Analysis .....	24
Methods.....	24
Type-Variety Classification.....	24
The Late Classic Ceramic Assemblage.....	31
Terminal Classic Types from El Mirador (Structures 2A8-2 and 3A8-1).....	37
Frequencies at the Group Level .....	41
Ware, Slipped, Unslipped, Polychrome .....	44
Modal Analysis .....	46
Vessel Form .....	46
Base Support Forms .....	53
Vessel diameter .....	55
Surface Decoration.....	58
Miscellaneous Observations .....	61
Continuity and Change .....	63
Chapter 3: Architecture, Special Deposits, and Burials.....	65
Late Classic Architecture .....	65
Terminal Classic Architecture .....	69
Special Offerings .....	75
Burials.....	76
Social Memory.....	77
Continuity and Change: Late and Terminal Classic Architecture .....	81
Chapter 4: El Mirador in a Regional Setting .....	84
Altar de Sacrificios .....	86
Architecture.....	90

Uaxactun .....	92
Ceramics .....	92
Calakmul .....	95
Ceramics .....	95
Architecture.....	99
El Mirador: Differences and Similarities to Regional Patterns .....	102
Chapter 5: Organization of Ceramic Production .....	104
Level 1: Polychrome Vessels.....	104
Level 2, General Pottery Production.....	108
Decline in Polychrome Production .....	110
Fine Paste Replacement .....	113
Chapter 6: Access to Foreign Goods .....	117
Long Distance Imported Goods At El Mirador .....	121
Prestige Items.....	122
El Mirador: High Culture and Wealth .....	126
Chapter 7: Discussion and Conclusions.....	131
Dating the Occupation .....	131
Pollen Core Dating.....	133
Function and Meaning of the Danta Acropolis Settlement.....	134
Ceramic Analysis and Continuity or Change.....	135
Similarities and Differences with Regional Patterns .....	139
Ceramic Production and Access to Goods.....	140
Future Work .....	143
APPENDIX A.....	146
Minor Ceramic Types and Changes in Type Frequencys .....	146
Terminal Classic Types and Varieties .....	147
Changes in type frequency and other observations.....	150
Appendix B.....	153
Appendix C.....	155
References.....	157

### List of Tables

Table 1. Late Classic ceramic types and counts from El Mirador (Forsyth 1989). .....	36
Table 2. Terminal Classic types from El Mirador. ....	42
Table 3. Frequency of types within the Tinaja Ceramic Group.....	43
Table 4. Frequency of types within the Infierno Ceramic Group. ....	44
Table 5. Type frequency within the Encanto Ceramic Group. ....	44
Table 6. Late and Terminal Classic Forms. ....	47
Table 7. Vessel forms from the Terminal Classic assemblage. ....	48
Table 8. Terminal Classic Base Supports from El Mirador.....	53
Table 9. Types of Terminal Classic Base Supports and Vessel Forms. ....	54
Table 10. Surface decoration according to slip color. ....	58
Table 11. Surface decoration according to vessel shape.....	59
Table 12. Ceramic Phases from sites mentioned in the chapter. ....	86
Table 13. Monochrome slip counts from Uaxactun, (Smith 1955). ....	93
Table 14. Frequency of general vessel forms for Tepeu III, Uaxactun. ....	95
Table 15. Metate and grinding stone fragments from Tikal. ....	124

### List of Figures

Figure 1. Map of Maya area showing approximate location of El Mirador (Reproduced with Permission.....	15
Figure 2. General Map of El Mirador (Mirador Basin Archaeological Project). ....	16
Figure 3. Map of the Danta Complex at El Mirador with structures 2A8-2 and 3A8-1, the location of the Terminal Classic Occupation. Courtesy the Mirador Basin Archaeological Project. ....	17
Figure 4. Frequency of Ceramic Groups from the LacNa Complex.....	33
Figure 5. Corozal Incised: Grooved Variety.....	35
Figure 6. Post-Lac-Na Complex Ceramic Groups.....	38
Figure 7. Fine orange sherds. Top row: Pabellon Modeled-Carved; bottom, Altar/Balancan Fine Orange.....	40
Figure 8. Terminal Classic vessel form counts.....	47
Figure 9. Terminal Classic Forms:.....	49
Figure 10. Rim forms.....	50
Figure 11. Flaring walled basal break dish with hollow bulbous support, Tinaja Red.....	51
Figure 12. Hollow bulbous supports, Tinaja Red. ....	54
Figure 13. Histograms for the distribution of rim diameters from red-slipped vessel forms. ....	56
Figure 14. Histograms for the distribution of rim diameters from black-slipped vessel forms....	56
Figure 15. Histograms for the distribution of rim diameters from cream/gray-slipped vessel forms. ....	57
Figure 16. Late Classic LacNa architectural complex.....	66

Figure 17. Outline of room walls on Structure 2A8-2 (Courtesy of the Mirador Basin Project). 72  
Figure 18. Outline of rooms from Structure 3A8-1 (Paulino Morales 2006, Mirador Basin  
Project, reproduced with permission). ..... 73  
Figure 19. Surface treatment of vessels from Altar de Sacrificios. .... 89  
Figure 20. Frequency of Late Classic and Terminal Classic ceramic groups..... 138



# **The Terminal Classic at El Mirador, Peten, Guatemala**

## **Chapter 1: Introduction**

The Preclassic Maya city of El Mirador, Guatemala, has been intensively studied for thirty years. During that time period archaeologists have been able to piece together the culture-history from this site which previously was thought to have been inhabited between 800 BC-A.D. 800. Recent excavations in one of the two largest architectural complexes extend the timeframe for habitation a little further. Instead of being abandoned at the end of the Classic Period there was a modest Terminal Classic settlement built on top of the earlier Preclassic site. Research at the site has determined that El Mirador was a gigantic Preclassic city, with some of the largest buildings ever constructed in the Maya world or the Americas. The mass of the buildings, their quality and required planning, bespeak a city with complex social organization, much more complex than was previously believed to be the case for the Preclassic Period. In addition to probably being the largest Preclassic city, El Mirador and many sites in the Mirador Basin are unique in having easy access to Preclassic buildings because most are not buried or capped by later constructions as is the case most other places (Hansen et al. 2007). Because of the high level of complexity shown in the Preclassic, rather than the Classic Period, El Mirador is of special interest from a social evolutionary perspective. Another salient characteristic of the site is that while it was an important political and ceremonial center in the Preclassic, it did not continue to grow in the Early and Late Classic Periods as many other Maya centers did. Instead, the site, along with many others in the Mirador Basin, collapsed suddenly around A.D. 150 (Hansen et al. 2008). It is tempting to view El Mirador and the Mirador Basin from a world-systems perspective as a former core and core-region which seemingly slipped from view and from history, overshadowed by the numerous larger complex centers, which are characteristic of

the Classic Period. Since El Mirador in the Late Classic and Terminal Classic Periods was a small settlement, with fewer indications of significant social stratification, a view expressing the backward or provincial nature of the settlement can easily be justified, especially when comparing the settlement to larger Maya polities. However, when seen through a social-evolutionary frame, instances of cultural degradation, collapse, and stagnation, as social processes, can be just as important as explaining the rise of complex society (Schwartz and Nichols 2006). El Mirador is an example of a power city/polity which collapsed, as I will detail later, but even in its simpler later history it does not appear to have been forgotten and may have played a special role in the memory and myth of the Maya (Hansen et al. 2008).

### **Purpose**

The purpose of this study is to describe changes and continuities from the Late Classic to the Terminal Classic periods of El Mirador, Peten, Guatemala, and place the site in its overall regional context. The period which I concern myself the most with is the Terminal Classic (AD 800-1000), and my research has primarily focused on ceramics and architecture, which, as artifact classes, play a critical role in defining the Terminal Classic across the southern lowlands. In order to assess continuities and changes within the archaeological record I will describe in detail what is known about the Late Classic and Terminal Classic occupations from El Mirador. After describing the material culture from El Mirador and its changes and continuities in ceramics and architecture, I will then compare that information with what is known about the same artifact classes from other Maya sites inhabited during the Terminal Classic. The comparisons will help assess how similar or different El Mirador was to other Maya sites which are quintessentially Classic Maya, and they will hopefully also help to ascertain to what degree the inhabitants of El Mirador were affected by the changes that took place at the powerful

political and economic centers surrounding them. Did the Terminal Classic El Mirador settlement experience similar cultural processes present at other Maya sites? To what extent? Although the research questions in this study only deal with one site, El Mirador, the description of its culture-history and how it fits in a local and regional context are subjects of research which concord well with suggestions for studying the Terminal Classic recently advocated by Arthur A. Demarest, Prudence M. Rice, and Donald S. Rice (2004), and which I briefly describe below. These authors state that the end of the Classic Period is a matter of debate and speculation and has been so for over a century (Demarest et al. 2004: 545). To overcome the unending speculation the authors suggest that it is important to have a regional frame of reference (Demarest et al. 2004:547). Archaeologists should build chronological sequences for Maya sites to see what can be cross-dated and what aligns. This will help in understanding the variability of collapse. In essence the program that they advocate requires building chronological sequences, with initial focus on specific sites. The culture-history produced should rely on local evidence. However, the task from there is to discover the linkages between processes and events in a region or subregion, and then compare them with adjacent areas (Demarest et al. 2004:548). Eventually, site, subregion, and regional patterns need to be viewed in a pan-Maya context. Using this approach will lead to better theories concerning the collapse and the authors imply that it would also negate single cause models. Richard Adams (1973) has some suggestions remarkably similar to those summarized above.

This report does not intend to discover probable causes for the Late Classic “collapse” at El Mirador or elsewhere. However, the specter of the “collapse” is ever present in any study dealing with the Terminal Classic. There is little in the way of evidence from this site alone that explains why certain changes happened; nevertheless, changes and continuities in the material

record from El Mirador can be compared with those of other areas to assess what did happen, even if this deals with rather mundane matters. Such comparisons may in fact help to determine whether similar cultural processes were present at different sites. Furthermore, data from this site is not likely to bear upon the Maya collapse because it does not contain many of the cultural items associated with the elite that would have been affected by an elite cultural collapse (P. Rice and Forsyth 2004).

Data from El Mirador reflect a simpler, less centralized, social organization and are better adapted instead to dealing with questions concerning how the local population adapted to the dramatic changes in political and social organization during the Terminal Classic. The focus is on regular people, though not necessarily commoners, rather than powerful nobles from large centers that receive most of the attention. It is my hope that a description of the ceramics and architecture from El Mirador, as well as careful comparison with those from other sites, will help address other research questions, going beyond site chronology. My research questions deal with specific aspects of the Terminal Classic El Mirador settlement as they relate to important trends and processes already observed at other sites during the Terminal Classic. From the outset it is important to note, as I will elaborate later, that El Mirador and most of the Mirador Basin do not demonstrate typical Classic Maya traits. There is an ambiguous site hierarchy in the Basin, and El Mirador during the Late and Terminal Classic periods appears in the main to have been a simple village community with relatively few material indicators of social stratification. The inhabitants did not build monumental architecture, build tombs with precious offerings, or engage in most activities that are associated with high or elite Maya culture.

There is growing literature on minor political centers, or even middle-level sites, exhibiting significant variability (some have inscriptions and monumental architecture);

however, there has been almost no study of small settlements exhibiting little centralized control and a dispersed settlement pattern such as El Mirador. This would seem to contradict statements by Giles Iannone, and Samuel Connell (2003:2-3), who state that settlements on either extreme of the rural-urban spectrum have been studied, whereas the middle-level settlement has received little attention. Such studies referred to are, however, part of clear settlement hierarchies where all levels of settlement were dominated by one center at the top and each respective level of settlement participated in the political, ceremonial, and economic systems of the polity. For the Classic Maya it appears that each settlement was integrated within a polity and its political and economic organization. While villages on the lowest settlement level may have been home to rural peasants they would have still been part of a socially stratified polity. El Mirador is unique because of its political underdevelopment; it is not clear if it was part of a Late Classic polity, and the settlement pattern in the Mirador Basin is different in lacking a large dominant center (although Naachtun and Tintal are potential candidates). There is evidence for an elite class in the Mirador Basin during the Late Classic period. However, what makes the Mirador Basin salient is that it appears underdeveloped politically. The settlers did not build large temples or palaces, erect stelae, or carve large glyphic reliefs. Evidence for an elite class comes in the form of names on ceramic vessels, as well as investment in residential architecture and the production of specialized high quality polychrome vessels. In most residences at Late Classic and Terminal Classic El Mirador it would be difficult to separate elite from non-elite material assemblages. These problematic aspects of the Late Classic aside, there are significant reasons to believe that El Mirador at this time was either part of the Calakmul Polity or had close ties to it (Hansen et al. 2008). This link is largely based on epigraphic information. Another significant parallel exists in the Terminal Classic architecture and its layout at the two sites. Nevertheless, exactly what the

relationship of El Mirador was with Calakmul is unknown as well as to what extent the site participated in regional political and economic systems. Irrespective of the particular political arrangements at El Mirador, the site will be used as a case study to provide clues as to how inhabitants from a minor and politically insignificant village fared and adapted to their situation during the tumultuous times of the Terminal Classic. Were the settlers better able to provision their homes with necessary domestic items in the Late Classic than in the Terminal Classic? Did the material wealth of the peasant settlers change from the Late to Terminal Classic periods following major organizational changes in the region? What was the function of the settlement? Was the politically underdeveloped village a squatter community? How did the people treat the previous Preclassic built environment and what does this tell us about their belief in the wider Pan-Maya belief system? Did the inhabitants accept or resist new cultural and ideological innovations in the Terminal Classic?

Ceramic data will also be utilized to answer another question dealing with the economic organization of the community. Were there two levels of ceramic production operating in the Mirador Basin during the Classic Period (if not at El Mirador itself)? What evidence is there to infer two levels of ceramic production sponsored by different classes?

The rest of this thesis will be organized as follows: I will briefly give an overview of the Terminal Classic period, both as a chronological period and as a cultural stage. This background is necessary because the term is laden with meaning and different interpretations, and historically has undergone some changes in definition. This will lead into a brief discussion of new perspectives on the Terminal Classic period. From there I will summarize El Mirador culture-history based on prior work from the site and elsewhere in the Mirador Basin in order to provide background information for later chapters. Chapter two will describe the ceramics from the site

and the methods used in analysis. The architecture from the Terminal Classic settlement will be the focus in chapter three. Next, in chapter four, I will compare the ceramic and architectural data to those from other sites in the Maya lowlands. In chapter five I will address the question of whether there were two levels of ceramic production at El Mirador, and chapter six will deal with the question concerning access to goods. Chapter seven will be an attempt to synthesize the data presented and place El Mirador in context vis a vis other prevailing Terminal Classic patterns.

### **The Terminal Classic**

The Terminal Classic has been a vital and debated concept in Maya archaeology for over forty years (Culbert 1973; Demarest et al. 2004; Forsyth 2005), and as an historical and cultural designation it is an analytic topic central to this study. Since it is a topic of utmost importance to this research it deserves some attention here. Seminal archaeological investigations in the lowlands laid the foundation for what later was to be termed the Terminal Classic. By the early 20<sup>th</sup> century archaeologists had noted a host of characteristics shared by most of the large Maya cities that are hallmarks of Maya classicism. They also noted that these signs of classicism decreased or disappeared at about the same time as did the stela-altar complex (P. Rice et al. 2004: 2). One of the principal tasks of Mayanists in the twentieth century was to achieve chronologic control over the cultural sequences at sites and regions in order to deduce changes and continuities in cultural processes and date the Late Classic decline. In this endeavor the study of ceramics has been the main tool used to devise local and regional chronologies. One of the earliest ceramic chronologies constructed is that of Uaxactun in the central lowlands. Forsyth (2005:7) notes the important role that these early studies played, and continue to play, in

interpreting culture histories in the lowlands. In fact, this thesis continues in that vein and utilizes ceramic data from Uaxactun (Smith 1955) for comparison.

The term “Terminal Classic” entered into archaeological vocabulary in 1965 when archaeologists working in the Maya lowlands met in Guatemala City to discuss and compare ceramic sequences from various sites (P. Rice et al. 2004). Research on the Terminal Classic period, as it was envisioned at the 1965 and 1970 Santa Fe conferences, resulted in *The Classic Maya Collapse* (Culbert 1973). Forsyth’s (2005:7) summary on how the Terminal Classic was viewed at that time is as good of a description as there is. Describing the period he says:

“The concept of the Terminal Classic.... was conceptualized as both a time period, corresponding roughly to the Tepeu 3 horizon established at Uaxactun, and as exhibiting a particular set of cultural manifestations, specifically the termination of a whole set of “Classic” cultural practices that either disappeared or greatly diminished during the designated time horizon. That is, the Terminal Classic concept was always inseparably connected to the concept of collapse and abandonment of the southern and central lowlands, particularly the “core” Peten region.”

This initial view of the Terminal Classic has been dramatically altered with the passage of time as more data have become available. Even during early attempts to define the Terminal Classic, archaeologists were aware that the demise of Classic traits was not uniform. In fact, the Northern Lowlands did not fit that pattern at all (Andrews 1973; Forsyth 2005:8 ). In retrospect one can justifiably say the early formulators of the Terminal Classic concept were more absorbed by what they saw as disjunctions in Classic Maya culture rather than continuities (P. Rice et al. 2004). However, the assertion by Arlen Chase and Diane Chase (2004:12) that perspectives on



the Classic collapse are influenced as much by paradigms and methodology as by distinctions in data has been perceived as too extreme by P. Rice et al. (2004:7).

One critical flaw with the Terminal Classic concept is that it was erroneously viewed as a cultural horizon. As initially defined, a horizon is when shared artifact styles have wide breadth and limited temporal depth (P. Rice et al. 2004:3). Subsequent research in the Maya lowlands has shown that within the period called the Terminal Classic there are divergent artifact styles. Forsyth (2005:8) points out that this criterion lumps all sites from the time period together regardless of what kind of cultural processes may have operated at them. On the other hand, if the Terminal Classic is just viewed as a cultural stage then different sites may not exhibit the same cultural processes at the same time. When initially introduced as an archaeological concept, the Terminal Classic was believed to have ended everywhere (except the Northern Lowlands) at the same time, and all sites in the Southern Lowlands were believed to have undergone similar cultural processes (P. Rice et al. 2004:3; Forsyth 2005:8). This outlook, or collapse centrism (P. Rice et al. 2004:4), evident in the early attempts to define the Terminal Classic was a result of the limited amount of data available at the time. The focus of research was primarily large political centers with monumental architecture in Peten, Guatemala, which demonstrated similar processes of abandonment accompanied by loss of Classic traits. As mentioned previously, the collapse was believed to have been a rapid, simultaneous process which relied heavily on the final Long Count dates at Late Classic political centers.

The nomothetic definition of the Terminal Classic did not withstand the test of time as new research was conducted on the Postclassic in the Yucatan, Belize, and other areas. The prevailing view of the Postclassic and the Terminal Classic was that they represented an inferior/less sophisticated Maya culture when compared to that of the Classic period (P. Rice et

al. 2004; Chase and Chase 2004). Until the past couple of decades the Terminal and Postclassic periods have been seen in a dichotomous relationship with the Classic period and have been defined primarily by what the Classic traits they lack. Significant changes in the political, economic, and religious structures were believed to have taken place during the Terminal Classic and continuing in the Postclassic. New research has demonstrated that some of the disjunctive cultural practices associated with the Post Classic actually had their origins in the Late Classic (Chase and Chase 2004:18-19). The Terminal Classic is central to this project as an analytical concept. Important research from the 70s and 80s has demonstrated the variability of the Terminal Classic as a cultural stage; the same cultural processes were not shared by all southern lowland sites. Additionally, even when sites or regions experienced similar cultural processes the timing of these was variable. Furthermore, when viewed as a cultural horizon, there is variability in the degree to which material culture is shared across time and space (P. Rice et al. 2004:3).

New emphasis on variability during the Terminal Classic period has caused some to question the efficacy of the Maya Collapse as a central paradigm. Depending on what area of the Maya lowlands the archaeologist is researching, use of the term “collapse” may not be favored at all (Andrews 1973; Demarest et al. 2004). Perhaps some disagreement arises concerning the “collapse” because when the Terminal Classic became an archaeological concept the collapse was believed to have been simultaneous in the southern lowlands, indicating a possible collapse of Maya civilization. This idea has been rejected, and the consensus is that Maya civilization continued in the northern lowlands after it had declined in the south. In fact, there was temporal overlap between the florescence in the north and the Late Classic in the southern lowlands (Aimers 2007).

The Late Classic collapse was not a civilization collapse, but rather a specific type of political system that disappeared or declined during the Terminal Classic (P. Rice et al. 2004:8). This political system, headed by holy kings (*K'ul ajawob*), declined in the 8<sup>th</sup> and 9<sup>th</sup> centuries AD and the material manifestations of the elite diminished as well (Sharer and Traxler 2006:499). The collapse of this political system occurred first in the southwestern lowlands by AD 800 (Demarest et al. 2004; Sharer and Traxler 2006). Copan, located in the southeast lowlands may be an exception to this pattern, however. The central lowlands were affected next, followed by some sites in Belize, such as Xunantunich and Caracol. The collapse of political authority, for obvious reasons, is most visible at large primary and secondary Maya centers. Some centers were abandoned rapidly while others experienced a gradual decrease in population. The collapse varied from region to region, or even by site (especially in areas of Belize), but some sites did not collapse at all. Indeed, some prospered, mostly in areas peripheral to the southwestern and central southern lowlands (Aimers 2007; P. Rice et al. 2004; Sharer and Traxler 2006). An example of this is Lamanai, in northern Belize, where the Terminal Classic is almost indistinguishable from the Late Classic and Early Postclassic. Some sites in the core region of the Peten prospered in the Terminal Classic, such as El Peru.

The Terminal Classic in the Maya lowlands was a very dynamic time period. The variability in cultural processes, change or continuity, is impressive for such a small area. One of the highly variable factors differentiating sites and their respective culture histories is whether the Terminal Classic was a period with a marked disruption in traditional cultural patterns, or, on the other hand, whether continuity is expressed based on material culture and practices. Other distinguishing factors present during the Terminal Classic which indicate variability in cultural

processes include population dispersion vs. nucleation, rapid abandonment vs. slow decline, prosperity vs. disruption, and sudden vs. gradual economic change (P. Rice et al. 2004:8). In recent studies the issue of rapid vs. slow abandonment has been a matter of importance and different perspectives abound. Some Maya cities such as Dos Pilas may have been abandoned rapidly at the latter end of the Late Classic (Palka 1997). Others, such as Tikal, were abandoned perhaps more slowly; however, the residents have been described as impoverished squatters camping amongst the palaces (Culbert 1973). Charles Suhler and David Friedel (2003) posit that the Terminal Classic artifacts left on surfaces and in upper levels of refuse are not due to itinerant squatters leaving their garbage over the centuries. They believe that the Terminal Classic at Tikal, and other places, is a result of a brief occupation by hostile invaders. Copan occupies the other end of the rapid vs. slow abandonment spectrum. Researchers studying the Copan Valley believe that there was a significant resident population throughout the Terminal Classic (Aimers 2007). The issue of whether a site or region experienced slow vs. rapid abandonment is of great import in determining the character of Terminal Classic occupation.

### **Natural Setting, Previous Research, and Culture History**

El Mirador is located in the far north area of the Department of Peten, Guatemala, about 7 km south of the Mexican border (Figure 1). It lies in the middle of the vast Mirador Basin, an oval shaped depression bounded by karstic hills. About three-fourths of the basin lies within Guatemala, and the other quarter is located in the Mexican state of Campeche (Hansen 2007: 27). The basin is characterized by seasonal swamps, called *bajos*, and low broad uplands in between the *bajos*. The uplands provided the inhabitants with abundant limestone for construction; the soil, however, is shallow and calcareous, whereas in the *bajos* the soil is clayey and poorly drained (Howell 1989:1). Although hundreds of plant species abound in this area of

the Peten, the dominant plant species are ramonal, caobal, and zapotal. The rainy season lasts from mid-May to mid-December followed by the dry season. The average rainfall is probably less than the 1,327 mm recorded at Carmelita, the nearest weather station 60 km to the south (Howell 1989). The site itself is situated on an east-west trending upland with a large bajo to the west.

The ancient Maya city of El Mirador contains many different structural complexes which are separated into west and east groups (Figure 2). The western group has a dense concentration of buildings ranging from small residences to enormous platforms. The Tigre-pyramid is the most impressive structure at 55 m high and 150 m in length on the sides. A large central acropolis with numerous platforms and courtyards is found in front of the east facing Tigre-pyramid. Other structural complexes in the west group include Los Monos, El Leon, and Tres Micos (Howell 1989:6). The east group, the Danta Complex (Figure 3), is dwarfed by the lofty summit of the Danta Pyramid which rises 70 m from the first basal platform. The Danta-pyramid rises in a series of four platforms or levels, increasing in height from west to east, and then precipitously drops down on the east face. Platform 1 has an approximate area of 72,000 sq. m, and the area of Platform 2 is 20,000 sq. m. The Preclassic builders apparently took advantage of a natural rise in the landscape and filled in areas to create Platforms 1 and 2 thereby giving it the appearance that the rise was completely man-made (Howell 1989:6). Despite placing the basal platform on a natural rise, the dimensions of this construction are staggering. It measures 300 m along the western base; the southern base is about 500 m long, and it rises about 10 m in height (Howell 1989:6). Important architectural features on Platform 1 include the Pavos Plaza and the Pava Acropolis (2A6-1). Platform 2 measures about 200 m north to south and it is the basal support for the Danta Acropolis. It rises about 22 m above Level 1. Numerous low mounds have

been found on Platform 2, and they are presumed to be residential structures. Excavations by Howell (1983, 1989) indicate that a modest Late Classic settlement had been constructed on Platform 2. Access to the massive 8,100 sq. m Danta Acropolis (2A8-1) was achieved using an inset stairway from Platform 2 (Howell 1989:6). The Acropolis is characteristic of triadic structures, with the Danta-pyramid (2A8-2) at the far back facing west and with two other major temples flanking the southwest (2A8-3) and northwest sides (3A8-1, see figure 3). These two structures in turn are flanked by a lower platform mound on their east sides. Two other platforms are located on the west end of the acropolis each some distance to either side of where the inset stairway ends coming from Platform 2 (Howell 1983). The last level of the Danta Complex is at the top of the Danta-pyramid which rises steeply 22 m from the plaza floor below it. The summit (Level 4) is 40 sq. m; however, no evidence of a superstructure has been recovered.

### **Prior Research**

Despite the monumental scale of construction of El Mirador, it was not discovered or investigated until very late. In 1943 a group of Carnegie Institution archaeologists visited the Danta Complex; however, knowledge of its existence goes all the way back to 1926 when F. Vans Agnew and Enrique Shufeldt, in the employ of a chicle operation, visited the site (Howell 1983:14). Ian Graham visited the site in 1962 and 1967 and made an important contribution by producing the site's first compass sketch map. He also reported on the massive size of the buildings and Late Preclassic stela fragments carved in the Kaminaljuyu style (Howell 1983:14). Joyce Marcus dug several test pits in the west group in 1970, although that material was not analyzed until 1978 by Forsyth (1980).

The first archaeological project to intensively study the site was organized in 1978 by Bruce Dahlin. The project focused on aspects related to subsistence: *bajo* soils, reservoirs,

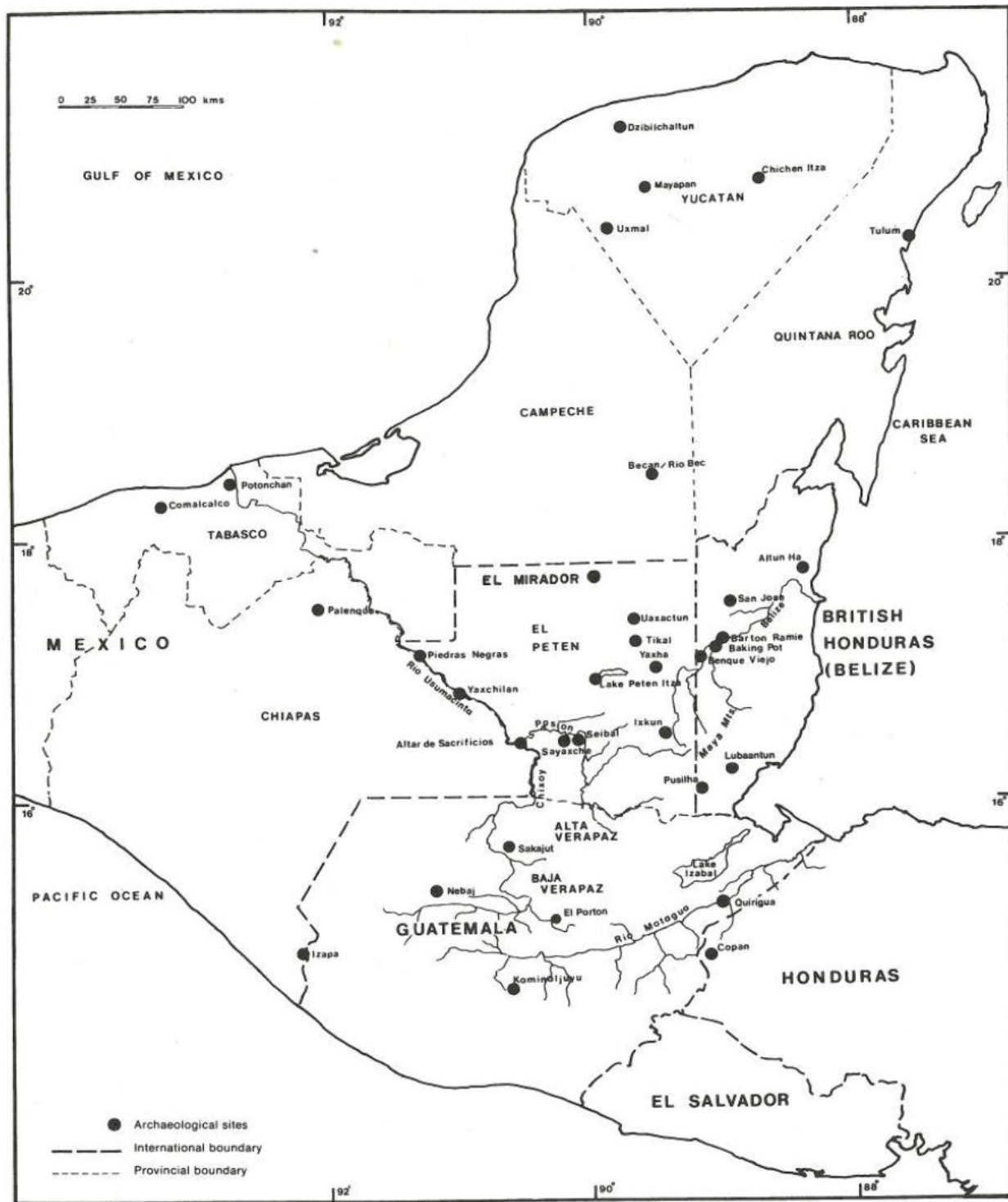


Figure 1. Map of Maya area showing approximate location of El Mirador (Reproduced with Permission).

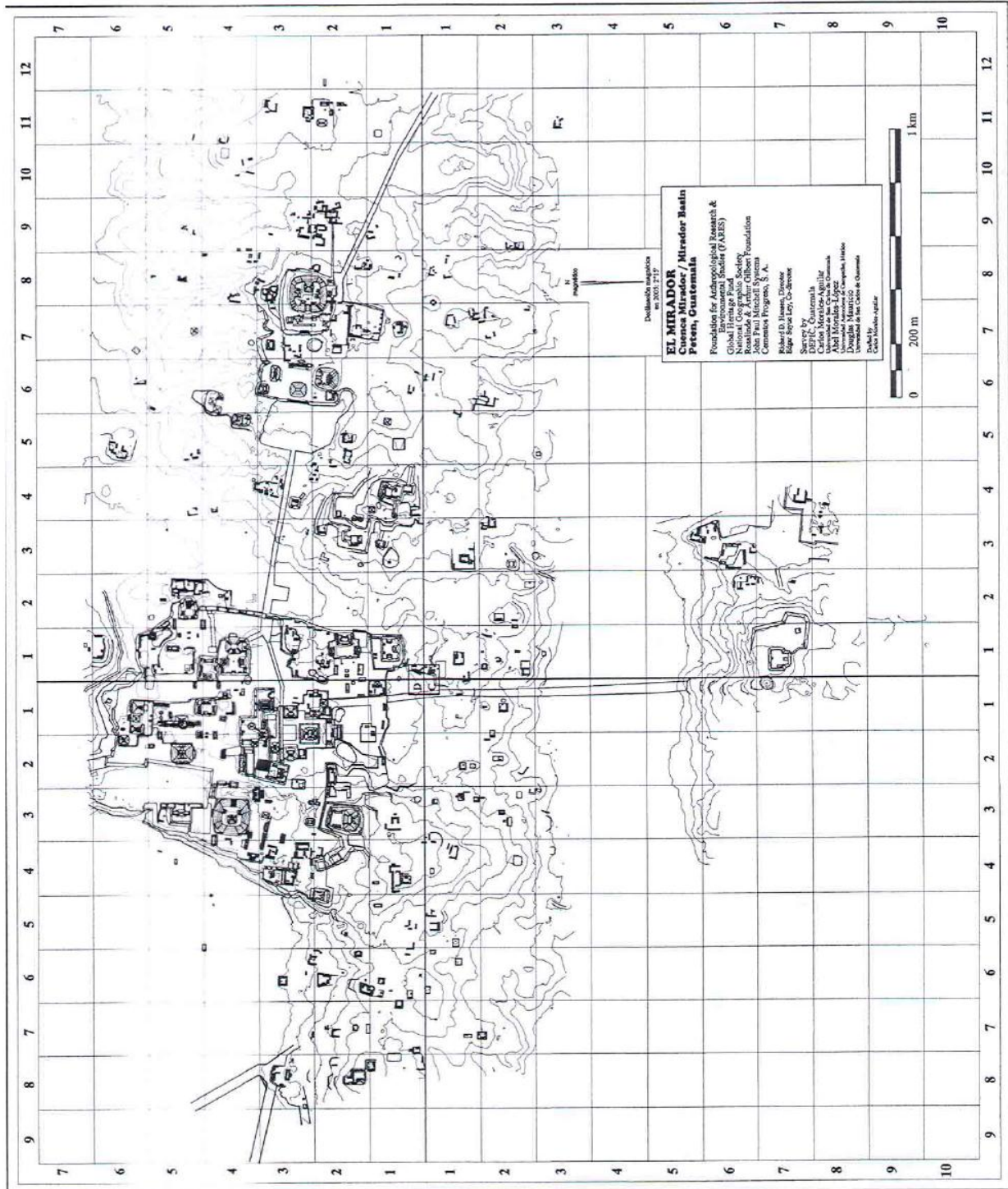


Figure 2. General Map of El Mirador (Mirador Basin Archaeological Project).



