

**STATE INTERVENTIONISM IN THE LATE CLASSIC MAYA PALENQUE POLITY:
HOUSEHOLD AND COMMUNITY ARCHAEOLOGY AT EL LACANDÓN**

by

Roberto López Bravo

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This dissertation was presented

by

Roberto Lopez Bravo

It was defended on

April 18, 2013

and approved by

Katheryn M. Linduff

Robert D. Drennan

Marc Bermann

Olivier de Montmollin

Dissertation Advisor

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Roberto López Bravo, PhD

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Archaeological materials from seven excavated households (three commoner, three elite and a super-elite) from El Lacandón, a rural settlement of the Ancient Maya Palenque polity in Chiapas, Mexico; are analyzed to examine how households and communities were articulated and later affected by incorporation into larger sociopolitical entities. The study spans El Lacandón's foundation in the Late Preclassic period (300 B.C. -A.D. 150), its abandonment as part of its assimilation into the Palenque polity at the beginning of the Classic period (ca. A.D. 150), and its re-foundation as a 2nd level community in the political hierarchy of the Palenque polity at the end of the Late Classic (A.D. 750-850). Economic analyses consider patterns of production and consumption. Obsidian blade manufacturing was organized as a household-level production in both periods, and it was not attached to elite interests during the Late Preclassic, with households of both statuses engaged in paper production, woodworking and paper/cloth imprintings. The pattern changes during the Late Classic, with manufacturing activities restricted to elite households. In terms of consumption, obsidian was available in similar quantities to all households during the Late Preclassic, and became more abundant in elite households during the Late Classic. Ideological patterns of the Late Classic period show that the super-elite household was clearly linked to Palenque's great tradition expressed in burial practices, according to body position and head orientation. Local elite burials practices were more diverse, which was possibly related to a local little tradition. El Lacandón's abandonment at the end of the Late Preclassic coincides with the growth of Palenque as a political capital, a pattern frequently

observed in cases where rural population moved to growing political capitals. Sociopolitical patterns during the Late Classic were examined by a comparison of civic precinct planning and the differential distribution of elite and commoner households in the districts of the Palenque polity. The analysis concluded that provincial elites exercised less power than the elite of the capital, but were able to negotiate a local identity expressed in Palenque-related elements and also elements of other polities.

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1.0 INTRODUCTION

The investigation of the internal functioning of political systems for ancient complex societies has become an important focus of archaeological inquiry in recent years (Feinman and Marcus 1998). More specifically, there is a growing interest in the examination of the diverse strategies of economic and political integration developed in ancient complex societies. Following this line of research, this dissertation concerns the examination of how different social units—ranging from households to entire communities—were articulated and later affected by incorporation into larger sociopolitical entities (Bermann 1994, 1997; D'Altroy 1992; Feinman 1998; Hastorf 1990, 1993; Marcus 1993; Schreiber 1992; Smith 1994). This dissertation focus on the analysis of a specific case: the foundation of the community of El Lacandón at the end of the Late Preclassic period (300 B.C.-A.D. 150); its assimilation and abandonment into the Palenque polity at the beginning of the Early Classic period (ca. A.D. 150); and its re-foundation and functioning as a 2nd-level community in the political hierarchy of the Palenque polity at the end of the Late Classic period (A.D. 750-850).

In the Maya Area, recent research has been dedicated to the analysis of political systems during the Late Preclassic period, when specialist concur with the development of a state system centered at El Mirador, the largest political capital of the period (Clark 2000; Clark, et al. 2000; Demarest 2004; Sharer and Traxler 2006). In addition, it has been suggested that El Mirador's elite was interested in the colonization and/or take over of the ethnic frontier with the Mixe-Zoque group, a process that allowed Maya expansion into areas previously empty or with scarcely Mixe-Zoque occupation, as the Northwestern Zone and the Upper Grijalva Region of Mayaland (Bryant and Clark 1983; Clark, et al. 2000). After the demise of El Mirador political system around A.D. 150, it is now accepted that new, smaller polities emerged in the region, all of them centered on competing dynastic capitals, as was the case of Palenque.

The majority of the recent attempts to understand Classic period political systems (A.D. 150-850) have used epigraphic evidence for the reconstruction of capital-hinterland interaction and macro-scale geopolitics. Classic period political integration is usually inferred from: 1) Distribution of emblem glyphs (Berlin 1958; Culbert 1991; Houston 1993; Marcus 1976, 1993; Mathews 1991); 2) Identification of subsidiary lords (Schele 1986, 1991a; Schele and Freidel 1990); and 3) References to subordination between polities (Grube and Martin 1998; Martin and Grube 1995, 2000). As vivid as those reconstructions can be, the nature of the evidence does not necessarily allow a complete view of Ancient Maya society because inscriptions do not concern the everyday activities of most of the population, but only specific events in the life of the political elite. Furthermore, besides restricted allusions to tribute extraction found in painted pottery (Schele and Mathews 1998, Stuart 1998), there is no epigraphic evidence to develop a characterization of how entire communities functioned as part of larger political entities.

At the other end of the social spectrum, excavations of housegroups, considered as the loci for a majority of household activities, had been undertaken in Mayaland following a variety of approaches and objectives (Haviland 1985, 1988; Hendon 1991; McAnany 1993, 1995; Robin 2003; Sheehy 1991; Tourtellot 1983, 1988a, b; Webster and Gonlin 1988). These studies have provided us with an increasingly large sample of elite and commoner residences along with their artifacts, features and burials, a sample that can be profitably used for the analysis of different dimensions of social inequality. However, it is still necessary to develop analytical frameworks and fieldwork strategies that allow us to discern the effects of political, economical and social integration into the everyday life of the population, which could be profitable undertaken at the household and community levels.

Among the recognized Classic Maya polities, Palenque –probably the largest polity in the Northwestern Zone of Mayaland—provides a vantage point for the analysis of integration because of its recognized long sequence of occupation. This dissertation will examine elite and commoner households at El Lacandón in order to understand how they were articulated as a community during two specific periods: 1) A Late Preclassic community founded by Maya settlers in the middle of a zone already populated by Mixe-Zoques; and 2) A Late Classic community integrated in the inner core of the Palenque polity. In so doing, the research will fall within recent approaches interested in the combined use of epigraphic and archaeological data (Andrews and Fash 2004; Bell, et al. 2004; Demarest 1997, 2004; Dunning and Kowalski 1994;

Houston 1993; LeCount and Yaeger 2010; Sabloff 2003; Sharer and Traxler 2006) to gain a more comprehensive view of Ancient Maya society.

1.1 ANCIENT MAYA POLITICAL SYSTEMS

Recent reconstructions of Late Classic political and economical affairs in Mayaland follow a general anthropological discussion around two competing theoretical positions: decentralism and centralism (Chase and Chase 1996; de Montmollin 1989, 1995; Demarest 1996; Folan 1992; Fox, et al. 1996; LeCount and Yaeger 2010). Centralist theorists argue for the existence of states with a powerful bureaucracy and differentiated economic activity (Fox et al 1996:797; Chase and Chase 1992:11, 1996; Folan 1992); while decentralist theorists propose the importance of kinship and ritual as the main integrative mechanisms of rather loose systems characterized by a high degree of political and economic replication (Carmean and Sabloff 1996; Demarest 1992, 2004; Fox, et al. 1996; Houston 1993; Tourtellot, et al. 1992).

Centralist arguments are linked to organic economic solidarity within an unitary state, with social interdependence achieved due to economic specialization of social groups and classes. On the other hand, mechanical economic solidarity, characterized by affinity and religious beliefs as connecting devices between social groups, is usually linked to decentralist theoretical positions which argue for the existence of segmentary states (de Montmollin 1989, Table 1; Durkheim 1984 [1933]). Additionally, there are suggestions that the former positions must be understood as polar extremes of a continuum of variation in political and economic structure (de Montmollin 1989; 1995).

A considerable amount of the current research in Maya political and economic integration is focused on the classification of specific polities as centralized (Chase and Chase 1992, 1996; Folan 1992) or decentralized (Carmean and Sabloff 1996; Demarest 1997; Dunning and Kowalski 1994; Houston 1993; Tourtellot et al 1992), using generally epigraphic evidence and some settlement data for the development of broad characterizations of the social system of those polities. However, comparatively little effort has been made to develop bridging arguments that take into account the dynamics of integration and their concrete effects on the everyday life of communities and households.

1.2 CAPITAL-HINTERLAND (SUBSIDIARY COMMUNITIES) RELATIONS

The everyday operation of states is normally assumed to have some type of impact on the lives of their subjugated population. In order to develop a characterization of that impact, a profitable analytical strategy is to see vertical (state?) integration as multi-faceted rather than monolithic. In that sense, it is adequate to analyze integration at least in terms of two different dimensions: nature and degree (Bermann 1994, 1997). The nature of vertical integration concerns the understanding of how the different spheres of social life –economic, sociopolitical and ideological—were manipulated for the development of a more integrated system. On the other hand, the degree of state integration can be understood as a continuum of variation (de Montmollin 1989, 1995) between two poles –from decentralized to centralized—depending upon the amount of resources and labor invested and extracted by the state, from low to high degree (Hassig 1985, Fig. 5.2).

A centralized state is interested on the control of different aspects of the economic, sociopolitical and ideological spheres in order to develop a more integrated polity in the territory it rules, with a particular emphasis given to the extent by which households and other social units are interdependent in terms of the extraction and exchange of goods and services (Blanton et al 1993:16-17; Feinman 1998:109). Some researchers in the Maya Area also consider that the state should have a special interest on the development or employment of economic strategies, like craft specialization, which can be seen as tools for the outgrowth of economically interdependent capital household or subjugated communities of the political entity. However, the locus of craft production –the capital or the peripheral sites—is still a matter of discussion and investigation (Blanton et al 1993:186; Chase and Chase 1996; Marcus 1993:145; Potter and King 1995; Rice 1987). Considering that interventionist states are highly interested in the administration of a realm, they are closely aligned with centralized political and economic formations, which use more territorial expansionistic strategies [direct rule format] (Hassig 1985:101, 1992a). Overall, the effect of an interventionist state on incorporated communities should be discernible at both commoner and elite households, with transformations in the sociopolitical, economic and ideological relationships that existed between them and with supralocal entities.

A decentralized state is interested mainly in the extraction of wealth or labor (tribute) without a direct involvement in the reorganization and/or governance of annexed territories, which could maintain their political and economic systems as long as they continue to meet the state's requirements (Hassig 1985, 1992a, 1992b; Grube and Simon 1998). It is generally agreed that, under conditions of state expansion, local elites retained a substantial amount of power despite the presence of an overarching central authority (Feinman 1998:112), which could be archaeologically observed as a continuation of previously established economic patterns. Craft specialization would arise as result of the differential distribution of raw materials, with small-scale exchange systems for the distribution of finished goods. Decentralized states generally use hegemonic expansionist strategies (Hassig 1985:92-93, 101, 1992a, 1992b, Grube and Simon 1988) and generally maintain a decentralized political and economic format [indirect rule format]. Households in communities incorporated by a decentralized state should experience different effects depending upon their affiliation to specific socioeconomic strata. Elite households should be more attuned to state interests, while commoner households are more likely to maintain their previous patterns, or engage in new ones that fall outside of the state's interests.

1.3 RESEARCH QUESTIONS

The proposed research does not concern the wholesale confirmation or rejection of a monolithic –decentralized or centralized—model for Maya political organization. Rather, it will try to unpack the concepts involved in those broad models, specifically at the household and community levels. In order to accomplish that goal, the effects of state integration at El Lacandón will be assessed through the following questions, which will allow a characterization of the economic, ideological and sociopolitical patterns that characterized both elite and commoner households that were part of two different communities: 1) A Late Preclassic community associated to El Mirador Maya expansion; and 2) A Late Classic community that held a 2nd-level position in the Palenque polity's hierarchy.

Did household economic patterns at El Lacandón change between the Late Preclassic and the Late Classic communities? and, if they changed, how can they be characterized?

Two different aspects will be monitored in terms of household economics: 1) Fluctuations in wealth as expressed in differential distributions of imported utilitarian goods and fancy ceramics between commoner and elite households (Smith 1987); and 2) Modifications in patterns of craft production, specifically changes in the location and intensity of the production of obsidian and chert artifacts.

Under a highly integrated system, we can expect to detect changes in wealth as result of the establishment of a different exchange system under the control of the capital, which allowed the commoners to have more access to specific materials previously in hands of the local elite. Wealth indicators (obsidian and fancy ceramics, in the present case) could be more frequent in commoner households after incorporation, and conversely be less frequent in elite contexts than before. A non-interventionist state would seek to use the already established system of inequality for its own purposes, constraining local elites to increase the exploitation of commoner households in order to accomplish the new economic obligations imposed from the capital. Under this arrange, commoner households' wealth would decrease as local elites strive to maintain their standard of living by channeling down the new economic impositions. Changes in household's wealth after incorporation have been documented in different case studies, as the Wanka III phase in the Upper Mantaro Valley (Costin and Earle 1989; Hastorf 1990), and the Morelos Valley in Central Mesoamerica (Smith 1992b, 1994). The analysis of fancy ceramics distribution will allow also the investigation of feasting practices.

The examination of patterns of craft production is a challenging aspect, considering that there is no available information regarding how production was organized at the developing capital before incorporation. Nevertheless, the focus will be the identification of changes after incorporation into the Palenque polity. An interventionist state would seek the development of a capital-rural dichotomy, with the production of obsidian artifacts removed from the smaller communities and the subsequent establishment of specialized workshops at the capital. In that sense, after incorporation both elite and commoner households at El Lacandón would receive finished artifacts without engaging in production (Aoyama 2007; Eberl 2007). A non-

interventionist scenario implies the possibility of a more diverse productive array at El Lacandón (Potter and King 1995), in the order of household or domestic production (Costin 1991; Deal 1998); or the concentration of production in local elite households (Pohl and Pohl 1994). Previous research in the region has shown that there is possible to identify prismatic blade production by means of analyzing the distribution of debitage (Johnson 1976).

Did household ideology at Late Classic El Lacandón reflected a capital-oriented great tradition or local ideas—little tradition?

In terms of household ideology, two different aspects will be investigated: 1) Changes in household ritual, and 2) Modifications of burial practices. The ideological impact of incorporation will be assessed through the investigation of patterns of consumption of Palenque-related ritual artifacts (figurines; ladle censers; pedestal censers and cylindrical censer stands) at both elite and commoner households. In addition, changes in burial practices (body position and orientation) will be monitored in order to detect a shift to Palenque-related customs.

Under an interventionist state, we should expect to notice that Palenque-related artifacts substituted more locally oriented ritual artifacts at both commoner and elite households, considering that those goods were widely available and also marked the gradual commitment to a Palenque-oriented *great tradition*, and the abandonment of a local *little tradition* (Redfield 1960). In a non-interventionist format, consumption of Palenque-related ritual paraphernalia after incorporation would be restricted to elite households, where their presence would mark local elite commitment to Palenque-related ideas. In terms of burial practices, previous research at Palenque has shown a marked preference to an extended position with a north orientation (Rands and Rands 1961; Ruz 1963; López Bravo 1995). Changes in elite and commoner households burial practices will be analyzed following the previously mentioned rationale.

Did sociopolitical patterns at Late Classic El Lacandón reflect the integration of the community into a larger sociopolitical entity?

As mentioned before, an important aspect in the identification of interventionist and non-interventionist states is how the annexed communities were ruled, which also gives hints

about the relationships between local and capital elites. Under an interventionist state, administrators are appointed from the capital. Non-interventionist strategies entail the employment of local elites. At El Lacandón this issue will be addressed through the analysis of civic-ceremonial area planning and building design, considering that the shape of these architectural traits suggest how intimate were the relationships between local and capital elites.