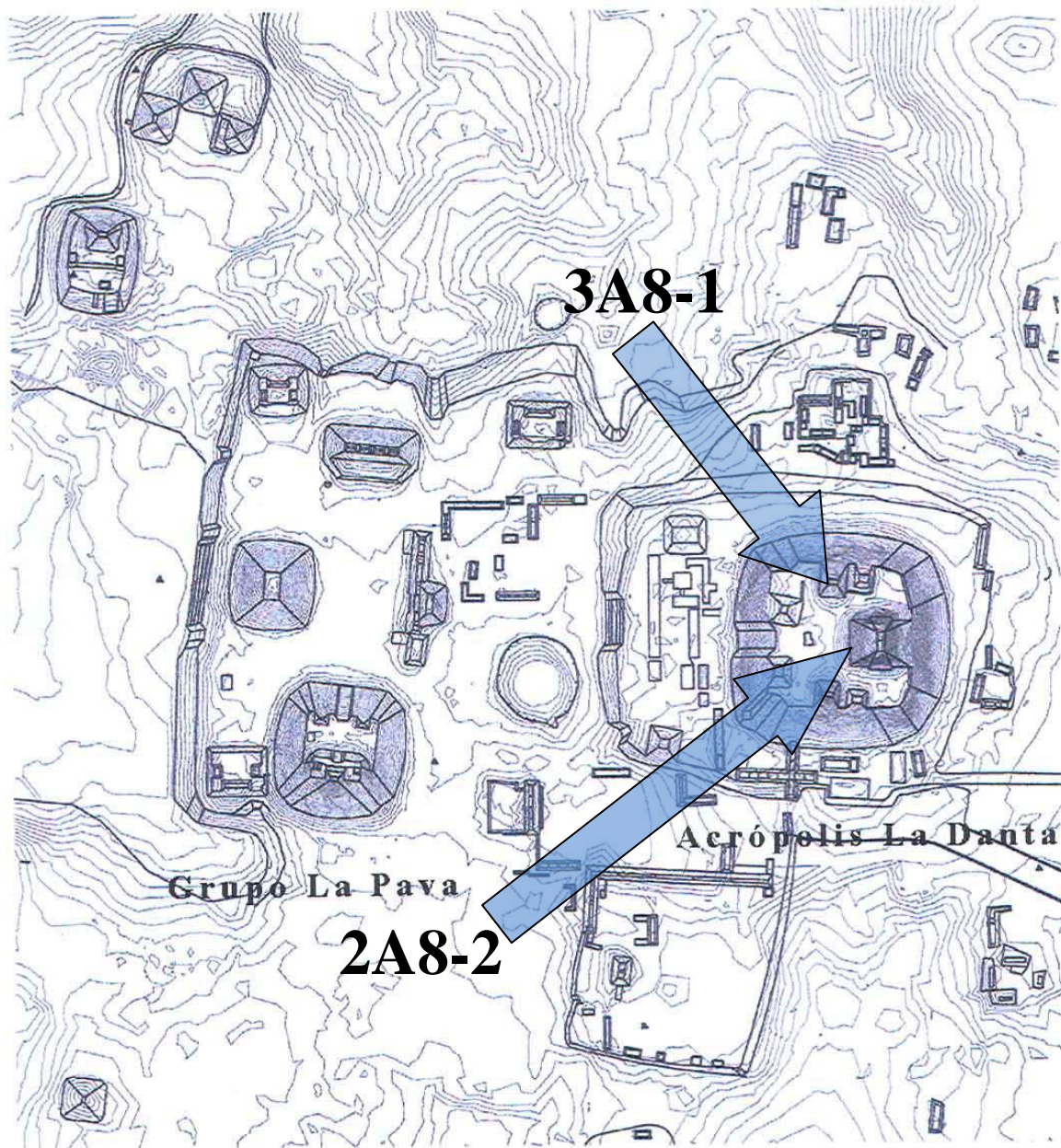


Figure 3. Map of the Danta Complex at El Mirador with structures 2A8-2 and 3A8-1, the location of the Terminal Classic Occupation. Courtesy the Mirador Basin Archaeological Project.

causeways, as well as house mounds were investigated (Howell 1983:15). Work accelerated in 1979 when Brigham Young University's Ray Matheny joined the project. Excavation that year was primarily limited to salvaging information from looters' trenches (Howell 1983:15). By the

end of that year it was already apparent to investigators that El Mirador was unique in the Maya area—the Late Preclassic construction was mostly unencumbered by later building activity. This all too frequent problem had biased knowledge of the Preclassic at other lowland sites.

Research was expanded from 1980-82 as Matheny attempted a multi-faceted approach that included survey, mapping, and excavation, and which had building a site chronology as its main objective. These field seasons at El Mirador resulted in a number of important publications used to piece together site chronology (Hansen 1990; Howell and Evans-Copeland 1989; Forsyth 1989; and Howell 1983). Research in the Mirador Basin has continued without interruption since 1987 under the auspices of RAINPEG (Regional Archaeological Investigation of the North Peten) now known as the Mirador Basin Project. Both organizations have been headed by Richard Hansen. El Mirador, Nakbe, and many other smaller sites have been investigated under RAINPEG and the Mirador Basin Project.

### **Site Culture History**

Initial habitation of El Mirador probably occurred during the Middle Preclassic (1000-300 B.C.) time period and is represented by an early building which was later covered by Structure 200 (Forsyth: personal communication 2010). Additionally, limited amounts of Mamom period ceramics have been found in deep test pits (Hansen 1990). There is always a possibility that other Middle Preclassic buildings will be found beneath the expansive later constructions. A precursor to the growth that El Mirador later had is found in nearby Nakbe. A major Middle Preclassic settlement was located at Nakbe consisting of numerous platform mounds, many of which were already up to 13 m in height. By the end of the Middle Preclassic, the inhabitants of Nakbe had built an extensive hydraulic system to capture water as well as

calzadas extending away from the site center (Hansen 1993:104). Forsyth (2006) indicates that other sites in the basin, such as Wakna and La Florida, have Mamom material.

Most construction activity at El Mirador and Nakbe dates to the Late Preclassic period (300 B.C.-A.D. 150). During this time Nakbe was eclipsed by El Mirador in size although there continued to be a close relationship between the two sites and others in the basin. Excavations into these massive constructions show that the bulk of construction comprising the Tigre and Danta Complexes was performed in a single construction phase, as if the activity were a single event (Hansen 1990; Howell 1989). Millions of cubic meters of fill was moved to build the large temple-pyramids at El Mirador and at other sites in the basin, which would have required a large labor force and may indicate a high degree of control over resources by elite administrators (Hansen 2004:29). The sheer size of the buildings constructed during this time was never repeated in Maya history and the Late Preclassic represents the apogee or cultural peak at El Mirador (Hansen 2004; Hansen et al. 2007). This assertion is not only true just based on architecture and labor involved; ceramic data show that the Late Preclassic was the period with most intensive occupation at El Mirador (Forsyth 2003). Much of the Tigre Complex was built between 150 - 1 B.C. and then was maintained and added to from A.D. 1-150, according to Hansen (1990:210). Most of the building activity can then be attributed to the later end the Late Preclassic. Triadic architecture and huge stucco masks are some of the notable attributes on buildings during this period. Construction using well-cut stone blocks, and the use of thick layers of stucco on floors and walls is also characteristic. A wall surrounds many of the architectural complexes in the west group. Numerous small mounds and platforms are found inside the walled area as well as outside for some distance and were likely residential in function (Hansen 2004:31; Howell 1989; Copeland 1989).

At the end of the Preclassic El Mirador experienced a major disruption or collapse. Around A.D. 150 construction activity ceased (Hansen 1990), and there appears to have been a dramatic decline in population (Hansen et al. 2007). The site was nearly abandoned along with most sites in the basin. Numerous excavations and experimental studies show that the Maya probably degraded their surrounding environment by cutting down trees needed to burn limestone to produce lime for plastering buildings. The use of lime has been described as conspicuous consumption and from the Middle to Late Preclassic periods its use increased significantly (Hansen et al. 2007:426).

The Protoclassic period (A.D. 150 to 250) is scantily represented in the Mirador Basin. Following the Preclassic collapse there appears to have been no significant occupation until the latter half of the Late Classic (Hansen et al. 2007; Forsyth 2006). New construction was not initiated during this time period, although some ceremonial buildings from the Preclassic were maintained and used (Forsyth 2006). Excavated contexts containing Protoclassic deposits appear to be restricted to site centers. Hansen (1990) and Copeland (1989) report numerous “squatter mounds” in the Tigre and Monos Complexes that probably date to this period. Chultuns at both El Mirador and Nakbe have also produced Protoclassic ceramics, and at Nakbe a ritual deposit with much ash and ceramics dates to the period. Apparently the drastically reduced Protoclassic population was living among Middle and Late Formative ruins at El Mirador and Nakbe (Hansen et al. 2007).

Evidence for Early Classic activity (A.D. 250-600) is still scanty and limited throughout most of the basin (except Naachtun), although less so than the Protoclassic. Early Classic construction is also unknown at El Mirador and Nakbe; however, at a site called La Muerta, just 4 km from El Mirador, Early Classic peoples had constructed a special funerary building to pay

homage to the deceased. Whether the builders were from nearby is unknown. Hansen et al. (2007) suggest that this ritual activity at La Muerta, in the form of ancestor internment and veneration, might be tied to efforts to maintain property ownership (see Gillespie 2002; McAnany 1995). Similar but less elaborate activities connected with the internment of deceased ancestors and associated rites occurred at El Mirador in the Late and Terminal Classic periods. Another Protoclassic and Early Classic practice was the digging of intrusive pits into stuccoed floors of public buildings along with the placing of special caches which consisted of burned offerings and ceramic material. The Pava Acropolis on the Danta Complex and the finely made Structure 34 on Tigre have such pits (Howell 1989; Hansen 1990). The recent excavations on Structures 2A8-2 and 3A8-1 (which this thesis addresses) produced some Early Classic ceramic material. Early Classic types represent a small fraction of the total ceramic material found throughout all stratigraphic levels. Because of significant structural slumping on the Danta Acropolis, deposits from various different ceramic complexes have been mixed. The mixing has been so thorough that fine paste ceramics from the Terminal Classic have been found in the same lots with material from the Late Preclassic, about a millennium older.

The Mirador Basin countryside was inhabited on a significant scale during the Late Classic (A.D. 600-800); however, it still was not comparable to the intense Preclassic occupation (Forsyth 2003). In fact, the Tepeu I facet (defined at Uaxactun for the early Late Classic, Tepeu II refers to the late Late Classic period) is rare when compared to Tepeu II (Forsyth 2006). Forsyth has described the Late Classic occupation in the basin as “anomalous” (Forsyth 2006:501) and as having a unique configuration (Forsyth 2006:502) because it lacked so many of the typical Classic characteristics such as large temple-pyramids, palaces, and large public plazas. Late Classic settlements are found throughout the basin but are relatively modest in size.

The typical pattern is for the settlement to be located on lower hill or sierra slopes in a transition area between the bajos and uplands, perhaps to take advantage of the two ecotones available (Forsyth 1998:92). The relationship of Late Classic settlements being near limestone outcrops has also been noted (Hansen et al. 2007: 427). Most Late Classic settlements were small, with about 4 to 10 small structures (Forsyth 2006:502). The settlement pattern was extremely dispersed as compared to the Preclassic period when the large centers had a tiered settlement pattern (Hansen et al. 2007:427). At El Mirador, Nakbe, and other large Preclassic centers, Late Classic residential buildings were constructed near canals and drains leading to *bajos*. Generally, local inhabitants were living largely on top of, or near, Preclassic buildings (Hansen et al 2007:427). The dispersed Late Classic settlement pattern, which even occurs in the large ruined Preclassic cities of El Mirador and Nakbe, is similar to the pattern of rural residential groups found between the large sites during the Preclassic, but overall it contrasts dramatically with the integrated concentric pattern of the Preclassic (Forsyth 2003, 2006).

Despite the modest nature of Late Classic occupation in the basin, the inhabitants do not appear impoverished when compared with their neighbors outside the basin (or even at Naachtun), or when compared to earlier periods such as the Preclassic. Forsyth has noted that Late Classic settlers throughout the basin constructed buildings with well-cut stone, many of which were vaulted, as well as finely made stuccoed floors and walls. He says that “These constructions and their distribution indicate an economic situation, an organization of production, and a level of life much beyond that of simple settlers with purely subsistence activities” (Forsyth 2003:660). Nevertheless, although the details of the socio-political system in the Mirador Basin are vague, it is clear that there was no high ranking royalty commanding a powerful polity (Forsyth 1998). On the other hand, epigraphic evidence coming from the finely-

made codex ceramics confirms that the populace was not composed of simple *campesino* squatters. *Ajaw* lords are recorded on codex pottery coming from Nakbe. This finely made polychrome was manufactured in an elite Late Classic residential group at the site (Hansen et al. 2008).

Although the Mirador Basin may not have been the seat of powerful Classic rulers during the Late Classic, it still may have been an important place for the Maya. Epigrapher Stanley Guenter believes that El Mirador was home of the original Kan Kingdom, partly based on the fact that the *kan* or snake glyph first appears in the Mirador Basin during Late Formative and Early Classic times (Hansen et al. 2007). Texts from Calakmul and other Maya polities indicate that Holy Kings may have performed sacred rites at El Mirador or other sites in the basin. Additional texts also indicate that during the Early Classic period El Mirador may have been the site of royal accessions for dynasties from other Maya cities. Hansen et al. (2008) believe that El Mirador and Nakbe were venerated by pilgrims during the Late Classic and Terminal Classic periods because these sites were highly esteemed because of mythological role as part of a founding kingdom or dynasty which subsequent Maya polities sought to be tied to.

## **Chapter 2: Ceramic Analysis**

### **Methods**

I employ two principal methods of classification for Terminal Classic ceramics from El Mirador, one being the type-variety (t-v) system, the other modal. The Terminal Classic ceramic material from the Danta Complex was classified by Donald W. Forsyth and BYU students during the summers of 2006 and 2007. The modal analysis was performed by me during the summer of 2007. The type-variety system has developed into the most popular method of ceramic classification in the Maya lowlands, although it is not the only method available. Because the main intent of my ceramic analysis is to help establish site chronology and compare the ceramic sequence from El Mirador to these other sites, I use of the t-v system despite its limitations. It is important to recognize that there are some drawbacks to the system which can be overcome when combined with other methods. A short explanation of the type-variety system and modal analysis will be given, highlighting the strengths and weaknesses of each, as well as providing rationale for their use.

### **Type-Variety Classification**

In efforts to organize and order prehistoric data, archaeologists have relied heavily on classification systems. Inevitably, such systems do not capture every aspect of what is being studied and there is loss of information. However, classification does enable the investigator a means of ordering reality (most likely the observer's reality; see Forsyth 1983:5), so that general statements can be derived concerning relationships between things. The most popular taxonomic approach using ceramics has been typological in which artifacts are grouped together based on specific shared attributes. Types are not defined based on the whole range of known attributes



they possess, but on a limited range (Forsyth 1983). In the Maya lowlands ceramic types are generally defined based on surface finish and treatment.

The type-variety method was developed to standardize pottery classification. Initially it sought to solve problems in southwest pottery typologies, but it was believed that it could be adaptable and could be applied anywhere. Many investigators contributed to the type-variety system as used in its present form. The earliest advocates of the system were Joe Wheat, James Gifford, and William Wasley (1958). Archaeologists in the American southwest pioneered some of the earliest ceramic typologies and systematic classification, such as the Pecos Classification, which allowed investigators to work using the same nomenclature standards (but inconsistency in conceptual frameworks may have continued), and enabled interregional comparisons. Ceramic classification was also carried out early on in the Maya area, principally to establish site or regional chronologies; however, the classifications were not set within a standardized system. When similarities in ceramic types between sites and regions were recognized they were noted, but this was not done in a systematic manner. Comparison was often made going back and forth between types or wares and modes, which are different hierarchical levels of classification. Additionally, comparison tended to be restricted to units of individual types or attributes and not overall ceramic similarity between sites or cultural phases (Forsyth 1983:7).

The type-variety system, labeled Type: Variety-Mode Conceptual Approach by James C. Gifford, was formulated to measure ceramic similarity at multiple levels including site, region, and area, thus making the approach attractive to archaeologists in the Maya area. From 1979 to the present, type-variety classification of El Mirador ceramics has been performed and supervised by Donald Forsyth who closely follows T:V-M definitions adapted from Gifford (1963) with some changes. Definitions used in this classificatory approach are described below.

Before classifying ceramics into types and varieties it is essential to know the most fundamental data about them. An *attribute* is a consistent observable property of an artifact, which can be isolated for analysis, and may include “the elements of construction, form, decoration, style, etc.” (Forsyth 1983:8). Types are derived from attributes and their combinations. A *type* is an analytical abstraction; “it is a ceramic unit recognizably distinct on the basis of visual/tactile characteristics” (Forsyth 1983:8). Types are combinations of distinctive attributes within a specific areal distribution and limited time interval. Generally no one vessel contains all the attributes that define a type. A type is the summation of the different varieties it comprises. A *variety* of a type is distinguished from other varieties by minor variations in a small number of attributes or are defined based on minor temporal or spatial variation (Forsyth 1983). Variations in technological, aesthetic, and stylistic attributes differentiate varieties within a type. An example of this is the Pantano Impressed type which has two varieties that are distinguished based on the method of impression used, either tool impressed (Pantano Variety), or stamped (Stamped Variety) (Forsyth 1989:90-91).

A *ceramic group* is the next level of classification above a type. It is essentially an aggregate of types related to one another by certain shared attributes. For instance, at El Mirador, the Tinaja Ceramic Group covers nearly all red monochrome types for the Late and Terminal Classic periods. The concept of *ware*, which will be discussed further because of debate as to its utility, is generally understood to include groups of types that are similar in technological attributes or method of manufacture. Unlike types and ceramic groups, a ware is not temporally or spatially restricted. *Ceramic complex* is used to denote the sum total of the ceramic content from a particular phase and is given the same name as the phase or archaeological unit. The next level of classification is the *ceramic horizon* which emphasizes the spread of distinctive ceramic

modes between sites and regions. The horizon is based on horizon markers which are “distinctive and chronologically significant modes shared by two or more ceramic complexes” (Willey et al. 1967:305). The concept of *ceramic sphere* is useful because it emphasizes ceramic similarities among ceramic complexes. To be part of a ceramic sphere two or more complexes must share a majority of their most common types. Numerous other concepts have been included in type: variety analysis in lesser degree, but have not been incorporated into this study (Forsyth 1983:8-10).

Modal classification differs from typological analysis because the emphasis is no longer on identifying key attributes that would constitute a type but on the attributes themselves (Forsyth 1983:5). In modal analysis there is no attempt to systematize vessels into types in order to make general statements. Rather, instead of assigning affiliation the focus is on the attributes that can be observed on vessels. Two major approaches to modal analysis are generally practiced. One involves classification of vessel forms and the other is based on technological classifications. Vessel shape classification is determined by vessel shape attributes that are similar, such as thick bolstered rims on incurving neck basins. Additionally, vessel shape has been important in ceramic studies because shape is often indicative of function.

A technological approach emphasizes classification into groups based on methods of manufacture, physical properties, and characteristics of materials. These groups possibly cover almost any aspect of ceramics; however, Forsyth points out that a mode is a significant attribute, and he considers a mode to be an aspect that transcends type-variety categories (1983:139). In this study, technological modes are limited to color modes, modes of exterior vessel penetration for decoration, and to a lesser degree design modes. Another potentially important technological mode is paste composition.

While the type-variety system is the most popular classificatory system used in the Maya lowlands it is not the only one available; neither is it the most desirable for some purposes. Early Maya ceramic studies advocated a modal analysis along with type-variety classification (Gifford 1963). However, as noted by Forsyth (1983:240), modes have largely been ignored in type-variety analyses. When modal attributes have been treated they are often mentioned within the type-variety system. This has prompted Forsyth to state that “by treating elements of surface finish typologically and other elements modally....the system itself biases the classification in a particular direction” (1983:240). Precisely because of this problem, where ceramic attributes may get stuck in a single classification system and be difficult to reexamine later, T. Patrick Culbert and Robert L. Rands (2007) proposed a multi-classificatory approach. They do not believe that approaching ceramic research using a unitary classificatory system provides all the information that can be obtained from ceramic analysis. Therefore they emphasize three and possibly four mutually independent levels of analysis: type-variety, modal, paste, and art-historical for highly decorated ceramic types. This approach is basically the same as Forsyth’s (1983) with an added emphasis that the analyses be conducted independent of each other.

The need for additional classificatory systems is underscored by taking a closer look at the type-variety system and what it accomplishes. Strengths and weaknesses of the t-v system have been evaluated by Forsyth (1983:229-241). He found that the type-variety system has been effective at lower levels of analysis, principally type and variety. These ceramic units have generally been comparable from one study to another and accomplish one of the aims of the type-variety system. One problem hindering consistent comparison of uniform ceramic units is that of splitters vs. lumpers when it comes to defining new types or simply creating a new variety within a type (1983:230). The concept of ware has its problems. Meant as an integrative concept,

there has not been any consistent understanding of how ware should be used in type-variety analysis or what it accomplishes. Supposedly it represents another level of abstraction above type and ceramic group and indicates a level of similarity in paste composition and surface finish. Although this concept is meant to be integrative, its employment has been spotty. Its use certainly has some utility from a technological perspective. Disruptions in the production of particular wares or the introduction of new ones are significant aspects of ceramic assemblages.

The type-variety system has generally served its main purpose as a mechanism for establishing temporal sequences of sites and regions based on ceramic types and complexes. In fact it has served a crucial role in this regard; archaeologists must establish a chronology before they can go on to higher level interpretations (Forsyth 1983:232). Some methods, used before the type-variety system came into use, have served the same purpose of establishing a chronology—namely modal analysis, which was meant to be a part of t-v analysis. Although the t-v system has been effective in temporally separating ceramic material into complexes, in most cases it has not led to indisputable, fine-tuned temporal sequences. Admittedly, sequences can be fine-tuned within the type-variety system when temporal distinctions within a complex (facets) are used (Forsyth 1983:233). The use of ceramic complex, so important in creating cultural sequences, is also problematic. Forsyth has found that use of ceramic complexes, when creating chronologies, tends to reify complexes; treating them as if their boundaries are discrete instead of blurred; the latter in fact often tends to be case. This problem is relevant to the ceramics at El Mirador as I will discuss below. For example, typologically the Terminal Classic Post LacNa ceramics are mostly the same as the Late Classic LacNa ceramics.

Another principal reason for which t-v analysis was created was to assess intersite ceramic relationships. Again, one gets the feeling from Forsyth (1983:235) that t-v analysis has

generally been beneficial in this area. The standardized system does provide information on whether a type is present or not at a site or region. It can assess similarity and divergence between ceramic complexes based on ceramic sphere membership. However, a ceramic sphere may also treat similar ceramic material divisively, such as when a complex does not quite have a majority of shared types to be included in the ceramic sphere but nevertheless demonstrates similarity. Using the ceramic sphere concept, if two complexes were not part of a given ceramic sphere, but one shows greater similarity with the sphere than the other, they would still be treated the same. The reality may be that the ceramics between the complexes are on a continuum; however, if that were the case the use of ceramic sphere category would not indicate so (Forsyth 1983:235). When utilizing the ceramic sphere concept it may be helpful to qualify whether or not the complex is included fully within the sphere or whether or not it is a partial or near member of the sphere (Ball 1976:323). The utility of modal analyses in providing chronologic information, as well as being indicators of intersite relationships has been noted by Forsyth (1983:240) and is the main reason for its use along side type-variety classification.

The following procedures were used in type-variety classification: ceramic material from excavation lots was bagged and sent to the Mirador Basin Project laboratory in Guatemala City. There Dr. Forsyth and BYU students sorted material based on surface finish (slip color) and then classified sherds into types and varieties following those already defined for El Mirador (Forsyth 1989). Once classified, sherds from individual types were counted and weighed (in grams).

The modal analysis concentrated on two areas: vessel form classification and the isolation of individual attributes. Vessel form classification of the Terminal Classic ceramics follows Forsyth's (1989) vessel form definitions. Individual forms will be discussed later. In my attempt to capture information on attributes, I tried to note any characteristic that would be of

quantitative significance as well as unusual features. My modal analysis was restricted to the rim sherds, bases, and some unusual body sherds, most of which were slipped monochrome or polychrome. Almost none were unslipped since previous ceramic analysis showed that the patterning on unslipped striated vessels did not change from the Late to Terminal Classic periods, so the unslipped pottery was not analyzed. I collected information on the following attribute categories: slip color, surface decoration, vessel diameter, type of base support, and the type of design and its location. Additionally, I tried to document the relative variability of firing techniques, whether there was more consistent control or not of the firing atmosphere. The only distinction that I made in this regard was to record the occurrence of more uniformly fired sherds versus those that were mottled. Slip color is also extremely variable, so much that on individual sherds deciding where to record the color would be arbitrary. For this reason I did not use a Munsell chart for every sherd.

### **The Late Classic Ceramic Assemblage**

This section briefly summarizes El Mirador Late Classic (LacNa Complex) ceramics so that the differences and similarities between the Post-LacNa and LacNa ceramics can be more readily comprehended. Here I describe the major types, varieties, vessel forms and mention rare types. Forsyth has defined vessel forms for ceramic types, but this has been expressed in general terms rather than quantitatively. More comprehensive statistical information for the Late Classic will be given at the end of the chapter when comparing Terminal Classic to Late Classic ceramics, and in Appendices A and B. For additional information, including more in depth descriptions of types or varieties, see Forsyth (1989:79-117).

The LacNa assemblage at El Mirador is more restricted than earlier Preclassic contexts. It has not been encountered in virtually every built-up area as the Late Preclassic ceramics have

been; however, it is found widespread throughout the site. As previously noted, Late Classic residential mounds are scattered across the El Mirador landscape. The LacNa Complex sample (Forsyth 1989) was taken from operations in two areas, one being an elite residential mound called LacNa and, the other the Danta Complex (Platforms 1 and 2). Since the publication on the ceramics of El Mirador, LacNa phase ceramics have been found in numerous areas of El Mirador.

El Mirador has a relatively simple ceramic assemblage for the Late Classic period composed of five ceramic groups (Figure 4): one group covers all the unslipped pottery (*Encanto*); the group covering all the red monochromes is called *Tinaja*; black monochromes belong to the *Infierno* Group, and there are two polychrome groups, one with orange background slip (*Palmar*), and the other with cream background slip (*Zacatal*). The *Encanto* Group (n=10,625; 37.8%) has at least two types: one being Cambio Unslipped: Cambio Variety, the other is Encanto Striated: Encanto Variety. Both types are almost invariably found in jar form, with wide everted rims and thickened or folded lips. In Cambio Unslipped the neck may also be flared with a direct rim. The difference between the two types is the medium to heavy exterior striation on Encanto Striated vessels up to the neck versus the smoothed exterior surface of Cambio Unslipped. Less common forms are present, such as short-necked jars, plates, round-sided bowls, and restricted orifice vessels (Forsyth 1989:114-116). Both types have coarse crushed-limestone temper. The striated type, with some minor differences in vessel shape, rims, and line execution, represents a continuous line of ceramic development going all the way back to the latter part of the Middle Preclassic (Forsyth 2003:661). Unslipped pottery comprises a significant portion of the ceramic assemblage at El Mirador as well as at other Maya sites.



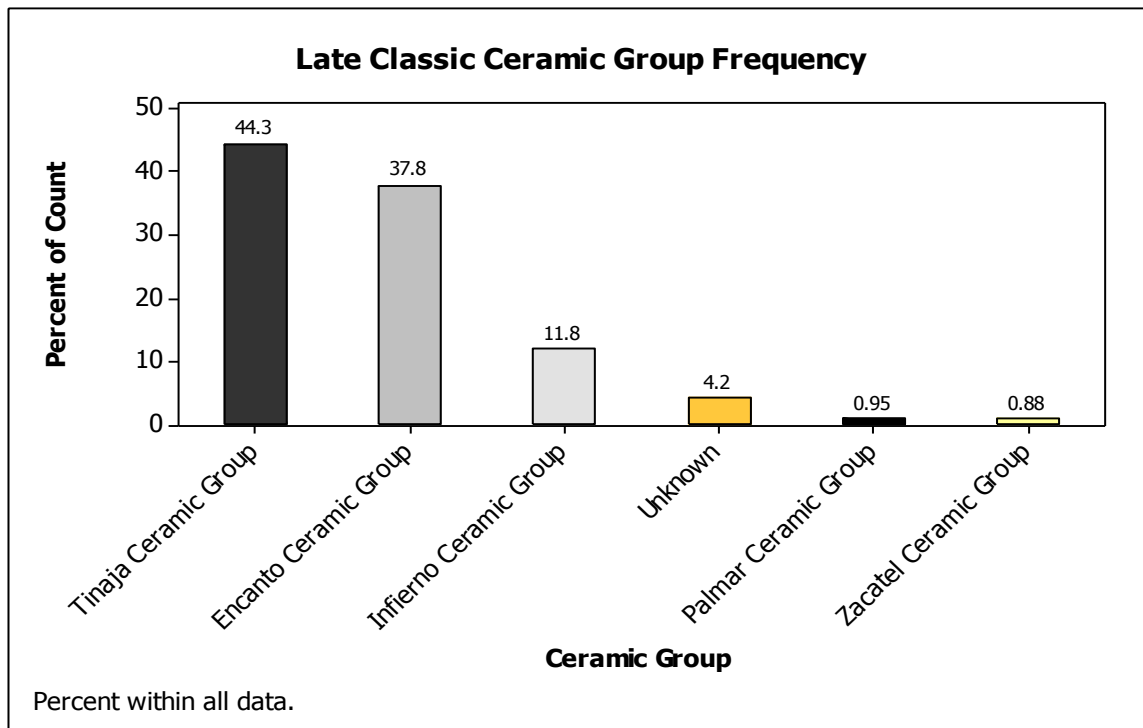


Figure 4. Frequency of Ceramic Groups from the LacNa Complex.

accounted for 28% of the assemblage vs. 9% for Cambio Unslipped.

The *Tinaja* Ceramic Group constitutes a significant portion of the ceramic assemblage at El Mirador during the Late Classic period. It is the most predominant group and makes up 44% of the sherds in the sample. The unifying characteristic of the types in this group is the red glossy slip derived from an oxidizing firing atmosphere. The major type in this group is *Tinaja Red:Nanzal Variety*; at 42% it is the most popular type in the LacNa complex. This variety belongs to the Tepeu 2 period identified at Uaxactun (Smith 1955). *Tinaja Red* vessels are generally well fired and have medium-textured, dense-strong paste. The surfaces are usually well smoothed and have red to dark red slip color. This type is found in various forms, although the most popular are short to medium necked jars, dishes or plates with an interior offset, and flaring-sided basal break bowls. Also numerous are hemispherical bowls, some with slightly restricted orifices. The frequency of different basal supports is unknown; however, most vessels

have flat bottoms. Occasionally, some vessels have solid, teat-like tripod supports. Only rarely do hollow oven-shaped supports occur (1989:80-84).

Another type within the Tinaja Ceramic Group that consistently occurs, although in significantly less numbers than Tinaja Red, is Chinja Impressed: Chinja Variety (1.5%). This type is readily distinguishable because of a line of thumb impressions found on the exterior of vessels. Slipping occurs on vessel interiors and exteriors but rarely below the line of thumb impressions. Nearly all the vessels from El Mirador had deep impressions made right into the vessel wall and not onto an appliqué fillet, as have been found at other sites. The dominant form for this type is an incurved-rim basin comprising 99% of the sample. This vessel form is large, with rim diameter ranging from 28-42 cm. The rare forms include dishes and plates with interior offsets, and short hyperboloid jars, all with thumb impressions (1989:86-89). Other notable but rarer types are not discussed here, such as Corozal Incised (Figure 5), but they are discussed in Appendix A. Many of the same vessel forms and attributes appear to occur in the Infierno Group as well as in the Tinaja Group. Infierno Black: Bolocantal Variety is the most abundant type within this group (9.1%). Salient characteristics of this type are its black to brown slip color, and it is found most commonly as a dish or plate with an interior offset or basal break bowl with tripod supports. Hemispherical bowls are also common. Vessel bases are often flat and are usually much smaller than the diameter of the vessel in the angled wall forms. Also common are tripod supports in the form of solid nubbins. A handful of hollow *cascabel*-shaped (Spanish for bell-shaped) supports have been documented (Forsyth 1989:93-97).

One of the most distinctive Late Classic types is Carmelita Incised: Maculis Variety (.1.9%). The surface finish is the same as the Bolocantal Variety; it is distinguished, however,



Figure 5. Corozal Incised: Grooved Variety.

by post-slip incisions. Frequently they are circumferential lines placed about 1-3cm below the rim, or there may be lines just above the corner angle near the base. Sometimes both are present, and they may frame other elements such as hatching, chevrons, and stepped frets. Although it is not the most common element, the most notable motif is an incised monkey, or monkeys, resting on the bottom framing lines. Vessels with the monkey element have been dubbed “monkey pots” (Skousen 2009). The monkey motif is predominately found on composite silhouette vessels—a form with slightly flaring vessel walls and a corner point marking a change in the vessel contour angling inward toward the base (Forsyth 1989:fig. 40). Other forms include composite-restricted-orifice bowls and basal-break dishes with flaring side walls. Hemispherical bowls occur with one to three lines below the rim. Lines on this form were executed either post-slip or pre-slip (Forsyth 1989:97-102).

Table 1. Late Classic ceramic types and counts from El Mirador (Forsyth 1989).

Type	Count	Freq.	Type	Count	Freq.
Tinaja Red: Nanzal Variety	11858	42.2%	Desquite Red-on-orange: VU	19	T
Corozal Incised: Variety Unspecified	35	T	Chantuori Black-on-orange: VU	14	T
Corozal Incised: Groove-incised Variety	24	T	Palmar Orange Polychrome: VU	208	0.7%
Chinja Impressed: Chinja Variety	428	1.5%	Other Palmar Group: Vercal Orange?	20	T
Pantano Impressed: Varieties Unspecified	59	0.2%	Other Palmar Group: Brown-on-orange	6	T
Colmoyote Impressed: Colmoyote Variety	13	T	<b>Palmar Ceramic Group Total</b>	<b>267</b>	<b>0.9%</b>
Other Tinaja Group	27	T	Naranjal Red-on-cream: Vu	29	0.1%
<b>Tinaja Ceramic Group total</b>	<b>12444</b>	<b>44.3%</b>	Chinos Black-on-cream: VU	24	T
Infierno Black: Bolocantal Variety	2563	9.1%	Zacatel Cream-polychrome: VU	195	0.7%
Carmelita Incised: Maculis Variety	542	1.9%	<b>Zacatel Ceramic Group Total</b>	<b>248</b>	<b>0.9%</b>
Tres Micos Impressed: Tres Micos Variety	166	0.6%	Cambio Unslipped: Cambio Variety	2573	9.1%
Carro Modeled: Carro Variety	18	T	Encanto Striated: Encanto Variety	8031	28.6%
Other Infierno Group	34	0.1%	Other Encanto Ceramic Group	21	T
<b>Infierno Ceramic Group Total</b>	<b>3323</b>	<b>11.8</b>	<b>Encanto Ceramic Group Total</b>	<b>10625</b>	<b>37.8%</b>
			<b>Unknown</b>	<b>1176</b>	<b>4.1%</b>
			<b>Total</b>	<b>28083</b>	

“T”=trace. <.1%

The most numerous type within the Palmar Group is Palmar Orange Polychrome: Variety Unspecified (.007%). Forsyth combines the former Saxche Orange Polychrome within the Palmar Orange Polychrome type since demonstrable difference is negligible (1983:107). Overall design patterns are difficult to recognize; however, they coincide with the design pattern reported for this type elsewhere. Popular forms include round-sided bowls, deep to shallow flaring-sided bowls, plates, and vases. There are also other tentative variants within the Palmar Group.

The cream slipped Zacatel Ceramic Group nearly rivals the Palmar Group in the Late Classic sample. Most cream polychromes fall under Zacatel Cream-polychrome: Varieties Unspecified (.007%). This type consists of red and black painted designs. Red painted lines include naturalistic, geometric, and glyphic elements. Additionally, glyph bands are common and are outlined in black paint and have red interiors (1989:110-114). This latter “codex style” was found in higher quantities at nearby Nakbe. In fact, they were manufacturing vessels with this painted style there (Hansen et al. 1992). Since the El Mirador ceramic report was written before the Nakbe excavations, the codex material was not officially tallied separately. Subsequent field collections from El Mirador have located codex-style polychromes in various contexts, indicating that they are not rare but are well represented within the polychrome assemblage.

#### **Terminal Classic Types from El Mirador (Structures 2A8-2 and 3A8-1)**

Most of the ceramic types and groups remain the same for the Terminal Classic except for a few additions and other changes (Figure 6, Table 2). Cameron Incised was originally defined from Uaxactun materials as a Tepeu III type (defined at Uaxactun for the Terminal Classic [Smith and Gifford 1966:155]). It has glossy red slip and belongs to the Tinaja Ceramic

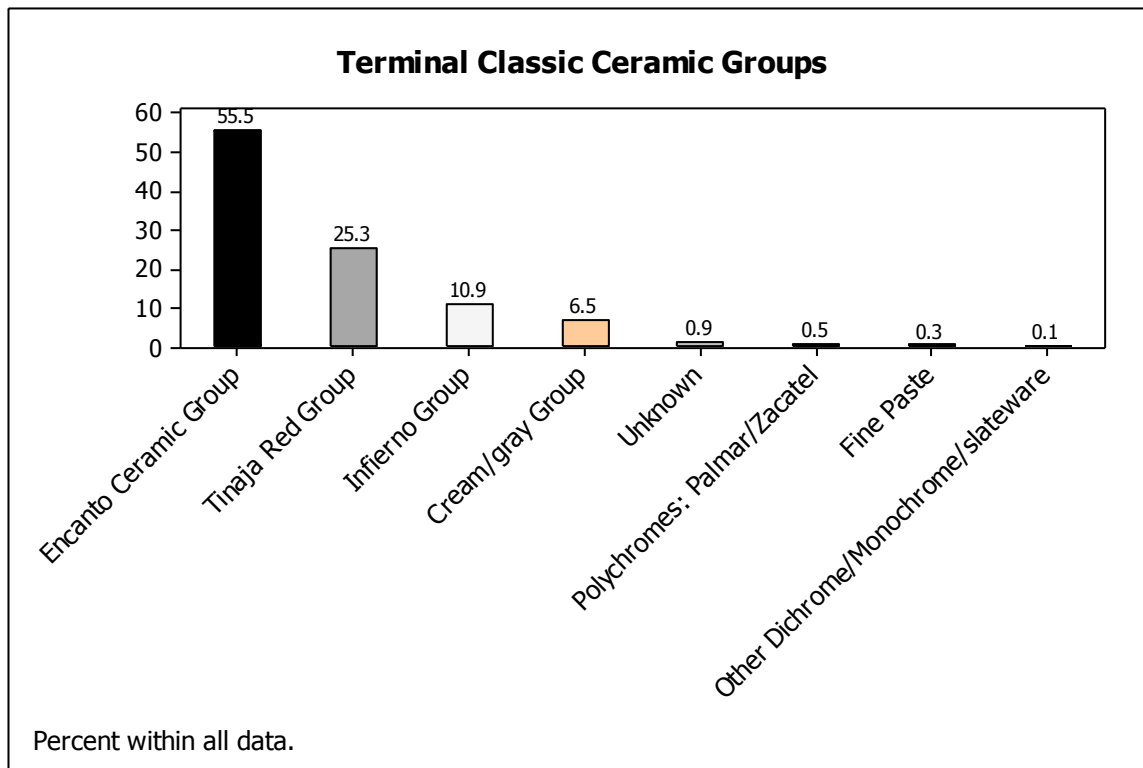


Figure 6. Post-Lac-Na Complex Ceramic Groups.

Group. Preslip incised lines are the most salient characteristic of this type. Although it occurs in tripod dish form, it is most frequently found as an incurved rim basin. At El Mirador the type is not common, with only 19 sherds found. Its presence is important as a marker for the Tepeu III horizon. Tinaja Red: Subin Variety was originally defined by Adams (1971:23) at Altar de Sacrificios under the name Subin Red: Subin Variety. This variety occurs there in some quantity and is often considered a ceramic marker for the Terminal Classic outside the Pasion River Basin, where it occurs in small quantities. In the Pasion region it dates to late Tepeu II and Tepeu III (latter part of the Late Classic and Terminal Classic). Adams classified it as a separate type. Antonia Foias (1996), however, did not see much typological difference between Subin Red and Tinaja Red, so this has been designated as a variety of Tinaja. It is different from Tinaja vessels in having an appliqué band on the exterior below the rim. The most common forms of this variety are open basins and restricted orifice vessels. It is a rare type at El Mirador (n=7), and its

frequency constitutes less than one percent of the ceramic assemblage. Tinaja Red: Tinaja Variety is a new variety defined based upon new vessel forms that are used. The surface finish is the same as the Nanzal Variety from the Late Classic. The new forms it appears in are recurved rim tripod dishes and rarely as a beaded rim bowl or barrel-shaped vessel (Smith 1955). This variety is less common at El Mirador (n=45) but was found consistently. This variety, with its new forms, is a horizon marker for the Terminal Classic.

A new variety appearing in the Terminal Classic is Tres Micos: Red Rim Variety. This variety was established in 2006 when classifying the Danta Complex ceramics. It varies only slightly from Tres Micos in having an intentional red band on the rims of the thick incurved rim basins. Vessel exteriors have the same black slip characteristic of Tres Micos below the red rim band, and have thumb impressions. Vessel interiors are usually slipped black also. It is a less common type at El Mirador, with 46 sherds in the assemblage, but it appeared in various excavation lots.

A new type defined in 2006 has been called Kuxum Mottled: Kuxum Variety. Slipped surfaces are creamy, creamy-brown, or creamy-gray. The creamy colored slip is frequently mottled, but the surfaces are glossy and belong to Peten Gloss Ware, just as do the Tinaja and Infierno Groups. Although it is defined as a type, I suggest that it could also be viewed as a tentative ceramic group also. Forsyth (personal communication: 2010) concurs, and the group name is Kuxum Ceramic Group. Many of the same surface decorations present in the Tinaja and Infierno Groups are found in the Kuxum Mottled type, including thumb impressed, tool impressed, incised, and stamped vessels. Significantly, vessel forms for this type mimic the other slipped monochrome groups. This type is common (1776 sherds) accounting for 6.5% of the total assemblage based on counts. Corozal Incised: Groove-Incised Variety, although present in the



Figure 7. Fine orange sherds. Top row: Pabellon Modeled-Carved; bottom, Altar/Balancan Fine Orange.

Late Classic, was found in consistent quantities and is one of the types that characterizes the Terminal Classic assemblage. Vessel shapes for this type are limited to hemispherical bowls. These bear two or three groove-incised lines below exterior rims (one vessel had four). Hollow supports were noted on at least a few partial vessels. At least 91 sherds of this type were tabulated.

Altar and Balancan Fine Orange have been treated as separate groups in the past. Both Forsyth (1989) and Ball (1977) consider them to be indistinguishable from each other at the group level, although typological differences exist. Balancan Orange has lighter slip, while Altar Orange has a light red to yellowish red slip. Both types are commonly found as round-sided bowls and tripod dishes. At El Mirador these two types are rare, with 17 sherds recovered.

Pabellon Modeled Carved (Smith and Gifford 1966) is one of the most elaborate fine



paste types (Figure 7). This is a fine orangeware from the Altar/Balancan Group. It lacks temper and is very brittle. Its intricate designs were made by cutting away parts of the exterior of a vessel and then incising and modeling the areas left so as to give it relief. Carved designs typically include seated personages. Forms include barrel shaped vases and round sided dishes. It is a little more frequent than some of the other previously mentioned fine paste types. There are 19 sherds of this type in the ceramic assemblage at El Mirador.

Provincia Plano Relief (Smith and Gifford 1966) is another intricate fine orange type from the Altar/Balancan Group. Bowls are the most common form, and designs tend to be restricted to vessel exteriors. The designs are executed in plano-relief, achieved by post-slip incising. At Becan frequent designs from this type are stepped frets, diagonal lines, zig zags, and an occasional seated figure (Ball 1977:102). At El Mirador the type is represented by just five sherds.

### **Frequencies at the Group Level**

When moving up to the next level of ceramic inference using the ceramic group, greater and perhaps more significant changes are detected than when comparing frequencies between ceramic types. The Tinaja Ceramic Group, which had been dominant in the Late Classic period (44%), declined to 25% in the Terminal Classic. Seven different type-varieties, or categories were present in the Late Classic assemblage. However, as mentioned previously, the Tinaja Red type dominated all other types in this period (see Table 3.), with over 95% of the total for the group. The only other type from the group that had a frequency of over 1% was Chinja Impressed. Other than these two types all the rest were very rare types within the group. In the Terminal Classic period Tinaja Red, in its various varieties, was still the dominant type from the

Table 2. Terminal Classic types from El Mirador.

Type	Count	Freq.	Weight	Freq.	Type	Count	Freq.	Weight	Freq.
Tinaja Red: VU	5620	20.7%	133751	16.4%	Palmar/Saxche Orange Poly	28	0.1%	466	T
Tinaja Red: Subin Variety	7	T	618	T	Chantuori Black-on-orange	6	T	30	T
Tinaja Red: Nanzal V.	203	0.7%	5595	0.7%	Desquite Red-on-orange	5	T	103	T
Tinaja Red: Tinaja V.	45	0.1%	1936	0.2%	Possible Chimes Polychrome	2	T	69	T
Cameron Incised: VU	19	0.1%	1686	0.2%	Tich Polychrome	3	T	121	T
Chinja Impressed: CV	497	1.8%	16191	2%	Possible Zacatal Polychrome	2	T	43	T
Corozal Incised: VU	37	T	693	T	Sacluc Black-on-orange	1	T	9	T
Corozal Incised: GV	91	0.3%	2415	0.3%	Possible Benque Polychrome	1	T	11	T
Pantano Impressed: PV	103	0.4%	5319	0.6%	Other Polychrome	57	0.2%	1732	0.2%
Pantano Impressed: SV	43	0.1%	1825	0.2%	<b>Total Polychrome</b>	<b>131</b>	<b>0.5%</b>	<b>2875</b>	<b>0.3%</b>
Other Tinaja CG	196	0.7%	4022	0.5%	Altar or Balancan Fine Orange	17	T	189	T
<b>Tinaja Group Total</b>	<b>6861</b>	<b>25.3</b>	<b>174051</b>	<b>21.3%</b>	Pabellon Modeled-carved	19	T	131	T
Infierno Black: BV	122	0.4%	3435	0.4%	Provincia Plano-Relief	5	T	37	T
Infierno Black: VU	2377	8.7%	68406	8.4%	Tumba Black-on-orange	12	T	241	T
Carmelita Incised: MV	38	0.1%	1124	0.1%	Silho CG	3	T	32	T
Carmelita Incised: VU	17	T	455	T	Other Fine Orange	18	T	247	T
Tres Micos: TMV	271	1%	19226	2.3%	<b>Fine Orange Total</b>	<b>74</b>	<b>0.3%</b>	<b>836</b>	<b>0.1%</b>
Tres Micos: Red Rim V.	46	0.1%	4545	0.5%	<b>Slateware</b>	<b>13</b>	<b>T</b>	<b>313</b>	<b>T</b>
Other Infierno CG	88	0.3%	2062	0.2%	<b>Other</b>	<b>6</b>	<b>T</b>	<b>122</b>	<b>T</b>
Other Carmelita CG	8	T	188	T	TLC Weathered	114	0.4%	3918	0.5%
<b>Infierno Group Total</b>	<b>2967</b>	<b>10.9</b>	<b>99441</b>	<b>12%</b>	TLC Unknown slipped	133	0.5%	6488	0.8%
<b>Kuxum Mottled: Kuxum V.</b>	<b>1776</b>	<b>6.5%</b>	<b>45252</b>	<b>5.5%</b>	<b>TLC Orangeware</b>	<b>6</b>	<b>T</b>	<b>94</b>	<b>T</b>
Chimbote Cream Polychrome	13	T	148	T	Cambio Unslipped: Cambio V.	2528	9.3%	125948	15.4%
Sayan Red-on-cream	13	T	143	T	Encanto Striated: Encanto V.	12277	45.2%	346844	42.4%
					Other Encanto CG	243	0.9%	8710	1%
					<b>Encanto Group Total</b>	<b>15048</b>	<b>55.5%</b>	<b>481502</b>	<b>59%</b>
					<b>Total</b>	<b>27129</b>		<b>814892</b>	

“T”=trace. <.1%

Table 3. Frequency of types within the Tinaja Ceramic Group.

	Late Classic		Terminal Classic			
	Count	Count Freq.	Count	Count Freq.	Weight	Wt. Freq.
Tinaja Red: VU	-	-	5482	80%	129935	74%
Tinaja Red: Nanzal Variety	11858	95%	348	5%	10029	5%
Tinaja Red: Tinaja Variety	-	-	45	T	1936	1%
Cameron Incised	-	-	19	T	1686	1%
Chinja Impressed	428	3.4%	497	7%	16191	9%
Corozal Incised: VU	35	T	37	T	693	T
Corozal Incised: GV	24	T	91	1%	2415	1.3%
Colmoyote Impressed: Colmoyote Variety	13	T	-	-	-	-
Pantano Impressed	59	T	145	2.1%	7113	4%
Other Tinaja CG	27	T	197	2.8%	4053	2.3%

“T”=trace. <.1%

group; however, the group became more diverse in the sense that newer varieties appeared, and many of these types, although less common, still comprised over 1% of the group total. The frequency of the Infierno Group appears little changed between the two periods. There was a decline in the frequency of the group of less than 1%. Infierno Black, in its two varieties, was still the dominant type within the group with over 72%. In the Late Classic there were five different types, varieties, or categories within the group (Table 4), in the Terminal Classic there were eight. An example of this is the designation other Carmelita group used as a category in classification. Whereas Carmelita vessels accounted for over 16% of the group total during the Late Classic, during the Terminal Classic they were significantly less at 1%. The frequency of Tres Micos Impressed increased from about 5% to between 10% and 19% of the group total, depending on whether one considers counts or weights.

Palmar Group polychromes had a nearly 1% frequency in the Late Classic. In the Terminal Classic its frequency had decreased to just over .1%. Zacatal group sherds, which were

Table 4. Frequency of types within the Infierno Ceramic Group.

	Late Classic		Terminal Classic			
	Count	Count Freq.	Count	Count Freq.	Weight	Wt. Freq.
Infierno Black: Bolocantal Variety	2563	77%	122	4.1%	3435	3.4%
Infierno Black: VU	-	-	2377	80%	68406	68.8%
Carmelita Incised: Maculis Variety	542	16.3%	38	1.3%	1124	1.1%
Carmelita Incised: VU	-	-	17	T	455	T
Tres Micos Impressed: TMV	166	5%	271	9.1%	19226	1.9%
Tres Micos Impressed: TMRR	-	-	46	1.5%	4545	4.5%
Carro Modeled: Carro Variety	18	T	-	-	-	-
Other Infierno CG	34	1%	88	2.8%	2062	2%
Other Carmelita CG	-	-	8	T	188	T

“T”=trace. <.1%

Table 5. Type frequency within the Encanto Ceramic Group.

Type	Late Classic		Terminal Classic			
	Count	Count Freq.	Count	Count Freq.	Weight	Wt. Freq.
Cambio Unslipped: Cambio Variety	2573	24.2%	2528	16.8%	125948	26.1%
Encanto Striated: Encanto Variety	8031	75.5%	12277	81.5%	346844	72%
Other Encanto CG	21	T	243	1.7%	8710	1.9%
Total	10625	-	15048	-	481502	-

“T”=trace. <.1%

also nearly 1% of the Late Classic total, are virtually non-existent except for a two probable Post-LacNa Zacatal sherds.

The Encanto Group increased in frequency from the Late Classic at about 38% of the total assemblage to about 55% in the Terminal Classic period (Figure 4,5). Within the group the frequency of Cambio Unslipped went down from 24% to about 17%. Encanto Striated increased from 75% to about 81%. “Other Encanto Group” increased from .2% to nearly 2%.

### Ware, Slipped, Unslipped, Polychrome

Perhaps the most significant change, more than group frequencies, occurred in the frequency of slipped and unslipped pottery. In the Late Classic assemblage the Peten Glossware slipped pottery was dominant, at 60.5% of the total. The unslipped pottery, as one would expect, comprised a considerable portion of the overall assemblage (39.5%); however, the slipped pottery was still more frequent (Figure 6). This situation was reversed in the Terminal Classic period assemblage. The frequency of slipped pottery for the Terminal Classic was just 44.3%, and the frequency of unslipped pottery was 55.7%. If one disregards sherd counts and looks at gross weight, then the unslipped pottery frequency nearly reaches 60% for the Terminal Classic. Polychromes, though less numerous at El Mirador, were still found consistently in Late Classic residential mounds. Together the Palmar and Zacatel Ceramic groups accounted for nearly 2% of the total assemblage. In the Terminal Classic this frequency had drastically declined to one third of one percent. Polychromes, even though they had been less common in the Late Classic, had become extremely rare by Terminal Classic times. Furthermore, the finer Zacatel Cream polychromes seem to have virtually vanished, replaced by less finely made Campeche cream-slipped polychromes. Perhaps the introduction of fine paste wares acted as a replacement for the finer polychromes which disappeared in the Terminal Classic. It is significant that Kuxum Mottled, a new ceramic group, appeared during the period, introducing a new slip color that had not been popular for several hundred years.

On one hand the Terminal Classic assemblage appears to be less refined than that of the Late Classic, as evidenced by unslipped wares making up the bulk of the assemblage and with the dramatic decline in the frequency of polychrome pottery. On the other hand, the assemblage became more diversified, with a few more types and distinctive varieties appearing, and some of the less common types became somewhat more frequent.

## **Modal Analysis**

### ***Vessel Form***

A total of 2,070 rim sherds were classified according to vessel form. As mentioned previously, vessel form for Late Classic ceramic materials was noted by Forsyth (1989) in a general manner and not quantitatively. Forms are listed under each type with the most frequent ones listed first. Culbert and Rands (2007) emphasized performing the vessel shape analysis separately. One can easily do so. Forsyth (1983:139) lists color as one of the descriptive modes that can be quantified and vessel forms will be considered in conjunction with this variable after they are treated separately. There is a one-to-one correlation between slip color and ceramic groups at El Mirador, with only a few exceptions; all reds are Tinaja Ceramic Group, blacks are Infierno Ceramic Group, etc. Therefore, although I will present the ceramic forms according to slip color, relating these data to ceramic groups requires no work.

Forsyth placed the Late Classic ceramics into various shape categories, many of which overlap between the Tinaja and Infierno Ceramic Groups. For the Tinaja Group Forsyth lists several forms (Table 6). Some differences exist between the Infierno and Tinaja forms. The Infierno Group has a dish or plate with an interior offset but is described as also having an angling or rounded side. There is also a basal-break dish or bowl containing a variant composite silhouette form. Other additions include a deep bowl with slightly flaring sides and a flat bottom, composite silhouette (that is associated with Carmelita Incised) and a composite restricted-orifice vessel.

### ***Terminal Classic Vessel Forms***

Table 6. Late and Terminal Classic Forms.

Popular Vessel Forms	
1. Short to medium height hyperboloid-necked jar;	2. Dish or plate with interior offset;
3. Basin or bowl with thickened rim;	4. Deep hemispherical bowl;
5. Flaring-walled basal break dish or bowl;	6. incurved rim basin or bowl;
7. Deep vase;	8. Slightly restricted orifice vessel;
9. Lateral ridge-dish or plate;	10. Composite silhouette dish or bowl;
11. Flaring-walled plate;	12. Tapering orifice vessel;
13. Tecomate;	14. Pottery drum;
15. Bowl with recurved-rim	

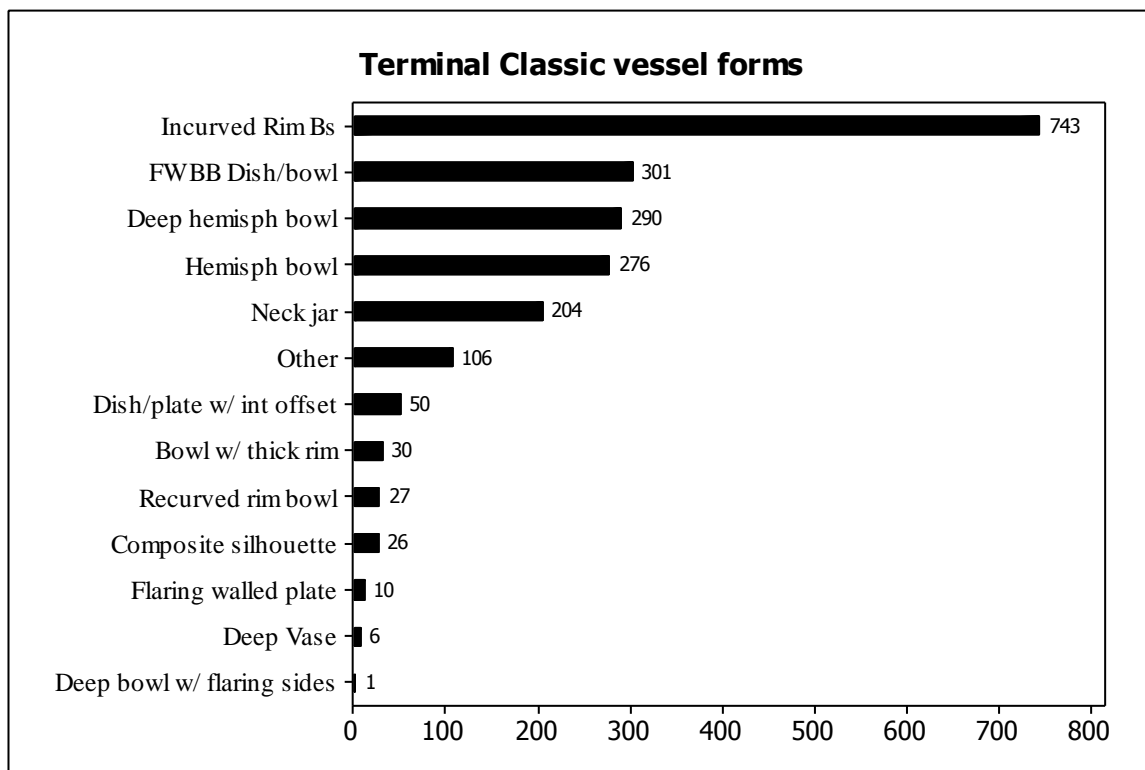


Figure 8. Terminal Classic vessel form counts.

Anticipating that most vessel forms for the Terminal Classic were similar to the Late Classic period I kept most of the categories that Forsyth had defined and added another, (recurved rim bowl) which is considered a Terminal Classic horizon marker. I should make note of the fact that in trying to be accurate I maintained a distinction between deep hemispherical bowls and hemispherical bowls. The deep hemispherical bowl form was defined for the Tinaja Group by Forsyth, and the regular hemispherical bowl was defined for the Infierno Group. When

Table 7. Vessel forms from the Terminal Classic assemblage.

	Inc. Rim Bs	Dp hem bowl	Hemisph bowl	Neck jar	FWBB Dish/bowl	Other	Dish/plate w/ int offset	Bowl w/ thick rim	Recurved rim bowl	Composite silhouette	Flaring walled plate	Dp Vase	Dp bowl fl sds	Total
Black	345	7	76	14	98	26	15	1	-	24	1	-	1	608
Red	300	261	140	144	181	48	32	28	23	2	8	5	-	1172
Cream	52	18	28	45	17	8	3	1	1	-	1	-	-	174
Slipped	46	2	2	-	-	3	-	-	-	-	-	-	-	53
Orange	-	-	10	-	1	12	-	-	1	-	-	-	-	24
Polychr.	-	1	17	-	2	6	-	-	-	-	-	1	-	27
Dichrome	-	1	-	-	2	1	-	-	2	-	-	-	-	6
Unslipped	-	-	-	1	-	2	-	-	-	-	-	-	-	3
Brn/gry	-	-	2	-	-	-	-	-	-	-	-	-	-	2
Other	-	-	1	-	-	-	-	-	-	-	-	-	-	1
Total	743	290	276	204	235	106	50	30	27	26	10	6	1	2070

doing the classification, if a bowl rim sherd seemed to have steeper walls and was relatively deep I called it a deep hemispherical bowl. If the bowl did not appear to be so deep, and did not have steep walls, it was classified as a hemispherical bowl (Figures 9,10). The fact that very few black slipped sherds had steep walls seems to confirm the assignment of the deep bowl form to the Tinaja Group by Forsyth. However, the red slipped pottery also had plenty of hemispherical bowls which were not very deep and thus were given a separate designation from the deep hemispherical bowls (Table 7). Although a distinction was made on my part regarding the bowls (in order to maintain the original defined forms for accuracy), the two forms probably represent a range, regardless of slip color, and this is evidenced by a close similarity in average bowl diameter for the two forms (Figure 12). The foregoing is an important prelude to a discussion on





Figure 9. Terminal Classic Forms: A. Hemispherical Bowl, Sayan Red/cream; B. Dish with interior offset, Infierno Black:VU; C. Flaring walled basal break dish/bowl, Tinaja Red:VU; D. Incurved rim basin, Tres Micos:VU; E. Slightly restricted orifice vessel, Tinaja Red:VU; F. Hemispherical bowl, Corozal Incised:GV; G. Deep hemispherical bowl, Kuxum Mottled:Kuxum Variety; H. Hemispherical bowl, Kuxum Mottled: Kuxum Variety; I. Flat base, Kuxum Mottled: Kuxum Variety; J. Restricted orifice vessel with groove (Imitation Cameron Incised), Infierno Black; K. Incurved rim basin, Tres Micos:VU; L. Neck jar, Kuxum Mottled: Kuxum Variety; M. Hemispherical bowl, Kuxum Mottled: Kuxum Variety; N. Hollow bulbous support, Trapiche incised; O. Incurved rim basin, Tres Micos Impressed:VU; P. Incurved rim basin with grooves on rim, cream/gray slip, Unknown Modeled; Q. Bowl with interior offset, Chinja Impressed; R. Incurved rim basin, Tres Micos Impressed: Red Rim Variety; S. Incurved rim basin, Infierno Black; T. Incurved rim basin, Tinaja Red:VU.

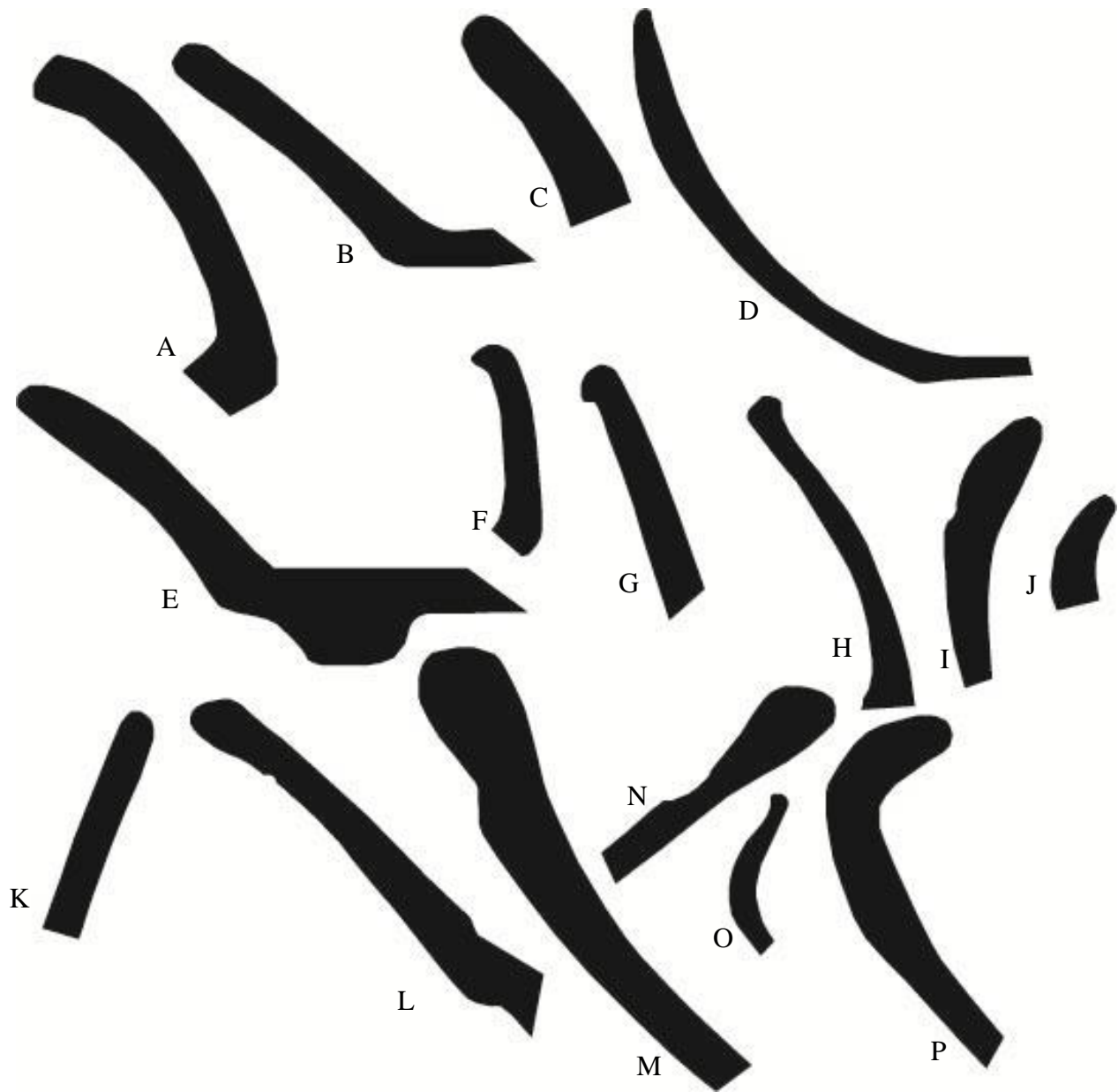


Figure 10. Rim forms: A. Flared neck jar, Pantano Impressed (with black slip); B. Flaring walled basal break dish, Infierno Black C. Flaring walled basal break dish/bowl, Kuxum Mottled: Kuxum Variety; D. Hemispherical bowl, Tinaja Red (flat base); E. Flaring walled basal break bowl/dish with solid nubbin supports, Infierno Black: Bolocantal Variety; F. Neck jar, Infierno Black; G. Flaring walled basal break dish/bowl, Tinaja Red; H. Neck jar, Kuxum Mottled: Kuxum Variety; I. Incurved rim basin, Cameron incised-like; J. Recurved rim bowl, Kuxum Mottled: Kuxum Variety; K. Slightly restricted orifice vessel/barrel shape, Tumba Black/orange; L. Dish/plate with interior offset, Tinaja CG: incised; M. Bowl, Chinja Impressed; N. Incurved rim basin, Tres Micos Impressed; O. Recurved rim bowl, Altar/Balancan fine orange; P. Incurved rim basin, Chinja Impressed.