It is expected that under an interventionist state, the administrators at the capital will be interested in the reproduction of Palenque civic and building design templates. On the other hand, a non-interventionist state would allow the presence of locally developed civic-ceremonial templates, or even the copy of the templates of other polities. The data that will shed light into these matters come from the comparison of specific characteristics of the civic-ceremonial precincts of Palenque, El Lacandón and other 2nd-level centers in the Palenque region, and also from ten pits excavated in the civic-ceremonial area, specifically around Structure 1 (a pyramid) and the Ballcourt.

1.4 PREVIOUS ARCHAEOLOGICAL RESEARCH

Prior research in Palenque has focused mainly on the description and analysis of its impressive architectural, sculptural, and epigraphic remains, with minor interest in other aspects of archaeological evidence (García Moll 1991; González Cruz 1994b; Morales Cleveland 1999; Morales Cleveland and Miller 2004; Robertson 1983, 1985; Ruz Lhuillier 1952, 1955, 1958a, b, 1962, 1973; Schele 1986). Fortunately, ceramic and lithic analysis have established a useful time framework [Table 2.1] (Rands 1967b, 1974, 1987), and reconstructed the functioning of a regional pottery and obsidian artifacts exchange system (Bishop 1994; Johnson 1976a; Rands 1969; Rands and Bishop 1980). Household excavations were undertaken, for the first time, as part of the Proyecto Especial Palenque 92-94 of INAH (National Institute of Anthropology and History, Mexico), at Groups I-II, B, C and IV, with a focus on the investigation of spatial and architectural patterns in long sequences of domestic occupation (González Cruz 1993; López Bravo 1994, 1995). This project, under the direction of Arnoldo González Cruz, has continued the excavation of the impressive buildings of the civic precinct, such as the Ballcourt, the Palace, the Group of the Cross, the North Group and the South Acropolis (González Cruz 1994b, 2005;

González Cruz and Bernal Romero 2000, 2004; Tovalín Ahumada and Ceja Manrique 2004; Tovalín Ahumada and López Bravo 2001). More recently, our knowledge of Palenque's urban characteristics have been fundamentally updated with the elaboration of the first complete map of the ancient city (Barnhart 2001, 2002, 2005), and a new detailed analysis of its water regulation systems (French 2002). The city's map have also served for the planning of an ongoing INAH project dedicated to the understanding of Palenque social organization and urban growth (López Bravo 2005; López Bravo, et al. 2003, 2004a). Archaeological materials of INAH projects were available for comparison with El Lacandón assemblages, as will be presented in subsequent chapters.

The investigation of the relationships between Palenque and its vicinity has been addressed by several regional survey projects of different theoretical interests and methodological orientations (Grave Tirado 1996, 1999; Liendo Stuardo 2002a, b, 2005, 2011; Ochoa 1978; Rands 1967a, 1969, 1987; Rands and Bishop 1980). Early and useful work has been done in the Greater Palenque Survey, directed by Robert L. Rands. This research encompassed an area of 70 km around Palenque, including test excavations at thirty-three sites of varying size, chronological duration and topographic setting. The main objective of the project was the documentation of ceremonial and economic development of the city and changes in its relationships with subsidiary centers, through an analysis of ceramic production, consumption and exchange at the intraregional level. One of its important conclusions was the existence of a sustaining area of intense ceramic exchange and greatest site density within a 20-30 km radius of Palenque (Bishop 1994; Rands 1967a; Rands and Bishop 1980).

Ongoing research focused on Palenque's hinterland provides a detailed description of settlement features in the vicinity of the ancient city, which allowed the analysis of trends of population control and subsistence strategies in an area of 37 km² around the city (Liendo Stuardo 1999, 2002b). This study has lately expanded to a 450 km² area of total coverage survey along the eastern section of the Palenque Late Classic polity inferred from epigraphic decipherment (see inset in Figure 2.3), and has allowed the identification of 486 sites of different size and location in a regional settlement hierarchy (Liendo Stuardo 2005, 2011).

Even though specific site chronology is still under analysis, it has been possible to understand the presence of five districts of settlement during the Murciélagos (A.D. 680 -750) and Balunté periods (A.D. 750-*ca.* 820) periods: 1) the city and its immediate hinterland,

2) the El Lacandón district, 3) the Chancala Valley district, 4) the Chinikiha district, and 5) the Plains district. This settlement patterns data will be used in Chapter 5 to understand the sociopolitical landscape of El Lacandón during the 8th century.

1.5 ORGANIZATION OF THIS DISSERTATION

The present dissertation will show how two different communities were established in El Lacandón. Chapter 2 introduces a general description of geography, culture history and community description. Chapter 3 shows the analysis of the Late Preclassic community, divided into five sections. Chapter 4 illustrates household economy, feasting and household ideology of the Late Classic community; and Chapter 5 includes sociopolitical patterns at the community and regional levels. Finally, the dissertation ends with a Conclusions section, which outlines several observed patterns and also suggests ideas for future research.

1.6 SUMMARY

An important review of the main arguments of centralized and decentralized positions, concludes with a consideration for Mayanists to be more explicit about their theoretical and methodological positions (Demarest 1996:801). The present dissertation focuses its attention on the unpacking of the concepts implicit in the centralized and decentralized models of state integration, specifically in terms of the household level, as a contribution to the ongoing theoretical discussion regarding Ancient Maya political and economical structure. In addition, it will contribute methodology and empirical evidence for characterizing the relations between capital and secondary centers through the analysis of specific trends inside the basic social and economic unit: the household.

Currently, our understanding of Palenque –and the vast majority of Maya polities—still relies heavily on epigraphic decipherment focused on macro-scale geopolitics, which does not convey information about household economic strategies or the way of life of most of the population. The present approach seeks to combine epigraphic information concerning political expansionism with archaeological data regarding patterns of consumption and production in households. In so doing, the proposed research at El Lacandón will complement recent archaeological investigations conducted at Palenque and its hinterland, as a manner to characterize in a more complete way the functioning of the Palenque polity during the Late Classic period. The outcome will be relevant not only for Maya studies, but it also will be comparable to relevant archaeological cases from the Andes (Bermann 1994, 1997; Costin and Earle 1989; Hastorf 1990); the Near East and Mesopotamia (Falconer 1995; Wattenmaker 1994) and the Morelos Valley in Mesoamerica (Smith 1992b, 1994), studies that are beginning to explore the intricate relationships that existed between different social groups in expanding polities.

2.0 EL LACANDÓN AND THE PALENQUE POLITY: REGIONAL LANDSCAPE, CULTURE HISTORY, AND COMMUNITY DESCRIPTION

A broad introduction to the geography and culture history of the Northwestern Zone of Mayaland and the Classic period Palenque polity is necessary to develop a historical framework for the analysis of the Late Preclassic and Late Classic communities at El Lacandón. In order to accomplish this goal, the present chapter is organized in three sections: 1) Regional landscape, 2) Culture history, and 3) Community description. The regional landscape section concerns a general description of the different ecological systems that characterize the Northwestern Zone, including some remarks regarding land use. A culture history section allows the characterization of relevant sociopolitical changes through the Preclassic and Classic periods. Finally, the community description section introduces El Lacandón's architecture and chronology.

2.1 REGIONAL LANDSCAPE

The Northwestern Zone of Mayaland has been divided into three different physiographic subdivisions: 1) the Low Sierras, 2) the Intermediate Plains, and 3) the Middle Usumacinta (Adams and Culbert 1977; Rands 1973). Palenque and El Lacandón are located in the first slopes of the Low Sierras, in the frontier with the Intermediate Plains (Figure 2.1). The elevation of the Low Sierras subdivision ranges from 100 to about 1000 meters above sea level, and it is characterized by steeply folded Tertiary limestone formations that allowed the formation of several valleys, like the upper section of the Chacamax River and the Chancala River drainage, both of them eventually ending at the Usumacinta River. The Intermediate Plains, located to the north, have a Pleistocene terrace origin and the most infertile soils of the zone. Their surface is generally flat close to the flood plains of the river systems, and has an increasingly higher

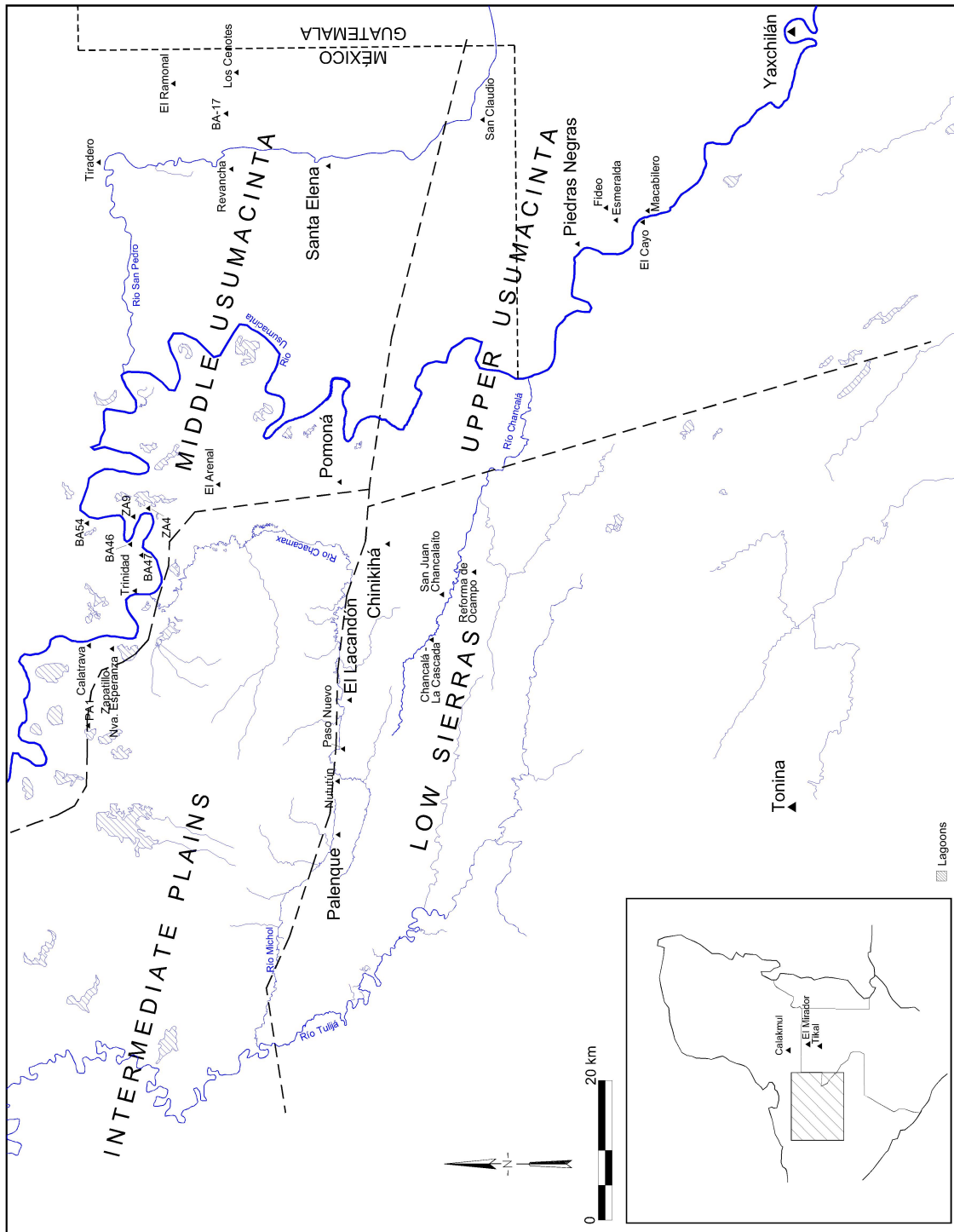


Figure 2.1: Geographic Subdivisions of the Northwestern Zone of Mayaland (Redrawn from Adams and Culbert 1977, Rands 1973, INEGI -E1209, INEGI-E1508)

elevation (50 to 75 m) towards the first Sierra escarpments. Finally, the Middle Usumacinta is a floodplain region, with Recent Coastal and Recent Fluvial morphogenetic systems (West, et al. 1969).

In general terms, the Northwestern Zone is characterized by yearlong rainfall and an annual precipitation close to 3000 mm, which fluctuates from 100 mm during the dry season (April-June) to 495 mm during September, the peak of the wet season (INEGI 2005; Liendo Stuardo 2002b). Mean temperature ranges from 22.9° C during December and January, to 28.8° C during May at the end of the dry season, and 27.5° C in the summer rains. However, topographic factors and non-seasonal precipitation variation mark zonal ecosystem differences: the Low Sierras are a rainforest region, with vegetation rising to 40-50 m; while the Plains and the Middle Usumacinta, with comparatively minor precipitation, show open savannas between interfluvial areas and narrow gallery rainforest along streams and lagoons (Tamayo 1960).

Until recently, modern land use relied on communal *ejido* subsistence agriculture and small portions of more commercial agriculture, a pattern more common in the Sierras, where local populations traditionally preferred the Low Sierras more fertile soils than the comparatively uncultivable Intermediate Plains soils (Rands and Bishop 1980:23). Nevertheless, the last ten years have experienced a change in productive patterns, and now the entire Northwestern Zone is intensively dedicated to cattle production, both in middle plots and large ranches. This contemporary economic activity is changing the entire landscape, which can be easily seen in an examination of the Plains from the top of the pyramids at Palenque.

2.2 CULTURE HISTORY OF THE NORTHWESTERN ZONE

A reconstruction of the Northwestern Zone culture history relies on several lines of evidence: 1) ceramic chronology and distribution, 2) settlement patterns; and 3) epigraphic decipherment. The initial occupation of the Northwestern Zone is linked to the arrival of Mixe-Zoque settlers during the Middle Preclassic (c. 900 – 300 B.C.), whose pottery shows similarities to the Nacaste Phase of San Lorenzo (in the Olmec nuclear area) and with Xe Phase materials from Seibal (located in the Upper Usumacinta / Pasión region). Additionally, several Olmec-style sculptures and portable objects had been found in the Middle Usumacinta. Both lines of evidence suggest a Mixe-Zoque identity of some sort for the initial inhabitants, who apparently prefer to settle along the Usumacinta River and surrounding swampy areas, an ecological setting similar to the Olmec area.