Figure 11. Flaring walled basal break dish with hollow bulbous support, Tinaja Red.

the forms because hemispherical bowls (both the regular and the deep kind) are the second most numerous form after incurved rim basins (Figure 8). Forsyth notes that the incurved rim basin was very common in the Late Classic and that the form is a “widespread Tepeu horizon marker” (1989:80), but one does not get the impression that incurved rim basins dominated all other forms in frequency. In the Terminal Classic assemblage this form is certainly dominant. Another frequent form is the flaring-walled basal break dish/bowl (n=301; Figure 11) which can be taken to be a serving vessel. The incurved rim basin was likely used to store liquids (Hansen et. al 2007).

A more portable vessel for storing liquids is the necked jar which was also common. Interior offset dishes or plates were not very common, but they do appear to have persisted into the Terminal Classic period. This form was much more frequent in the Late Classic. Composite silhouette vessels were also much more frequent in the Late Classic than they were in the Terminal Classic. Bowls with thick rims, which were not angled inward enough to be called

incurved rim basins, were not common. Generally, the thick rims were associated with incurved rim basins. The recurved rim was not common either but occurs consistently in the Terminal Classic deposits so that its presence is a reliable marker for the period. Flaring walled plates occur rarely as well as many of the other forms which were included under “other.” Most of the “other” forms are unidentified; however, there are some interesting rare ones, including two cylindrical vases and two cylindrical jars. There were several (n=17) restricted-orifice vessels and others classified as slightly restricted. There were also a few tecomate or tecomate-like vessels and two rounded-rim bowls not restricted enough to be tecomates.

Considering vessel forms together with slip color, another mode variable, can also be informative, as it matches the two most salient vessel combinations (Table 7). The frequent vessel forms mentioned earlier (incurved rim basins, deep hemispherical bowls, hemispherical bowls, flaring walled basal break dishes/bowls, and neck jars), are strongly associated with monochrome red. The same association occurs with the combination of those forms and the black slipped vessels but in lesser quantities proportionate to less frequent black slipped rims. However, there are at least two exceptions; one being that necked jars are not very common for the black slipped group and composite silhouette is nearly ubiquitous to the black group. Importantly, Kuxum Mottled, the cream-brown-gray group, is also evenly distributed among most of the frequent vessel forms and occurs in rare form categories such as recurved rim bowls and flaring walled plate. The combination of the cream-brown-gray on these forms appeared only in the Terminal Classic. The category “slipped” is strongly correlated with incurved rim basins. These sherds were weathered and had tiny spots of slip, enough to know that they were slipped vessels but not enough to make a determination on slip color. Recurved rim bowls are strongly associated with red slip color.

## Base Support Forms

Table 8. Terminal Classic Base Supports from El Mirador.

	Flat	Flat rounded	Hollow Bulbous	Oven Shaped	Hollow Bulbous or Oven Shaped	Hollow Ovoid	Solid Teat/nubbin	Ring base	Undetermined	Total
Red	86	9	33	7	31	1	11	2	14	195
Black	52	6	5	1	5	1	10	-	7	87
Cream/Brown/Gray	20	1	2	-	4	-	1	-	1	29
Fine Orange	1	-	2	-	-	-	1	-	1	5
Weathered/unknown	-	-	3	2	1	1	-	-	-	7
Polychrome	1	-	-	-	-	-	-	-	-	1
Unknown/unslipped	-	-	4	-	-	-	-	-	-	4
Total	160	16	49	10	41	3	23	2	23	328

Concerning base support appendages, most of the data comes from slipped monochrome vessels. For definitions of the various supports see Smith (1955). Most supports had broken off from their vessels, so vessel form is unknown for many. Where the support was still attached to the vessel I made note of the vessel form, but these data come from a very small sample. Nearly 50% of the base supports are flat (Table 8), and this appears to be a decrease from the Late Classic where Forsyth has pointed out that most of the supports were flat for both red and black slipped vessels (1989:84, 95-96). Forsyth did note that a handful of hollow supports had been found. Hollow supports (Figure 12), although they were present in small quantities prior to the Terminal Classic at El Mirador, are characteristic of the Terminal Classic, becoming much more frequent. Many of these hollow supports have clay pellets in the hollow support. Nearly 1/3 of the supports were hollow, either hollow bulbous-shaped, hollow oven-shaped, either of the two, or hollow ovoid-shaped. Flaring walled basal break dishes or bowls were overwhelmingly represented among the vessels with the supports still attached (Table 9). Hollow supports were



Figure 12. Hollow bulbous supports, Tinaja Red.

Table 9. Types of Terminal Classic Base Supports and Vessel Forms.

	Neck jar	FWBB Dish/bowl	Dp hem bowl	Inc. Rim Bs	Dp bowl fl sds	Dp Vase	Dish/plate w/ int offset	hemisph bowl	Recurved rim bowl	Bowl w/ thick rim	composite silhouette	flaring walled plate	other	Total
Flat	-	2	2	-	-	2	-	2	-	-	-	-	2	10
Flat rounded	-	8	-	-	-	-	-	-	-	-	-	-	-	8
Hollow Bulbous	-	7	-	-	-	-	-	2	-	-	-	-	1	10
Oven Shaped	-	-	-	-	-	-	-	1	1	-	-	-	-	2
Hollow Bulbous or Oven Shaped	-	9	1	-	-	-	-	3	1	-	-	-	-	14
Hollow Ovoid	-	-	-	-	-	-	-	-	-	-	-	-	-	0
Solid Teat/nubbin	-	4	-	1	-	-	-	1	-	-	-	-	-	6
Ring base	1	-	-	-	-	-	-	-	-	-	-	-	-	1
Undetermined	1	7	3	1	-	-	-	2	-	-	-	-	-	14
Total	2	37	6	2	0	2	0	11	2	0	0	0	3	65

found most frequently on flaring walled basal break dishes and hemispherical bowls. Flat and solid teat or nubbin supports also occurred on the flaring walled basal break forms. One of the rarer forms, the recurved rim bowl, contained hollow oven-shaped supports (these resemble Spanish clay baking ovens with vertical walls that gently incline toward each other at the top until they join). A chi-squared test was performed for the distribution of flat and hollow supports and the three most popular slip colors, red, black, and gray/cream. The results are presented in Table C-1 of Appendix C, along with percentages for the observed values. The sum of the differences from the two distributions has a Chi-squared value high enough to reject the null hypothesis at the .05 significance level.

### **Vessel diameter**

Diameter was measured for rim sherds that were large enough to determine vessel curvature. Generally, if the rim sherd was about 8 cm wide or wider, I felt that I could accurately get a measurement from a diameter chart. Figures represent measurements as averages in centimeters for each type. The smallest rimmed vessels were the necked jars and the largest were incurved rim basins and dishes or plates with interior offsets. A few extremely large vessels were noted, in excess of 44 cm, all incurved rim basins, and one of these measured 52 cm in diameter and was black slipped. The vessel with the smallest orifice was an 8 cm diameter, black slipped miniature neck jar. For the frequent forms, incurved rim basins, hemispherical bowls, flaring walled basal break dishes or bowls, and neck jars, measuring the diameter of the rim is informative and has helped establish averages for these form categories. Diameter measurements for the popular forms do not cluster into clear cut size differences. The size for rim diameters is widely distributed, and there do not appear to be fixed vessel sizes (Figures 13-15). Ceramic

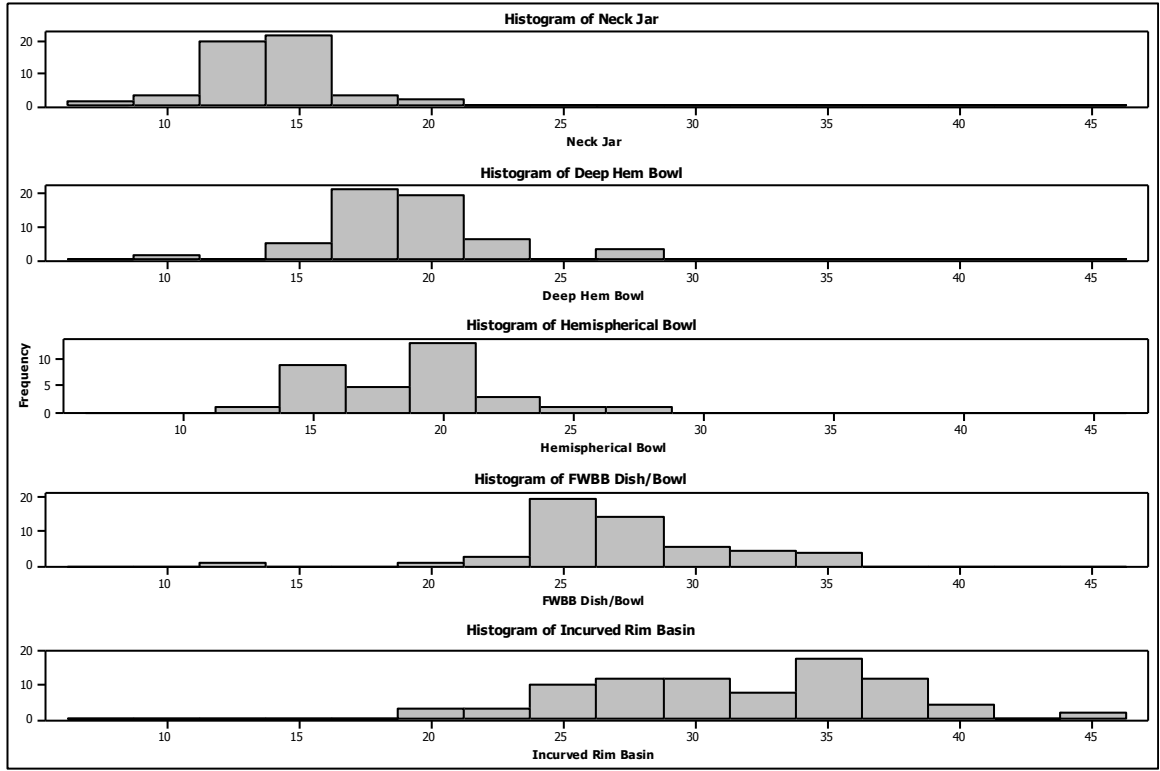


Figure 13. Histograms for the distribution of rim diameters from red-slipped vessel forms.

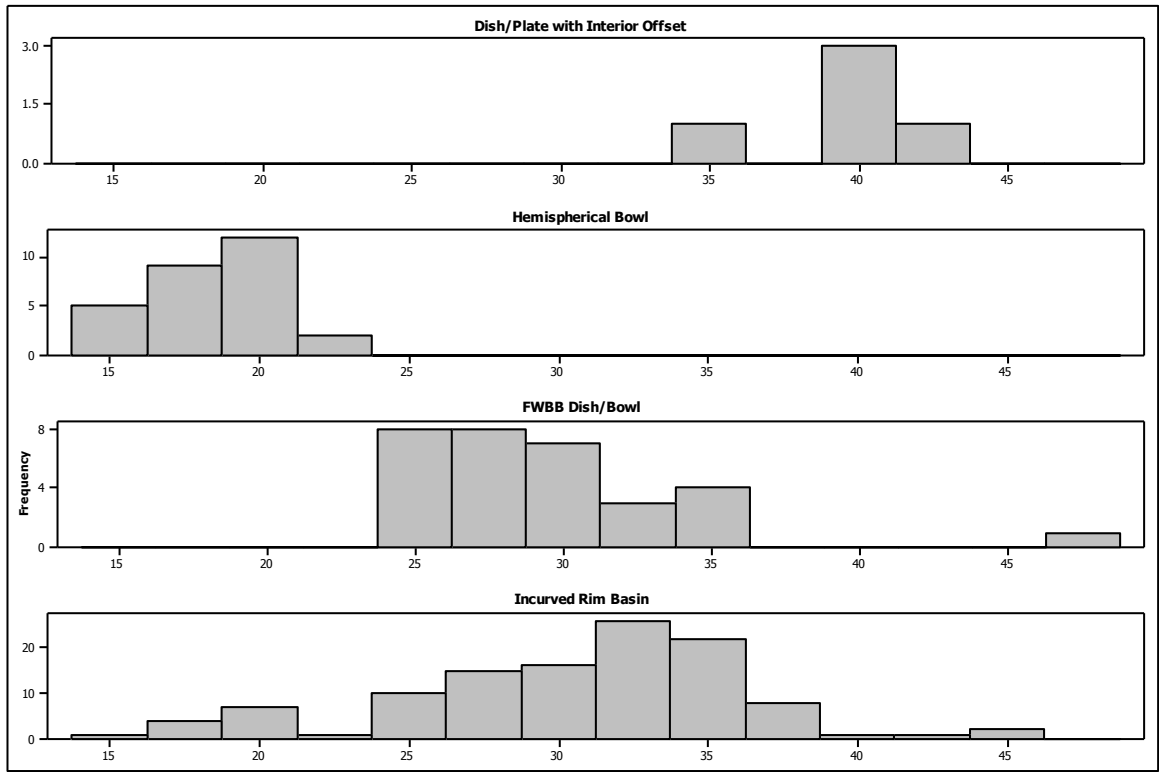


Figure 14. Histograms for the distribution of rim diameters from black-slipped vessel forms.



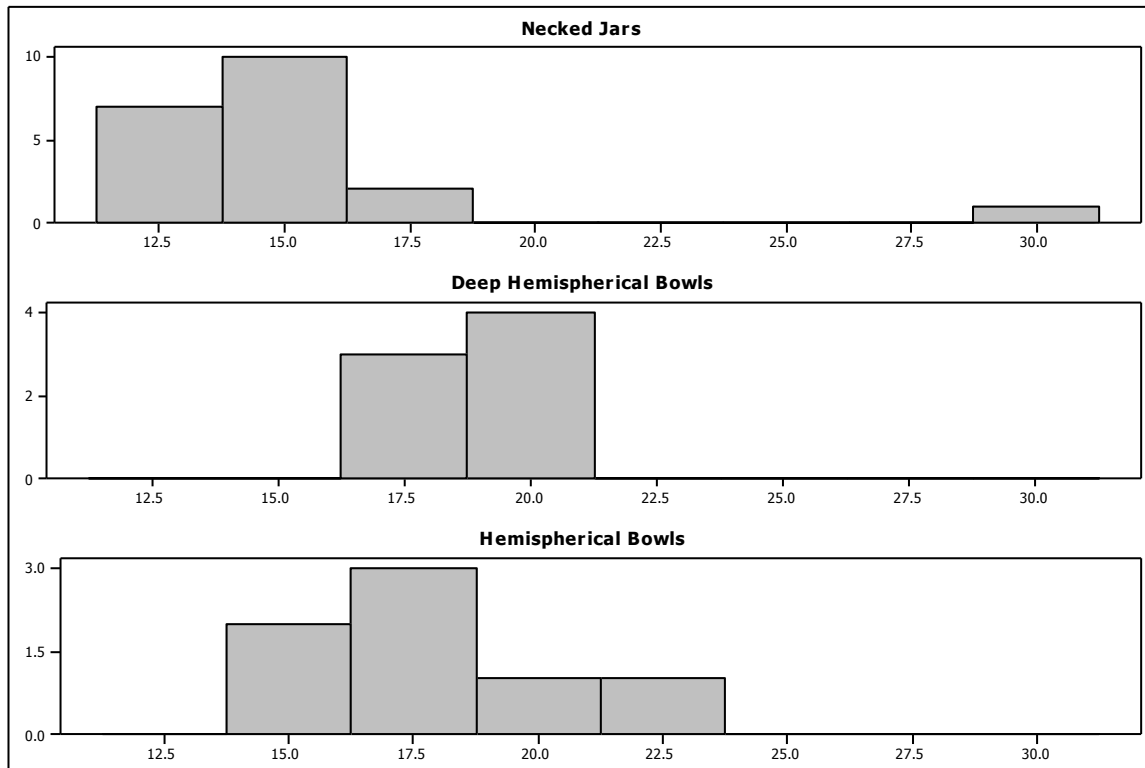


Figure 15. Histograms for the distribution of rim diameters from cream/gray-slipped vessel forms.

manufacturers did not standardize vessel size (See Table 1, Appendix B); however, there may have been preferential sizes, such as 12-14 cm for neck jars, 24 cm for flaring walled basal break dishes or bowls, and 18-22 cm for hemispherical bowls. Incurved rim basins have a wide range, but the majority ranges 28-38 cm.

Little can be said concerning the rarer forms and whether rim measurements cluster to standardized sizes. The difference in the average vessel diameter between slip color categories is also highly dependent on the size of the sample. For instance, black neck jars appear to be much smaller than red neck jars; however, the sample for the black neck jars is significantly smaller than that for the red neck jar sample (Table B-2, Appendix B). Averages for the less frequent forms or form/slip combination should be taken as approximations.

Table 10. Surface decoration according to slip color.

	Applique	Champhering	Fluted	Grooved	Gouged-Incised	Impressed	Incised	Incised-fluted	Incised-Impressed	Modeled-carved	Carved	Total
Red	2	1	1	-	1	336	138	1	2	-	-	482
Black	-	-	2	2	7	289	77	-	-	2	1	380
Cream/Brown/Gray	-	-	-	-	-	32	6	-	1	-	-	39
Fine Orange	-	-	1	-	-	-	9	-	-	14	1	25
Dichrome	-	-	-	-	-	-	1	-	-	-	-	1
Brown/gray (Slateware)	-	-	-	-	-	-	1	-	-	-	-	1
Slipped	-	-	-	-	-	45	5	-	-	-	-	50
Unslipped	1	-	-	-	-	-	-	-	-	-	-	1
Other	-	-	1	-	-	2	1	-	-	-	-	4
Orange Monochrome	-	-	-	-	-	-	1	-	-	-	-	1
<b>Total</b>	<b>3</b>	<b>1</b>	<b>5</b>	<b>2</b>	<b>8</b>	<b>704</b>	<b>239</b>	<b>1</b>	<b>3</b>	<b>16</b>	<b>2</b>	<b>984</b>

### Surface Decoration

Two main methods of surface decoration were employed by Terminal Classic potters at El Mirador. Impression and incision were the most popular, and impression was overwhelmingly the most popular method at over 71% of decorated sherds analyzed. Incision was the second most popular method, and a number of rarer methods were used such as appliqué, champhering, fluting, grooving, gouge-incised, model-carving, and modeling. The main two methods are strongly associated with the red and black slipped vessels. Model carving is found exclusively on the fine orangeware. Gouge-incising, another specialized decoration, is mainly found on black slipped vessels (Table 10). Vessels with impressions were found primarily on incurved rim basins and necked jars (Table 11). Its occurrence on other rare vessels besides these two is notable, such as on a dish with an interior offset and rarely on hemispherical bowls. Impressions on the incurved rim bowls are almost all thumb or fingernail impressions. At times the

Table 11. Surface decoration according to vessel shape.

	Applique	Champhering	Fluted	Grooved	Gouged-Incised	Impressed	Incised	Incised-fluted	Incised- Impressed	Modeled- carved	Carved	Painted	Other	Total
Neck jar FWBB	-	1	-	-	-	41	-	-	-	-	-	-	-	42
Dish/bowl Dp hem	-	-	-	-	-	-	3	-	-	-	-	-	-	3
bowl	2	-	-	-	-	2	4	-	-	-	-	-	-	8
Inc. Rim Bs	-	-	-	-	-	556	31	-	-	-	-	-	-	587
Dish/plate w/ int offset	-	-	-	-	-	1	5	-	-	-	-	-	-	6
hemisph bowl	-	-	-	-	1	1	130	1	1	1	-	2	-	137
Recurved rim bowl	-	-	-	-	-	1	-	-	-	-	-	-	1	2
Bowl w/ thick rim	-	-	-	-	-	5	-	-	-	-	-	-	-	5
composite silhouette	-	-	-	-	1	-	22	-	-	-	-	-	-	23
other	-	-	1	2	-	8	11	-	2	2	1	3	-	30
Total	2	1	1	2	2	615	206	1	3	3	1	5	1	843

impressions are elongated, having been dragged; often there is little horizontal movement, and the impressions are well executed. Occasionally the impressions are very small and appear to be impressed with a small finger, such as a pinky. Often the impressions are very wide. Where the line of impressions starts ranges from 2 cm to 7cm below the rim. Sometimes the impressions are continuous, with a small raised ridge between the imprints. However, there were many vessels that had spaced impressions, ranging from .4 cm to 2 cm apart.

Impressions on jar necks are markedly different from the thumb impressions on the incurved rim basins. Most jar necks were tool impressed with either slotted lines at the neck joint or dotted, raked lines. One sherd had quadrangular impressions. The dotted, raked line and

slotted motifs were almost equally represented. Stamping occurred on less than a third of the impressed-neck vessels. Decorations included several swirls around the neck, known as scrolls, a few of which had dots below them.

Incision is most abundant on hemispherical bowls and composite silhouette vessels. It accounts for 24% of the sherds classified as having surface decoration. Red slipped pottery had a higher frequency of incision, at 58%, and black pottery had an incision frequency of 32%. Most incision took the form of circumferential lines below rims, occurring on both the red and black slipped pots. On two sherds belonging to the same black slipped dish with an interior offset, a reptilian design was noted. Incurved rim basins with a single circumferential groove below the rim were present consistently in small numbers, and this mode combination is characteristic of the Terminal Classic. Red hemispherical vessels with incised circumferential lines often had two or three lines. Sherds with three incised grooves were equally abundant as those with two grooves. Two sherds had four grooves. The distance from the rim to the first incised groove varied from 0.8 cm to 1.5 cm, and the distance separating the grooves typically ranged 0.3 cm to 0.5 cm apart. Two hemispherical vessels had intact hollow supports still attached, and they had heights from base to rim of 5.5 and 8.8 cm respectively. These same observations hold for black slipped hemispherical bowls; however, only two grooves were noted for vessels in the black slip color. The quality of the incised grooves on the hemispherical bowls and incurved rim basins was variable.

Incision also took the form of geometric shapes, such as triangles or abstract lines on a few sherds. Other rare incising includes a possible sun symbol and hatched lines in the bottom of a vessel that was a grater bowl. Punctuation was an extremely rare method of incision on the sherds analyzed. Modeled-carved rim sherds were usually too small to know what form they

were. One hemispherical bowl did belong to this category. The few polychrome sherds were also tabulated to see what forms they occurred in. The only known form is a hemispherical bowl but other forms most likely occurred. A chi-squared test to assess the difference in the distribution between the major slip colors and methods of surface decoration was performed (results are given in Appendix C, Table C-2). The chi-squared value was more than the minimum value used at the .05 level of significance. Therefore the null hypothesis is rejected and some degree of association is to be inferred among red, black, and cream slip colors, and the method of surface decoration. A chi-squared test was also performed on the distributions of vessel shapes and surface decoration versus the expected values if they belonged to any evenly distributed sample. This result is rather obvious (Appendix C, Table C-3), and the null hypothesis was rejected. There is an association among vessel shape and the method of surface decoration chosen by the potters.

### **Miscellaneous Observations**

Other aspects of the Terminal Classic pottery from El Mirador that I tried to keep track of included quality of firing, luster or slip color variation, and other miscellaneous items. Most monochrome pottery was well fired, just as it had been in the Late Classic. However, there was an increase in poorly fired pottery, and when comparing the entire ceramic assemblage, there is a slight but observable change in quality of manufacture from the Late to Terminal Classic periods. One salient feature of the ceramics from El Mirador is the existence of vessels slipped one color on the interior and another color on the exterior. Since the two colors are not placed on the same visible frame the vessels are not considered to be dichromes. Several sherds with different color combinations were observed—the most common being red interiors with cream or black exteriors. On some sherds the inverse was true and there was a black or creamy interior

with a red exterior. Although there is much variation in the monochrome slip color for both the Late and Terminal Classic periods there seems to be intentional placing of new slip colors on different forms and modes. There are a few instances of impressed neck jars (Pantano Impressed: PV, and one of the stamped variety) that were slipped in black and cream instead of red. I have already pointed out that the new cream/brown/gray ceramics imitate nearly all the forms and modes common to the red and black ceramics. Another example of this is several black slipped hemispherical bowls with circumferential incised lines imitating Corozal Incised. There are also incurved rim basins with a circumferential groove below the rim occurring in black which imitate Cameron Incised vessels. Some of the monochrome red sherds had a slightly orange/red color. The following color hues were noted for the red pottery using a Munsell chart: 10R4/6, 10R5/6, 2.5YR3/6, 2.5YR4/6, 2.5YR4/8, 2.5YR5/6, and 5YR4/4. The variability in color on a single sherd can be so great that I only focused on gathering this limited information from several red slipped sherds, enough to demonstrate the wide range of slip color.

Several rim sherds had mending holes; some large pieces had two or more holes. A few failed attempts at drilling the holes were also noted where the hole from one side narrowly missed the hole on the other side. I mention this because having previously classified Late Classic ceramics from the Mirador Basin, there appears to me to be a higher incidence of mending holes in the Terminal Classic. The holes generally occur on the larger vessels, incurved rim basins and flaring walled basal break dishes or bowls. Why mending holes would be more frequent in the Terminal Classic period is not clear, but one idea may be that with a reduced population and difficult times the Maya at El Mirador needed to extend the use life of these common storage and serving vessels.

## Continuity and Change

From the previous discussion of Late and Terminal Classic ceramic types, forms, and modes, it should be obvious that there is considerable continuity in the ceramic assemblage. The bulk of the pottery stayed the same with the same types and modes. The unslipped pottery, not discussed in detail, is identical for the two periods. Furthermore, most of the slipped monochrome pottery is the same. This being so, a good question is what features actually separate the ceramics from the two periods other than chronology. Although the bulk of the ceramics stayed the same there are some demonstrable changes that characterize the Terminal Classic period. These changes include the introduction of new forms, the disappearance of forms, new modes, and greater frequency of certain types or modes.

Typologically the introduction of small quantities of fine orangeware is a ceramic marker for the Terminal Classic, and it occurs at most sites throughout the southern lowlands. There was also an introduction of limited numbers of cream polychrome vessels from Campeche to the north. Monkey pots disappeared, and composite silhouette vessels nearly disappeared during this period. Additionally, although quite rare, slateware appeared for the first time. Pantano Impressed, in both its varieties, became more popular, as did Corozal Incised: Grooved Variety. Interior offset dishes or bowls were characteristic of the Late Classic and are rare for the Terminal Classic. Recurved rim bowls occurred in small numbers, which is another ceramic marker for the Terminal Classic period. One important change is the abundance of two particular forms, incurved rim basins and hemispherical bowls. Flaring-walled basal-break dishes or bowls are common, but their frequency may have even decreased between the two periods. Add to these changes the introduction of cream-brown slipped pottery, red slipped bands on the black Tres Micos vessels, different slipped interiors and exteriors on vessels, and the picture of the

Terminal Classic assemblage overall is different and separable from the Late Classic assemblage. One of the most important changes, however, is the virtual disappearance of polychrome pottery, especially finer polychromes original to the Peten. This change is often taken as one of the most important markers of social change in the lowlands. Accompanying this significant change is a substantial increase in the frequency of unslipped pottery and a decrease in red slipped pottery.



## **Chapter 3: Architecture, Special Deposits, and Burials**

### **Late Classic Architecture**

As mentioned previously, the Late Classic settlement pattern in the Mirador Basin contrasts dramatically with other areas of the Maya lowlands. Most areas developed densely populated polities, erected monumental architecture and stelae, and they used Maya glyph writing extensively. This should not be interpreted to mean that there was no elite class living in the Mirador Basin, or that they did not possess fine things or commission fine things to be built. In fact, at La Muerta, just a few kilometers from Mirador, is a funerary temple with a crest on top (Suyuc et. al 2004). At nearby Nakbe the Codex Residential Group was finely built. Several rooms of a palace residence were excavated, and the finely made Codex Polychrome was abundant (Lopez and Ortiz 1994). Late Classic residential groups are common and are scattered over Nakbe, El Mirador, and many other sites in the Basin. At El Mirador the quality of architecture construction is variable. Some architectural features were well made; others were not. It seems certain, however, that the Late Classic inhabitants of El Mirador did not erect any buildings as finely made as those at Nakbe.

Deanne G. Matheny (1982) gave a paper about excavations in two adjoining Late Classic residential compounds at El Mirador. The LacNa residential group is located between the West and East Groups and just east of the large precinct wall. Three structures were excavated (Figure 16). Structure 5A2-6 is located on the north side of a residential unit with larger structures, but it was chosen because it was in better condition. The entrance was on the south side; therefore it is associated with the south residential unit group. The back (north) wall of the structure had several courses of preserved stonework. Dimensions are not given for the structure, which was

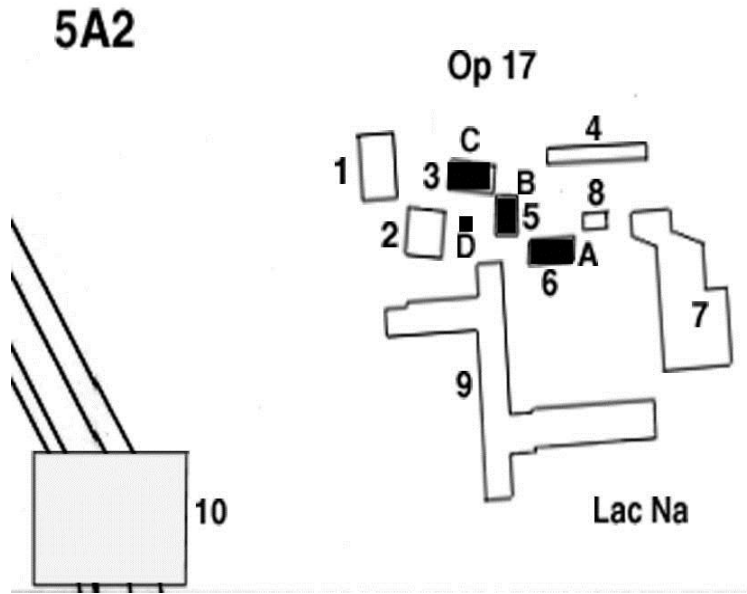


Figure 16. Late Classic LacNa architectural complex.

badly looted. A well preserved plaster floor was found inside, as well as a plastered bench that spanned the width of the west side of the structure. Upon penetrating the first floor, a second floor was found, and floor preparation fill with abundant cultural material was found under it. A probable trash midden was located behind the structure.

Structure 5A2-5 was a rectangular structure with well preserved walls several courses high. It also had a midden located at the back of the structure. At least one burial was found here, as evidenced by Late Classic vessels left behind by looters. The interior floor was plastered, and there was a plaster bench on the south side of the structure.

Structure 5A2-3 is a rectangular structure. Looters discovered at least two burials here, and left vessels at both the east and west looters' trenches. As with the other structures this had a formal entrance and a plastered floor, one of six superimposed floors. In some areas there were still several courses of preserved stonework visible. It also had a plastered bench on the west side of the room.

The information provided to me by Matheny was rather general, and she never indicated that the methods of construction were crude or shoddy by any means. Late Classic residences on the Danta Complex were more varied in quality of construction and materials used. Two Late Classic structures were excavated by Wayne Howell (1983). One building, Structure 2A8-5, was chosen because it had been so badly looted that something had to be done to retrieve data before it deteriorated further. The mound has a maximum height of 6.5 m and is located on Level Two near the southeast corner of the Danta Acropolis. It is associated with several rectangular residential structures (Figure 3).

Cleaning of the looter trench, which had gutted the building, revealed a room measuring 3.7 - 4.1 m in width. Roughly shaped or unshaped limestone blocks were used in the interior wall construction. Apparently, none of the wall surfaces had been plastered, and the floor was plastered but had deteriorated significantly. On the east side of the room was a well made plaster bench that extended out 2.3 m from the wall and rose 53 cm. The bench consisted of 35 cm of large rubble capped by 10 cm of medium gravel, which was further capped by 10 cm of thick stucco. Howell points out that this well made bench was an anomaly amidst the otherwise sloppily made features (1983:122). A low, one-to-two course wall, probably serving as a room divider, ran north from the bench; it was also made of irregularly shaped pieces of limestone. The entrance to the room was uncovered on the west wall. A vent was located on the west wall, and it measured 15 x 17 cm. Overall, the room walls were crudely made, and the roughly shaped or irregular stones were placed in irregular courses with chinking in places, but without the use of mortar. The walls stood 2.2 m high on the west, and on the north and east they stood between 1.3 to 1.5m high. The outer portion of the west wall was built in crude fashion using a stepped technique. Bits of stucco were found indicating the exterior of the building was probably

plastered. The lower portion of the wall was 2.5 m thick, and fill between the wall facings consisted of consolidated rubble. Some of the cultural fill in the structure occurred after abandonment, and there is evidence of additional crude constructions superimposed on the room described above as well as some burials that pertain to the Terminal Classic.

Structure 2A7-3 is similar in size and height to Structure 2A8-5. It is located on level 2 to the southwest of the Danta Acropolis and is associated with several long rectangular mounds to the east and north, presumably residences (midden in the back of one of the structures produced abundant Late Classic sherds and other materials). Structure 2A7-3 grew through accretion. Materials used in its construction were used haphazardly, and different techniques and materials can be seen side by side ranging from irregular uncut limestone pieces to well dressed limestone blocks. Late Classic inhabitants gathered whatever stone was available, including borrowing stone nearby from the well made Late Preclassic buildings. On Level 1, Structure 2A6-9 has well cut stone facades, but in some areas the stone is missing, almost certainly due to Late Classic depredation of the structure. A tomb from the structure may have been broken into also.

Room chambers were revealed near the top of 2A7-3. Room 1 measured 4.3 m east to west, and 1.9 to 2 m north to south. Room 2 was 2.35 m wide and the length was undetermined. Room walls consisted of unfinished roughly coursed walls, although, some well cut large blocks were placed at the corners. Some red painted stucco was found on some of the blocks and indicates that perhaps the upper walls were better prepared. Numerous triangular shaped beveled stones were found and are evidence that this structure had a vaulted roof.

Room 2 had a low bench on the east wall that stood 30 cm high and came 45 cm away from the wall. Four stone blocks standing on end were placed out from the wall and rubble was placed behind them. The bench was not plastered and was a remodeling addition to the room.

This is the only feature found in both of the rooms. The floor of Room 1 was a coat of stucco 10-12 cm thick. The floor extended beyond the entrance and covered stairs giving access to the rooms. Another plastered floor 10 cm thick was found 1.75 m below the bottom step and the floor covered fill held in by a crude retaining wall. Residential use of the structure is indicated by a midden up to 18 cm thick which mostly covered the floor of Room 1, especially near the north wall. In Room 1, underneath Floor 1, a whole vessel and a jade bead were found, probably part of a dedicatory cache. On top of Floors 3 and 4, at the bottom of the structure, more midden was found which included “figurine fragments, animal bone, bifaces, waste flakes, a spindle whorl, shell, obsidian, a human tooth, and several enigmatic clay items” (Howell 1983:144). Excavations into the northwest building exterior revealed that the rubble filled mound was covered by veneer style architecture in this area. On the southwest corner a different method was used with well cut limestone blocks set on edge, with the long axis perpendicular to the structure. Because of the large size of this structure compared to the other nearby ones, Howell felt that this was an elite residence. Many fragments of modeled stucco lying about suggested that the building may have had a more impressive appearance than the crude construction indicates (1983:149). Unfortunately, none of the lower, less-impressive rectangular mounds were excavated which may have been more analogous to the Terminal Classic rooms on Level 3.

### **Terminal Classic Architecture**

Excavations of the Danta Acropolis in 2005 and 2006 on Structures 2A8-2 (Figure 17) and 3A8-1 (Figure 18) by the Mirador Basin Archaeological Project revealed over 55 masonry rooms. Most rooms were excavated fully in the 2005 season when possible. In 2006 the project received the go ahead from the Guatemalan government to remove the Terminal Classic structures covering the massive Preclassic temples in order to consolidate and restore the facades

of these buildings. In 2006, during the process of removing architectural features, more rooms were uncovered which were noted, but not totally excavated. It is unknown if rooms are present on 2A8-3, the third building in the triadic formation, because it was not explored.

A summary of Terminal Classic architecture will be given. Because of space constraints I will not describe every room individually. The south façade of 3A8-1 and part of the west side were excavated. The west façade of 2A8-2 was excavated, and the excavations wrapped around the building, partially covering the north and south facades and exposing more rooms. Most rooms were built on top of 1.5 to 2 m of debris which had accumulated from structural collapse which occurred as the Preclassic pyramids above became unstable. Juan Velasquez (2006:394) implies that the fill containing Early Classic and Preclassic sherds was brought in from somewhere nearby to level off areas on the lower section of 2A8-2 prior to construction of the Terminal Classic rooms. In some instances the fill may have been brought in from other places, but for the most part it seems clear that most of the fill was the result of parts of the façade breaking away and falling down. Early Classic material may be present in the fill because it was once at the surface in the Early Classic, and the Preclassic temple structures were visited during that ephemeral occupation, just as other parts of the site were.

The most salient architectural characteristic of the rooms on structures 3A8-1 and 2A8-2 is that they were constructed using stone that had been removed from the facades of these enormous preclassic temple-pyramids, and they transformed what had been relatively untouched sacred buildings into quotidian residential space. In many instances there were significant parts of the façade missing, and the Terminal Classic rooms were using the exact same types of blocks. Therefore, there is no question where the stone came from, and it is a fact that the inhabitants pilfered the materials to build their residences. Most of the rooms have been assigned

a residential function since they are replete with domestic cultural material, including abundant utilitarian ceramics, animal bone, figurine fragments, zoomorphic whistles, groundstone, lithic material, and small quantities of shell and greenstone. The intent to maintain privacy is indicated by the presence of cord holes in the walls of some of these rooms which may have been used to hold curtains. Archaeologists for the Mirador Basin Project have identified two or three construction phases of unknown duration. All of the rooms date to the Terminal Classic based on ceramic cross-dating since a few pieces of fine orangeware have been found beneath the floors of the rooms, presumably placed there sometime prior to construction. Whether all the rooms belonging to the first phase were built as a single event is unknown. The first phase of construction consisted of large room walls. It is not known if the phases represent clear distinct chronological events or whether the phases of construction in different areas of the two buildings coincided.

The general orientation and level of the rooms are other distinguishing factors. Juan Luis Velasquez (2006:394) commented the following on the three construction phases on structure 2A8-2: “the first (construction phase) used blocks of good quality taken from the Danta Building, and one example of that is Room 20; a second moment is seen with the construction of rooms 22, 18, 19, 16, and 23, with blocks of regular quality, and showing a greater concentration of rooms on the north and west facades; a third moment is represented by the construction of rooms close together, not only at the base of the building, but also.... at a greater height, being constructed in the most simple way, with crude stones mainly, and using those spaces for housing and artisan activity as with rooms 22, 23, and 24,” (my translation).

In structure 3A8-1 the first phase is seen in rooms 1, 2, and 3. They are quite long. Room 1 is 7.5 m long. On this structure the first rooms were the largest, and afterwards they



Figure 17. Outline of room walls on Structure 2A8-2 (Courtesy of the Mirador Basin Project).



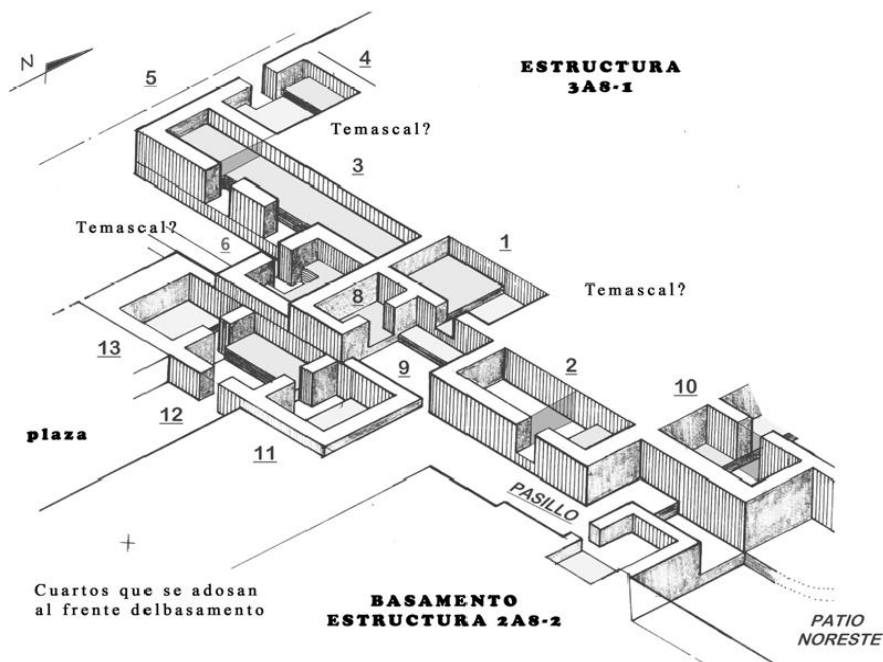


Figure 18. Outline of rooms from Structure 3A8-1 (Paulino Morales 2006, Mirador Basin Project, reproduced with permission).

were remodeled with rooms subdivided or new rooms built to the side. The second construction phase is visible in rooms 10, 9, 5, and 3. Frequently, what happened is that the original room walls were wider and better made, whereas walls from the remodeling events are narrower and made of even cruder manufacture. For example, the original walls in Room 5 are 55 cm thick, but the walls belonging to the second phase are 40 cm thick. Not only were rooms subdivided, Room 7 appears to be an enlargement of Room 6. The rectangular stones were placed in two ways, either on edge, or in a straight line with the long axis running horizontal. Sometimes both styles of stonework were used in the same room, such as Room 1.

Room floors were plastered, and superimposed floors from remodeling events are the norm. Most of the rooms had benches, some of which were quite low at around 15-20 cm while the highest ones were around 45 cm. The benches are certainly large enough to sleep on. Room 25 has a bench that measures 1.2 m wide by 2.0 m long x .3 m high. Room 10 has a longer one at 1.5 m wide by 2.5 m long. The south wall of Room 10 formed a boundary for the residences on 3A8-1, separating them from a stone pavement or walkway that ran between 28A-2 and 3A8-1. The stone paved corridor was functioning up until the last occupational phase on the Danta Acropolis when it was destroyed or fell into disuse as crude stone walls were built across it and restricted access.

The presence of niches built into the back wall of many rooms is one of the most conspicuous architectural features of the Terminal Classic occupation. One niche is present in Room 1, a very large room, but most of them are in rooms of small dimensions. There are niches in rooms 4, 8, 9, 6, 7, 14, 16 on Structure 3A8-1 and rooms 40, 41, 42, 43, 48, 50, 51, and 52 on Structure 2A8-2. On the latter building most of the niches were found with the door jambs sealed. One niche from the building was found plastered all over, even on the ceiling, and it measured 1.35 L x 1.25 m W; the height was not determined. The rooms with small dimensions and having niches are inferred to be *temascales* or sweatbaths. The inference is strengthened by other features in some of these rooms. For instance, in Room 16 a small drainage canal ran across the room starting from the niche in the back. A free standing bench sits in front of the niche and there is another near the entrance. These rooms slope down allowing for effective drainage. Additionally, Paulino Morales and Laura Ferguson (2006:429) note that, at least on 3A8-1, the floor surfaces were burned and there were numerous broken jars which might have held liquids. The stone pavement in front of Rooms 2 and 4 may have been used to drain water

from the sweatbaths in these rooms. Sweatbaths have been found at many other Maya sites and may have been used for healing but are also connected to other important parts of peoples' daily lives, such as birth, political events overseen by leaders, and places where guests are attended.

### **Special Offerings**

Special offerings or deposits at El Mirador are mostly domestic in nature; they are quite simple, and are probably connected to the dedication of modest dwellings. They are also found as modest burial offerings, which will be treated momentarily. In structure 3A8-1, Room 2, an almost complete striated vessel was found on the floor. A broken grinding stone was found *in situ* in Room 9. A pit was found under the doorway of Room 4. It was .85 m in diameter and 1.2 m deep. It may be connected with undetermined rituals. In front of Room 3 a Carmelita Incised bowl was found upside down. Rooms 14 and 15, on the west façade, both had numerous broken, unslipped vessels beneath the floor. At plaza level beneath Rooms 14 and 15 at the northwest corner, a cist was found that was sealed by six irregular limestone blocks. Inside was an incised/gouged black on red dish with a fanged serpent motif. Three fragmented vessels were found *in situ* in fill right above the cist. Two of them were unslipped striated jars and the third was a black tripod dish from the *Infierno* Group. In Room 20 a simple offering inside the bench consisted of a spherical punch and a fragmented mano. Room 17 had two crude metates placed vertically inside the bench of the room. Beneath the floor of Room 23 was Offering 1 which had an Encanto Striated jar with a chert chisel inside; it was accompanied with another unslipped jar. On top of an interior bench in Room 35 was an especially dense deposit with much ash. It was 23 cm high and may have been ritual in nature. It had abundant ceramic material, including 11 figurine fragments, 8 whistle fragments, 22 fragments of obsidian prismatic blades, and various

fragments of shell, snails, and chert flakes. This lot included several fine orange sherds, one Cameron Incised, and a Chimbote Cream Polychrome.

### **Burials**

A total of eight Terminal Classic burials have been recovered from the Danta Complex, two recovered by Howell (1983) on Level 2, and six were discovered during the 2005 and 2006 excavations on the Danta Acropolis. Burial 1 was found in Room 1, Structure 3A8-1, at 25 cm below the plastered floor. It was found in front of the niche and the bench. All that remained was the cranium, six teeth, and a possible humerus. No offerings are associated with the burial, but it is notable that one of the upper incisors has evidence of intentional dental transfiguration (this is the term preferred by Christy Turner [2000]). In Room 12 or 11 (the report is not clear on this) is Burial 2 which was placed inside a bench, with the cranium at the north end and the remains laying in dorsal position. No offerings are associated with the burial, and the room may have been filled in and the doorways sealed with limestone blocks sometime after the burial was placed inside. Burial 3 was apparently found in Room 10 (shown in the figures, but not described). It consists of a partial cranium, arm bones, either radius or ulna, two femurs, and either a tibia or fibula. It is unknown whether other offerings were associated with this burial. Burial 4 was found in Room 38 beneath a thin floor, with yet another thicker floor superimposed. It consists only of the front part of the skull of an infant. No goods or offerings are associated with it. Burial 5 was found inside Room 29, and deposited inside landslide fill which had fallen from the higher parts of the pyramid. Only a fragment of a metate and a small granite mano were found with it. Badly deteriorated humeri and femuri, along with a phalange, were found. Because of the large size of the bones, this individual is believed to be male. In Room 31 Burial 6 was found in fill next to the east wall. Apparently, the foundation of the wall served as a cist for the

burial. The cranium was placed with the head at the north, and this individual also had dental transfigurement in one of the upper incisors. The upper part of the femur has a cut that most likely happened after death. Ash and ceramics were associated with the remains as part of a special deposit or trash midden, including a jade bead. Burials 7 and 8 were found in Structure 2A8-5 on the second level of the Danta Complex. They were shallow intrusive burials with minimal preparation for the grave. Howell (1983) believes they were placed there in commemoration of the Late Classic lineage. The later interment of individuals in structures probably associated with their lineage was a common practice of the Maya (McAnany 1994). Furthermore, these two burials contained a few finely made fine orageware vessels, a hallmark of the period, and they are the most impressive burials found so far at the site for the Terminal Classic. If the individuals were of some import, that fact was not displayed by lavish grave offerings as have been found at other sites in the lowlands.

### **Social Memory**

There is a strong possibility that social memory played a significant role in the founding, and function, of the Terminal Classic village on the Danta Acropolis. Exactly what role it played is hard to expalain, and determining whether they were attempting to remember or forget is still more difficult (Bradley 2003). Social memory is a term generally used in reference to the construction of a collective notion about the way things were in the past (Halbwachs 1950). It is an important concern for archaeology because archaeological interpretation is a form of social memory. It is relevant to this study because past inhabitants frequently encountered ancient material remains that would have necessitated some type of interpretation, especially when reuse was involved (Bradley 2003). Studies show that collective memories often become corrupted within one-hundred to two-hundred years (Henige 1974). Oral histories, if not codified in

writing, may be expressed in a number of material forms such as built monuments. Even when memories are codified in writing or materially some loss in the integrity of the collective memory is expected. The meaning and memories associated with monuments also changed over time, which is well attested by reuse and modification of ancient monuments. Despite the enduring character of many monuments, the ways in which they were used often changed. One challenge to archaeologists is conceptualizing why changes were made. A possible impediment to understanding the role of social memory in the changing use of monuments is the archaeologist's persistence in relying on linear time scales as chronologies are constructed. The kinds of narrative or conceptions of time might be quite different between archaeologists and those responsible for building the ancient monuments (Bradley 2003, Lucas 2005). Additionally, public monuments were often erected with a political purpose in drawing upon collective memories.

If the social memory evident from the Terminal Classic constructions on the Danta Acropolis has any validity it may be more relevant than other examples which are connected with codified written memories because their context would therefore be much more limited than those without written texts (Bradley 2003). Remembering the past was an important aspect of political legitimization in the ancient world, and it is still invoked. One other aspect of social memory that receives much less attention involves deliberate attempts to forget the past, or remembering by forgetting (Bradley 2003). This may take the form of iconoclasm connected with attempts to erase the past through destruction of objects or monuments.

Whether the Terminal Classic inhabitants of El Mirador were trying to purposefully remember the distant past by placing their residences on the façade of large Preclassic pyramids or were trying to erase the past or forget it by reusing and pilfering stone from the ancient

structures is unknown. Perhaps some level of disregard for the structures is evident by stone robbing and the deliberate desecration of Late Preclassic stucco masks they encountered as they dug their residences into the pyramid. Ritual decommissioning of the Preclassic pyramids is another possibility; however, at other Terminal Classic sites this has taken the form of termination rituals that involved sealing rooms, blocking access to public buildings with debris from feasting, and even the desecration of human bodies (Guderjan 2005; Navarro et al. 2008). These activities are not evident at Terminal Classic El Mirador. Hansen et al. (2008:47) describe situations where Late Classic inhabitants had different perceptions of ruined monuments than had Preclassic peoples, such as residences at Nakbe that were placed on top of a Preclassic causeway. If the Terminal Classic residents were remembering the Late Preclassic (with this lapse of time the memories would be mythological rather than concrete memories [Bradley 2003]), and commemorating their ancestors and the pyramids, it is important to point out that the context of doing so had changed, and the residents or pilgrims were not following typical Maya traditions. If the residents of the village, or pilgrims, were commemorating the buildings from the Danta Acropolis as part of a perceived ancestral connection they did so in an atypical way. They did not build another temple superstructure or shrine or even attempt to encapsulate the building, as frequently happened with Preclassic structures during the Classic period. Instead, they removed stone from the facades of 3A8-1 and 2A8-2, and perhaps were showing disrespect rather than reverential behavior. Based on the similar situation at Calakmul, where the large Preclassic temple pyramid was covered with residences and workshops in the Terminal Classic period, ritual space was being redefined in the Terminal Classic period. The former ritual spaces were modified and were dual in nature, being both ritual and sacred, and having a secular dimension as palace-temple pyramids (Braswell et al. 2004).

Because of the similarities with Calakmul it seems likely that the Terminal Classic inhabitants of El Mirador thought that the Preclassic buildings were important in some way. However, the constructions may have been erected from the Preclassic pyramid stone because of expediency. The residences at El Mirador, built onto the façade, could likewise be considered a palace-temple pyramid complex, although a bit shabbier. One pattern I wish to highlight, which I believe is of some import, although speculative, is the location of occupation during the different time periods. The relationship to the time periods specifically is not important in my explanation; obviously there were other notions of time operating during the Terminal Classic, but I refer to the fact that the different construction locations correspond roughly to the chronologic periods. I find it interesting that residential occupation on the Danta Complex changed along with the major periods of occupation. In the Late Preclassic residential structures were scarce on the Danta Pyramid, but at least one was constructed on Platform 1 of the Danta Complex surrounding the Pava Plaza (Suyuc Ley and Castillo 2006). During the Proto-Classic and Early Classic there was essentially a hiatus in occupation. During the Late Classic period, residential occupation on the Danta Complex was concentrated on Platform 2 where several range structures and taller elite residences were built (Howell 1983). There is evidence of Early Classic and Late Classic activity on Platforms 3 and 1, but it was not residential occupation; rather, it was ritual in nature. In the Terminal Classic the population moved to Platform 3, the Danta Acropolis, in buildings 2A8-2 and 3A8-1. Thus, according to settlement data, the occupants of the Danta Complex, despite breaks in occupational history, progressively moved higher up the building platforms during each major period of occupation and finally resided on Platform 3, the highest level adequate for habitation, during the Terminal Classic period. The motive for this pattern of progressively moving residence higher up the pyramid is unknown. There may have been a



functional reason for the pattern, but also there may have been an ideological motive. One potential ideological motive might deal with the problem of acquiring enough ritual power during the Late Classic and Terminal Classic periods. The importance of the Danta pyramid to the Terminal Classic inhabitants is difficult to assess, but I believe that it was important: however, they appear to not have tried to commemorate the Preclassic structures in typical fashion. It is also possible that the totally new structures may have been intended to modify and alter existing interpretations of the older structures (Bradley 2003). Additionally, it may be that the inhabitants were prohibited from making alterations to the Danta Acropolis during the Late Classic by a political entity that controlled El Mirador. In the Terminal Classic this control may have broken down and the inhabitants may have modified the structure as they wished. These are but a few of the possible scenarios. Although the exact motive is unknown, the pattern of residential movement up the pyramid with time is captivating.

### **Continuity and Change: Late and Terminal Classic Architecture**

One of the salient characteristics of the architecture between the two cultural periods is the apparent lack of respect for the colossal Late Preclassic temple-pyramids of the Danta Complex. If the Late Classic inhabitants demonstrated lack of respect by pilfering stone blocks from lesser ceremonial buildings on Level 1 and 2, then the Terminal Classic occupation may represent a deeper level of disrespect or desecration. While the Late Classic inhabitants robbed stone from structures, especially on Level 2, they appear to have respected the Danta Acropolis, leaving perhaps the largest ceremonial compound of the site, and one of the largest ever constructed by the Maya, relatively untouched. There was an increased presence of Late Classic inhabitants on the Danta Acropolis compared to Early Classic times; however, all pure Late Classic deposits occur beneath the room structures on Str. 3A8-1 and 2A8-2. From all

appearances the inhabitants continued a general pattern of visitation and pilgrimage already established since the Early Classic. The Terminal Classic occupation of the Danta Acropolis is different because the largest Late Preclassic temple-pyramids apparently were not accorded the typical level of reverential respect normally given to sacred structures. Respect usually took the form of leaving the structure alone or performing rituals on the structure. The purpose of removing stone from the Preclassic pyramids had is unknown. It is also a possibility that what appears to be desecration of the older pyramids was an act of consecration, making the new Terminal Classic period rooms sacred. The inhabitants may have sought to lay claim to their heritage by associating themselves with the builders of El Mirador, a memory which may have been important in their cosmology.

Quantitative comparison of architectural elements between the two periods is impeded by lack of complete measurements for rooms for the Terminal Classic, and because data from only a few Late Classic buildings from El Mirador were available. One architectural characteristic present during the Late Classic were corbel-vaulted roofs, such as Str. 2A7-3. This element is frequently cited as one of the cultural markers of the Maya Classic period and represents a more substantial investment in shelter against the elements as well as a shared practice of some importance that was prevalent in the Maya world. The rooms found on the Danta Acropolis were not corbel-vaulted, and it seems certain that the roofs were made of perishable materials. Concerning methods of construction and quality of workmanship there appears to be some similarity between the two periods. As mentioned previously, the real striking difference in the architecture has more to do with where the Terminal Classic inhabitants built than with the quality of manufacture and the way materials were used. In some instances Late Classic structures have well built features. Part of the exterior of 2A7-3 had a façade of well cut stone,

and the stucco fragments indicate at least a finely finished façade. However, in the room on top of this structure is a bench that was never plastered, and the parts of the structures that Howell excavated that have well cut stone got that way by using stone that was taken from the Late Preclassic structures. On the other hand, the residences in the LacNa Complex appear to have been well constructed. The Terminal Classic occupation continued in the same vein as the Late Classic as far as quality of construction. Some features are well finished, such as benches, but importantly the masonry construction is of inferior quality, almost without exception. The shoddy wall construction is due to the ad hoc use and placement of stone which had been removed from the existing Preclassic structures on the Danta Acropolis.

## Chapter 4: El Mirador in a Regional Setting

Since the Late Classic occupation at El Mirador was strikingly incongruent with the rest of the Maya lowlands it is a worthwhile task to see how similar or different El Mirador was to the rest of the Maya lowlands during the Terminal Classic period. Broadly speaking, is the Maya collapse manifest in the same ways as have already been observed at other sites? Comparisons will be made with other Maya cities in this chapter which will indicate how similar or different El Mirador was to regional cultural processes. These comparisons will be made by considering ceramic assemblages which are sensitive to cultural change, and consider architecture to a lesser degree.

Forsyth (1998) sought to measure cultural change from the Late to Terminal Classic in the Maya lowlands by comparing ceramic assemblages. In analyzing cultural processes he emphasized traits of Maya society that are not exclusively associated with the elite managerial class. In the past, as mentioned, when the focus had been primarily on the most visible aspects of Maya culture (the stela cult, monumental architecture, luxury items, polychrome pottery), interpretations of the Terminal Classic generally emphasized the cultural decadence and disjunction of the period. In Forsyth's analysis, however, the everyday utilitarian wares that all Mayas used are the focus in interpreting cultural stability and change and have the advantage of representing all segments of Maya society.

Vessel forms were found to be particularly sensitive to cultural change and were the main basis for making comparisons. Relevant to this thesis is Forsyth's (1998) concept of the Peten Subcomplex, (or supercomplex [Rice and Forsyth 2004]), covering most of the Peten and parts of Campeche and having analogs in nearby areas. The supercomplex is defined by bowls or basins with thick inverted rims and often having thumb impressions on the exterior below the

rim. It also includes tripod dishes with divergent walls and tall necked jars. Forsyth split the complex into two groups, a west and an east group. The West Group, originating in the Usumacinta area, is distinguished by the presence of two types, Subin Red and Chaquiste Impressed. The group also is known to have abundant fine orange wares. Most of the Peten is covered by the West Group, except for the north and northeast corner of the department. The West Group covers the Usumacinta region, as well as the Peten lakes region, and the Rio Mopan area. The area north of the lakes region, the region surrounding Tikal, Uaxactun, and beyond, belongs to the East Group (Forsyth 1998:69) and conforms to the Eznab Ceramic Sphere defined by Culbert (1973:80). Some of the characteristics that comprise the Eznab Ceramic Sphere include small quantities of fine orangeware, generally the same types that are found in the West Group, a significant reduction in fine polychrome vessels, and the introduction of different forms in monochrome red which imitate fine orangeware forms from the West Group. The Late Classic assemblages from Calakmul and El Mirador do not have the West Group, but appear to be dominated by the East Group (Forsyth 1998:68). However, it does appear that by the Terminal Classic the West Group had spread to Calakmul and Tayasal, although it did not predominate at Calakmul. The West Group spread to Tayasal late, and was perhaps the exception in the lakes region since other sites there had the West Group prior to the Terminal Classic.

The ceramic assemblage from the Terminal Classic period of three sites will be compared to El Mirador. The three other sites (Table 12) in question were chosen largely because of the quality of reporting and because they differ according to which supercomplex group they belong to. Altar de Sacrificios, in the Pasion Region, belongs to the West Group. Uaxactun belongs to the East Group, and Calakmul shows more affinity with the East Group, but it shows other influences from the north. Of the three sites used for comparison, Calakmul is the closest

Table 12. Ceramic Phases from sites mentioned in the chapter.

Time Period	El Mirador	Altar de Sacrificios	Seibal	Uaxactun	Tikal	Calakmul
600		Chixoy	Tepejilote	Tepeu I	Ik	Ku
650	Late Classic					
700	late Late Classic	LacNa	Pasion	Tepeu II	Imix	
750			Tepejilote to Bayal Transition			
800	Terminal Classic	Post-LacNa	Boca	Tepeu III	Eznab	Halibe
900		Jimba	Bayal			
1000	Post Classic				Caban	

inproximity to El Mirador, and it shares some cultural practices with El Mirador that were exclusive to the Terminal Classic.

### Altar de Sacrificios

Located near where the Chixoy and Pasion Rivers meet, Altar de Sacrificios was a small Maya kingdom in the Late and Terminal Classic periods. Altar de Sacrificios developed much like other kingdoms. Social stratification appears to have emerged in the Late Preclassic followed by a disruption in Late Preclassic ceramic traditions. Among the changes was the introduction of polychrome vessels. The use of polychrome painting increased during the Early Classic along with other techniques of decoration, such as gouge-incising (Adams 1971:5). Late Classic Chixoy Complex pottery (corresponding to Tepeu I) is considered to be one of the high points in the Altar sequence as far as execution. The Pasion complex continued the emphasis on finely made polychrome ceramic vessels; however, they tended to be executed in more

standardized patterns than before. Altar reached its apogee in the Late Classic, with ceremonial architecture reaching its largest extent during this period. On the other hand, population may have been densest during Boca times (dates to the early to mid Terminal Classic period [Adams 1971:161]) with most house mounds simultaneously occupied during the period. Ceramic changes during the Boca Complex are contemporary with the cessation of monument erection and monumental construction. The Boca Complex, just like Tepeu III, shares the Terminal Classic trend of decline of the ceramic polychrome painted tradition and the increase in monochrome types. Commenting on the social dynamics of the period, Adams said “the picture at Altar during Boca times is generally one of simplification of ceremonial culture in nearly all aspects. These changes suggest an internal crisis” (Adams 1971:161). Adams was able to divide Boca into early and late facets. If there was a reorientation in the ceramic sequence during Boca times, the following Jimba Complex represented a complete disjunction in ceramic types and forms, and it probably had a foreign origin. The ceramic types at El Mirador correspond to Boca and Jimba types at Altar de Sacrificios.

### ***Boca and Jimba Types***

Adams report gives counts of pottery vessel types from specific operations, which apparently are supposed to be illustrative of the whole complex. However, there are types which he deemed important to defining the Boca and Jimba Complexes which are not among the ceramic counts from the operations in question (Adams 1971:104-105). Since counts are not given for the whole assemblage it is not possible to make adequate quantitative comparisons. Apparently important to the Early Boca facet were monochrome red vessels, Subin Red: Subin Variety, and Tinaja Red: Aduana and Tinaja varieties. Ejercito Red is probably a local regional variety of Tinaja Red. In the early facet Encanto Striated was important, and Chaquiste

Impressed, Zopilote Smudged Black in the Zopilote and notched varieties, Anonal Orange Polychrome, and Sayaxche Orange Polychrome were important to a lesser degree. The late facet is characterized by the presence of Tinaja Red: Tinaja Variety, Zopilote Smudged Black: Modeled Foot Variety, Pantano Impressed (both the Pantano and Stamped varieties), Lombriz Orange Polychrome: Lombriz Variety, San Isidro Orange Polychrome, San Isidro Variety, Sayaxche Orange Polychrome: Sayaxche Variety, and Jimba Complex trade pieces (Altar Fine Orange and Tres Naciones Fine Gray), and appliqué buttons on Encanto Striated vessels. Based on sample operations (Adams 1971: 102-105) it is worth noting that the frequency of polychrome vessels decreased dramatically from over 13% in the Late Classic to 5% during Boca times. Furthermore, the polychrome types have naturalistic designs which are not well executed, especially in the late facet.

While Boca Complex ceramics included small quantities of imported fine-paste ceramics, the following Jimba Complex is characterized by their abundance. They account for nearly 38% of a 10% sample of housemounds (Adams 1971:107). Fine Gray Ware types are actually more frequent (51% of fine paste ceramics) than fine orange ware types. Popular modes which are characteristic at Altar de Sacrificios during Boca and Jimba include impressions on jars and open or slightly restricted basins and tall necked jars, tripod dishes or bowls with hollow supports, and for fine orange and gray types, barrel shapes, grater bowls, and composite silhouette bowls. Altar de Sacrificios belongs to the West Group of the Peten Supercomplex because of the presence of Subin Red: Subin Variety and Chaquiste Impressed. One area of similarity between El Mirador and Altar de Sacrificios is the emphasis on monochrome red types, belonging



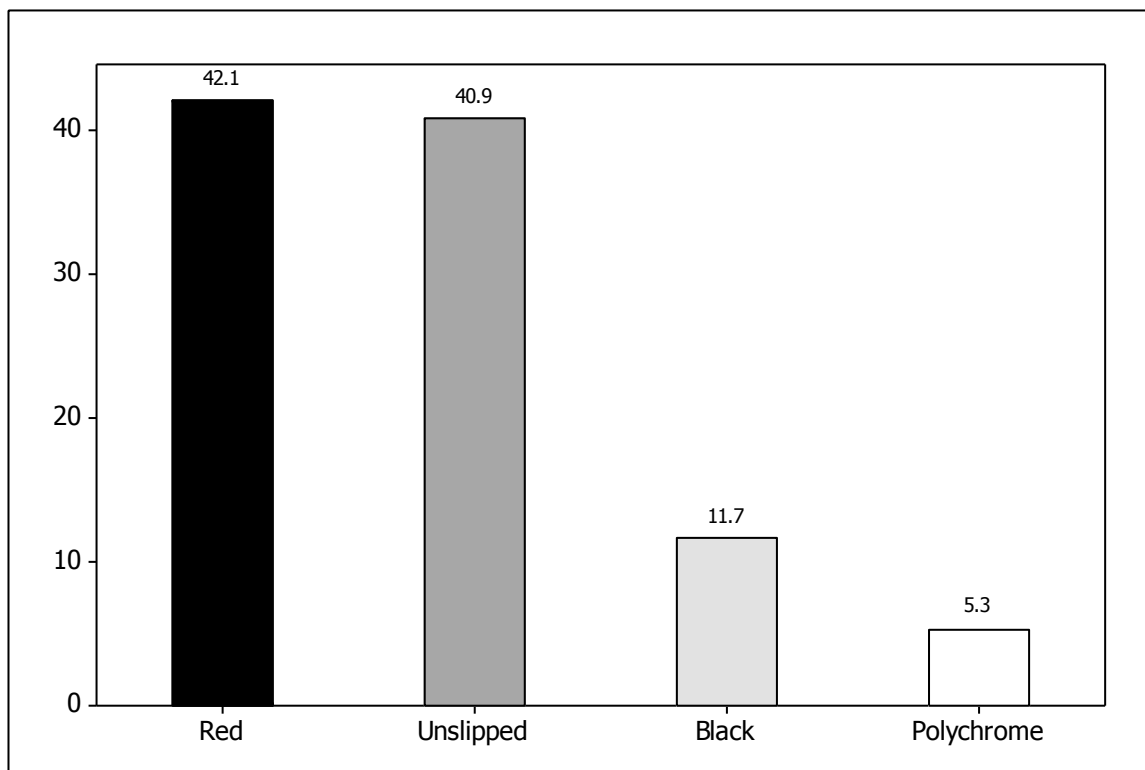


Figure 19. Surface treatment of vessels from Altar de Sacrificios.

principally to the Tinaja Group. Black slipped pottery appears to be just as frequent as at El Mirador (Figure ; however, the Zopilote type does not pertain to Peten Gloss Ware. The Tinaja Red: Tinaja Variety appears at El Mirador in small quantities as it does at Altar. The Subin Variety of Tinaja Red and Chaquiste Impressed occur in small numbers at Altar but are quite rare at El Mirador. In fact only a few possible examples of Chaquiste occur. Chinja Impressed is the most frequent incurved rim basin at El Mirador. Additionally, Cameron Incised occurs at both sites along with the stamped and tool impressed varieties of Pantano Impressed. Other than Saxche Orange Polychrome (a variety of Palmar Orange Polychrome according to Forsyth 1989) the rest of the polychrome types are different. Polychromes at both sites decrease in frequency and quality. The polychromes from El Mirador are also different—most of them are cream slipped and include naturalistic designs. They were also likely produced outside of the Peten, somewhere in Campeche. Another major difference in ceramic assemblages between the sites is

that unslipped pottery overwhelmingly dominates the assemblage at Post-LacNa (Terminal Classic) El Mirador, whereas at Altar monochromes are still more frequent in the Terminal Classic (Figure 19). The changes that occurred from the Pasion Complex to Boca (especially the late facet), and Jimba, at Altar de Sacrificios, as well as nearby sites, represent a significant reorientation in the ceramic assemblage (Forsyth 1998:67). El Mirador seems to have undergone some of the same changes in the ceramic assemblage as occurred at Altar de Sacrificios, such as the introduction of new forms, mostly present in fine paste types or imitating fine paste types, decreased importance of polychrome, and increased frequency of unslipped pottery. El Mirador certainly did not have the same degree of ceramic change as apparent at Altar de Sacrificios. Fine paste wares were very rare and never came to characterize the assemblage as they did at Altar. The overall picture, when focusing on utilitarian pottery at El Mirador, is one of continuity punctuated with some small changes. Because of the new pottery traditions introduced in the Usumacinta area during the end of the Late Classic and into the Terminal Classic a possible invasion by non-Peten Maya has been postulated (Adams 1971:163). This aspect of cultural history has not been resolved. Because of the significant continuity in the ceramic assemblage at El Mirador, and the modest quantities of tradewares, in the realm of domestic culture there would appear to be considerable stability.