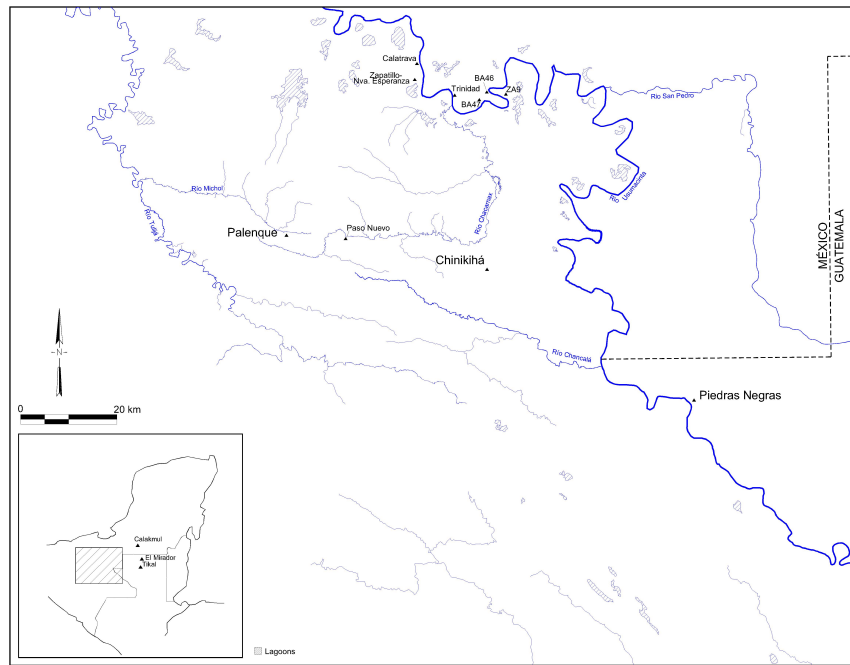
Table 2.1: Chronological sequence of Palenque

| MAJOR PERIODS | PALENQUE CERAMIC COMPLEXES | DYNASTIC CHRONOLOGY AT PALENQUE | REGIONAL EVENTS | EL LACANDON |
|--|----------------------------|---|--|--|
| TERMINAL CLASSIC | HUIPALE | Janaab' Pakal III (799-?) | Regional political collapse | Abandonment |
| | BALUNTE | K'inich K'uk' Balam II (764-after 783) | Palenque defeated by Tonina (ca. 764) | Unit 3, Unit 4, Str. 13, Unit 20, Unit 27 Site expansion to 16 ha |
| | MURCIELAGOS | U Pakal K'inich Janaab' Pakal II (ca. 740-ca.764) K'inich Ahkal Mo' Nahb' III (721-ca. 740) Kan Joy Chitam II (702-ca. 721) K'inich Kan Balam II (684-702) | Palenque reaches its population peak Chak Suutz' installed as sajal (721); attacks Piedras Negras (725) A lord accedes at Chinkihá (?); Kan Joy Chitam II captured by Tonina (711) Supervision of accession at Moral-Reforma (690) Victory over Tonina (687); Cross Group and Xupa temple dedicated 6 captives from Pomona received in Palenque (659) | Civic precinct with balcourt 2nd-level center in political hierarchy Re-colonization with Palenque emigrants |
| | OTULUM | K'inich Janaab' Pakal I (615-683) Aj' Ne' Ohi Mat (605-612); Muwaan Mat (612-615) Lady Yohl Ik'nal (583-604) Kan Balam I (572-583) Ahkal Mo' Nahb' II (565-570) Kan Joy Chitam I (529-565) | Palenque probably sacked by Calakmul (659) Tortugero attacks Ox Teh, K'uh (644) Palenque and Plan de Ayula defeated by Piedras Negras (ca. 628) Pakal I married a woman from Ox Teh, K'uh (626) Palenque sacked by Calakmul (611) A lord from Tonina captured at Chinkihá (573) | ← |
| EARLY CLASSIC | MOTIEPA | Ahkal Mo' Nahb' I (501-524) B'utz' Aj' Sak Chik (487-501) "Casper" (435-487) K'uk' Balam I (431-435) | | Hiatus No Early Classic ceramic materials |
| | PICOTA | | Palenque is the largest center in the region, with an area close to 30 ha | → |
| LATE PRECLASSIC | MISOLHA | Mythic ruler | Maya regional colonization maybe linked to El Mirador as a political capital | Abandonment; population probably moved to Palenque Unit 8, Unit 10, Unit 4, Str. 13 Civic buildings ? Village of 5.7 ha Founded by Peten emigrants |
| | | | | |
| Bishop 1994; Rands 1987 with modifications | | Bernal Romero 2005; Mathews n.d.; Schele 1991; Schele and Traxler 2006; Martin and Grube 2000 | | Present study |

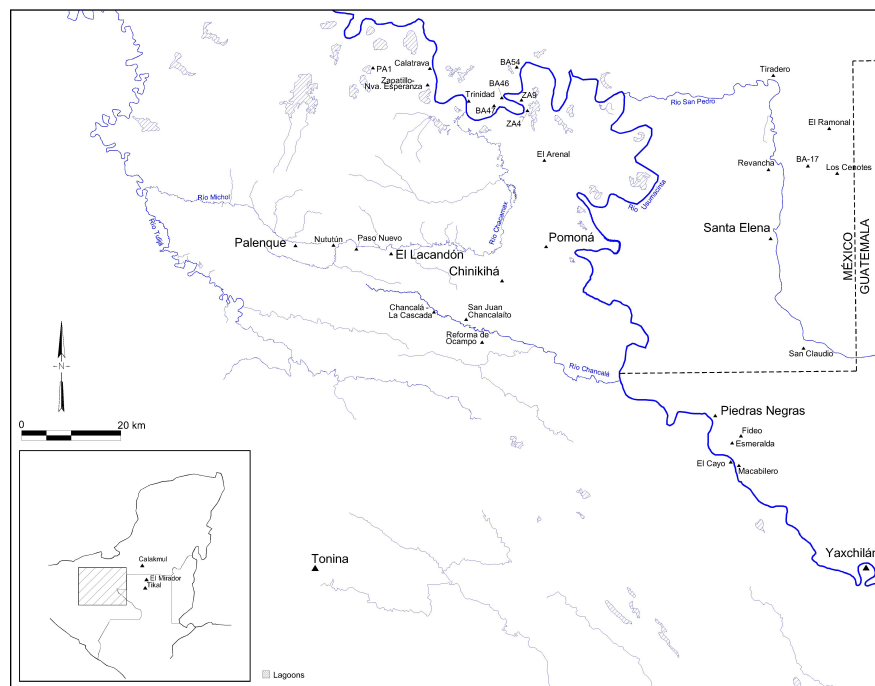
The majority of Middle Preclassic Mixe-Zoque communities have been identified along the Usumacinta River at Trinidad, Zapatillo-Nueva Esperanza, Tierra Blanca, Pomoca, and La Concepción, with a comparatively minor settling of the Low Sierras at communities such as Chinikihá, Paso Nuevo and Palenque (Figure 2.2a). In general terms, researchers agree that the Northwestern Zone can be considered as a frontier between the Mixe-Zoque and Maya people (Clark, et al. 2000; Lowe 1977; Ochoa 1983; Rands 1977, 1987, 2002).

Later on, the zone was colonized by Maya people that arrived probably from the Petén Zone during the Late Preclassic period (300 B.C. – c. A.D. 150). This colonization has been linked to the development of a state-level political system centered at El Mirador, evidenced by the presence of Sierra Red ceramic materials (Clark, et al. 2000). The presence of more communities than during the previously mentioned Middle Preclassic suggests a population growth (Figure 2.2b). Sierra Red materials have been recovered at Pomoná (López Varela 1995), Tiradero, El Arenal, Revancha, San Claudio and Santa Elena, in the Middle Usumacinta (Ochoa 1978; Perales and Mugarte 1995); as well as at Piedras Negras, El Cayo, Fideo and Macabilero in the northern corner of the Upper Usumacinta region (Golden, et al. 2005; Houston, et al. 2003; Lee and Hayden 1988); and at Nututún, Paso Nuevo, El Lacandón, La Cascada, San Juan Chancalaito and Reforma de Ocampo, in the Low Sierras subdivision (Liendo Stuardo 2005, 2011; López Bravo 2005; López Bravo, et al 2003; Rands 1967a, 1977, 2002). Ongoing research at Palenque has detected the extents of this Late Preclassic occupation, noticing the presence of two discrete settlements located on the eastern and western margins of the Late Classic city (López Bravo 2005).

The start of the Early Classic period (A.D.150 – 600) evidences the emergence of several political centers in the Northwestern Region, probably related to El Mirador's demise (Clark, et al. 2000). The growth of these centers has been linked to a population nucleation process (Rands 1977:161). Evidence of this shift has been observed along the Usumacinta River and, more specifically, in areas located around centers that will develop into Classic period dynastic capitals. Ongoing research is dedicated to the understanding of sociopolitical patterns in the Piedras Negras polity, which included an Early Classic abandonment of small communities such as Fideo and Esmeralda and the relocation of their population into Piedras Negras (Golden, et al. 2005), and a similar process at El Lacandón in the Palenque polity, which is the focus of this dissertation.



a



b

Figure 2.2: Preclassic Period Archaeological sites in the Northwestern Zone

a) Middle Preclassic Sites, b) Late Preclassic Sites.

Key to site names in Table 2.2. Regional maps site information collected from: (Anaya Hernández 2001a, b, 2005; Becquelin and Baudez 1990; Golden, et al. 2005; Hernández and Álvarez 1978; Liendo Stuardo 2005, 2011; López Bravo 2005; López Varela 1989; Muñoz 2003; Ochoa 1978, 1983; Perales and Mugarte 1995; Rands 1967a, 1977, 2002).

Table 2.2: Middle Preclassic and Late Preclassic archaeological sites in the Northwestern Zone

| SUBDIVISION | ARCHAEOLOGICAL SITES | |
|------------------------------------|--|----------------------|
| | <u>Middle Preclassic (circa 900-300 B.C.)</u> | |
| <i>Middle and Upper Usumacinta</i> | Pomoca (BA 46) | Piedras Negras |
| | La Concepción (ZA 9) | |
| | Tierra Blanca (BA 47) | |
| | Trinidad (BA 63) | |
| | Zapatillo-Nueva Esperanza (PA 3) | |
| <i>Low Sierras</i> | Palenque | |
| | Paso Nuevo | |
| | Chinikihá | |
| | <u>Late Preclassic (300 B.C. – circa A.D. 250)</u> | |
| <i>Middle Usumacinta</i> | Pomoca (BA 46) | Piedras Negras |
| | La Concepción (ZA 9) | Fideo |
| | Tierra Blanca (BA 47) | Esmeralda |
| | El Mirador (BA 17) | Macabilero |
| | Tiradero (BA 16) | El Cayo |
| | Povicuc (ZA 4) | El Arenal |
| | Zapatillo-Nueva Esperanza (PA 3) | Los Cenotes |
| | Agua Fría (PA 1) | El Ramonal |
| | La Soledad (BA 54) | Revancha |
| | Pomoná | San Claudio |
| <i>Low Sierras</i> | Santa Elena | |
| | Palenque | San Juan Chancalaíto |
| | Paso Nuevo | Chancalá-La Cascada |
| | Chinikihá | Reforma de Ocampo |
| | Nututún | Tonina |
| | El Lacandón | |

(Anaya Hernández 2001a, b, 2005; Becquelin and Baudez 1990; Golden, et al. 2005; Hernández and Álvarez 1978; Liendo Stuardo 2005; López Bravo 2005; López Varela 1989; Muñoz 2003; Ochoa 1978, 1983; Perales and Mugarte 1995; Rands 1967a, 1977, 2002).

The population growth of centers such as Palenque and Piedras Negras during the Early Classic correlates with: 1) The founding of local dynasties, and 2) The formation of second-generation states (Marcus 1993, 1998a). According to epigraphic decipherment, dynasty emergence is usually linked to the accession date of the first local ruler at each polity capital (Figure 2.3): A.D. 431 at Palenque, with the accession of K'uk' B'alam I; A.D. 359 at Yaxchilán; *circa* 460 at Piedras Negras, and *circa* 514 at Toniná (Martin and Grube 2000; Schele 1991b; Schele and Mathews 1991). Epigraphic references to dynastic events were recorded in monuments for the first time at the beginning of the Late Classic period (A.D. 600-*ca.* 820), when activities such as warfare, taking of captives and marriage alliances have allowed the reconstruction of regional geopolitics (Martin and Grube 2000; Schele 1991b; Schele and Mathews 1991).

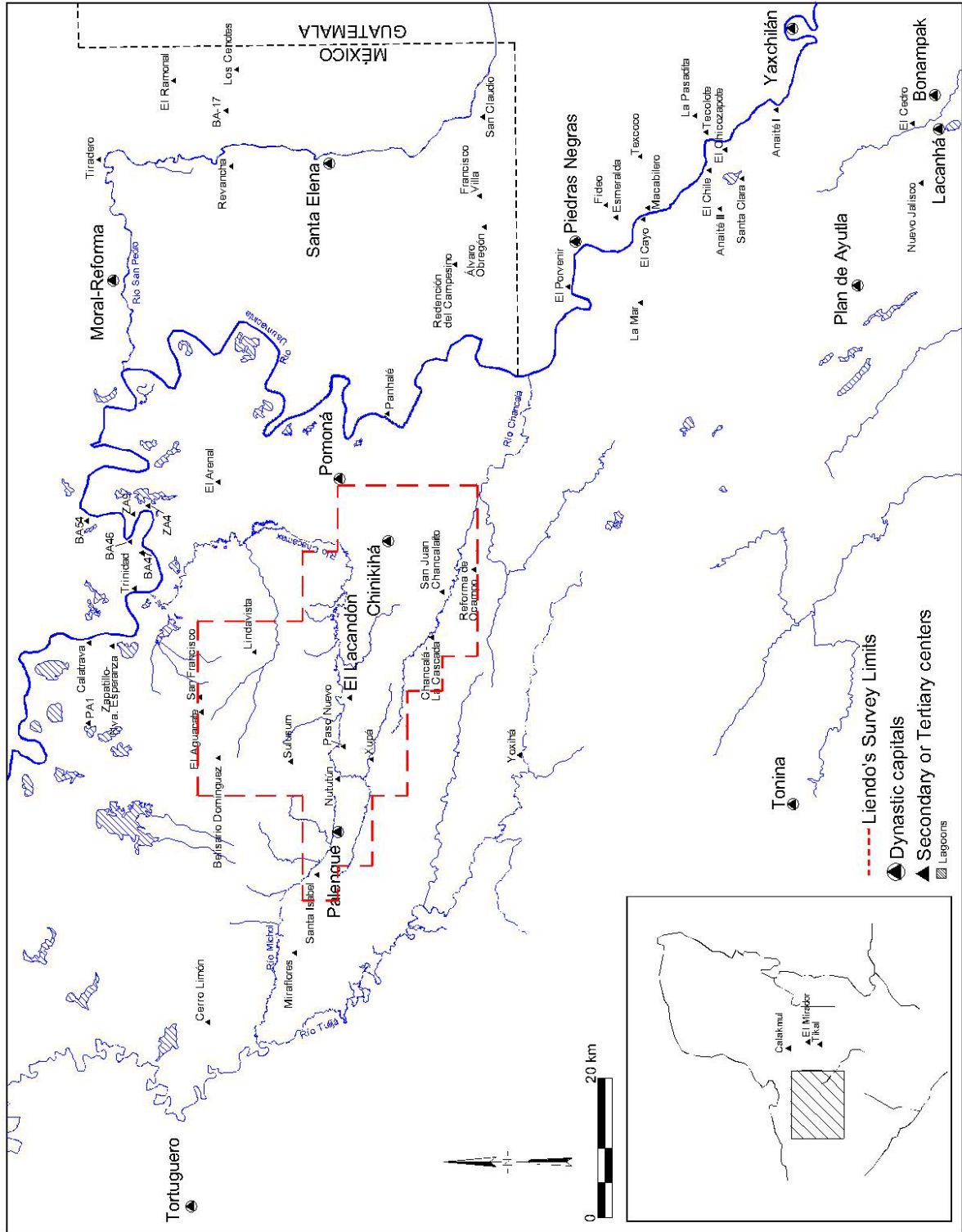


Figure 2.3: Late Classic Sites in the Northwestern Zone

The beginning of the Late Classic period at Palenque is marked by references to strong defeats by Calakmul and the expansion of Palenque's political sphere. Exotic ceramic imports virtually disappear, and there is evidence for the movement of serving vessels –wide everted-rim tripod plates with polychrome decoration—from Palenque to a number of smaller sites in its periphery zone (Bishop 1994:32; Rands 1974:63; Rands 1987: 219). According to epigraphic decipherment, Palenque experienced two strong defeats by Calakmul in 599 and 611, probably related to the control of the Middle Usumacinta Region, as evidenced by some monuments from Santa Elena and Palenque (Mathews n.d.; Schele and Mathews 1993:67-70; Simon and Grube 2000:159-161). These conflicts probably included the sacking of the capital and a dynastic crisis that probably ended with the accession of Pakal at 615. However, his political legitimacy was contested by the local rulers of Tortuguero, who started to use the Palenque emblem glyph and attacked Ox Te' Kuh', a still not located site whose ruling family provided Pakal's wife (Martin and Grube 2000; Bernal Romero 2005:78-79).

Later on, it is generally assumed by epigraphers that Palenque ascended to political preeminence in the Northwestern Zone under the rule of Pakal. The long duration of his term (615 – 683) was characterized by a number of inter-polity conflicts that were probably the result of Palenque's interest in controlling the access to the Usumacinta region. As an example, in 624 a Palenque lord was taken captive by the ruler of Piedras Negras, and they are depicted on Stela 26 together with another captive, a lord from Sak Tz'i', a political capital recently identified as Plan de Ayutla in the Upper Usumacinta (Martos López 2005). This event demonstrates that at that moment Sak Tz'i' and Palenque were political allies against Piedras Negras, but this alliance would shift later when Yaxchilán and Toniná, more closely located to Sak Tz'i', became its enemies (Anaya Hernández et al 2003:184-189).

In addition, the monuments from El Retiro, to the west, and Pomoná, close to the Usumacinta River to the east (Figure 2.3), had shown evidence of Palenque's political preeminence. These inscriptions can be used to define the limits of the Palenque polity, which encompassed three different sections (Marcus 1992): 1) the capital and its supporting zone, 2) a section of internal, well connected districts and, 3) several outer provinces that eventually were able to obtain partial or whole autonomy, such as Tortuguero, Pomoná and Moral-Reforma (Bassie-Sweet, et al. 2002; Bernal Romero 2005; Grube, et al. 2002; Marcus 1976, 1993; Martin and Grube 2000; Schele 1991b; Schele and Freidel 1990; Schele and Mathews 1993).

During the next ceramic complexes, Murcielagos (680 – 750) and Balunte (750 –c. 810), previous research has found evidence of some degree of reorganization of ceramic production in the entire polity. Sites in the Intermediate Plains engaged in the production of utilitarian vessels, while the vast majority of cylindrical censer stands and figurines were manufactured in Palenque or its immediate vicinity. Additionally, elite thin walled pottery became common, with the presence of fine pastes (Chablekal Gray Group, Fine Orange) usually interpreted as marking the establishment of ties with northern Maya-Chontal groups along the Usumacinta River (Bishop 1994; López Varela 2005; Rands 1987a; Rands and Bishop 1980, Rands, et al. 1982), which correlates with epigraphic information regarding the relationships between Palenque, Pomoná and Moral-Reforma.

After his death in 683, Pakal was succeeded by his elder son, Kan Balam II, who demonstrated Palenque's supremacy with an attack to Toniná, and the overseeing of the dynasties of Moral-Reforma and Pomoná (Juarez Cossío 2003; Martin 2003; Mathews n.d.). His building program included a major redesign of the Cross Group in Palenque, dedicated to Palenque's patron deities, and temples of similar plan were erected at subsidiary civic centers such as Xupá and El Retiro (Blom 1991). Epigraphers contend that a major political disruption followed the capture of the next Palenque ruler, Kan Joy Chitam II, by a ruler from Tonina in 711. However, four years later he participated in an event in the company of the ruler of Santa Elena, and was able to rule for another ten years (Martin and Grube 2000; Schele and Freidel 1990; Schele and Mathews 1993; Stuart 2004).

Current research in Palenque's South Acropolis (a section of the civic precinct located to the south of the Cross Group) has discovered detailed information about courtly life and related activities after the accession of Ahkal Mo' Nahb' III in 721. This ruler sponsored the construction of Temples XIX, XXa and XXI as a conceptual replica of Kan Balam's Cross Group, an event that also included a new temple design. Judging from the monuments, his accession to office was related to alliances with powerful subsidiary lords, who apparently gain so much political power as to be commonly depicted in official monuments at the Palace, Temple XIX and Temple XXI. Some of them were also capable of building elaborated residential complex with family shrines such as Group IV, the house of Chak Suutz'. Chak Suutz' was probably the most important of these lords, an important military commander who led successful campaigns against Piedras Negras and other localities (Bernal 2005; Martin and

Grube 2000; Schele 1991a; Schele and Mathews 1993). The specific date of Ahkal Mo' Nahb III's death is unknown, as is the accession date of his successor, Janaab Pakal II, who took office around 740. We know little of his reign, but its end apparently relates to another defeat by Toniná (*circa* 764). Two later rulers have been identified in the Palenque monuments, both of them with minor building sponsorship, which is interpreted as evidence of the lowered prestige and power of the dynasty. The inauguration of the last ruler on 799 is only known from an incised ceramic vessel. Other regional dynasties were vanishing at the same time. The last known ruler of Piedras Negras was taken prisoner by its Yaxchilán counterpart in 808, where this event is the last recorded elite activity. On the contrary, other dynasties survive the Palenque dynasty's demise by several decades: the last recorded event at Sak Tz'i' is the burial of a lord in 864, while the last monument of Toniná was erected on 909 (Anaya Hernández et al. 2003; Martin and Grube 2000).

The Late Classic period occupation of Pomoná and other sites along the middle sector of the Usumacinta River shows evidence of a more intense relationship with the Petén Area than the experienced by Palenque, as suggested by the abundant presence of orange polychromes materials of the Saxché and Palmar Groups, ceramics that are comparatively scarce at Palenque. However, polychrome materials disappear closer to the end of the period, being replaced by Gray and Orange fine paste ceramics (López Varela 2005; Rands 1973:179), a period marker that will be analyzed later in Chapter 4.

The end of the Late Classic (Balunté complex) shows a sudden increase of population in the Intermediate Plains subdivision, which Rands interpreted as people moving away from an overpopulated Low Sierras subdivision (Rands 1973:196), while others suggests a settlement system designed to link Palenque's hinterland and the Middle Usumacinta, with sites located every four km. (Liendo Stuardo 2005:72). Later on, the Intermediate Plains shared a demographic collapse with Palenque and the entire Low Sierras subdivision during the 9th century (Huipale complex) that is usually interpreted as a general population movement to the Middle Usumacinta region after dynastic demise. Little work has been done in the Northwestern Zone to understand the social organization of the Postclassic period (900-1521), when, according to Early Colonial sources, the Tabasco and Campeche plains were densely inhabited by Chontal-Maya people, and the rest of the Northwestern Zone was a vacant zone (Berlin 1952; Scholes

and Roys 1948; Vargas Pacheco 1983; Vos 1980), until it was repopulated with persons from the Chiapas Highlands and Southern Yucatan that fled from the Colonial regime (Vos 1980).

2.3 EL LACANDÓN'S LATE PRECLASSIC AND LATE CLASSIC COMMUNITIES

Located 18 km to the east of Palenque, El Lacandón was built in a plateau that overlooks the Intermediate Plains, about 800 m to the south and 50 m above the Chacamax River (Figure 2.3). This plateau or natural terrace has a gentle inclination to the north, and is crossed by two arroyos (streams) that flow from the swampy areas that limit the plateau by the southwest and northeast (Figure 2.4). Moreover, the archaeological site covers the slopes of a hill located to the west, and an eastern slope that gently descends to the northeast. As in Palenque, the presence of perennial water springs was probably the main reason to choose these loci to found a settlement, considering their agricultural and habitation possibilities. In addition, their location at the first slopes of the Low Sierras allowed people at El Lacandón and Palenque to monitor the plains. Taking into account other sites located in the same type of settings, such as Miraflores and Santa Isabel, it is possible to assert that both factors were important site planning aspects during the initial colonization of the region and consecutive settlement modifications.

The first architectural assessment of El Lacandón was made in 1993, consisting on the mapping of its civic-ceremonial core (Grave Tirado 1996). In 1999, I conducted a full-coverage survey of six sq km around the site that included the mapping of all its structures. Seventy-four structures were recorded at the site, all of them stone-faced, including 54 house mounds distributed in 38 house groups, a range structure group, 9 pyramids and a ballcourt.

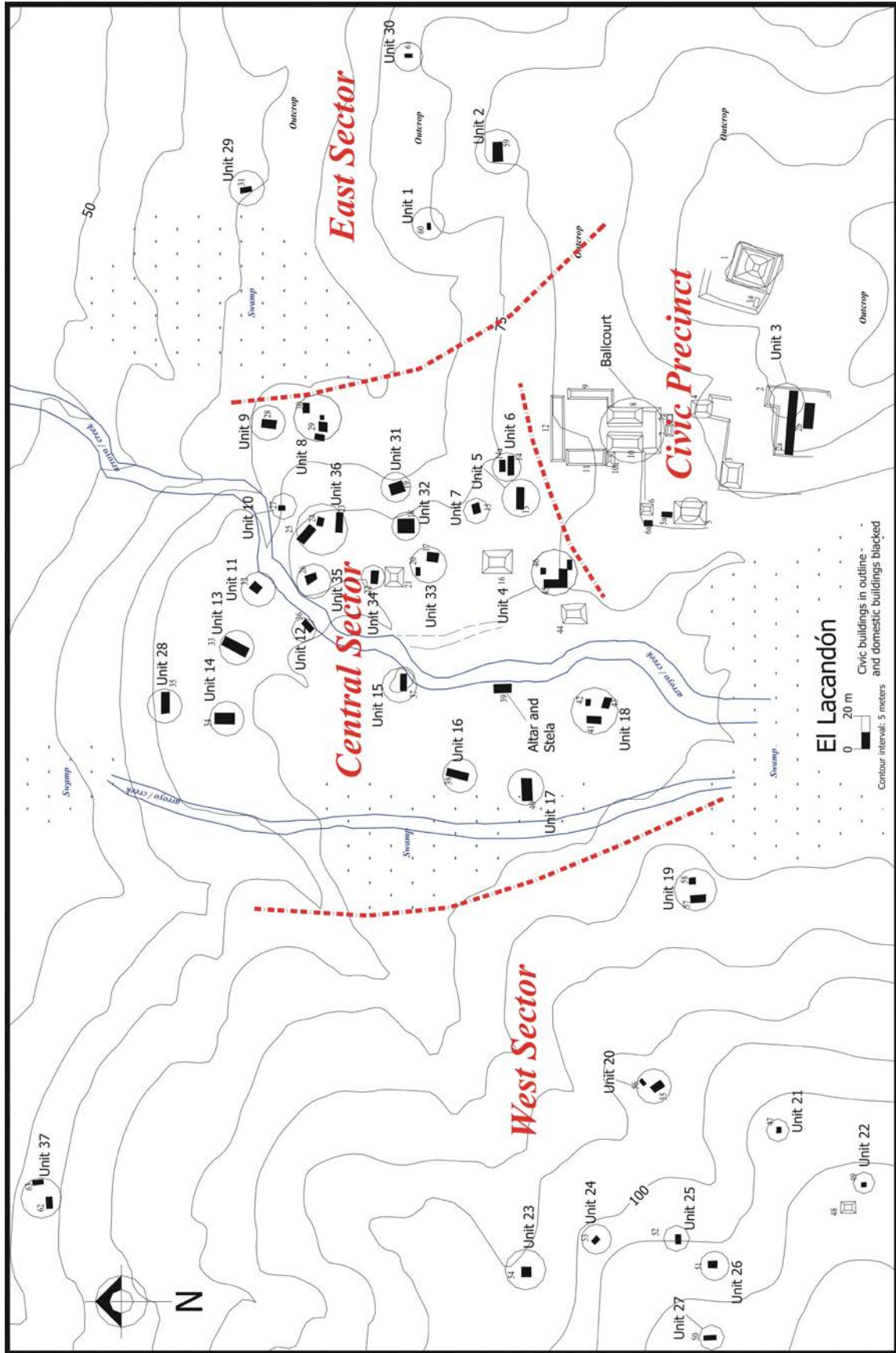


Figure 2.4: El Lacandón sectors

Within the Late Classic Palenque polity, El Lacandón has been considered a second-order administrative center due to the presence of a large elite compound and a ballcourt, as previously observed at centers such as Chinikihá and San Juan Chancalaito (Grave Tirado 1996:89-90; Liendo Stuardo 1999:61).

Modern land use at El Lacandón includes areas dedicated to cattle ranch and *milpa* (maize fields) farmland. Cattle ranch implies the clearing of the original tropical forest vegetation and its replacement by grazing pasture, a practice that allows good visibility of structures (Figure 2.5), in particular house mounds. On the other hand, areas in the eastern and western portion of the site are being used as *milpa*, and have comparatively bad visibility and preservation due to tractor plowing.



Figure 2.5: Civic Precinct's view from the northwest

2.3.1 Chronological evaluation

A combination of surface collections and shovel probes were used to evaluate El Lacandón's chronological sequence and changes in community size (total occupation area), and subsequent excavations allowed a more detailed chronological analysis. The Late Preclassic community was restricted to an area of 5.7 ha covering the flat sections around the biggest stream (Figure 2.6), identified by the presence of ceramic materials of the Sierra Red Group. Appendix A presents a general description of ceramic analysis. The identification of small amounts of matte-finish orange-brown wares and the absence of identifiable Early Classic regional markers suggests a specific chronology between 50 B.C. and A.D. 150/200, the last portion of the Late Preclassic (Brady, *et al.* 1998; Rands 1987, 2002).

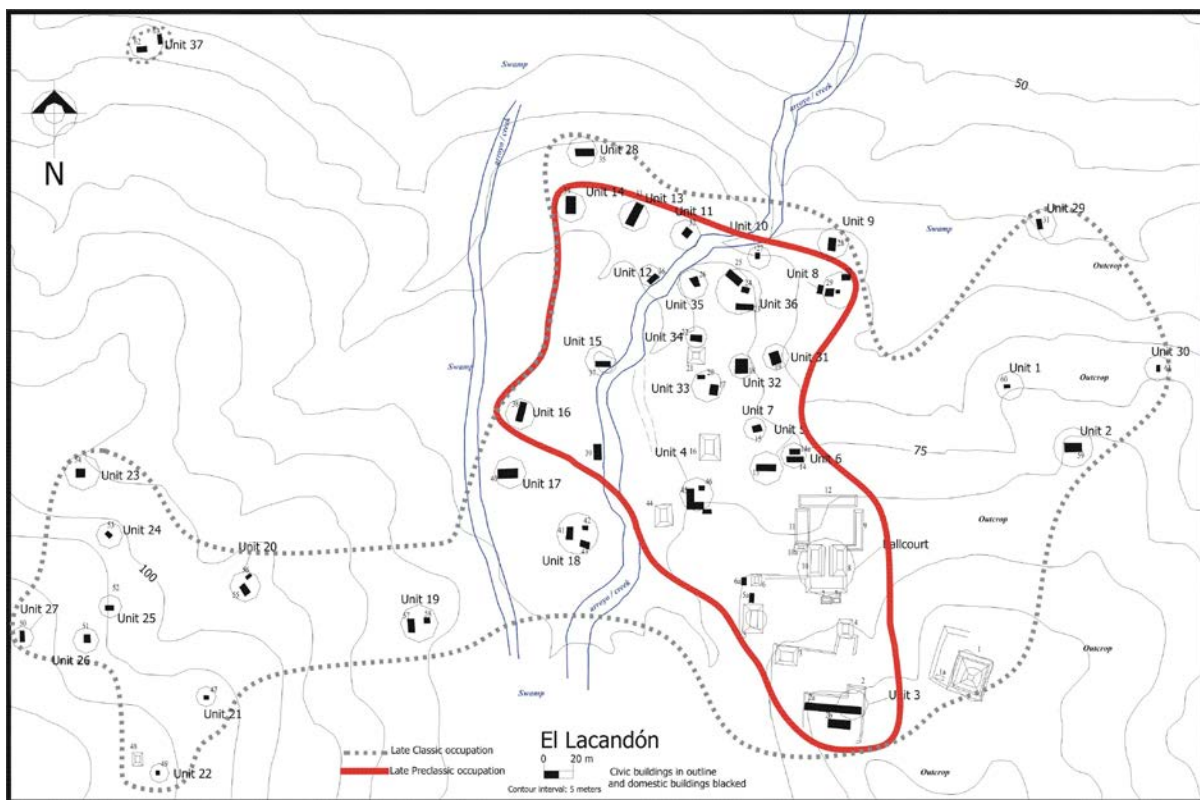


Figure 2.6: El Lacandón Occupations

After abandonment at the end of the Late Preclassic, El Lacandón was reoccupied during the Late Classic. The new inhabitants built a new community that expanded to the west and east,

with a total area of 16 ha identified by ceramic materials belonging to the Murciélagos (A.D. 680-750) and Balunté (750- *ca.* 820) Palenque ceramic complexes (Bishop 1994; Rands 1987). At the beginning of this research it was assumed that all surface observed architectural remains had been built during the Late Classic occupation, considering that the new settlers made major modifications to the Late Preclassic buildings that included their incorporation into the Late Classic house platforms and pyramids. In that sense, the excavations allowed the identification of structures built during the Late Preclassic occupation that were buried to accommodate new Late Classic house mounds, such as Structure 45-sub and Structure 45 in Unit 4. It was also possible to detect structures that were not affected during the Late Classic, such as the houses of Units 8 and 10. These cases will be specifically explained in the following chapters.