### ***Architecture***

At Altar de Sacrificios building construction continued unabated during Boca times. Structure A-1 is located at the north end of the main plaza of the group and formed an acropolis or palace structure. The building was first erected during the end of the Early Classic or beginning of the Classic period, and it continued to grow through accretion with some small platforms added during Boca times. Everything indicates that Boca period inhabitants maintained

this structure and made small additions. The superstructure for this large building was made of perishable materials. House mound construction also reached its height during Boca times and it is the period when most mounds were inhabited simultaneously (Adams 1971:161). During the following Jimba Phase some very low mounds were made on top of Structure A-1, apparently using materials taken from nearby (Smith 1972:35).

The constructions from the Danta Complex and Altar de Sacrificios could not be more different. At El Mirador there was no attempt to maintain the nearby temples on which the Terminal Classic structures were placed. They had already been in a state of disrepair for centuries. The occupation at El Mirador did not simply modify buildings or continue a building program, as happened at Altar. The situation at El Mirador is different because of the apparent disregard (other possibilities do exist) for the Preclassic buildings whose stone was used in the new constructions. The Boca Complex population was not nearly as nucleated as was the case on the Danta Acropolis. The population did not limit their settlement to just one plaza area as was the case with El Mirador. The Jimba period, with apparent disregard for the preexisting palace structure, demonstrates behavior analogous to Post-LacNa El Mirador.

The Boca and especially the Jimba phases at Altar de Sacrificios are more drastic departures from established ceramic patterns than is seen from the other sites described in this comparison. This is because the Usumacinta area was the recipient of drastically different influences in the Terminal Classic, culminating in the domination of fine paste wares, which represent a completely new ceramic tradition from the previous period, but still Classic Maya in style. Altar de Sacrificios exhibits considerable disjunction in the ceramics instead of stability. The importance of new ceramic types to the occupation should not be doubted because they

appear just before the site was virtually abandoned (Jimba Complex), and their introduction to other sites in the Peten also coincides with demographic decrease or near collapse.

## **Uaxactun**

### ***Ceramics***

This site is located about 19 km north of Tikal and was the focus of some of the earliest professional archaeological work in the southern lowlands. The importance of Peten pottery, which is best described by Smith (1955) at Uaxactun, is such that Forsyth (2005:11) has commented that it has served as a “ceramic vertebral column” for ordering ceramics typologically and modally, for the purpose of making ceramic comparisons.

Tepeu III ceramics, which date to the Terminal Classic, were isolated for classification by subtracting all the other types that were known positively to date to Tepeu I and II. The type-variety determinations were also made after the first publication when Smith became convinced that type-variety designations could be given for the vessel illustrations. There is no quantitative data for type-varieties. On the other hand, Smith’s description of vessel forms and modes is unparalleled. According to Smith (1966), in a comparison of surface manipulation from the beginning of Tzakol to the end Tepeu, incising and modeling were more frequent during Tepeu III times than they ever had been during the phases in question. Painting of vessels reached a low point in its frequency during Tepeu III, as the polychrome tradition essentially died out. There was an increase in gouge-incising, and the use of impressions as a decorative mode on ceramic vessels actually declined from the Late to Terminal Classic. The use of plano-relief on vessels was also supposedly more frequent in Tepeu II phase than Tepeu III phase. Frequent vessel shapes for Tepeu III include wide mouth storage jars, mostly unslipped, incurved rim bowls, flaring side tripod plates, incurved rim tripod dishes, round-sided bowls or dishes, and small

Table 13. Monochrome slip counts from Uaxactun, (Smith 1955).

	Red	Orange	Weath/Var	Black	Cream	Brown/Gray	Fine Orange	Other	Total
Tepeu I & II	80	195	828	49	1	61	0	14	1228
Tepeu III	1106	302	1026	56	4	349	44	4	2891
Total	1186	497	1854	105	5	410	44	18	4119

mouth jars.

Monochrome red ceramics are the most frequent slipped vessels from Uaxactun (Table 13). Tripod dishes with recurved rims were common in the assemblage as well as flaring walled tripod dishes. Incurved rim basins and jars are well represented but somewhat less frequent. Round sided hemispherical bowls were also common. Black slipped vessels were not nearly as common as orange and brown/gray monochromes, and they were most often made as flaring walled tripod dishes. Jars and incurved rim basins are common forms for brown and gray slipped vessels. Monochrome ceramic types from Tepeu III include Tinaja Red: Tinaja Variety, Cameron Incised, Pantano Impressed, Portia Gouged-Incised, San Julio Modeled, Monica Plano-relief, from the red slipped group, Achote Black, Ones Impressed, Carro Modeled, Torro Gouged-Incised. The polychromes, decreased in importance, and were primarily orange slipped. Only 80 polychrome sherds have been found that date to Tepeu III times. They are mostly found as round sided tripod dishes. Fine paste wares are also quite rare at Uaxactun—only 44 sherds were found. They occur in the types observed at other sites, as well as a few additional ones pertaining to the *Balanca*, *Silho*, *Matillas*, and *Cunduacan* ceramic groups. Of the fine paste wares found, the most common forms are barrel shapes and round-sided hemispherical bowls (Smith 1955, chart 1).

The ceramic assemblage at Uaxactun appears to have been fairly stable from the Late to Terminal Classic with regard to the utilitarian wares. The *Encanto* Ceramic Group continued into Tepeu III times unabated. The main changes in the ceramic assemblage were the introduction or disappearance of certain forms or the increase or decrease of decorative modes. For instance, incurved rim tripod dishes become quite popular in red slipped monochromes. Whether the loss or introduction of certain forms was due to dietary changes is unknown, but there was certainly more storage jars in the Terminal Classic than before, along with the new incurved rim tripod dish (Table 14).

El Mirador shows the same emphasis in the Terminal Classic on incurved rim basins, flaring walled plates or dishes, and storage jars as evident at Uaxactun. Typologically the two settlements are quite similar. Interestingly Pantano Impressed apparently was not present at Uaxactun until Tepeu III times, whereas at El Mirador it was present in the Late Classic. Smith (1966) reports that Chinja Impressed is not present at Uaxactun during Tepeu III; however, taking into account the procedure for identifying the Tepeu III ceramic assemblage its absence is questionable. It is present at El Mirador in significant quantities. Another interesting parallel is the increase in round-sided hemispherical bowls at Uaxactun, which is also the case for El Mirador. Terminal Classic markers such as Cameron Incised are notable, as well as Tinaja Red: Tinaja Variety, which is common at Uaxactun in incurved (or recurved) rim tripod dishes. The El Mirador sample is a much larger sample than that reported for Uaxactun. Fine paste ceramics were actually more frequent at Uaxactun, but not altogether common. There are also several additional fine paste types found at Uaxactun but not at El Mirador, probably because Uaxactun was a larger settlement in the Terminal Classic. One similarity exists in that most polychrome vessels from both sites were on round-sided bowls occasionally having tripod supports. From all

Table 14. Frequency of general vessel forms for Tepeu III, Uaxactun.

	Wide Mouth Storage Jars	Incurved Rim Bowl	Flaring-side Tripod Plates	Incurved Rim Tripod Dish	Round -side bowl or dish	Small Mouth Jar	Other	Total
Frequency	37%	20.5%	11.1%	8.9%	7.8%	7.1%	7.5%	100%

\*Wide mouth jars are invariably unslipped.

appearances, Uaxactun had the same continuity in utilitarian ceramics as El Mirador. Some changes were more evident at Uaxactun, such as greater change in vessel form frequencies, but the forms continued to have similar domestic functions. The greatest changes, although not significant quantitatively, but affecting the character of the assemblage, were the near disappearance of polychrome vessels and the introduction of small amounts of fine paste ceramics. A similar appraisal would also characterize El Mirador. Little information exists that would illustrate what the Terminal Classic community was like at Uaxactun, but it must have been greatly reduced demographically, as happened at Tikal nearby (Valdes and Fahsen 2004).

### **Calakmul**

#### ***Ceramics***

This site is located about 50 km to the north of El Mirador, across the border, in Campeche, Mexico. This is one of the largest Maya city states, and it was a large Preclassic settlement, just as El Mirador was. However, in the Early Classic, when El Mirador went into an abrupt decline, Calakmul grew tremendously into the polity that rivaled Tikal during much of the Early and Late Classic periods (Braswell et al. 2004). The most recent ceramic report does not address vessel forms, and the only quantitative data is for types and varieties (Boucher and Dzul 2006). The ceramic count chart is also expressed only according to ceramic groups, but this still allows some comparisons to be made.

First, it does seem a strange that the Calakmul Project recovered so little unslipped pottery from the excavations. It constitutes only about 5% of the total Halibe Phase assemblage (Terminal Classic). Although Boucher and Dzul (2006) assigned the Encanto Group to both the Ku (Late Classic) and Halibe phases, there may have been more reluctance to place unslipped pottery with the Halibe phase than the Ku phase when making the temporal determination of ceramic lots. When taking into account what is known from other Maya cities the figure for unslipped pottery is suspect, but the low number may just be a reflection of the building contexts that were excavated, being primarily from temples and palaces. It is possible that the unslipped pottery was discarded somewhere away from the rest of the pottery. The most common group present at Calakmul during the Halibe phase is the Achote Group (this is actually a continuation of the Infierno Black tradition, but it was given a different name by the investigators because a new ceramic complex had started). Torro Gouged-Incised is mentioned as being a common type from this group (Dominguez Carrasco 1994: 234). The second most frequent group is Maquina Brown, pertaining to Peten Gloss Ware and having clear brown to darker and reddish slip color (Dominguez Carrasco 1994). This ceramic group may actually represent what some regard as the lighter end of the Infierno Group spectrum (Forsyth personal communication, December 2010). Also present and common in the assemblage are types belonging to the Tinaja Group, including the Tinaja Variety (which occurs abundantly), Subin Red, Pantano Impressed, Chaquiste Impressed (not common), and Cameron Incised, with the latter type mentioned as being common. New forms are introduced into the black and red slipped pottery during the Halibe phase. These include barrel shaped vessels with pedestal or ring base supports, and incurved rim tripod grater bowls. The Dolorido Polychrome Group and the monochrome Traino Brown are also found in the latter form. During the Terminal Classic Calakmul was the recipient of



influences from the north, principally slateware belonging to the Muna, Ticul, Tancachacal, Chencan, Hontun, and non-specified thin slateware groups which comprise approximately 5% of the total for the period. Traino Brown had its origin from the north, and it began to appear as early as the Late Classic. Tecolote Composite, affiliated with the Rio Bec region, was introduced in censer form at this time as well as Miseria Applique which is associated with the Peten. Fine paste types comprise almost 2.5% of the Halibe Complex assemblage. And they are also strongly present in new forms such as barrel shaped vases and incurved tripod grater bowls. Round sided bowls appear to be the most common form for fine paste types, however (Dominguez Carrasco 1994). Dolorido, the only polychrome ceramic group from the Halibe Complex comprises less than 0.5% of the assemblage total. Polychrome ceramics had made up nearly 2.5% of the assemblage during the Late Classic Ku Complex.

The Post-LacNa Complex at El Mirador shows significant similarities to the Calakmul Halibe Complex. Boucher and Dzul (2006), and Dominguez Carrasco (1994) indicate that Chinja Impressed is not present at Calakmul during the Terminal Classic, though it had been during the Late Classic, but was replaced by Chaquiste Impressed, which is supposedly a common type at the site. However, in Dominguez Carrasco's description of Chaquiste Impressed she does not mention that the impressions are made on a raised fillet, being the major difference between it and Chinja Impressed. This is an important point because if only Chaquiste Impressed is present then it would indicate more substantial interaction with the Western Group of the Peten Supercomplex in the Terminal Classic since it is one of the principal types comprising the Western Group. Nevertheless, incurved rim basins are quite common at Calakmul just as they are at El Mirador during the Terminal Classic. One major difference is that Chaquiste Impressed does not appear at El Mirador, except perhaps for a few potential sherds. Maquina Brown is a

ceramic group not reported for El Mirador. It is not known whether Kuxum Mottled: Kuxum Variety, the creamy slipped monochrome named after classifying the Danta ceramic material, represents an analogous type. It is different from Maquina Brown in being gray to creamy-brown, not the dark brown slip color like Maquina. Nevertheless it is a new monochrome group which is found in considerable quantities somewhat similar to the situation at Calakmul with Maquina Brown.

Relying upon the ceramic chart by Boucher and Dzul (2006) it appears that red and black monochromes reversed popularity from the Late to Terminal Classic periods. In the Late Classic, monochrome red was the most common slip color, and black pottery was numerically not even half as frequent. In the Terminal Classic, Achote Black became the most frequent ceramic group (significantly more popular than unslipped types, which is suspect). Torro gouged incised occurs and is common at Calakmul, but it is quite rare at El Mirador.

Both El Mirador and Calakmul witnessed a dramatic decrease in polychrome pottery from the Late to Terminal Classic periods. The Dolorido Group is represented by Zanahoria Rayada: Zanahoria Variety, and Droga Red-on-Cream: Droga Variety, which are well represented at Becan and indicate influence from that region. These polychromes are not present at El Mirador. On the other hand, there are other polychromes from Campeche which have been found, and they include such types as Chimbote Cream Polychrome, Sayan Red-on-Cream, and a handful of Tich' Polychrome sherds. These polychromes most likely are trade pieces; it is interesting that they do not appear at Calakmul since Calakmul is closer to their zones of production. Sherds belonging to the Palmar Group are rare at El Mirador and are not present at Calakmul.

Another difference is the appearance of slateware, which is very rare at El Mirador but common at Calakmul. Ticul Thin Slate and Muna Slate sherds were encountered at El Mirador, and other non designated thin ware types were observed at Calakmul along with the Tancachacal, Chencan, and Hontun Groups. Non-designated thin slateware types were made locally somewhere in southern Campeche and comprised nearly 3% of the assemblage there (Boucher and Dzul 2006:608). Calakmul appears to be at the southern frontier of the slateware tradition, and sites beyond it have only small quantities of this pottery.

Calakmul shares with El Mirador several cultural patterns which are found broadly over the lowlands during the Terminal Classic. Polychromes decrease dramatically and new ceramic types from Campeche are introduced in small quantities. One may say that monochrome vessels dominate assemblages during the Terminal Classic; however, that would only be true for Calakmul. At El Mirador unslipped pottery actually dominates the assemblage. The fine paste wares appear at both sites in the Terminal Classic in the same types. At El Mirador they are found in small quantities, while at Calakmul they are much more common. El Mirador appears to have been the recipient of the same influences from the northwest such as fine paste wares and new forms, albeit to a lesser degree than Calakmul, and this is probably due to it being a much smaller settlement than Calakmul.

### ***Architecture***

Parallels between El Mirador and Calakmul go beyond ceramics. In contrast to El Mirador, Calakmul had a significant occupation during the Terminal Classic, although evidently reduced in population. A distinctive Terminal Classic development is the conversion of Classic or Preclassic period temple-pyramids into palace-temples, or spaces devoted to secular and sacred practices. At Calakmul, the largest building, Structure II, a former triadic Preclassic

temple at 55 meters high, was modified toward the end of the Late Classic. The Preclassic masks were covered over and a large central staircase was erected leading to three new structures built on the edge of the top of the platform and which functioned as a palace complex. Later, perhaps at the start of the Halibe Phase, a series of crude rooms were built on the north façade of Structure II (Braswell et al. 2004). At the top of the large platform Structure II-B was a vaulted building with three parallel rooms which were subdivided in the Terminal Classic. Several of the rooms were used for purely domestic purposes, such as sleeping, food preparation, and cooking. Hearths were abundant inside the rooms, as were domestic debris such as metate fragments. One room functioned as a sweat bath. Various activities have been inferred based on the artifacts from the crude rooms on the façade of Structure II. These activities included “preparing *nixtamal*, cooking, serving and consuming food, weaving, stone knapping, and shell working are demonstrated by the stone tool kits, ceramics, faunal remains, and lithic and shell debitage recovered as in situ floor assemblages” (Braswell et al. 2004:173). The function of many rooms has been inferred by activity areas such as shell working, food preparation, storage, sleeping, stone tool manufacture, textile production, and lithic reduction workshops. Tons of ash (literally), containing artifacts from domestic waste were deposited at the base of Structure II during the final occupation. Structures I, III, and VII, also from the site core, were inhabited during the Terminal Classic and functioned as palace-temples. It is stressed by archaeologists working at Calakmul that the Terminal Classic inhabitants were not squatters. The residences on the top of Structure II are inferred to have been residences of the elite and the cruder rooms located farther down the structure are believed to have been those of their retainers (Braswell et al. 2004:179). Palace-temple pyramids are more common in the northern lowlands than they are in the south. Other than Calakmul, and perhaps the Caana at Caracol, El Mirador may be one of

the few other examples of this building type from the southern lowlands. Numerous sites had settlement nucleated inside site cores during the Terminal Classic, but to have the residences nestled on top of the temples was not common. Significantly, the site had an elite class that continued functioning throughout the early Terminal Classic and erected stela and lived in the site epicenter in the palace-temple pyramids (Braswell et al. 2004:180). Although these temple pyramids were used as residences during the Terminal Classic their ritual importance did not end. Many musical instruments, mostly whistles, and other offerings were found covering stairs on the buildings previously mentioned (Braswell et al. 2004: 179). Of some significance are the many palaces from the Rio Bec area which functioned as palace-temple pyramids. If this practice diffused from the Rio Bec area it would not be the only architectural influence from that area at Calakmul.

Close affinity with El Mirador is easy to establish. The inhabitants at El Mirador also erected a palace-temple pyramid, filling the facades of Structure 3A8-1 and 2A8-2 with numerous rooms. Several *temascales* have also been found at El Mirador, affirming that rituals were an important component of daily life there. The resemblance Structures 2A8-2 and 3A8-1 to Structure II at Calakmul is remarkable. It would appear as if the Maya at the two sites were both following the same mental template in building the rooms that dressed the pyramids and were cut into the existing building facades. One difference, of course, is that the Calakmul occupation is attributed to members of an elite class and their retainers, with access to high status goods, whereas at El Mirador high status goods are much scarcer and elite persons were less numerous and more difficult to identify. Different functions for the various rooms on Structure 2A8-2 have been proposed (Velasquez 2006). Other than sleeping quarters and sweat baths, food preparation, and living quarters for artisans are additional ways in which the rooms may have

functioned at El Mirador. Overwhelmingly, the emphasis of activities was for domestic purposes, and no formal workshops or production areas were found. Ceremonial use of the El Mirador structures was also similar to those at Calakmul. Rituals other than sweat baths also took place based upon numerous figurines and whistles found. Despite the significant changes that occurred at Calakmul in the Late and Terminal Classic periods, domestic activities continued there in much the same way as they had before, along with newly introduced ceramic and architectural influences from the north, but overall having considerable continuity with patterns previously established in the Late Classic.

### **El Mirador: Differences and Similarities to Regional Patterns**

The Terminal Classic occupation at El Mirador was not as vigorous as that of Calakmul, Altar de Sacrificios, or perhaps even Uaxactun. However, it shared the same processes evident at the other three sites, such as the cessation of polychrome ceramics, the introduction of small quantities of fine paste wares (Altar de Sacrificios is the exception, where fine paste wares are much more frequent), and new forms introduced into the ceramic vessel repertoire. Since El Mirador followed the same patterns in this regard it should be mentioned that where it differs is in the scale of these changes. The fine pastes and new ceramic forms are present to a lesser degree at El Mirador than at the other sites, and this most likely reflects the fact that El Mirador was a much smaller settlement than the other sites, or perhaps it was abandoned earlier than the other sites mentioned. Overall, the changes that took place from the Late to Terminal Classic at El Mirador are less dramatic because the settlement was not particularly large then and lacked the monumental constructions characteristic of the Classic period. Nevertheless, El Mirador is distinctive because the small population did nucleate on top of the Danta Acropolis and appears to have followed a pattern established in the northern lowlands of converting temple-pyramids

into palace-temple pyramids. The rooms on the pyramids on the Danta Acropolis definitely resemble the crude rooms that covered Structure II at Calakmul. Despite the change in where the population settled, established patterns of ceramic production continued much the way they had been, indicating general continuity in domestic culture. In fact, ceramic continuity is the strongest at El Mirador out of the sites compared. This is probably due to its small size and provincial nature. The inhabitants of El Mirador were living in relatively humble circumstances; however, there was significant stability in the occupation. The construction of the rooms, their remodeling, and the variety of domestic artifacts indicate significant domestic activity and suggest that the inhabitants intended to establish and cultivate a community there.

## **Chapter 5: Organization of Ceramic Production**

The assertion presented here is that there were two levels of ceramic production operating at El Mirador and across the lowlands during the Late Classic period—one of which disappeared or ceased to function during the Terminal Classic. The production of fine ware vessels, consisting of fine polychromes and ordinary polychromes, was apparently sustained by members of the elite managerial class, and they comprised one level of production. The production of fine wares went into decline or collapsed during the Classic to Terminal Classic transition (Forsyth 2005:18). In the vacuum left from the decline of polychrome production, fine paste ware may have partially filled a similar role. The second level of production involved utilitarian vessels whose production was not sustained by elites (rationale for this is explained later in the chapter). Utilitarian vessels were consumed by all segments of society, and their production continued into the Terminal Classic without significant modifications.

The question of whether there were two levels of ceramic production present during the Late Classic has implications beyond the economic organization of the Maya. It is also an important aspect in understanding what changes and processes occurred in Maya society from Late to Terminal Classic times.

### **Level 1: Polychrome Vessels**

Cumulating evidence from several disciplines, including archaeology, ethnohistory, ethnography, and others, indicate that Maya society was socially stratified into at least two broad classes, perhaps more, which were usually not clear-cut distinctions (Sharer and Traxler 2006). The assertion that polychrome pottery production during the Late Classic period was in the hands of the elite class has been made by several archaeologists (Dominguez et al. 2004; Foias and Bishop 2007; Forsyth 1998, 2005). Some explanation is due in regard to elite production and



control before the argument will be laid out. Elizabeth Graham's (2002) comments concerning elite control are well taken. She indicates that an activity such as the production of polychrome vessels usually involved several processes related to actual production that may or may not have been controlled by elites. In the following argument, elite "control" of polychrome production is assumed; however, what role the elites played in the process, or to what extent they were involved, is unknown and probably differed between sites and regions. For instance, at Calakmul, Dominguez et al. (2004) surmise that polychrome production was directly controlled by elites through state sponsored ceramic specialists. Foias and Bishop (2007) suggest a weak coupling of the political and economic spheres and propose that in the Petexbatun region the fine polychrome vessels were controlled by elites and that the control of the more common ordinary polychromes still remains open to question. I argue that even the production of the ordinary polychromes was highly influenced by the elite class, perhaps because of its ideological significance.

Finely made polychrome vessels (elite polychromes) possessed several qualities that regular polychromes and utilitarian vessels did not, and those qualities allowed them to become prestige items. There are primarily three qualities, or additives, that endowed them with prestige and fueled their use as social currency in gift exchanges and rituals (Reents-Budet 1998). The first is the technical sophistication of the vessels. Mastering their production required extensive experience and special privileged knowledge concerning the Maya writing system and cosmological and historical events. Secondly, these vessels bore distinctive painting styles. Thirdly, these vessels sometimes bore the names of the owner of the vessel, and more rarely the painter. When this happened, the owner or artist rose out of anonymity allowing his identity to be perpetuated. Elite Maya pottery developed under special conditions. In tracing the development

of pictorial pottery, Dorie Reents-Budet (1998:76) suggests that additives of prestige emerged when an object became an important participant in the establishment of prestige. When possessing certain accoutrements became socially advantageous and became a symbol of sociopolitical status, and when it started to function as a symbol of social and economic power, then the three additives began to grace the surface of polychrome pottery. The emergence of elite polychrome pottery is strongly connected to the political and economic competition among Maya polities and elites during the Late Classic period (Reents-Budet 1998). Keeping in mind that the sociopolitical climate of the Late Classic period was conducive to the introduction of fine pictorial pottery with the names of vessel owners or the artists, it is interesting to contemplate what the situation was like during the Terminal Classic period when this important artistic medium, which had been so important in establishing social identity, disappeared.

Evidence from various Maya sites indicates that polychrome production was probably sustained by members of the elite class, though the level to which they were involved probably varied greatly. A brief review of polychrome production and postulated elite involvement will be given. I will then present data from sites used in the comparative analysis in chapter 4 to strengthen the argument. The argument is an inductive one; nevertheless, I believe that the evidence overwhelmingly establishes that elites were associated or involved in some way with polychrome production. Fine polychrome vessels (categorized as elite polychromes by Reents Budet [1998]) have been found associated with workshops such as at Aguateca (Inomata 1995). The Aguateca case is especially informative because the elite workshop was located inside an elite compound. Excavation of the royal scribe's household yielded evidence that painting polychrome vessels was not the only activity that had occurred there. The carving of shells, bone, and wood also took place at this workshop. It may be the case that single medium craft

production was generally not supported by the Late Classic economic system, perhaps because of the decentralized staple finance and wealth finance systems of the period (Reents Budet 1998). However, there may be exceptions to the contrary. One example may be Nakbe, in the Mirador Basin, where Codex Style ceramics were produced at an elite compound.

Elite polychrome workshops have also been postulated for Tikal (Becker 2003), Copan (Fash 1991), and other sites. Although most polychrome types are found across a broad spectrum of Late Classic society, the finely made types are more restricted in distribution, were valued as trade items, and were more often used as funerary offerings. Chemical sourcing and standardization studies can contribute data concerning ceramic production systems. Both of these methods were used to elucidate patterns of ceramic production in the Petexbatun region (Foias and Bishop 2007). In pottery standardization studies high variability may be indicative of numerous potting groups, whereas low variability would indicate the opposite. Unfortunately, standardization studies do not always indicate the scale of production. Based on standardization studies showing high coefficients of variability, the majority of the pottery from the region was produced locally by many potting groups. While there was high variability for both monochrome red and polychrome vessels that were analyzed, there was a difference with the polychrome vessels; they had lower coefficients of variation, leading Foias and Bishop to believe that there were fewer and more distinct polychrome producers. Furthermore, labor intensive clay preparation and variable firing techniques lead them to believe that at least some of the polychromes, specifically the elaborate ones, were manufactured by different producers than those of the monochrome pottery. Neutron activation studies confirm the importance of imported volcanic paste in elaborate polychrome serving vessels from the eastern Peten in establishing political ties during the Late Classic.

Much of the evidence supporting the existence of two distinct levels of ceramic production comes from the facts. However, it is still important evidence because some of the facts, when combined with the trends in ceramic manufacture, indicate that two levels of production had been operating. The key point to this argument is the significant ceramic continuity in utilitarian pottery and the near cessation in polychrome production, especially elite polychromes. All polychrome production in the Peten either diminished or virtually collapsed during the Terminal Classic.

### **Level 2, General Pottery Production**

Dominguez et al. (2004) concur with Forsyth's (1998) observations concerning the cohesiveness and continuity of monochrome production in the Terminal Classic and propose that there were two levels of ceramic production operating at Calakmul. Only two polychrome types continued to be manufactured during the Terminal Classic, and their production was less standardized. The high frequency of polychrome pottery in the Late Classic and then sudden decline in elite polychromes in the Terminal Classic suggests a close connection between the elite and the producers of the polychrome pottery. The uniformity and standardization in the utilitarian pottery, conforming to Forsyth's (1998) "Peten subcomplex", indicate that there was significant intercommunication between the producers and consumers of this pottery that probably represents shared perceptions or similar ideas about vessel forms and their functions. At Calakmul it is suggested that the homogeneity in monochrome pottery was also due to ceramic specialization by part and full-time producers. Although the elite at Calakmul do not appear to have controlled the distribution of the utilitarian ceramics, Dominguez et al. (2004) believe that the state played a part in controlling pottery making groups in the production of utilitarian vessels as well as those of prestige.

Forsyth's study of changes in ceramic inventories from the Late to Terminal Classic period across the Maya lowlands show that the production and distribution of utilitarian wares was quite stable and continued with little alteration, whereas there were major changes among the fine wares. This indicated to Forsyth (2005:10) that the production of utilitarian and fine ware ceramics was in the hands of two different social groups. The system of fine ware production died out in the Terminal Classic as elites encountered significant problems, while the general production system of utilitarian ceramics continued without disruption, assuming simple market forces were involved. Forsyth also points out that one would expect the production of polychrome vessels to have continued if they were part of the same manufacturing and distribution system as the utilitarian ceramics and made by the same group of potters (2005:10). Furthermore, it is not just the fine elite polychromes that diminish. Even the ordinary polychromes diminish significantly, and they are qualitatively inferior to Late Classic polychrome pots.

During the Terminal Classic a complete cessation of human figure polychromes occurred. The trend during the Late Classic was an emphasis on surface treatment, especially attention to surface treatment in the form of dichrome or polychrome painting, the finer wares exhibiting human forms. In the Terminal Classic, with the loss of painted polychrome vessels, the emphasis shifted to techniques of surface penetration on vessel exteriors. This trend likely represents the loss of skilled artisans, or a decline in patronage or certain resources (Rice and Forsyth 2004). As mentioned, the exact role that elites would have played in the production of polychrome vessels is unknown. Were they involved in acquiring clays, making the vessels, painting vessels, firing them, and distributing them? This may have depended greatly on the level of centrality at a given settlement or polity. The exclusive and restricted distribution of fine polychromes, along with

studies indicating their manufacture in workshops, supports the view that elites sustained production of polychrome pottery, at least the fine types, probably through full-time and part-time craft specialists. This may also help explain the loss of ordinary polychromes. If ordinary polychromes were made by specialists catering to the market, and elites perhaps could no longer afford them any longer, the demand could have diminished to the extent that polychrome production was not feasible or economical. Generally, in marketplace systems, elites did not involve themselves in controlling the distribution of goods (Hirth 1998). If the production of ordinary pottery manufacture had included less fine and more numerous ordinary polychromes, then it should perhaps have continued into the Terminal Classic along with with the basic production system that remained stable. This did not occur. On the other hand, if polychromes were produced by a different set of producers than the ones responsible for the utilitarian pottery, then the decline in polychrome producers would have had little or no effect on the producers of utilitarian pottery. This seems to be a likely explanation given the information. However, alternative explanations for the massive reduction in polychrome production cannot be disregarded.

### **Decline in Polychrome Production**

Significant reduction in polychrome production is evident at the sites used for comparison in Chapter 4. At Altar de Sacrificios, polychrome production declined from nearly 14% of the assemblage in the Late Classic to just 5% for the Boca Complex. Only two polychrome types are present in the assemblage, Anonal Orange Polychrome: Resist Variety and Sayaxche Orange Polychrome: Sayaxche Variety, both of which are orange slipped and are not among the finest polychrome types. In the Jimba Complex only one polychrome type is present, San Isidro Orange Polychrome, and it accounts for less than 0.5% of the total for the complex.

At Uaxactun polychrome production also virtually disappeared. Cream slipped polychromes, which provided a clearer background for fine polychromes exhibiting human figures, virtually disappeared, and only comprised 6.25% of Tepeu III polychromes, whereas for Tepeu I and II their frequency was almost 19%. Orange slipped polychromes accounted for 87.5% of the polychrome total. Overall polychromes decreased from 40% of the Late Classic Tepeu II slipped sherds to 2.6% for the Terminal Classic Tepeu III sherds. A few polychrome types were still present during Tepeu III times, but they were inferior in quality. In the Late Classic, sherds with either glyph-like or human figure elements comprised 16% of the total of polychrome and dichrome categories, whereas in the Terminal Classic the frequency had declined to 7%.

The situation is similar at Calakmul. Polychromes declined there from 2.5% in the Late Classic to less than 0.5% of the Terminal Classic total. Only two polychrome types were produced in the Terminal Classic, and they did not continue in the traditional Peten style. Present during the Late Classic was an imitation or variant of Codex Polychrome, but with a yellow background. The yellow variant has been found in some numbers and was likely produced at Calakmul (Barrios and Carrasco 2006).

Codex-style polychrome vessels, as with other polychrome pots, were distributed across a wide segment of Maya society (Hansen et al. 1992). However, many elaborate vessels are known (Macleod and Reents-Budet 1994) and are considered elite pottery based on their high level of execution and restricted distribution. The Mirador Basin appears to have been one of the principal loci of production of this style of polychrome. It is worth emphasizing again that, although the Mirador Basin area did not have similar levels of political power or organization as other areas in the lowlands, it was still far from being a cultural backwater. Codex polychromes,

named because the brush strokes and cream background are reminiscent of Post-Classic/Spanish Conquest period codices painted on bark paper, have been found to have been produced at a few places in the Mirador Basin, principally Nakbe, but also at El Mirador. Excavations in 1993 in the Codex Group, a Late Classic residential compound, revealed looted elite residences that contained Codex Style ceramics in significant amounts (Lopez and Ortiz 1994). There is also correlation between the frequency of Codex Style vessels and burials, indicating it had a funerary function. Nakbe was the location of a workshop producing this type of pottery, according to analyses using instrumental neutron activation. The chemical analyses indicate two main chemical groups comprising the codex-style. Based on the high number of codex-style sherds from Nakbe, their high quality, and identical chemical signature for the principal group, ceramic production of this type at the site is almost certain (Hansen et al. 1992). Other sites within the Mirador Basin, including El Mirador, are also likely centers of production, as was Calakmul to the north.