Considering preservation issues, available work force and time, excavations in El Lacandón's civic area were limited in size, and in the majority of cases were done outside of buildings. Recovered materials indicate that the area was used during both occupation periods, and probably functioned for similar civic purposes for both communities. However, future research should address the presence of Late Preclassic civic buildings buried beneath surface architectural remains.

2.3.2 Late Classic House Group architectural status and excavation areas

The identification of house group architectural status was the first stage in the analysis of domestic life at El Lacandón. House group status was assigned using the following criteria: 1) House mound area, 2) Construction quality, and 3) Proximity to the civic precinct (identified by the presence of pyramids, temples and a ballcourt). All surface data regarding house mounds is included in Appendix C.

House mound area ranges from 10 to 200 m², with an average of 38.6 m², (calculated as a 5% trimmed mean for a sample of 54 house mounds, with outlier values removed). This figure is closely similar to 36.4 m², the observed house mound average area in the immediate environs of Palenque (Liendo 2002b:73).

The distribution of the batch of El Lacandón house mound area was analyzed using a Stem-and-Leaf Plot (Figure 2.7). The analysis suggests house mound area distributes in three different groups: 1) Small and Mid-Size house mounds (between 10 and 60 m²), 2) Large house mounds (between 60 and 100 m²), and 3) A super-large house mound, the range structure with an area of 200 m² that apparently served as the residence of the local ruling family.

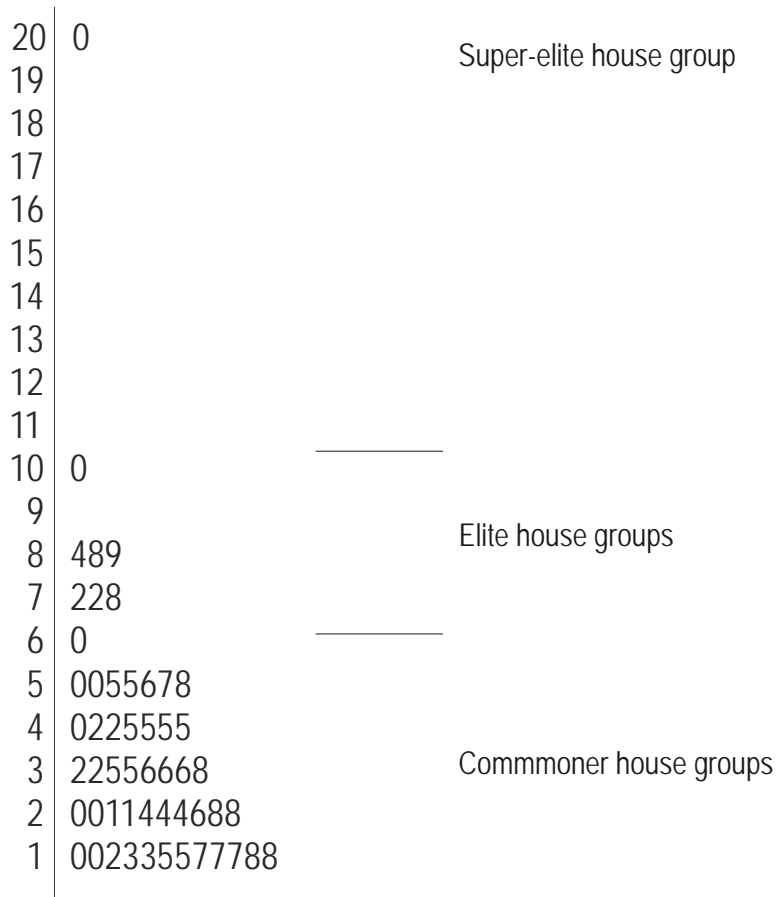


Figure 2.7: Stem-and-Leaf Plot of House Mound Area

A second stage of the analysis included surface-observed construction quality and proximity to the civic area. Taking into account this information, seven house groups were chosen for excavation: 1) Unit 3, the super-elite house group, 2) Unit 4 and Unit 5, two elite house groups with large dwellings built with worked stone and located in the proximity of the civic area, and 3) Unit 8, Unit 10, Unit 20 and Unit 27, four commoner house groups with smaller dwellings located far away from the civic area (Figure 2.4).

2.3.3 Community sectors at Late Classic El Lacandón

Topographic variation and the presence of ravines determine four different sectors at the Late Classic community: the Civic Precinct, the Central Sector, the West Sector and the East Sector (Figure 2.4). Buildings at the Civic Precinct are distributed along three plazas that descend to the north (Figure 2.8). Civic architecture includes five pyramids, a range structure, and a Ballcourt. Structure 1, the tallest structure of the site with a height of 10 m, marks the eastern portion of the Civic Precinct and is separated from the rest of it by a deep ravine (Figure 2.4).

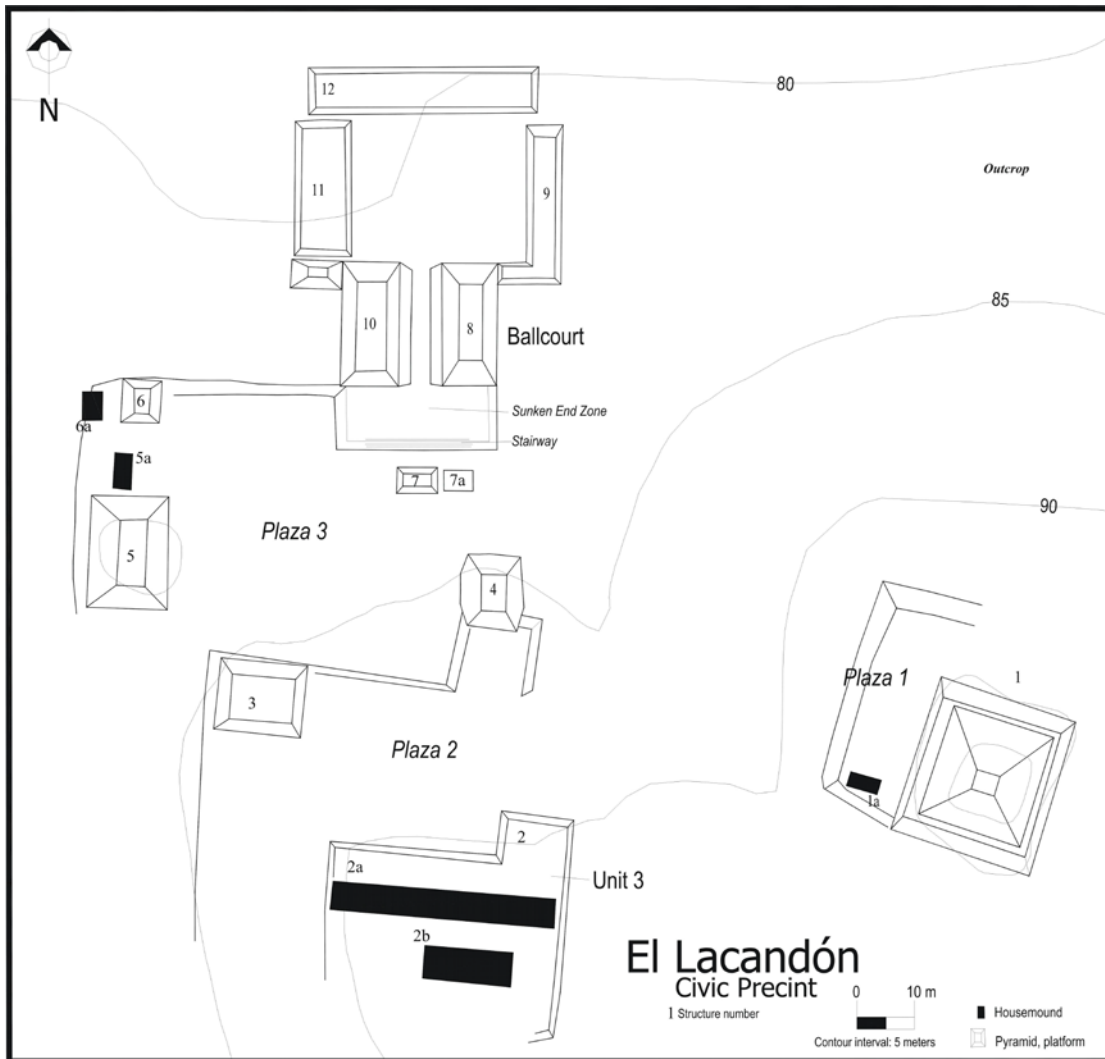


Figure 2.8: El Lacandón's Civic Precinct

Unit 3 includes a range structure and a rectangular platform atop a 2.5 m “L” shaped platform. This group of buildings was apparently designed to preside over the rest of the Civic Precinct, considering its location in the tallest plaza. An examination of stone’s shape and quality suggested the range and the rectangular platform were not made with stone walls or a corbelled vault roof, and thus functioned as bases for superstructures of pole walls and thatch roofs. In addition, surface visible walls of the “L” shaped platform that support the group had modified stones of medium size.



Figure 2.9: View of Structure 3 remaining walls

The main plaza (Plaza 3 in Figure 2.8) comprises four pyramids (Structures 3, 4, 5, and 6) and two altars (Structures 7 and 7a), linked to the southern end of the Ballcourt. An additional two low platforms attached to pyramids (Structures 5a and 6a) probably functioned as housing residences for retainers involved in ritual activities, or as storage places of materials associated with those ritual activities (de Montmollin 1995:70). The presence of vault stones and wall sections visible on surface (Figure 2.9) suggest that Structure 5 and Structure 3 supported temples with the typical Maya corbelled vault roof, a type of buildings identified at rural sites in

the Palenque polity such as Xupá, Miraflores, El Retiro, La Cascada and Chinikihá (Blom 1991; Grave Tirado 1999; Maler 1908).

The lower portion of the Civic Precinct contains the Ballcourt, an architectural group that closes the main plaza by the north. The Ballcourt was oriented north-south, and had an I-shaped enclosed-court form that matches Type VII of Taladoire's classification, the most used taxonomy of ballcourts in Mesoamerica. However, the end zones are of different size, with a comparatively larger northern end zone. This asymmetric pattern has been previously noticed in Mayaland only at Toniná, in the Northwestern Zone, and Chinkultic in the Chiapas Highlands, and both of them have been dated for the end of the Late Classic period (Taladoire 2001; Taladoire and Colsonet 1991). Recently, another enclosed ballcourts have been found in the Northwestern Zone at Plan de Ayutla and Chinikihá, but these playing alleys are examples with symmetrical end zones.



Figure 2.10: View from the Ballcourt from the south

The communication between the main plaza and the Ballcourt was realized by means of descending almost three meters, which made the playing alley a sunken area (Figures 2.8 and 2.10). Surface examination of the southern end zone suggests the presence of several steps made of regularly-shaped stones, an architectural feature that is not present in the northern end, where the enclosure was bounded using three rectangular platforms of small height and different size and proportions that did not show remains of architectural features built atop of them.

The Central Sector is found to the north of the Ballcourt, and shares the largest flat section of the site with the lower portion of the Civic Precinct. It comprises 22 house groups loosely clustered around three single pyramids, Structures 44, 16 and 21. The biggest creek, which probably has changed its position through time, crossed the Central Sector, judging from a paleochannel that can be detected behind Structure 21. This movement could have affected buildings located between the current channel and the paleochannel, an area now empty, and even others located to the west of the current channel, such as Structures 36, 36 and 39. In addition, the Central Sector is surrounded by the east and west by swampy areas.

Two monuments, a circular altar and a rectangular stela with a rounded top (Figure 2.11), were found associated with Structure 39. Both monuments were found broken and their parts dispersed, with their original decoration badly preserved due to natural erosion that did not allow a clear identification of its original inscription. However, Figure 2.11 shows that the stela originally had some carved decoration. The three stela fragments suggest the monument had a total height of more than two meters, while the altar had a diameter close to one and a half meters. Stelae and circular altars are common features in the civic precincts of many Late Classic Maya centers, and according to the decipherment of their inscriptions we know they were placed in public spaces to commemorate events and activities of specific rulers. In that sense, it seems possible that the monuments were originally located in the Civic Precinct of the community, and were later moved to Structure 39 at an unknown time. The El Lacandón's stela is noteworthy because stelae and circular altars are rare in Palenque when compared to other Late Classic dynastic capitals of the Northwestern Zone as Piedras Negras, Moral-Reforma or Toniná. Only five circular altars have been found at Palenque, one for each of the four sides of the Palace's sustaining platform and another one located in front of the Temple of the Inscriptions. Regarding stelae, there are only two documented cases of this type of monument at Palenque: Stela 1, a monument carved in the round that represents the ruler Kan Balam II, and

La Picota stela, a plain monument located close to arroyo La Picota, in the western section of the city (Blom 1926, 1991).

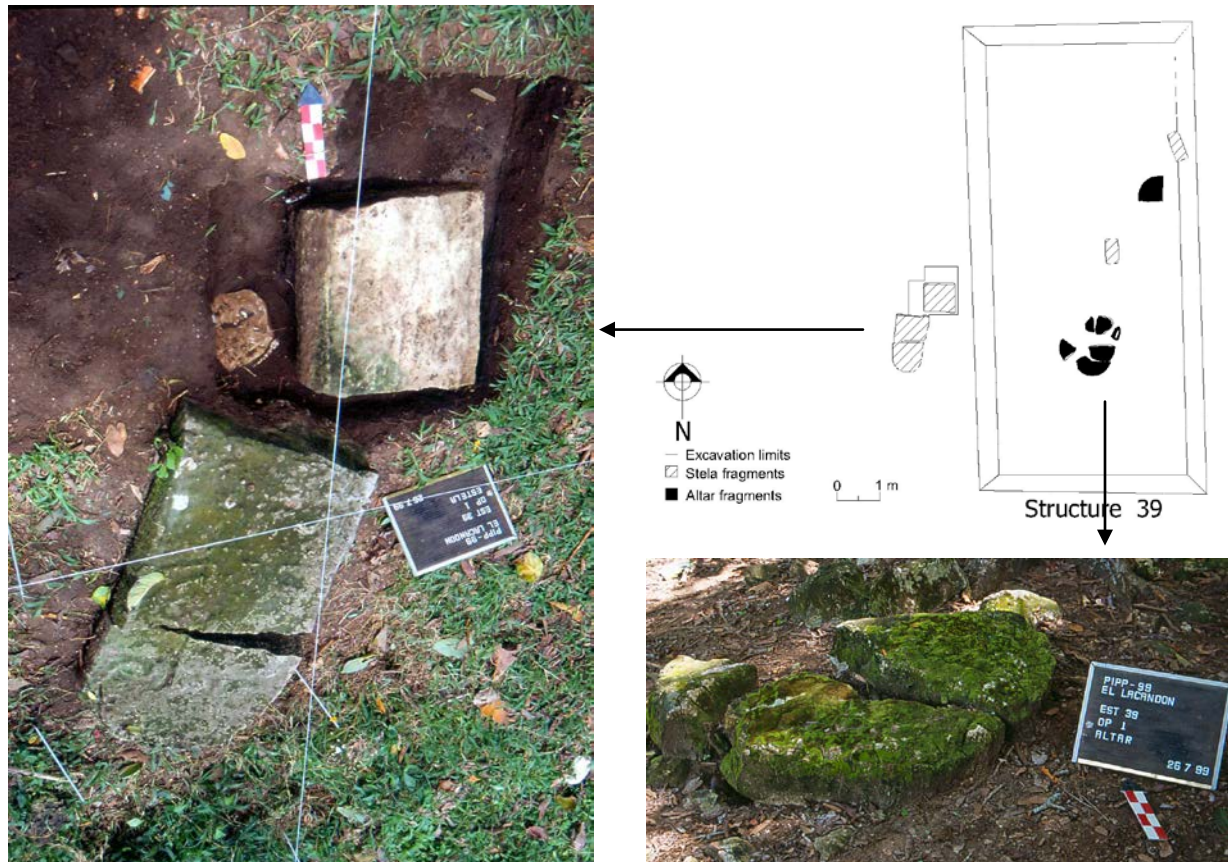


Figure 2.11: Stela and altar found in Structure 39

The West Sector was built upon natural terraces on a steep escarpment that rises 35 m above the Civic Precinct level (Figure 2.4). It comprises ten house groups loosely clustered around Structure 48, a small 2.5 m high pyramid. As mentioned before, modern *milpa* plowing has affected the visibility and preservation of structures in the sector, specifically in the empty section between Unit 23 and Unit 37, where the presence of surface ceramics suggest the area originally had more residential structures. Finally, the East Sector was built upon an area of rugged outcrops that descend to the northeast, and comprises 4 house groups.

2.4 SUMMARY

This chapter introduces a general historical and geographical framework for the study of El Lacandón, a site in the Northwestern Region of Mayaland that was occupied during the Late Preclassic and Late Classic Periods. The first occupation of the site coincides with the arrival of Maya people probably linked to the development of a state-level political system centered on El Mirador, while the second occupation seems associated to the Palenque polity. The following chapters will analyze different aspects of household organization of the Late Preclassic and Late Classic communities.

3.0 THE LATE PRECLASSIC COMMUNITY

This chapter focuses on El Lacandón's Late Preclassic occupation. As previously mentioned in Chapter 2, recent research has identified the emergence of Maya state-level governance at the Mirador Region during this period, reflected in: 1) A symbol system and 2) Specific beliefs that defined divine kingship (Clark, et al. 2000; Demarest 2004; Freidel, et al. 2002; Freidel and Schele 1988). Comparatively modest attempts have assessed the presence of other state-level society indicators, explicitly in reference to specific aspects of the economic realm, status differentiation and the relationships between the El Mirador Region and the periphery of Mayaland (Clark, et al 2000). Through an analysis at the household level and community levels, this chapter aspires to provide a general view of domestic life in a Late Preclassic village on El Mirador's far periphery. At the regional level, the analysis centers on sociopolitical topics concerning the position of the El Lacandón community within the Late Preclassic Maya expansion in the Palenque region, an area previously occupied by Mixe-Zoque, as well as the relationship between El Lacandón community's Early Classic abandonment and the development of dynastic capitals, such as Palenque, in the Northwestern Zone.

The analysis of the Late Preclassic community is organized in five sections: 1) An introduction that presents the general excavation results, 2) Analysis of household economy, 3) Analysis of social patterns among households in terms of feasting practices, 4) Analysis of household ideology in terms of ritual and burial practices, and 5) Analysis of sociopolitical patterns at the regional level, specifically the relationship between the abandonment of the Late Preclassic community and the development of Palenque as a dynastic capital.

3.1 DEFINING HOUSE GROUP STATUS AND HOUSE GROUP EXCAVATIONS

As mentioned in Chapter 2, house group status was analyzed according to the following criteria visible on surface: 1) House mound area, 2) Construction quality, and 3) Proximity to the civic precinct (Table 3.1). According to these criteria, surface architectural remains of Unit 4 and Structure 13 (Unit 5) were classed as dwellings of elite households because of their location in the center of the Late Preclassic community (and then close to the expected Late Preclassic civic precinct, considering that it should be located beneath the Late Classic one), the observed large structure area and the presence of worked stones. Unit 8 and Unit 10, located far north, were identified as residences of commoner households because of their comparatively smaller structure area, minor stone quality and location on the edge of the community. The original postulate was that all surface remains had been built by dwellers of the Late Classic community covering the remains of the Late Preclassic community's house groups, considering that the observed dwellings are located in areas with surface presence of ceramic materials of both Late Preclassic and Late Classic periods (Figure 2.6).

Table 3.1: Late Preclassic Excavated House groups at El Lacandón

| Characteristics / Unit / Structure # | Elite House Groups | | | Commoner House Groups | | | | |
|---|--------------------|----|--------|-----------------------|-----|-----|---------|-----|
| | Unit 4 | | Unit 5 | Unit 8 | | | Unit 10 | |
| | 45 | 46 | 13 | 29 | 29a | 29b | 30 | 28 |
| Distance to Civic Precinct / center of the community (m) | 60 | | 22 | | | | 135 | 180 |
| Construction quality | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 |
| Length (m) | 9 | 5 | - | 6 | 6 | 3 | 6 | 6 |
| Wide (m) | 9 | 5 | 6 | 5 | 4 | 3 | 5 | 6 |
| Area (m ²) | 45 | 45 | - | 30 | 24 | 9 | 30 | 36 |
| Visible on surface | X | X | X | X | | | X | X |
| Detected on excavation | | | | | X | X | | |

Construction quality: 1: Unmodified stones; 2: Worked stones.

Table 3.1 summarizes the architectural characteristics of Late Preclassic excavated house groups, which are described in the following sections. All excavated houses had earth platforms with stone retaining walls used as bases for a superstructure made of perishable materials (pole and thatch) not recovered during excavation.

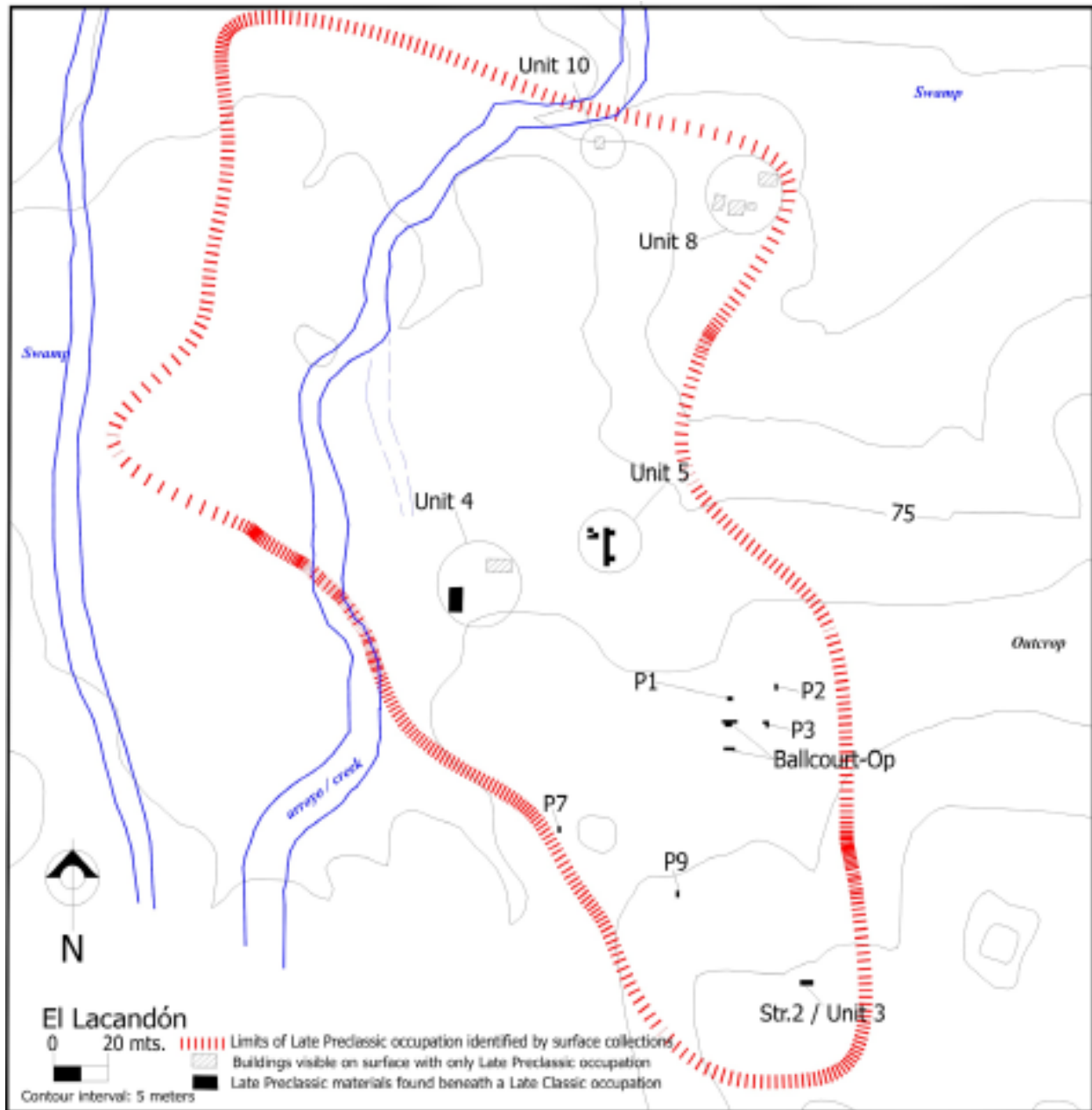


Figure 3.1: Excavations with Late Preclassic occupations

House group excavation strategy focused primarily on secondary deposits such as middens and other trash deposits around structures, considering that the artifacts recovered in them can be used for the reconstruction of the wide range of the activities undertaken by the household, even if the actual primary location of those activities is missed (Deal 1998; Hayden and Cannon 1983). Furthermore, climate conditions and modern land use did not allow the preservation of plaster or packed earth floors or other activity related surfaces.

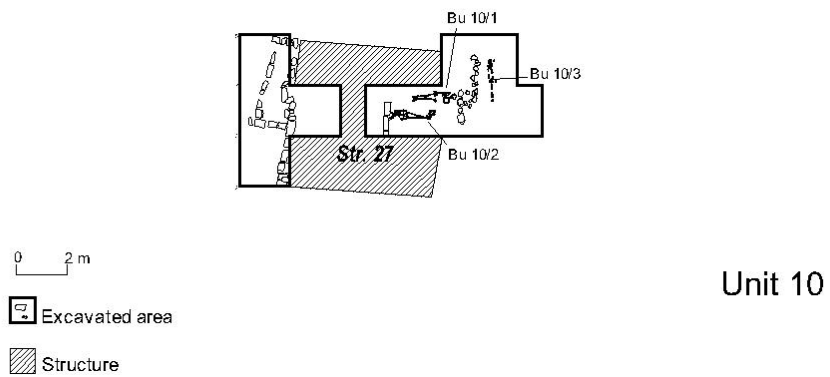
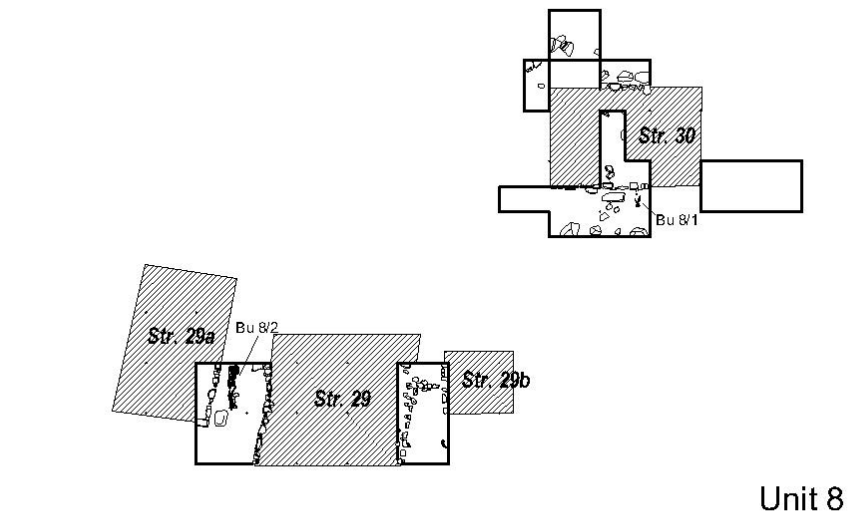
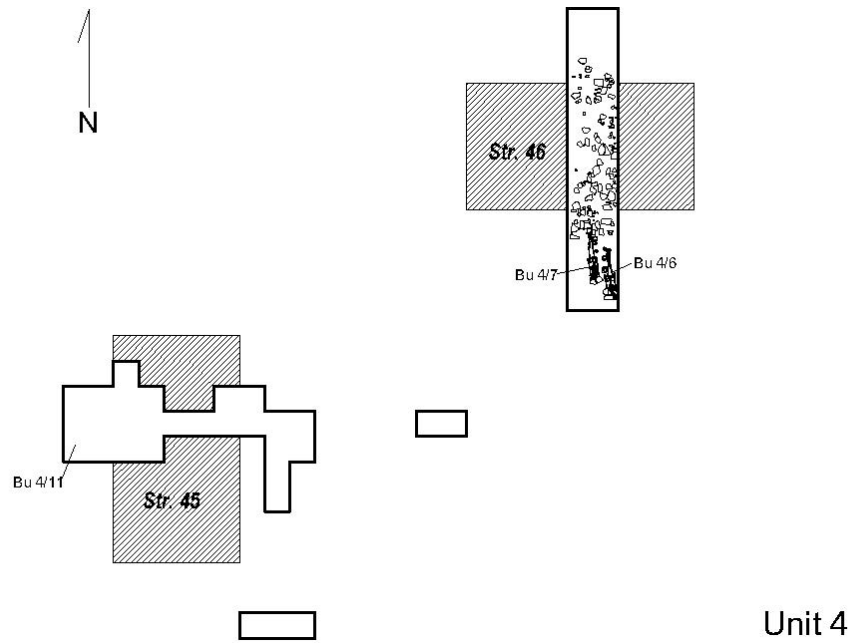


Figure 3.2: Late Preclassic Excavations at Unit 4, Unit 8 and Unit 10



a



b

Figure 3.3: Excavations carried out in Unit 4

a) View of Structure 46 from the south, with Burial 8. b) View of Structure 45's excavation from the west

Unit 4 comprises two housemounds, Structures 45 and 46, built around a patio open to the east and south. Structure 46 closes the patio to the north, and Structure 45 to the east. Excavation results of Structure 45 shows that it was built in a lower level than Structure 46, and that during the Late Preclassic the entire patio had a gentle slope towards the creek located to the east. This difference was later levelled during the Late Classic, allowing the expansion of the building, as can be observed in Figures 3.3 and 3.4. Three burials were recovered: two located on the front of Structure 46 and another one at the back of Structure 45 (Figure 3.2), all of them located outside of the buildings. Excavations at Structure 46 showed it was built during the Late Preclassic, and maybe had small, non-detected alterations done for its reuse during the Late Classic.