At El Mirador the codex-style was present and widely distributed during the Late Classic LacNa Complex. Cream polychromes from the Zacatel Group are non-existent in the Terminal Classic, except for two possible sherds. The other cream polychromes are likely trade pieces coming from the north, and they are of inferior quality, not containing design elements such as human figures or glyphs. The overall trend in the polychromes still found in the assemblage was a preference for non-Peten polychromes. The continuity in utilitarian wares, the cessation of fine polychromes, and significant decrease in ordinary polychromes, is noted at El Mirador, the sites previously mentioned, as well as at most of the sites in the northern Peten. The data strongly indicate that the production of polychromes declined along with other markers of elite culture, such as monumental architecture and the stela cult.



## Fine Paste Replacement

It has been suggested that with the loss of the polychrome tradition in the Terminal Classic, fine paste wares (and to a lesser degree slate wares), replaced polychromes, fulfilling a similar but not completely equal role (Forsyth 2005; Rice and Forsyth 2004). At El Mirador, fine paste ceramics are rare, but they have been found in similar contexts as polychromes, such as in burials, as part of potential ritual offerings consisting of burned material and ceramics on floor deposits, and some of the more elaborate fine paste types are present as well, including Pabellon Modeled/Carved and Provincia Plano Relief.

Calakmul had a more significant Terminal Classic occupation than did El Mirador. Apparently, members of the elite class were living on Structure II at Calakmul and surrounding buildings. However, the overall population was reduced, and the power of the elite must have attenuated somewhat. Nevertheless, the site seems to demonstrate that a reversal of fine ceramic types had occurred, with fine paste ceramics replacing polychromes in similar proportions. The Ku Complex, dating to the Late Classic, had a polychrome frequency of 2.4%. In the Terminal Classic polychromes had declined to less than half a percent, and fine pastes represented nearly 2.5% of the assemblage, a striking similarity in frequency between the two production techniques for the two periods.

In general, however, the replacement of polychrome vessels was not nearly as equal in general frequencies in north-central Peten. Fine paste wares are usually present there in small quantities. It is likely that the distribution of fine paste wares is reduced where the elite managerial class was reduced during the Terminal Classic. At Uaxactun the frequency of Tepeu III fine paste wares is 1.5%. On the other hand the importance of fine paste wares is indicated not just by certain types but by imitations of them, specifically forms that imitated fine paste forms.

Incurved (or recurved) rim dishes in the Tinaja Red: Tinaja Variety were quite common during the Terminal Classic, so the importance of fine paste wares on ceramic assemblages is greater than otherwise indicated because local potters imitated fine paste types, specifically copying popular fine paste vessel forms.

Additionally, it is of interest that not only was one fine ware production system replaced by another, but that the new system came from an area peripheral to ceramic developments of the Classic period. Forsyth (2005:11) notes the substitution of fine paste wares for polychromes but remarks that the outstanding element in this trend is that the area of influence was the northwestern lowlands which had previously been the recipient of ceramic influence from the Peten. In the Terminal Classic the situation was reversed and the Peten was influenced from the west. This observation deserves further exploration since it is probable that the changes in the ceramic repertoire, notably the replacement of polychromes with fine paste wares, may be explained when cultural influences from the west are taken into account.

A number of possibilities exist as to why fine paste wares were introduced into Terminal Classic ceramic assemblages across northern and eastern Peten. It is possible that they simply filled in the void left by the disappearance of fine polychrome vessels. If this was the case it is interesting to note that the influence came from the Usumacinta area. It would seem that the penetration of the fine paste tradition into the Peten followed the cultural and political decline of the region. However, the fine paste tradition made inroads into the northern lowlands at the same time—a region that was in its “Florescent” cultural stage (Forsyth 2005:11). The introduction of fine paste ware was probably not simply a case of western pottery producers taking advantage of their cultural ties to the Peten in the wake of decline there. Any explanation for its introduction must account for its presence in the north which was expanding, as well as the Peten, which was

in decline. Forsyth (2005:18) also notes that, in addition to serving as partial economic replacements for polychromes, fine paste vessels may also have served a function as symbolic replacements.

According to Lisa Lecount (1998) prestige items may not always have been indicative of social position but were integral as social currency in political strategies. At Xunantunich she suggests that the distribution of painted pottery varied according to elite political strategies of either exclusion or inclusion. In the Terminal Classic, when the power of the elite class was waning, a pattern of inclusion prevailed, signaled by comparable frequencies of prestige items in both elite and commoner residences. Ashmore et al. (2004) suggest that at the hamlet of San Lorenzo, which was subject to Xunantunich, the disappearance of differential displays of social position and wealth may indicate that there were not enough residents in the community from whom elites wanted to be distinguished, or they may not have had legitimate claim to the labor from these close ties. It is tempting to view an analogous situation at El Mirador since the settlement was so small. The opposite may be true regarding larger settlements such as Calakmul, which still had members of the elite probably vying to demonstrate their social position and power. The frequency of fine paste ceramics is relatively high there compared to their use at El Mirador and Uaxactun which appear to have been more inclusive, having small amounts of prestige items evenly distributed.

What the exact stimulus was that caused ordinary polychromes to diminish along with fine polychromes is unknown. That the majority of polychromes were made and distributed widely has long been known. Perhaps the occurrence of polychromes across all strata of Maya society indicates some type of political strategy of inclusion. This would be the case where finer polychromes are found widely distributed. How the ordinary polychromes fit in is still puzzling.

Another possibility is that ordinary polychrome vessels were associated with elites or higher culture and were employed as social currency in the lower class as they sought to emulate elite culture. When the production of fine polychrome pottery was disrupted in the Terminal Classic, and the power of the elites had waned, there was no longer a need for the ordinary polychromes because there was no need for emulation of the finer wares and so production of the ordinary ones ceased as well. The fact that utilitarian ware shows remarkable continuity at El Mirador is not altogether surprising since it was a small provincial settlement. The rapid transformation of the polychrome production system at El Mirador is not expected given that some of the polychromes were probably produced locally. If the production of polychromes was part of the utilitarian pottery production system, and was not controlled by elites, then one would expect that its production would have continued in the Terminal Classic when elites were encountering problems (Forsyth 2005:18). That this did not occur strongly indicates that the polychrome production was sustained by elites and that its wide distribution during the Late Classic may have represented a political strategy of inclusion and group identity, especially identity with the ruling nobility. The rupture of the production system and diminution in population at El Mirador during the Terminal Classic probably created an environment where any existing elites had reduced power. They may not have been able to acquire the new fine paste replacement pots in significant numbers, therefore negating the need to employ any strategies of inclusion.

## Chapter 6: Access to Foreign Goods

The purpose of this chapter is to discuss whether access to exotic items continued or was disrupted during the Terminal Classic period at El Mirador. I will also assess the general level of wealth of the late occupation at El Mirador. The precise implications of the presence or lack of exotic goods are unknown, but several scenarios are possible.

It would appear reasonable that the distribution of other items, in addition to polychrome vessels, would also decrease if they were sustained by the elite class. Exotic trade items, especially basic items, may have played an important part in the maintenance of large sociopolitical groups in the Maya lowlands. The most influential model was proposed by William Rathje (1972). It will receive considerable attention here, not because I believe that it is the best model, but because it is useful in explaining the frequency of foreign goods in the Late and Terminal Classic periods. Some aspects of Rathje's model are in doubt (Demarest 2004), but it deserves attention because it associates the importation of basic long-distance trade items with complex sociopolitical organization and implicates a special role for these items in the demise of sociopolitical complexity during the Terminal Classic period. Therefore, it is a model with specific expectations that can be tested by data from El Mirador and elsewhere.

Rathje (1972) proposed a model for the rise and demise of Olmec and Maya civilizations, and integral in these social processes was the acquisition of items through long distance trade. In fact, according to Rathje, the main function of sociopolitical integration of lowland rainforest civilizations was primarily to provide the population with needed utilitarian goods, allowing the settlers to have greater subsistence productivity. The conjunction of the environment and technology is crucial for an understanding of complex sociopolitical development in the tropical lowlands. To exploit a given environmental niche every household needs basic resources. Three

resources were identified by Rathje (1972:368), igneous or hard stone for grinding corn, salt, and obsidian for cutting tools. None of these three items occur in the Maya lowlands except in peripheral areas (the Maya Mountains of Belize might be an exception, but it is better understood as a highland area).

According to Rathje (1972), lowland areas acquired these goods primarily through long distance trade, not under a local market system such as existed in the highlands. Trade in the lowlands may have been conducted by suprahousehold organizations. Complex organization and significant planning were needed to carry out long distance trade in resource procurement areas. Complex systems of trade and redistribution were developed because of the dispersed nature of Maya settlement, making it impractical to accomplish the distribution of needed items by house to house peddling. The lowland Maya ceremonial center would have provided the needed organizational potential and integration of the scattered population to serve as supply bases to households (Rathje 1972). Furthermore, for the system to work effectively in the consistent acquisition of exotic utilitarian items, power, goods, and authority would have to be given up by autonomous households and concentrated into very few hands. Merchants would have been part of the ruling elite, according to Rathje, and would have been able to tap into long-distance trade.

Pertinent to this study is that Rathje identified long distance trade for utilitarian items as an important part in the collapse of Classic Maya culture as well as playing an integrative role. He proposed a core-periphery model—anticipating its utility in modeling regional interaction by many years. In the model the lowlands are divided into two areas, an inner core, which was separated from resource areas for basalt, obsidian, and salt, and bound by buffer areas which bordered the highlands and rivers used for transportation. People in buffer areas and the core were in need of highland resources. Buffer areas were at an advantage to exchange for highland

resources since they were not as far away and they had no incentive to act as middlemen for the core area for these goods since the core area had nothing to offer that the buffer did not have. Rathje (1972) believes that geographic position and environment of the core selected for complex organization capable of maximizing resources and competing with buffer zones. One important aspect of this was manufacturing commodities desired in resource and buffer zones, but especially mounting large trading expeditions, maintaining trade routes, and providing personnel to deal with the supply end at resource areas. Along with complex organization for the importation of basic necessities there was a growth in ceremonial displays and the need for luxury paraphernalia used to maintain stratification of the communities. Ideotechnic and sociotechnic items became the only exports that the core had to offer to buffer or resource areas of basalt or obsidian. However, as buffer areas began to reach similar levels of sociopolitical complexity, which were first introduced from the core, the core would be placed in a position where it would have to compete for resources on a similar organizational base. Buffer zones would have a spatial advantage over the core and would have controlled strategic resources. Rathje (1972) suggests that if competition for resources became dependant on military superiority then the core would be unable to reach new levels of sociopolitical organization and would not be able to protect its trade routes and markets from other state-level competitors. The core would get choked off. The argument implies that complex organization would decrease in the core as states were unable to provide exotic necessities for the households, and people would have been drawn to other areas in buffer and areas providing greater resources.

Many of the assertions in Rathje's model are open to debate, and it seems that several of them do not totally fit developments in the Terminal Classic as we understand them now. For instance, many zones located far away from resource areas prospered during the period, such as

the Rio Bec area. According to Rathje's list of predictions, it would be the core that would decay first, followed by sites in buffer areas. In applying the model to the Maya, Rathje believes that northeast Peten was the core area. However, there are several sites in buffer areas that collapsed early on, at about the same time as sites in the core. Examples include Copan and Palenque. Since economic relationships for the Classic period are still in doubt, several aspects of the model seem problematic. Arthur Demarest (2004) discussed several problems related to such models, including ambiguity regarding the extent of salt trade for the Classic period. However, he dismisses the necessity of importing volcanic stone for grinding and doubts that the control of obsidian was key in the maintenance of political authority.

Rathje's (1972) model is of value because the basics of the model include several aspects that can be tested, and it raises many other possible questions for the Terminal Classic. In fact, in many aspects the model is quite general, and one has to tease out possible implications for what Rathje is proposing. Rathje states that "when complex organization no longer successfully fulfilled its function, it collapsed" (1972:387). Its main function, according to Rathje, was to distribute basic items for subsistence needs. This statement, and others like it, would seem to imply two events or periods leading to collapse. In the first period complex social organizations had more difficulty providing basic exotic goods reliably, and secondly, a subsequent collapse or reduction in sociopolitical complexity and depopulation occurred as a result.

The occurrence of volcanic stone before the collapse and during the period of diminished elite activity can be tested, and it seems appropriate, especially given what is currently known about the Terminal Classic—that at many sites there was prolonged habitation, often including members of the elite trying to direct states that were reduced in power. Ultimately, Rathje's model cannot be proven by any one study, but its applicability to the data from El Mirador will



be discussed. The importance of basic imported goods for El Mirador is in determining if the inhabitants were still active participants in regional trade networks, if they were isolated settlers eking a living out in the forest, or if their situation was somewhere in between. How well connected were the inhabitants? What was their general level of wealth? Were exotic, basic goods available during the Terminal Classic at El Mirador as they had been before? The rest of this chapter will address these questions.

### **Long Distance Imported Goods At El Mirador**

The most detailed artifact information for the Terminal Classic at El Mirador comes from the excavation of several rooms on Structure 3A8-1 (Morales and Ferguson 2006), and most of my conjectures are based on this information. Some supplemental information does exist for Structure 2A8-2; however, it is not as detailed (Velasquez 2006; Lopez and Hernandez 2006). Terminal Classic artifacts are considered from all contexts here, including structural collapse where the materials were thoroughly mixed with ceramics which aided in cross dating the artifacts. In considering the general wealth of the inhabitants floor deposits are informative because they represent more finite temporal periods than the deposits in structural debris. Likewise, burials and special deposits would convey a more static view of exotic, basic good consumption.

Exotic, basic goods at El Mirador are primarily represented by ground stone tools and perhaps obsidian blades. The information from 2A8-2 generally does not specify what material the ground stone artifacts were. However, data from 3A8-1 reveal that local materials were used most often, but imported were definitely brought to the site. Recovered from the rooms on the building were a number of manos, 10 overall. There were three granite, four chert, and three quartz manos. Also recovered were several metates. Among the materials represented there were

three of undetermined rock, three granite, one slate, four quartzite, and one limestone grinding stone. Polishers were also encountered and the materials include one limestone, two chert, one granite, three of undetermined rock, one green stone, and three of sandstone. Additionally, there was one limestone mortar. Found on Structure 2A8-2 was a quartzite metate, a greenish granite grinding stone, one granite mano, and a basalt scraper. One additional piece of igneous rock was also noted.

Six artifacts of obsidian were recovered from 3A8-1, all of which are blades. One offering from 2A8-2 included 22 obsidian prismatic blade fragments, and a few obsidian blades were found on that building. While the number of obsidian artifacts is unknown, it appears that more pieces were found in fill on Structure 2A8-2, and numerous obsidian blades were noted by Lopez (2006). Chert was much more common than obsidian. The reports do not specify whether the cherts are primarily of the local variety or whether they came from more distant sources. On Structure 3A8-1 the ratio of obsidian to material for other flaked tools was quite low, less than 10% of the total for the other material types. The frequency may be a bit higher on 2A8-2, with obsidian flakes found in fill.

### **Prestige Items**

Valuable exotic items, preciosities, have been found on Structures 3A8-1 and 2A8-2. Jade, or green stone, has been found in both buildings. One piece was found on Structure 3A8-1, and several were found on 2A8-2. In Offering 1, in Room 24, several pieces of greenstone were found, some still bearing cortex. A jade bead was found with Burial 6 in Room 31, and a fragment of a jade earspool was found on what may have been a ramp leading to rooms on a higher level of the building. Other prestige items include shell items (bivalve) which were found in small quantities in both buildings. In the fill of Room 26 two mother of pearl shell fragments

were found, one of which was worked into an earring. The offering in Room 24 contained one piece of shell as well as another piece of mother of pearl. Numerous shell fragments were also found in construction fill beneath Room 35, and in Room 34 various shell fragments were found as part of an offering left on the bench. Marine gastropod shell was also commonly found in lots containing marine bivalve shell.

It appears that the inhabitants of El Mirador had no problems getting access to basic exotic goods during the Terminal Classic. Exotic metamorphic rock used for grinding, and obsidian for cutting tools was available during the Classic period, but a meaningful diachronic comparison is not possible since only a few manos and metates were found in the earlier smaller scale excavations. It is tempting to ask whether the frequency of exotic, basic goods at El Mirador is comparable to that at other sites. One would suspect that larger sites would have had easier access to exotic goods. I will briefly discuss imported basic goods from Tikal, which will help place El Mirador in proper perspective.

Besides offering quantitative data for comparison, Tikal is an interesting case study. If the *raison d' être* of sociopolitical complexity in the southern lowlands was to provide access to exotic, basic goods, then definite disturbances in the distribution system of these goods would be noted for the Terminal Classic. If this is indeed the case, a decline in the frequency of these exotic, basic goods would occur during the Terminal Classic as the elite class declined along with their political centers. The decline of the elite class, evident in by the decline of luxury goods, is well documented. In the information that follows, imported utilitarian items will be discussed. Data are taken from a database by Hattula Moholy-Nagy (2003). Material mentioned only comes from unmixed deposits. There is definitely plenty of material from mixed deposits at Tikal; however, I wanted reliable diachronic information, so I excluded the numerous mixed

Table 15. Metate and grinding stone fragments from Tikal.

Period	Imported			Local				Total	Frequency of Imports
	Basalt	Biotite Granite-Gneiss/Rhyolite	Arkose	Quartzite	Sandstone	Chert	Limestone		
Late Classic	10	17	4	149	3	2	21	206	15%
Terminal Classic	11	35	4	50	1	1	12	114	43%

lots and have only used unmixed deposits, either purely Imix (late Late Classic), or Eznab/post abandonment (roughly equal to the Terminal Classic). The Terminal Classic was somewhat prolonged at Tikal. Political activity continued in the early part of the period but the polity was getting weaker, and much of the population had relocated elsewhere (Valdés and Fahsen 2004). No known stela were erected for a period of 59 years, starting from A.D. 810. The last one was erected in A.D. 869. Elites had continued to live in the palaces and had made minor architectural renovations. In the later 9<sup>th</sup> century the written record of elite activities was silent, and the site was supposedly occupied by squatters living in the same palaces. If those people had access to imported basic goods despite the elite collapse it would be defeating to any theory that elites controlled access to them or that the function of sociopolitical complexity was to assure reliability in getting such items.

Table 15 summarizes the distribution of imported and local grinding stones from Tikal for the Late and Terminal Classic periods from unmixed deposits. Three material categories are definitely considered foreign: basalt, arkose, and a category where I have lumped biotite-granite, biotite gneiss, and rhyolite. Arkose is a sedimentary rock, but it is formed from the weathering of feldspar and quartz rich rocks such as granite. Quartzite is a metamorphic rock which is not naturally found in the northern Peten. It does occur at the edges of the lowlands (Demarest

2004); however, it is not nearly as distant as the other stones that either came from the Guatemalan highlands or the Maya Mountains in Belize. Since resource areas for quartzite were located at the edges of the lowlands it is not included with imported stone here. Local materials included sandstone, limestone, and chert; the latter two are found abundantly in northern Peten.

The distribution of exotic grinding stones shows that they were more frequent during the Terminal Classic than in the Late Classic—a finding that contradicts expectations of Rathje's model, but it is worth mentioning the possible reuse of Classic period items by Terminal Classic inhabitants. Chi-square tests (Appendix C, Table C-4) indicate that the distribution of foreign and local metates was not even or due to the sample size. There is an association between the greater frequency of foreign metates and the Terminal Classic time period. Perhaps the higher frequency of imported groundstone at Tikal is not surprising; in most ways the utilitarian production system continued without major disruption in the Terminal Classic. Furthermore, since the frequency of imported grinding stones was even greater at Tikal during the Terminal Classic, a period of political upheaval, it suggests that an opposite trend may have occurred. Perhaps the reduction in power of the elite managerial class enabled these basic goods to be imported more reliably. Several possibilities exist, including the possibility that elites did control the trade and redistribution of exotic, basic goods in the Late Classic, which then could have been taken over by local corporate groups as the power of elites declined in the Terminal Classic. If that possibility occurred it would undermine the supposed function of complex sociopolitical systems, which according to Rathje existed to reliably provide basic goods needed for subsistence. Some other rationale for their existence must be used, because the Maya at El Mirador, Tikal, and many other sites continued to import basic exotic goods without any apparent problems.

## **El Mirador: High Culture and Wealth**

Mesoamerican Civilization, along with civilizations worldwide, was distinguished from others based upon the particulars of “high culture” associated with inner elites and the manner in which elite groups articulated with the rest of society (Baines and Yoffee 2000). There are three categories of cross-cultural comparison which may indicate the ideological underpinnings of elite power; they are order, legitimacy, and wealth. Wealth, as seen by John Baines and Norman Yoffee (2000), is an economic surplus. Additionally, when an agreement on the value of things is reached their social potential is transformed (Joyce 2000). I equate wealth with the consumption and creation of material goods and specialized craft items known to be of high value to the Maya and Mesoamerican groups as a whole (Joyce 2000). Some items were perishable (cacao, feathers), while others have remained in the material record and are primarily associated with personal adornment. According to Rosemary Joyce (2000), high culture, as practiced by ancient Maya elites, was that which was expensive (and therefore required wealth to create), and that which was exclusive and required legitimacy to use. From the Late Formative to the Classic period, it is important to note that monumental architecture and iconography increasingly became more exclusive as spatial access to them became restricted to privileged groups. Iconography, monumental architecture, and expensive crafted items served to express a connection between elites and the cosmic order and thus reaffirm the legitimacy of elites and the order that existed (Joyce 2000).

Elite practices defined high culture. Specially crafted items and practices of exclusivity can be identified in the material record, although not all items or practices associated with high culture can be readily distinguished. Many items associated with high culture and elites can be recognized and have been known for a long time (Sharer and Traxler 2006). My comparison of

wealth is not to be perceived in the typical fashion (who were the haves and the have nots). Rather, I am focusing on the most basic level to see if in general the inhabitants of El Mirador were participating in high culture based on a host of practices, either their presence or absence, and not just frequencies of prestige goods. In this manner investment in burial offerings, domestic architecture, ritual architecture, specially crafted items, iconography, and monumental architecture are informative. When focusing on those areas of material culture the Terminal Classic inhabitants do not appear to have maintained high culture as it was typically defined by Maya elites. This observation is based on the lack of monumental architecture, iconography, specially crafted items, etc. that would indicate great expense or restricted access.

Measuring the level of wealth of individuals or households is often a difficult task. Wealth is often equated with social status. In the past archaeologists frequently associated social status with economic conditions (Masson and Peraza Lope 2004), and they identified two general economic and social categories, elites and commoners. One problem, not unique to the Maya area, is the fact that there is usually a gradient in artifact distributions which makes it difficult to identify the two groups archaeologically. Frequently, highly valued imported items find their way into households of lesser status or even of otherwise humble appearance. Some archaeologists suggest the existence of a middle class and the possibility of fluid class relations leading to upward mobility (A. Chase 1992; Masson and Peraza Lope 2004). Elaborate elite and humble commoner residences of both classes are often identified at settlements of various sizes. One problem lies in the many residences with characteristics placing them in the middle of the elite-commoner continuum. Additionally, social power may not always be defined economically. There are other ways to obtain power, including ideological, militaristic, and political (Masson and Peraza Lope 2004). What is known about these sources of power after the Classic period is

still vague, especially considering small sites such as El Mirador. It is important to remember how imperfectly these systems are understood when considering a topic as problematic as the level of wealth of certain inhabitants.

There may have been some differentiation of social status at El Mirador during the Terminal Classic, but this is not reflected in the material record as of yet. Certainly, there could have been other sources of power other than economic. There may have been social elites, which are distinguished not by material assemblages, but by investment in domestic and ritual architecture as well as ritual events (Masson and Peraza Lope 2004). However, there is really no differential investment in architecture at El Mirador during the Terminal Classic period, and ritual appears to be more of the domestic type. Architectural evidence and refuse left by the inhabitants appear to indicate they were of the same social status and composed a homogenous group. This does not mean that there were no individuals of elevated status. There may have been, but they are not distinguished in the material record. This characterization of a rather humble, homogenous occupation applies to the settlement as a whole. Historic examples have occurred where elites have retained their titles although they may have been impoverished (Masson and Peraza Lope 2004), and this is certainly one possible scenario to keep in mind for Terminal Classic El Mirador.

The Terminal Classic occupation at El Mirador, although homogenous in its distribution of material goods and apparently lacking in status differentiation, was not impoverished, and the inhabitants were not simply struggling to survive. The inhabitants participated in a broad network of trade on a small scale for foreign basic items, some of which definitely qualify as luxury items, such as the elaborate fine orange ceramic types of Pabellon: Modeled Carved and Provincia Plano Relief. They were also able to acquire jade and greenstone



in the initial manufacturing phase, with cortex still attached, not as a finished product. Shell, including mother of pearl, was found in small quantities. There is a possibility that items such as shell and jade were from Late Classic deposits and were reused by the Terminal Classic inhabitants.

Fine paste ceramic vessels appeared during the Terminal Classic which may have functioned economically and symbolically in an analogous manner to the fine ware production system consisting of polychrome vessels in the Late Classic. Another salient aspect is the fact that although the village at El Mirador was small and unsophisticated, it felt the same social pressures as the larger centers and changed along with them. These changes include importation of fine paste ceramic vessels, the imitation of fine paste forms, and the introduction of Campeche polychromes and slateware from the north. This does not mean that all these changes occurred simultaneously, only that El Mirador was influenced more or less at about the same time as the changes occurred elsewhere.

Admittedly, the inhabitants of El Mirador, although they had access to some exotic goods, do not appear to have been as well off as their counterparts at Calakmul or Tikal. Neither do characteristics of the settlement indicate that people there participated in high culture. This is expected since the inhabitants of Calakmul and Tikal both had remnant elite populations that still governed their respective polities at least a few decades into the Terminal Classic period. The Terminal Classic residents on the Danta Acropolis may also have been composed of remnant elite groups; however, investment in architecture and other material items was low, and this indicates that elites at El Mirador did not wield the same kind of power as the elites at Calakmul. The residents of Calakmul living on Structure II carried out many similar activities to those from the Danta Acropolis. However, the sophistication and the craftsmanship of the Calakmul artifacts

sets them apart, especially the artifacts found inside functioning temples, such as Structure IIA located on top of the pyramid which were destined for the nobility (Dominguez Carrasco and Folan 1999). Many of these fine objects were made by lower middle class artisans who lived and worked in the more than 67 rooms found on the north façade. The status and legitimacy of Calakmul elites is well attested by 288 artifacts made of shell and the wide variety of artifacts they consumed and made. Several jade plaques and other ornaments were also found in the temples. Whether Miradoreños tried to participate in high culture, as it may have been redefined in the Terminal Classic, by emulating Calakmul in the construction of a palace temple-pyramid, or whether the differential deposits at the two sites are due to other processes, is unknown.

On a certain level the Terminal Classic settlement at El Mirador appears isolated because it lacks numerous prestige items frequently used by the elite to denote status. The inhabitants did have access to luxury items, however, in modest quantities. Furthermore, the Miradoreños were not isolated, and they participated in a vigorous trade network for basic commodities and prestige goods, such as granite grinding stones, obsidian blades, shell, greenstone, and fine paste pots. The apparent lack in political development at El Mirador is puzzling since most areas in the lowlands developed polities with dependent secondary and tertiary centers. Perhaps the most logical conclusion is that Miradoreños were dominated by the Calakmul state and were prohibited from erecting stela and public monuments (Velasquez 2006).

## **Chapter 7: Discussion and Conclusions**

In the preceding chapters I have tried to describe the data for the Terminal Classic occupation at El Mirador, along with information from other sites, to put the occupation in perspective. Some discussion has been given for the individual topics addressed earlier. I will now provide some additional ideas that hopefully will be of value in understanding the Terminal Classic occupation at El Mirador.

### **Dating the Occupation**

The occupation I have described in previous chapters belongs squarely in the Terminal Classic period. Despite the fact that dating of this occupation to the Terminal Classic is secure there is still ambiguity regarding the onset and termination of the occupation, and this appears to be a general trend for most Terminal Classic sites, especially those that lack stone monuments with long count dates. The occupation at El Mirador is dated to the Terminal Classic, primarily by ceramic cross-dating, and therefore a brief discussion of the beginning and ending of the occupation is in order.

Fine paste ceramics, found throughout deposits on the Danta Acropolis, positively date the occupation to the Terminal Classic period which is generally believed to have begun by A.D. 830 (Sabloff and Willey 1967), if not earlier. This date is associated with the introduction of fine paste wares in the Pasion Region at Seibal and Altar de Sacrificios, and ultimately with the numerous late cycle 10 monuments at Seibal (Sabloff 1973). Since fine paste types appear first in the western lowlands, the Terminal Classic occupation at El Mirador is unlikely to have started prior to A.D. 800 or 830.

Whether the occupation lasted throughout the Terminal Classic period (until A.D. 1000 [Sharer and Traxler 2006]) is unknown. It is possible that the occupation lasted late into the 10<sup>th</sup>

century, but another possibility is that it was relatively brief, only lasting until the end of the 9<sup>th</sup> century. A handful of Postclassic censer fragments have been found on structures 2A8-2 and 3A8-1, but because no other ceramic vessels from the Postclassic have been found it probably does not represent permanent habitation and indicates that the rooms on the Danta Acropolis had already been abandoned. The Early Postclassic in the Peten is dated to around A.D. 1000. Additionally, one possible Tohil Plumbate sherd was found. As a popular tradeware type, it supposedly does not enter the Maya lowlands until the Early Postclassic. At El Mirador Silho Fine Orange occurs in small quantities. This ceramic group was previously believed to have been introduced later than the Altar and Balancan groups, but dating for this group as part of the Sotuta Ceramic Complex is still imprecise (Cobos Palma 2004). At Altar de Sacrificios, according to Adams, the introduction of small amounts of fine paste ware during the Boca phase was “late in the phase, late facet” (1973:140). The Boca phase lasted from approximately A.D. 771 to A.D. 909; thus, Adams dates the introduction of fine paste trade pieces to the latter half of the 9<sup>th</sup> century. The presence of the Silho group in the Jimba Complex (A.D. 909-948) at Altar de Sacrificios, however, along with higher frequencies of fine paste wares and the numbers of types, was one of the factors distinguishing the Jimba and Boca ceramic complexes. Conversely, Jeremy Sabloff (1973) would probably not accept such a late date for the introduction of the fine paste tradition at Seibal. He notes that most of the fine paste types that Adams dates to the Jimba phase were present in the Bayal phase at Seibal, which ended approximately A.D. 900. The Silho fine paste group characterizes many Terminal Classic and Early Postclassic assemblages in northern Yucatan (Andrews et al. 1988). The interpretation of Chichen Itza as primarily an Early Postclassic polity is still debated, but much evidence in recent years shows that it began earlier than once thought (Cobos Palma 2004). This partially stems from the fact that Sotuta ceramics

are earlier than previously thought. It is now known that Sotuta ceramics, and therefore the Silho group, partially overlap with Cehpech ceramics (containing Altar and Balancan fine orange groups) and were coeval for a two centuries, roughly. The Sotuta Ceramic Complex has been divided into early and late facets. The early facet contains Silho fine orange types, but it does not have Tohil Plumbate which is present in the late facet. The early facet ended at approximately A.D. 900 (Cobos Palma 2004). The virtual absence of Plumbate at El Mirador argues against the occupation lasting beyond the 10<sup>th</sup> century. The Jimba Complex at Altar de Sacrificios also did not contain Plumbate, so it is likely that the maximum duration of the occupation at El Mirador did not extend beyond the mid-tenth century. In fact, it is equally possible that the Jimba Complex was just a purer form of Boca, especially since the former could not be stratigraphically separated from the latter (Adams 1973). William Ringle et al. (1998) believe that the Jimba complex did not date as late as Adams suggested and was just a late facet of Boca. They also point out that recent evidence establishes the existence of the Silho ceramic group by A.D. 800-850. Thus, the presence of this group probably does not indicate a lengthier occupation at El Mirador, and the site may have been largely abandoned by around the start of the 10<sup>th</sup> century A.D. There is also a possibility that ceramic trade vessels that are markers for the Postclassic simply did not appear at El Mirador because the inhabitants could not afford them. Thus, there is still a possibility that the occupation at El Mirador was lengthier than the early 10<sup>th</sup> century.

### ***Pollen Core Dating***

Another line of evidence for dating the occupation on the Danta Acropolis to the Terminal Classic period is derived from sediment cores from bodies of water near the Mirador Basin. Results from these studies apply to the basin as a whole and do not directly date the

occupation on the Danta Acropolis. However, the results from these studies support the dates from ceramic cross dating.

Cores taken from Lake Puerto Arturo, located approximately 30 km to the southwest of the Mirador Basin, were analyzed for pollen and divided into chronological periods based on radiocarbon dates obtained (Wahl et al. 2005). Indicators of vegetation disturbance, represented by the *Poaceae* and *Asteraceae* families of herbs, reached a high point around A.D. 890. A dramatic decrease in levels of vegetation disturbance (associated with slash and burn agriculture) occurred in the next level analyzed dating to A.D. 960. Additionally, *Zea mays* pollen did not appear in any samples after A.D. 960, indicating at a minimum that agriculture was not heavily practiced in the Mirador Basin. These dates complement information from ceramic cross dating which suggests abandonment of the Danta Acropolis sometime in the 10<sup>th</sup> century A.D.

### **Function and Meaning of the Danta Acropolis Settlement**

For the most part, the function of Maya settlements is relatively straight-forward. Most functioned as political centers where nobility governed their respective kingdoms and displayed their power through monumental architecture and ritual pomp (Sharer and Traxler 2006). However, Terminal Classic El Mirador had no clear political or economic functions that were characteristic of larger polities. The main functions of the settlement were domestic in nature, but there may have been a ritual component involving pilgrimages, perhaps connected to the social memory of Preclassic El Mirador (Hansen et al. 2008).