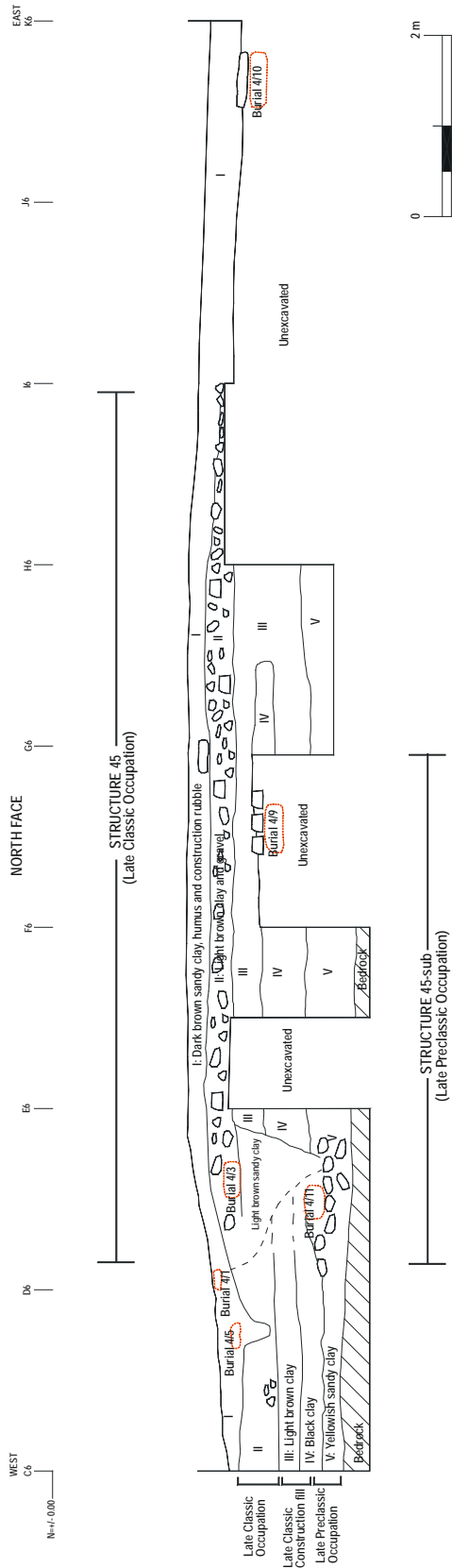


Figure 3.4: Unit 4, Structure 45 excavation profile

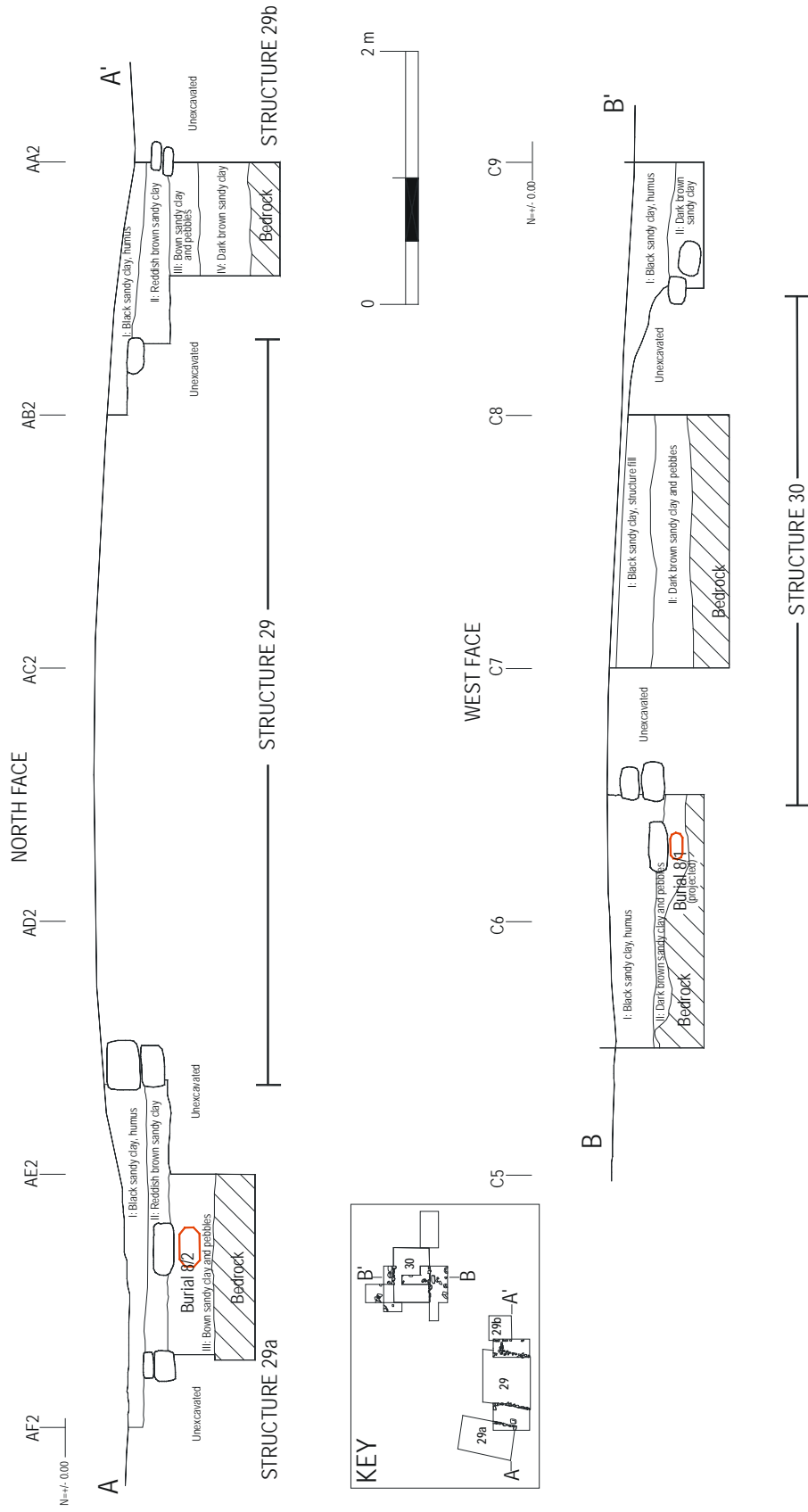


Figure 3.5: Unit 8, Structure 29 and Structure 30 excavation profiles

Structure 13 (Unit 5) is a rectangular platform located to the northwest of the Ballcourt. Excavations did not allow a clear identification of structure size during the Late Preclassic occupation, but permitted the finding of abundant materials deposited in middens around the structure. Surface data of Unit 8 suggested a house group containing two rectangular buildings, Structure 29 and Structure 30, while portions of another two, named Structure 29a and Structure 29b, were detected during excavation. Structures 29a, 29 and 29b closed the southern section of the patio, and Structure 30 the eastern section, which suggests a westward facing house group (Figure 3.2). All the supporting platforms were made of non-modified stones, a pattern used to identify dwellings built by commoner families.

The scarce presence of Late Classic materials and the absence of a construction sequence, similar to the one found in Structure 45 (Unit 4), indicates Unit 8 was not occupied during the Late Classic (Figure 3.5). Three burials were found, two at the front of Structure 30 and another one between Structures 29 and 29a.



Figure 3.6: Excavations at Unit 8

Finally, Unit 10 was the smallest of the excavated house groups, and it consisted of a square building, Str. 27, which was occupied only during the Late Preclassic. Three burials were detected, two of them in platform fill (Figure 3.2).

Excavations at the Civic Precinct –P1, P2, P3, Ballcourt Operation, P7, P9 and Unit 3 (Figure 3.1) found Sierra Red ceramic materials that support the original occupation of the area during the Late Preclassic. However, these excavations were limited to building exteriors, and did not allow the recovery of inner construction sequences. Further details of these operations will be presented in Chapter 5, while discussing the civic precinct’s chronology and architectural planning.

3.2 HOUSEHOLD ECONOMY

Through several analyses performed on the artifact assemblage recovered in excavations, this section examines patterns of production, exchange, and consumption in order to evaluate household economic organization. The distribution of chipped stone artifacts (chert and obsidian) provides a glimpse into household production. In terms of exchange systems, the analysis focuses on obsidian, considering its ubiquitous distribution at most archaeological sites and the limited number of its identified geological sources (Nelson and Clark 1998:278). Finally, differential consumption of highly valued items, specifically obsidian, allows the understanding of wealth differences between elite and commoner households (Smith 1987).

Economic comparisons between households are presented in two ways: 1) A comparison of all households’ assemblages, and 2) A comparison of the sets of commoner vs. elite households. In general terms, a comparison of all individual assemblages allow the detection of patterns that reflect more clearly the specific decisions that each household could make as an independent social unit. On the other hand, elite and commoner aggregates allow the understanding of gaps that existed between such analytical groupings of individual households, using socioeconomic criteria.

Table 3.2: Late Preclassic Artifacts

| Artifacts and Excavation Data | Elite House Groups | | Commoner House Groups | |
|----------------------------------|--------------------|---------|-----------------------|---------|
| | Unit 4 | Str. 13 | Unit 8 | Unit 10 |
| Exc Vol (Cu M) | 37.0 | 5.6 | 18.6 | 9.7 |
| Total Rim Sherds | 1017 | 128 | 588 | 316 |
| Storage and Cooking Jars | 330 | 35 | 320 | 137 |
| Plain Bowls | 587 | 89 | 206 | 178 |
| Platters | 47 | 0 | 20 | 1 |
| Vases | 53 | 4 | 42 | 0 |
| Figurines | 30 | 3 | 8 | 3 |
| Total Chipped Stone | 381 | 144 | 1811 | 602 |
| Obsidian | 51 | 25 | 247 | 81 |
| Chert | 330 | 119 | 1564 | 519 |
| Grinding stone | 2 | 0 | 0 | 1 |
| Short greenstone celts | 0 | 0 | 1 | 0 |
| Bark beaters | 1 | 0 | 1 | 0 |
| Roller stamp | 1 | 0 | 0 | 0 |

3.2.1 Stone tools production

Stone tools production was evaluated using the recovered sample of chert and obsidian production waste that was found mixed with other materials remains normally accepted as the result of the full range of domestic activities. However, it is important to remember that these kinds of chipped stone collections represent only a small part of the total debitage produced, which probably was moved to a special dump area outside of the residential units in order to avoid issues related to the danger caused by those materials (Clark 1997; Hayden and Cannon 1983).

Earlier analyses of the Palenque region chert materials had established the presence of several expedient, low effort processes dedicated to the manufacturing of flakes, blades and bifaces (Johnson 1976a). This production sequence looks similar to the observed at the Copán Valley and La Entrada Region during the Late Preclassic and Early Classic Periods, where individual households gathered local chert for manufacturing unspecialized percussion flakes modified by retouch and crudely made chopping tools (Aoyama 1999:15-16). As expressed on Table 3.3, El Lacandón materials follow this tendency, with members of each household dedicated to the production of tools.

Table 3.3: Late Preclassic Chert Artifacts

| Artifacts / Excavation Unit | Elite House Groups | | Commoner House Groups | |
|--------------------------------|--------------------|--------|-----------------------|---------|
| | Unit 4 | Str 13 | Unit 8 | Unit 10 |
| Flake Cores | 4 | 23 | 67 | 57 |
| % | 1.2% | 19.3% | 4.3% | 11.0% |
| Flakes | 0 | 18 | 52 | 392 |
| % | 0.0% | 15.1% | 3.3% | 75.5% |
| Scrapers | 0 | 0 | 1 | 2 |
| % | 0.0% | 0.0% | 0.1% | 0.4% |
| Bifaces/Choppers | 1 | 0 | 2 | 12 |
| % | 0.3% | 0.0% | 0.1% | 2.3% |
| General debitage | 325 | 78 | 1442 | 56 |
| % | 98.5% | 65.5% | 92.2% | 10.8% |
| Total | 330 | 119 | 1564 | 519 |
| % | 100% | 100% | 100% | 100% |

Previous research on obsidian blade production established that during the Late Preclassic period obsidian blades were produced preferentially at larger centers and consequently arrived to smaller communities as finished products. Examples of this type of non-producing communities are Cuello (Hammond 1991:170), K'axob and Cahal Pech (McAnany 2004:307) in Northern Belize, and also the small Late Preclassic community of Copán (Aoyama 1999:76-89). Conversely, obsidian blades were produced at the larger centers of the El Mirador Region, judging from the limited amount of recovered debitage from El Mirador (Fowler 1984:126-130).

The technological analysis of El Lacandón's Late Preclassic obsidian artifacts allowed the identification of prismatic blade production by-products, such as first, second and third series flakes and prismatic core fragments. The absence of platform preparation flakes, decortication flakes and macro flakes indicates obsidian arrived as polyhedral cores, which required a small amount of work to be transformed into prismatic cores for prismatic blade production, a pattern already observed in the Northwestern Zone and other areas of Mayaland (Clark and Bryant 1997; Johnson 1976a:25-26; Nelson and Clark 1998). Table 3.4 shows the results of the obsidian technological analysis.

Considering that a proportion of debitage larger than 20% (including flakes) in an obsidian assemblage can be interpreted as evidence of blade production (Norris 2002:166-207), it seems possible to suggest that all El Lacandón Late Preclassic households were involved in production of prismatic blades. Production output was evaluated using two indicators: 1) Proportion of flakes in the total assemblage (equivalent to Flake Pieces/Total Pieces Ratio in Norris 2002); and 2) Expected/Observed Blade Ratio, calculated assuming that each core

produced a total of 100 prismatic blades that then break into three fragments, one proximal, one medial and one distal (Aoyama 1999; Clark 1997; Norris 2002; Santley and Barret 2002; Sheets and Muto 1972). It was expected that higher proportions of flakes will reflect the variability of production output, or the intensity of specialization, among households, defined as a continuum between part-time and full-time specialization (Norris 2002; Santley and Kneebone 1993:40); and values greater than one for the Expected/Observed Blade Ratio indicate that some of the production was mobilized outside of the house group, entering into a exchange system (Clark 1997).

Table 3.4: Late Preclassic Obsidian technological analysis

| Artifacts / Excavation Unit | Elite House Groups | | Commoner House Groups | |
|--|--------------------|--------|-----------------------|---------|
| | Unit 4 | Unit 5 | Unit 8 | Unit 10 |
| Obsidian prismatic blades | 32 | 8 | 128 | 30 |
| % | 62.7% | 32.0% | 51.8% | 36.1% |
| First, Second and Third Series Flakes | 19 | 17 | 118 | 50 |
| (%) | 37.3% | 68.0% | 47.8% | 60.2% |
| Prismatic core | 0 | 0 | 1 | 3 |
| (%) | 0.0% | 0.0% | 0.4% | 3.6% |
| Total | 51 | 25 | 247 | 83 |
| % Total Debitage (Flakes+Shatter+Cores) | | | | |
| Expected blade number (prismatic core x 100 x 3) | | | 300 | 900 |
| Expected/Observed Blades Ratio | 0 | 0 | 2.3 | 30 |

The results shown in Table 3.4 suggest that the families of Unit 5, Unit 8, and Unit 10 were more intensely engaged in production of prismatic obsidian blades than the family of Unit 4, evidenced by larger proportions of flakes in the obsidian assemblage. Furthermore, Units 8 and 10 have Expected/Observed Blades Ratio higher than 1, which suggests that some of the production output was transferred to other, non-producing households.