The domestic function of the settlement is evidenced by the abundant refuse from the rooms on the Danta Acropolis. Many of these rooms have benches that could have been used for sleeping. Domestic refuse included large quantities of utilitarian pottery, lithics, ground stone, and even charred corn cobs (Lopez and Hernandez 2006). The dimensions of the rooms and the

various remodeling events strongly suggest that most were used for domestic purposes, either for sleeping, storage, food preparation, or tool manufacture. Although ritual use is postulated for these rooms (addressed below), the simple nature of all caches and special offerings found in them suggests that they were primarily domestic in nature.

Ritual use of the rooms on the Danta Acropolis may have involved pilgrims from the surrounding countryside (Hansen et al. 2008). The sweatbaths on buildings 2A8-2 and 3A8-1 could have been used by visitors, and the other rooms could have been used as lodgings. Hansen et al. (2008) also cite the use of unworked jade, ocarinas, whistles, drums, bark beaters, and figurines, among other materials, as evidence of ritual use by possible pilgrims. No superstructure exists on top of the main buildings on the Danta Acropolis, and offerings on top of the buildings are scarce, but a possible draw to pilgrims may have been the sweatbaths. Although inferential, the possibility of the Danta Acropolis village serving as a residential compound accommodating pilgrims seems a plausible explanation given the facts, especially considering the location of the settlement, built in the middle of a broad abandoned basin, but probably not coincidentally built on the facades of Preclassic structures erected a millennium earlier. However, if pilgrims were housed locally and were hosted by a resident population, their impact on the ceramic assemblage may be negligible (Ringle et al. 1998).

### **Ceramic Analysis and Continuity or Change**

Regarding the Terminal Classic ceramics from El Mirador, some conclusions have been reached concerning cultural continuity and change by performing two types of analysis, type-variety and modal analysis. The conclusions will lead into a discussion of the culture-history of El Mirador and the degree of cultural change or stability found in the material record.

The main purpose of conducting a type-variety analysis and a modal analysis on the ceramics from El Mirador was to answer culture-historical questions and determine cultural continuities and changes. The type-variety analysis built upon previous work at El Mirador by Forsyth (1989). To detect changes in the ceramic inventory in the Post LacNa Complex the Late Classic ceramics were also briefly discussed. In the Late Classic, monochrome pottery predominated, with the Tinaja Ceramic Group being the most popular. Monochrome black ceramics were also well represented. Unslipped pottery also comprised a significant portion of the assemblage. Polychrome pottery at El Mirador was produced in small quantities and has been consistently found in excavations. The polychrome types, as well as all the others, belong to either the Zacatal or Palmar ceramic groups, part of the Tepeu ceramic sphere original to northeast Peten. Few foreign types were present; however, some of the rarer polychrome types may represent outside exchange. In the Terminal Classic, El Mirador continued participating as a full member of this northeast Peten ceramic sphere, known as Eznab for this period, but some changes occurred. For the most part the major types continued to be well represented, but there were some changes in their frequency. More ceramic types are evident for the Terminal Classic, but overall it appears that there was a simplification in the ceramic assemblage, akin to the situation Adams (1973) describes for the Boca Complex at Altar de Sacrificios. At El Mirador the trend toward simplification is apparent, as seen in the high frequency of unslipped pottery which was greater than half the assemblage total. Certain types or varieties disappeared—most important of which was the near loss of polychrome vessels. Polychrome vessels were extremely rare in the Terminal Classic and were not of the finely executed types, such as Peten cream slipped polychromes. Instead, new types appeared in small quantities and undoubtedly were from other areas to the north and west and represent new areas of influence on El Mirador. This is



definitely the case with Campeche polychromes, such as Sayan Red on Cream and Chimbote Cream Polychrome, slatewares, and fine paste types probably introduced from the Usumacinta region.

Using the type-variety system clear differences in the composition of the Late Classic assemblage and the Terminal Classic were noted which allowed for temporally separating them. Not all changes between the two periods could be observed using the type-variety system and therefore modal analysis was used. Several changes were observed, and individual attributes of the ceramics were isolated for analysis. New forms were introduced during the Terminal Classic, and others disappeared or were less frequent. The most frequent forms for monochrome ceramics were incurved rim basins, hemispherical bowls, flaring walled basal break dishes and bowls, and small necked jars. Basal supports for these vessels were often flat, but a significant increase in hollow supports occurred during the Terminal Classic. Hollow supports are characteristic for the period. The diameter for rim sherds was also taken. Vessel sizes were not standardized but do show that certain size ranges were preferred for the various vessel shapes.

Finally, methods of surface decoration were represented by two primary techniques, impression and incision. These two techniques were found to be correlated with other attributes, such as color and vessel shape. The goal of the modal analysis was accomplished because the data did help to distinguish the Terminal Classic ceramics from the Late Classic ceramics. Many of the differences were subtle, such as the introduction of new vessel forms, such as recurved rim bowls, and the diminution in frequency of other forms. The tabulation of each rim sherd separately allowed for recognition of attribute combinations. As a result of analyzing modes more finely detailed information was recovered for the ceramic assemblage, aiding in its description, than would have been the case otherwise if I had only using the type-variety system.

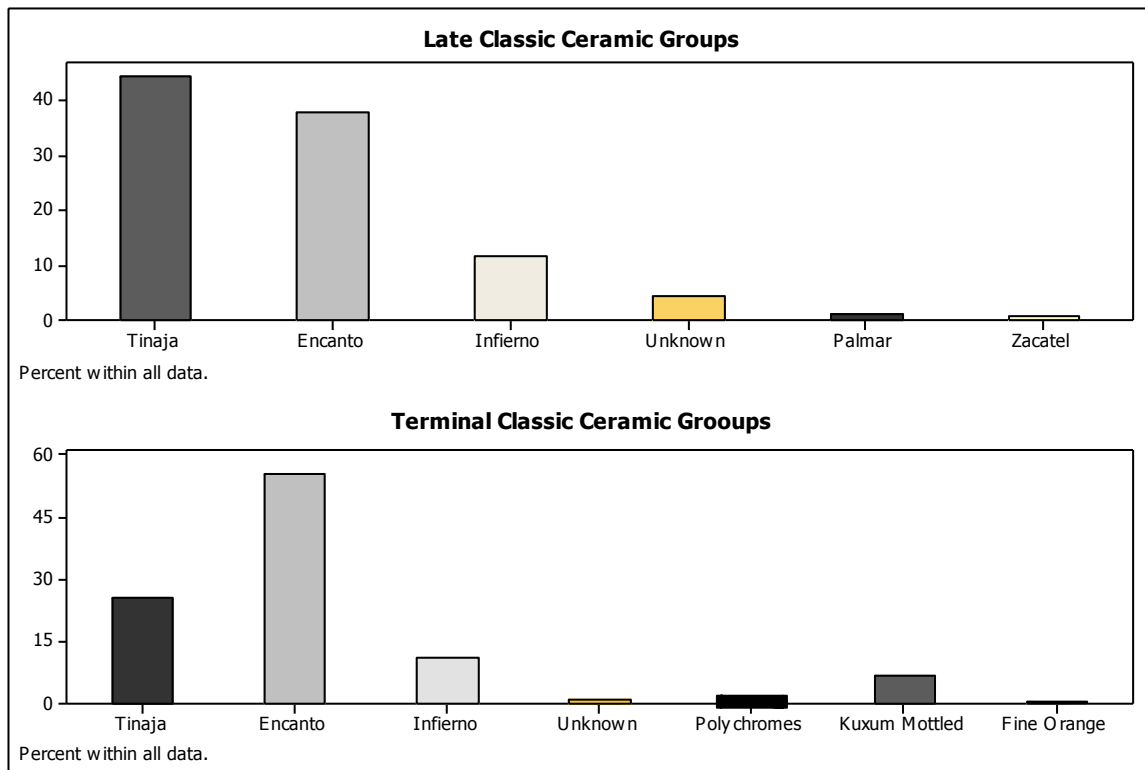


Figure 20. Frequency of Late Classic and Terminal Classic ceramic groups.

For instance, this allowed me to know whether a particular rim sherd had slip color variation, the diameter of the vessel, what form of surface decoration was used, and the vessel shape.

The type-variety analysis and modal analysis, when combined, indicate that there was significant continuity in the El Mirador ceramic assemblage from Late to Terminal Classic times (Figure 20). The continuity in turn indicates that there was significant cultural stability for the majority of the population during the transitions taking place in the Terminal Classic. Stability is inferred at least for the domestic aspects of the settlement. Every day life appeared to continue much the way it had in the Late Classic. The similarity in the ceramics between the two periods suggests that the potters that occupied the Danta Acropolis were descended from the Late Classic potters of El Mirador or were from somewhere nearby in the Mirador Basin. The data from El Mirador supports a view of cultural continuity for the period, despite significant changes for the upper level of society.

The emphasis on cultural stability is derived from the etic perspective by looking at the material record. It is unknown whether the Terminal Classic inhabitants of El Mirador perceived much change or not, but it is worth noting that their perceptions were different than ours, even the way they would have perceived time and change (Lucas 2005, Bee 1974). Furthermore, one need not necessarily characterize the dynamics of group behavior as an either or situation of change or persistence. Ordinary people, even those culturally isolated, generally do not throw out generations of accumulated cultural practices all at once; neither do they attempt to arrest cultural change forever.

### **Similarities and Differences with Regional Patterns**

Chapters 2 through 6 provided important data which assist in placing El Mirador in a regional context. The ceramic and architectural information from other lowland sites presented in chapter 4 shares similarities but also contrasts with the description of El Mirador in chapter 3. Several questions were posed in the introduction that deal with El Mirador's participation in regional cultural patterns and the degree to which it was different or similar to other sites. Although El Mirador had a distinctive occupation in the Late Classic which lacked typical monumental architecture and sophisticated displays of material wealth, in the Terminal Classic it shared many of the patterns and processes with dramatically different larger sites. At El Mirador it is particularly difficult to identify an elite class. However, there was a decline and disappearance of fine polychrome types just as occurred at other sites in the lowlands, such as Calakmul, Uaxactun, and Altar de Sacrificios. Importantly, El Mirador also showed significant continuity in the production and use of ceramic utility wares, a pattern observed at several other sites in the lowlands. The Miradoreños also acquired fine orangeware and other foreign ceramic types which became popular during the Terminal Classic period.

The occupation at El Mirador was different from those at other sites in several aspects. Principally, it was an impoverished occupation lacking in sophistication and material markers of status. This does not mean the occupants were squatters. In fact, the residences may have had a specialized function to lodge pilgrims (Hansen et al. 2008). The differences in ceramics and architecture between El Mirador and the other sites discussed are due to El Mirador being a smaller settlement and its lack of a significant elite class distinguishable from the main body of the residents. The crude masonry construction, general lack of fine funerary offerings, and few items of prestige paint an austere image of life at the Terminal Classic settlement. Also, of the sites discussed, El Mirador appears to have been the most stable, at least based on the ceramic continuities.

El Mirador is a salient case for the Terminal Classic because it occupied an underdeveloped area in the middle of the lowlands in the midst of many powerful polities. Daily life at large sites that supposedly underwent dramatic changes during the period also may have been relatively stable for the majority of citizens (Tourtellot and Gonzalez 2004). At Seibal, said to have been conquered by Mexicanized Maya elites (Adams 1973, Sabloff 1973), there is also a weak correlation between house types and other categories of material culture. This builds upon evidence that there often was little correlation between status and material displays in the Terminal Classic, a pattern which may have operated at El Mirador also.

### **Ceramic Production and Access to Goods**

Another question addressed was whether there were two levels of ceramic production operating in the Late Classic, one associated with fine ware for elites in the form of polychromes, and utility ware, part of the general production system associated with commoners. Despite the small size of El Mirador for the period, and its lack of typical Classic traits, it also shows the

same pattern seen at other Maya sites—a loss in polychrome vessels and continuity in utilitarian ceramics. The loss of polychrome vessels was partially replaced by the introduction of fine paste wares (see Chapter 5). The general idea of polychrome partial replacement dates back several decades (Sabloff 1973:122). My research has been important because it shows that even a provincial, apparently non-consequential settlement underwent the same cultural processes that the larger political centers did. The implications of two levels of ceramic production bear upon questions of how the Classic period lowland economy operated. Existing information suggests that elites sustained polychrome vessel production in some manner, even the common polychrome types. Fine paste vessels filled a similar role as polychromes in the Terminal Classic, but in a more limited capacity. Although the economic and political situation between El Mirador and other sites in the region is not understood, a reasonable conclusion is that the inhabitants of El Mirador desired fine paste wares, were able to attain them, and prized these vessels in a manner similar to polychromes. Fine paste wares were relatively rare at El Mirador but were distributed evenly throughout occupational debris. Fine paste sherds are usually found in small numbers in the southern lowlands. Their low frequency at El Mirador compared to Calakmul is probably a product of political decentralization at El Mirador and lack of an elite class (if there was one) that was either unable or chose not to socially differentiate itself through prestige items.

Forsyth (2005) noted the probable symbolic replacement of polychrome vessels with fine paste wares and emphasized that the direction of influence was outside the Peten. I also perceive some type of ideological connection with the adoption of fine paste ware. The imitation fine paste wares and vessel forms indicate some form of emulation. One possibility links fine paste ceramics to the spread of a cult or “international religion” in the Terminal Classic period (Ringle

et al. 1998). The pottery is suggested to be highly specialized and was used in rituals celebrating the cult of Quetzalcoatl and Tlaloc. The cult also appears to have had a broader social base than previous ideologies, appealing to a wider audience. One crucial aspect of the cult practice was pilgrimage to large cult centers (such as Chichen Itza). There is a lack of data that would connect the Danta Acropolis occupation with the cult of Quetzalcoatl. Only the very small quantities of fine orange vessels provide any type of link. If there was such a cult spreading during the Terminal Classic, El Mirador would have been peripheral to it. Nevertheless, the presence of fine paste wares at El Mirador represents some kind of cultural influence from the Usumacinta region.

Because of the small sample size for the Late Classic at El Mirador it was not possible to make detailed comparisons of the artifacts between the Late and Terminal Classic periods. When important factors such as investment in residential architecture are taken into account, however, it appears that some individuals from the Late Classic community wielded more power than is evident in the Terminal Classic. At least two elite residences on Platform 2 of the Danta were 6 m high (Howell 1983). The Terminal Classic inhabitants, based on present information, did not invest so highly in residential structures, and there are none from the Danta Acropolis that indicate differential displays of status. What can be said is that the acquisition of exotic basic goods by Miradoreños in the Terminal Classic demonstrates that they were not cut off economically from the rest of the lowlands, and they were not just struggling to survive. Granite, basalt, and obsidian were imported in small amounts. A few luxury items were also imported such as mother of pearl, other species of marine shell, and greenstone. Although perhaps impoverished, and lacking a large labor pool, the residents still had economic connections that enabled them to obtain these items.

## **Future Work**

There are many specific and general recommendations that I have which, if followed, I believe would aid in better understanding the Terminal Classic occupation at El Mirador. I have no recommendations regarding the effectiveness of modal analysis of ceramics. It definitely accomplishes its purpose. The type-variety system was also effective in accomplishing its purpose of creating a ceramic sequence. The main problem was the variability in reporting for other sites. Some reports only gave results on the level of ceramic groups, while others gave quantitative data for types but offered no information on vessel shapes or modes. Surely some progress can be made in consistently providing standard information needed for comparative purposes. Additionally, some absolute dates for the Terminal Classic occupation on the Danta Acropolis would be nice to have, but now that many rooms have been removed that would be impossible. However, the third triadic structure from the Danta Acropolis, which was not excavated, has potential for producing similar data. More sampling of Late Classic residences is needed to see how they relate to the Terminal Classic occupation. I believe that it is imperative that the Late Classic range structures that were built on Platform 2 of the Danta Complex be excavated to see what function they had. Having a large comparative sample of artifacts would also help in assessing cultural continuity with the Terminal Classic and in determining whether access to certain exotic, basic goods fluctuated with time.

Further study should also be done on the general ceramic production system consisting of utilitarian types. This may take the form of greater attention to paste composition to determine whether certain types were made locally or not. For instance, was Cameron Incised locally made, or was it imported into the site? If additional Terminal Classic occupation is found at other areas

of the site it will be important to record carefully the context of fine paste ceramics. This may aid in determining if ritual behaviors were associated with its use.

It is tempting to say that more small Terminal Classic settlements need to be excavated to see whether there were similar adaptations during the period. The main point is that settlement data in the environs of the Mirador Basin and Calakmul have not revealed a similar context to El Mirador. Calakmul, which displays a striking resemblance to El Mirador in the way that new residential architecture was placed on the façade of a large pyramid, is different in having an important occupation with a resident elite class during the period. Surely there are other small-sized Terminal Classic villages similar to El Mirador that collapsed along with the larger political centers they associated with. Further study of smaller villages might aid in understanding how rural hinterlands were integrated within political and economic systems of the time.

In conclusion, El Mirador is a unique occupation from the Terminal Classic period. Its uniqueness and insularity from typical Maya sociopolitical patterns was well established by the Late Classic period. The Terminal Classic period represents continuity in cultural patterns and probably in population as well. The occupation most likely began shortly after A.D. 800 and lasted until the end of the ninth century or probably maximally to the mid tenth century. At least four main material culture attributes characterize the occupation. The first is the non-typical pattern of placing rooms on the façade of an existing temple-pyramid. This may have been an attempt to convert the Preclassic pyramid into a palace-temple-pyramid. The rooms are also notable for their lack of refinement in masonry construction. Secondly, the presence of fine orangeware defines the ceramic complex as being Terminal Classic and demonstrates the connections the inhabitants had with other regions. Third, the ceramic assemblage and



architecture are simplified from the Late Classic and both provide a picture of a humble settlement without obvious status distinctions. Fourth, despite appearing underdeveloped, the settlement was able to acquire basic exotic goods and small amounts of prestige items. This indicates that the settlement was well connected to Terminal Classic economic distribution networks.

## APPENDIX A

### Minor Ceramic Types and Changes in Type Frequencies

Corozal Incised: Variety Unspecified is a less common Late Classic variety (.002 %). The vessels usually bear preslip circumferential incised lines and below them there may be simple geometric figures. The most popular forms are flaring-walled basal break dishes or bowls.

Corozal Incised: Groove-incised Variety differs from the previous variety in consistently having two or three exterior circumferential preslip grooves beginning about 1-1.5 cm below the rim. This variety was only found in hemispherical bowls at El Mirador (1989:88-90).

Pantano Impressed is another less common but consistently encountered Late Classic type (.0021%). It has a tool impressed variety as well as a stamped variety. Both varieties at El Mirador are found exclusively as short to medium high hyperboloid-necked jars, and both bear impressions at the neck-shoulder junction. In the Pantano Variety, small round punctations occur often as a single row or up to four rows. Spaced vertical slashes are also common as well as small triangles combined with punctations. On the Stamped Variety the dominate designs are scroll figures made using a unit stamp. The Stamped Variety is rarer than the Pantano Variety, and both were counted together by Forsyth (1989:88, 90-92). Colmoyote Composite: Colmoyote Variety is an extremely rare type identified by Forsyth. It is analogous to Chinja Impressed in every respect except there is a brown band on the lip that is intentional. Also extremely rare were hemispherical vessels with appliqué buttons, fluted vessels, and a black-on-red type.

Tres Micos: Tres Micos Variety is the black slip type counterpart to the red Chinja Impressed type. It is the same in every aspect except for the slip color. However, it has not been found in rare forms such as dishes and plates as has Chinja Impressed. Other rarer Infierno Group types include Carro Modeled: Carro Variety, which has modeled appliqué in the form of a

simple face, and other fluted, groove-incised, incised-punctated, gouge-incised, and basal impressed types.

One tentative type for the Zacatal Group is Naranjal Red-on-cream (n=29), which has red painted designs, both in positive and negative design patterns. Frequent motifs include dots, brackets, shapes in the form of a sausage called reserved sausages, and solid painted rim bands. Various forms are known for this group, including vases, hemispherical bowls, jars and flaring-sided plates and dishes. Chinos Black-on-cream: Variety Unspecified (n=24) differs from Naranjal Red in having black to dark brown painted designs. This type is rare, and due to its small sample, all that is known about vessel shape is that plates and dishes occur along with a drum shape. Orange-slipped polychromes pertain to the Palmar Ceramic Group. Desquite Red-on-orange (n=19) is discernible because of its red painted lines. The most common form for this type is jars which were slipped on their exteriors. Geometric designs also occur, but these are not usually recognizable. The type also has an unknown bowl or dish form. Chantuori Black-on-orange: Variety Unspecified (n=14) is a rare type with black paint applied over the orange slip. It has black to brown rim bands and geometric designs usually on vessel exteriors.

### **Terminal Classic Types and Varieties**

Chimbote Cream Polychrome belongs to the Chimbote Ceramic Group defined at Becan, Mexico, by Ball (1977:77). It has a white to light gray to pink background slip color. Applied over this is a red to red-yellow secondary slip. A tertiary application of red slip was applied, leaving circular and geometric patterns reserved in the primary and secondary slip, producing a final dark reddish brown slip color. The interiors have cream, red-brown, and black slips with a red or black lip color. Forms include round-sided bowls averaging 22-24 cm in diameter and dishes with slightly flaring sides. At Becan the type dates to Bejuco times (equivalent to Tepeu I)

and later. Its frequency there is common; at El Mirador it is a rare type, with just 13 sherds found in the sample.

Sayan Red-on-cream belongs to the Sayan Ceramic Group at Becan (Ball 1977:77). It has a pale brown paste with fine calcite and ground chert temper. The most common form is round-sided bowls. The exteriors of these vessels are slipped white to light gray to a very pale brown. Red to dark red slip is applied secondarily. A red lip band extends below vessel rims. Vessel lip diameters range from 18-24 cm. The type dates to the Chintok Complex (Late Classic) and later at Becan. It is a rare type at El Mirador, with just 13 sherds in the sample. Tich' Polychrome belongs to a ceramic group of the same name from Campeche. It is characterized by a cream slip with red, brown, and black painted decorations. It is found almost exclusively on composite silhouette forms. Frequent motifs are monkeys, the heads of zoomorphic gods, and anthropomorphic figures (Boucher and Palomo 1989). Three examples of this type have been recovered from the Danta excavations at El Mirador. Another Campeche polychrome has tentatively been recognized at El Mirador. Chimés Polychrome, belonging to the Tich' ceramic group, shares the composite silhouette shape, but it has orange-brown background slip and geometric motifs, often diagonal lines or criss-crossing black lines (Boucher and Palomo 1989). Only two likely examples are found in the Terminal Classic assemblage.

Caribe Incised is part of the Balancan Group and is distinguished from other types by incising, usually as geometric shapes. Only one sherd of Caribe Incised has been found at El Mirador. Another Fine Paste Ware is Telchac Composite, a fine gray type from the Chablekal Fine Gray Group, which has punctations and incisions. The most common form for this type is an open orifice, composite bowl. One definitive sherd from this type has been found at El

Mirador; however there was another fine gray sherd with black slip. One sherd of an unknown fine black paste is also notable.

Trapiche Incised was first recognized at Uaxactun (Smith and Gifford 1966) and has since been found at other sites in the lowlands. It belongs to the Altar/Balancan Group and has post-slip incisions on vessel floors. Tripod dishes are the predominant form. Designs may include mat patterns or stylized animals. At El Mirador, two sherds have been found, one of which has a mat pattern. Tumba Black-on-orange belongs to the Altar Group established by Smith and Gifford (1966). Keeping with fine paste wares, there is no apparent temper. Exteriors are decorated with black designs, semicircles, ovals, and horizontal bands. At Uaxactun, observed forms for this type are bowls with rounded-sides, whereas at Altar de Sacrificios barrel-shaped vessels occur as well as round-sided bowls with a pre-slip incision below the rim. At El Mirador 12 sherds from this type have been found, and they are all from round-sided bowls, one of which has an incision below the rim. The type of supports these vessels had at El Mirador is unknown.

Silho Fine Orange is a distinct ceramic group from Altar and Balancan, mainly different in having an opaque slip somewhat darker than the underlying paste, although slip color is comparable to Altar or Balancan. At El Mirador it is extremely rare, and only three sherds are represented. Cumpich Incised was defined by Smith (1971). It belongs to the Silho Fine Orange Group, and its most common form is a tripod grater bowl with crosshatched incising on the bottom. It is extremely rare at El Mirador, and only one sherd of this type has been found.

Torro gouged-incised (Smith and Gifford 1966) is a black-slipped ware belonging to the Achote Group (this group may be the same as Infierno, the only difference between them being a different temporal designations). These vessels are generally vases, tripod dishes, and plates. On

their exteriors they have post-slip, pre-fired, gouged-incised designs consisting of glyphic, scroll-like, and other geometric motifs. It is a rare type at El Mirador; five possible sherds of this type have been recovered.

Thirteen sherds of slateware or possible slateware were recovered from the Danta Complex operations. Ticul Thin Slate, belonging to thin slate ware, is tempered with fine calcite, as is Peten Gloss Ware (encompassing the Tinaja and Infierno Groups); however, it differs from the Peten Gloss Ware in having a soapy slip which ranges in color from brownish gray to light yellow brown (Smith 1971). Four sherds of Ticul Thin Slate have been found at El Mirador, two of which have incising. Muna Slate is a type and ceramic group. It has the same soapy slip and range of colors as Ticul Slate. This type is also very rare at El Mirador; there are eight likely sherds belonging to the type. Both types of slateware come in slightly different forms; however, round-sided bowls, bowls with restricted orifices, cylinder vases, and tripod dishes seem to be shared by both types. One additional possible slateware sherd was recorded.

### **Changes in type frequency and other observations**

One salient characteristic of the Post-Lac Na ceramic assemblage, besides some of the notable new types that help define the Terminal Classic, is the frequency change (at times significant) of many types from the Late to Terminal Classic periods (see Table 1 and 2). Within the Tinaja Ceramic Group the frequency of Tinaja Red in all its variants decreased in frequency from the Late to Terminal Classic. The type was still very popular; in fact, it was the most numerous monochrome type. However, the decrease is rather dramatic, down from 42% to 21% of the total assemblage in the Terminal Classic, a decrease of 50%. In the Late Classic the Tinaja Group was dominated by one type, Tinaja Red:Nanzal Variety, making up over 95% of the total for the group (Table 3). In the Terminal Classic this high frequency had gone down to less than

80% (Table 4). Corozal Incised increased from .2 % to about .5 %. Chinja Impressed had a negligible increase from 1.5% to 1.8%. When based on sherd weights instead of counts the total frequency for Chinja Impressed is about 2% of the total assemblage. Pantano Impressed increased from .2 % to .5 % of the total assemblage. Forsyth (1989) does not give a separate count for the stamped variety, but they seem to be more abundant in the Terminal Classic. Sherds typed as “Other Tinaja Group” were extremely rare in the Late Classic, just .1%; in the Terminal Classic these special sherds, many of which are incised, accounted for .7 % of the total assemblage. Colmoyote Impressed, a rare type from the Late Classic, does not appear in the Terminal Classic.

There is almost no change in the frequency of the Infierno Black from the Late to Terminal Classic periods, being about 9% of the assemblage respectively. Carmelita Incised decreased dramatically from almost 2% of the assemblage to only .7 %. There are no known examples of “monkey pots” at El Mirador in the Terminal Classic period. The composite silhouette form continued as an infrequent form, but decoration largely consisted of incised lines below the rim. Tres Micos Impressed, the black slipped counter-part of Chinja Impressed, increased from about .6% to just over 1% of the total assemblage when both the Red Rim and Tres Micos varieties are counted together. The Tres Micos: Red Rim Variety was entirely absent in the Late Classic. Additionally, sherds categorized as “Other Infierno Group” increased from 0.1% to 0.3 %.

Polychrome types from the Peten, which were present in the Late Classic, underwent some drastic changes in the Terminal Classic. Desquite red-on-orange declined somewhat, but with so few numbers for this type the significance of the decrease is not readily apparent. The

same can be said for Chantuori black-on-orange. However, Palmar Orange Polychrome, the most frequent polychrome type from the Late Classic, at .7 %, decreased in the Terminal Classic to just 0.1%. Significantly, the Zacatel Cream Polychrome Group entirely disappeared in the Terminal Classic. Monochrome orangeware vessels, unknown at El Mirador in the Late Classic, are quite rare in the Terminal Classic. Looking at the bulk of the ceramic sample, the unslipped pottery, Cambio Unslipped stayed the same at 9% of the ceramic assemblage. In the Late Classic Encanto Striated consisted of 28% of the assemblage; in the Terminal Classic this had gone up to 45%. Also of importance is the variety of sherds classified as “Other Encanto Ceramic Group.” These included unslipped figurine fragments, censer fragments, unslipped vessels with appliqué, incising, and other designs. These special unslipped vessels accounted for nearly 1% of the total assemblage.



## Appendix B

Table B-1. Average diameter according to vessel shape and slip color.

	Necked jar		FWBB Dish/bowl		Deep hem bowl		Incurved Rim Basin		Dish/plate w/ int offset		Hemispherical bowl		Recurved rim bowl		Bowl with thick rim	
	Average (Sample size)	Std. Dev.	Average (Sample size)	Std. Dev.	Average (Sample size)	Std. Dev.	Average (Sample size)	Std. Dev.	Average (Sample size)	Std. Dev.	Average (Sample size)	Std. Dev.	Average (Sample size)	Std. Dev.	Average (Sample size)	Std. Dev.
Red	13.5 (51)	2.4	27.2 (55)	3.9	19.3 (55)	2.9	31.7 (84)	5.6	29.5 (2)	-	18.7 (33)	3.4	22.3 (7)	4.9	36.8 (7)	7.8
Black	11.3 (3)	-	29.8 (31)	4.4	20 (1)	-	30.5 (114)	5.6	39.2 (5)	3	18.7 (28)	1.8	-	-	30 (1)	-
Crm	14.6 (20)	4	34.5 (4)	-	19.1(7)	1	32 (3)	-	-	-	18 (7)	2.6	-	-	-	-
Orng	-	-	-	-	-	-	-	-	-	-	18 (1)	-	-	-	-	-
Polyc	-	-	-	-	-	-	-	-	-	-	20 (1)	-	-	-	-	-
Dichr	-	-	-	-	20 (1)	-	-	-	-	-	-	-	30 (1)	-	-	-
Unk slip	-	-	-	-	-	-	22 (2)	-	-	-	-	-	-	-	-	-

Table B-1 Cont.

	Composite silhouette		Flaring walled plate		Other	
	Average (Sample size)	Std. Dev.	Average (Sample size)	Std. Dev.	Average (Sample size)	Std. Dev.
Red	22 (1)	-	25.2 (5)	8.5	22.5 (12)	9.1
Black	16 (3)	-	38 (1)	-	31.6	11.5
Crn	-	-	-	-	-	-
Orng.	-	-	-	-	-	-
Polyc	-	-	-	-	-	-
Dichr	-	-	-	-	-	-
Unk slip	-	-	-	-	12 (1)	-

## Appendix C

Table C-1. Chi-square test for distribution of slip color and base type. See Table 8 page 55.

Slip Color		Flat	Hollow	Total
Red	Observed value	95 (36%)	72 (27%)	167
	Expected Value	110.07	56.93	
	Difference	2.063	3.988	
Black	Observed value	58 (22.2%)	12 (4.5%)	70
	Expected Value	46.14	23.86	
	Difference	3.051	5.898	
Cream/Gray	Observed value	21 (8%)	6 (2.3%)	27
	Expected Value	17.80	9.20	
	Difference	0.577	1.116	
Total		174	90	264

Chi-Sq = 16.692, DF = 2

Table C-2. Chi-square test for the distribution of slip color and major types of surface decoration.  
See page 61 in the main text.

Slip Color		Impressed	Incised	Total
Red	Observed value	336 (38.2%)	138 (15.7%)	474
	Expected Value	354.69	119.31	
	Difference	0.985	2.928	
Black	Observed value	289 (33%)	77 (8.8%)	366
	Expected Value	273.87	92.13	
	Difference	0.835	2.483	
Cream/Gray	Observed value	32 (3.6%)	6 (.5%)	38
	Expected Value	28.44	9.56	
	Difference	0.447	1.329	
Total		657	221	878

Chi-Sq = 9.007, DF = 2.

Table C-3. Distribution of most frequent vessel shapes and modes of surface decoration. See page 61 in the main text.

Vessel Shape		Impressed	Incised	Total
Necked Jar	Observed value	41 (5.2%)	0	41
	Expected Value	31.14	9.86	
	Difference	3.123	9.861	
Bowl	Observed value	3 (.4%)	137 (17.3%)	140
	Expected Value	106.33	33.67	
	Difference	100.414	317.096	
Incurved Rim Basin	Observed value	556 (70.4%)	31 (4%)	587
	Expected Value	445.82	141.18	
	Difference	16.71	5.29	
Composite Silhouette	Observed value	0	22 (2.8%)	22
	Expected Value	16.71	5.29	
	Difference	16.709	52.765	

Total	600	190	790
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Chi-Sq = 613.179, DF = 3

Table C-4. Chi-square test for the distribution of metate stone types. See page 124 of the main text.

Time Period		Basalt	Granite/other volcanic	Arkose	Quartzite	Sandstone	Chert	Limestone	Total
Late Classic	Observed	10	17 (5.3%)	4	149	3 (1%)	2	21 (6.5%)	206
		(3.1%)		(1.2%)	(46.5%)		(0.6%)		
	Expected	13.52	33.48	5.15	128.11	2.58	1.93	21.24	
	Difference	0.916	8.108	.257	3.408	0.07	0.002	0.003	
Terminal Classic	Observed	11	35 (11%)	4	50	1 (0.3%)	1	12 (3.7%)	114
		(3.4%)		(1.2%)	(15.6%)		(0.3%)		
	Expected	7.48	18.52	2.85	70.89	1.43	1.07	21.24	
	Difference	1.655	14.652	0.464	6.158	0.127	0.004	0.005	
Total		21	52	8	199	4	3	33	320

Chi-Sq = 35.829, DF = 6

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