Figure 3.7 is a comparison of estimated proportions and error ranges of flakes in the obsidian assemblage of each house group. It shows that Structure 13 (an elite household) and Unit 10 (a commoner household) have a significantly higher proportion of flakes than Unit 4 and Unit 8. On the other hand, the comparison between elite (Unit 4 and Structure 13) and commoner house groups (Unit 8 and Unit 10) shows also a significant difference, with commoner house groups more involved in obsidian production.

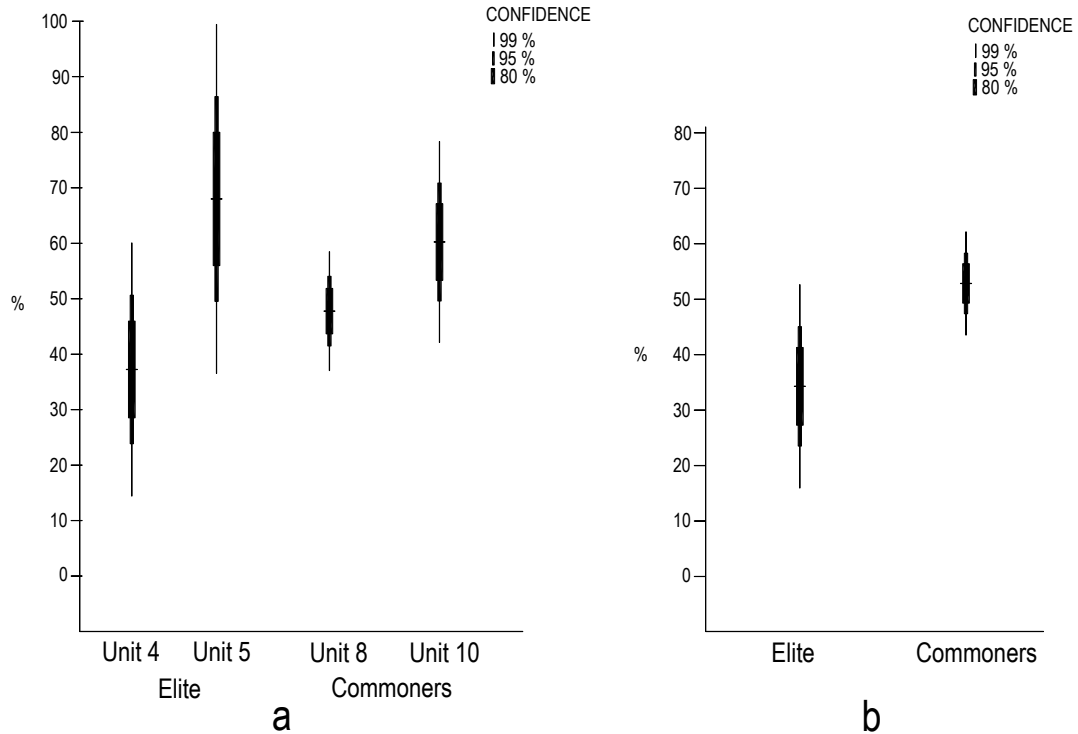


Figure 3.7: Bullet Graph of Flake Proportions in Late Preclassic Obsidian Assemblage
a) In every house group; b) In elite and commoner house groups

Overall, the results previously mentioned suggests that obsidian blade production at the Late Preclassic community was organized at a household level, with non-specialized individuals making tools sporadically to provision their own family, and, in some cases, (Units 8 and 10) also a small quantity that could have been exchanged with other households (Costin 1991; Peacock 1982; Santley and Kneebone 1993; Van der Leeuw 1976).

3.2.2 Other production activities

The analysis of additional production activities in each household used special items mentioned in Table 3.2. The presence of bark beaters, a specific type of stone rectangular objects with parallel grooves, is generally taken to indicate paper production. These objects are found in house group assemblages since the Middle Preclassic period (McAnany and López Varela 1999) but, apparently, they never were a common item (Coe 1965:600). During the Late Preclassic period, paper was probably used for ritual activities such as bloodletting related to ancestor veneration. Two bark beater fragments were found, one in Unit 4, an elite house group, and other

in Unit 8, a commoner house group, indicating that both families were producing and/or using paper for ancestor veneration. This data correlates with the finding as funerary offerings of other artifacts that were also used in those rites, such as stingray spines and bone perforators recovered in burials 4/7 and 8/2 (see Table 3.8).

Use replication and microscopic analyses of greenstone celts (*hachuelas*) have established that their preferred use was to cut wood (Clark 1988:139). Previous research established these artifacts were made in communities located near different sources along the Motagua River and its tributaries in Guatemala, using local metamorphic materials such as jadeite or other jadeite-like greenstone (Seitz, R. et al 2001), and later exchanged as ready-made objects probably through the same exchange networks that allowed the movement of obsidian (Clark 1998, Sheets 2000). Only one greenstone celt fragment was found in Unit 8, a commoner house group, suggesting that the family that inhabited there was more dedicated to wood cutting.

Roller stamps were used to imprint designs on cloth or paper, and have been found in Maya house group artifact assemblages since the Middle Preclassic period in communities such as Cuello and Kaxob in Northern Belize (Hammond 1991, McAnany and López Varela:159). A roller stamp fragment was recovered in Unit 4, an elite household. Overall, the evidence of paper production, wood working and paper/cloth imprint show that these activities were carried out by only two house groups: Unit 4, an elite household, and Unit 8, a commoner household.

3.2.3 Stone tools raw material acquisition

Even as chert is a common material in karstic or limestone-based geological regions, to this date no chert quarry has been reported in the Low Sierras subdivision of the Northwestern Zone. Chert probably came from large quarries found in the Middle Usumacinta subdivision, like the ones located around the residential site of Los Cenotes (Figure 2.3), which probably functioned as a chert workshop that supplied larger political centers as Moral-Reforma, Tiradero and Revancha (Hernández and Álvarez 1978). Unfortunately, the analysis of the precise chronology and technological characteristics of those materials is not published. Other chert quarry has been recognized at Piedras Negras (Hruby 2000:234), but the typically black materials of this source were not identified at El Lacandón. Another possibility could be the presence of a local source at El Lacandón, but until more specific data is recovered, the assumption is that chert arrived to the

site by means of an exchange network with other communities of the Middle Usumacinta subdivision.

Previous work positions El Chayal as the most frequently used obsidian source in Mayaland starting in Late Preclassic times. This tendency apparently correlates with the increasing power of the Kaminaljuyu polity, assumed to have taken control of El Chayal, and with the development of an exchange network that connected the Guatemalan Highlands and the Central and Northern Lowlands supervised by the powerful elites of Kaminaljuyu and El Mirador. The elite control of El Chayal obsidian is also assumed to correlate with a decline in use of San Martin Jilotepeque obsidian at El Mirador (Fowler et al. 1989:163; Nelson and Clark 1998:290-91). On the other hand, Ixtepeque obsidian, a source apparently controlled by the Copan elite in later periods (Aoyama 1999), has been identified at Colha in Northern Belize (Brown, et al. 2004), and at other sites of the Peten and Northern Yucatan Zones like Tikal, Becan, and Edzna (Nelson and Clark 1998). Specifically in the Northwestern Zone, El Chayal is the only source identified in the tiny Late Preclassic obsidian samples from Palenque (Johnson 1976a, b) and Piedras Negras (Hruby 2000).

Table 3.5: Late Preclassic Obsidian sources

| Source / Excavation Unit | Elite House Groups | | Commoner House Groups | | Total |
|--------------------------|--------------------|--------|-----------------------|---------|-------|
| | Unit 4 | Str 13 | Unit 8 | Unit 10 | |
| El Chayal | 92.2% | 76.0% | 57.5% | 81.9% | 68.3% |
| Ixtepeque | 5.8% | 20.0% | 30.8% | 14.5% | 23.5% |
| San Martin Jilotepeque | 2.0% | 4.0% | 11.7% | 3.6% | 8.2% |

Geological provenance of obsidian artifacts recovered at El Lacandón was analyzed using visual sourcing, an accurate, rapid and non-destructive technique that can be easily applied in a field laboratory (Aoyama 1999; Braswell, et al. 2000). Table 3.5 shows that three obsidian sources were identified: 1) El Chayal, 2) Ixtepeque, and 3) San Martin Jilotepeque. In terms of the number of identified sources, El Lacandón obsidian assemblage seems more diverse than the previously mentioned Late Preclassic samples of Palenque and Piedras Negras, but this could be related to the comparatively smaller sample size of both communities (n=1, in both cases, Hruby 2000:240; Johnson 1976a, b), when compared to El Lacandón (n=404, Table 3.2).

The data presented in Table 3.5 suggests a consistent pattern among house groups, with El Chayal as the dominant source, followed by Ixtepeque and San Martin Jilotepeque materials. This pattern presents similarities to Pires-Ferreira's analysis of Formative obsidian distribution among households in the Oaxaca Valley, where this homogeneity apparently marks a pooling of obsidian flow by the local elite before its redistribution to affines and commoners (Flannery and Marcus 2005:67-69; Pires-Ferreira 1975:35).

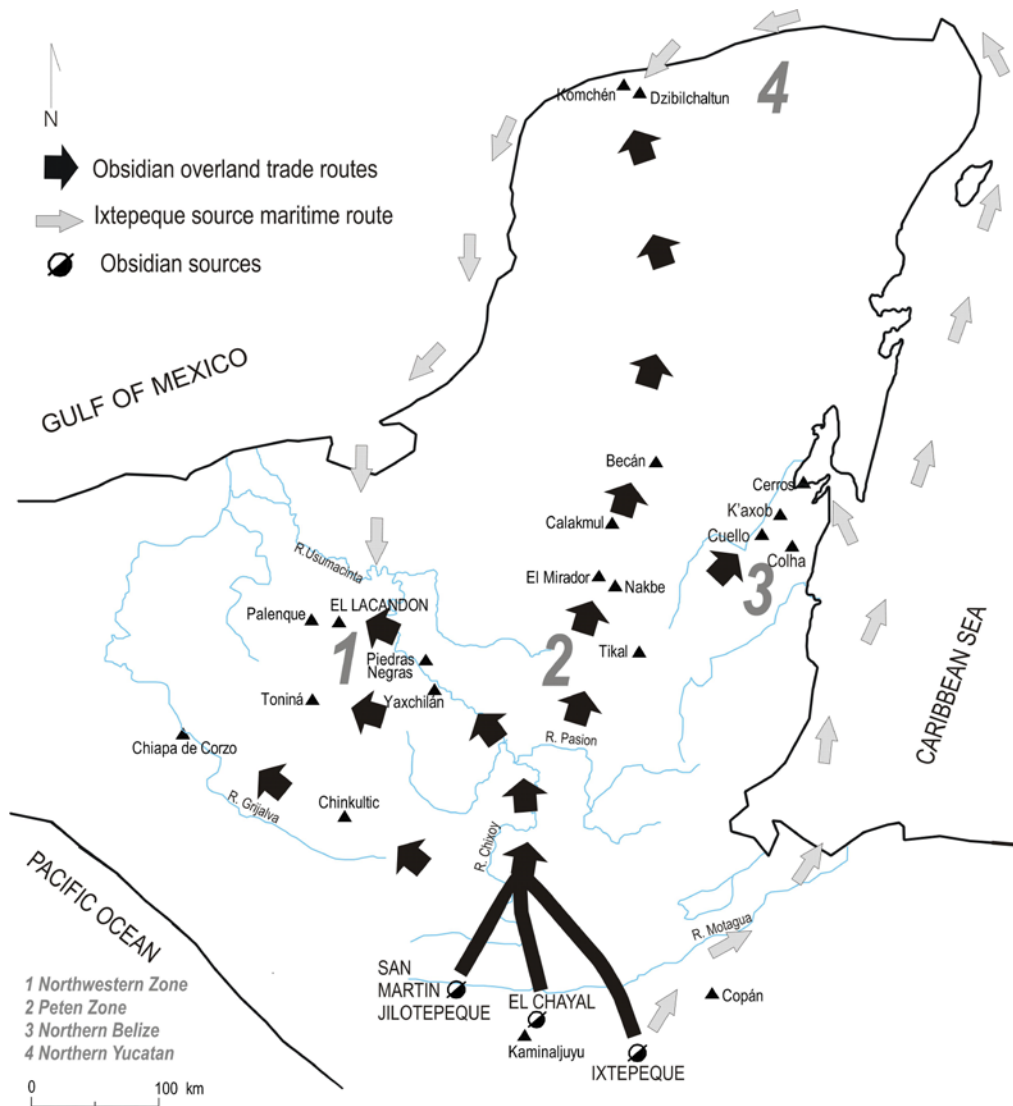


Figure 3.8: Late Preclassic Obsidian Exchange Routes (Hammond 1972; Nelson and Clark 1998)

Source analysis provides useful information about El Lacandón household's insertion into obsidian exchange routes (Figure 3.8). It has been suggested that El Chayal, Ixtepeque and San Martin Jilotepeque obsidian traveled to the Northwestern Zone by a combination of overland

and riverine routes that started at the Guatemalan Highlands and ended at the Usumacinta River (Nelson and Clark 1998). Otherwise, Ixtepeque obsidian could also have moved down the Motagua River and then along the Yucatan coast (Hammond 1972). The existence of this coastal route had been previously interpreted as a Postclassic phenomenon linked to 16th century historical accounts recorded at the time of the arrival of the Spaniards (Hammond 1972, Nelson and Clark 1998). However, ongoing research at Northern Belize has recovered Ixtepeque obsidian at communities such as Colha (Brown, et al 2004), which have been interpreted as evidence of a coastal route functioning since the Late Preclassic.

Obsidian exchange routes can indicate the exchange routes of other prestige and ritual items moved through the same natural corridors, items that were recovered as burial furniture (see below). For instance, jadeite beads were probably manufactured close to the Motagua River, the known jadeite source of Mayaland, and moved to the Northwestern Zone via the previously mentioned combination of overland and riverine exchange routes. In addition, burial furniture at Late Preclassic El Lacandón also includes highly valued maritime objects such as *Spondylus* shell, shark teeth (*Carcharinus lamia*), and stingray spines (*Dasyatis* sp). These items were probably obtained along the Gulf of Mexico coast, and arrived to the Northwestern Zone via the Laguna de Términos and the Usumacinta River (Borghegy 1961; Zúñiga Arellano 2000).

3.2.4 Obsidian Consumption

The analysis of differential access to obsidian gives hints about differences in status and wealth. Obsidian was the most valued cutting material in Mayaland, and the quantity of obsidian artifacts in house groups often correlates with other markers of status and wealth such as fine architecture, highly decorated ceramics and other exotic goods such as jade and shell (Demarest 2004). Specifically for the Late Preclassic period, previous research established that in Mayaland house groups were reliant on locally available chert, and exotic obsidian was a relatively scarce material, a high status commodity in short supply that was probably more frequently used in ritual activities such as bloodletting (Demarest 2004:158; Fowler, et al. 1989:165; McAnany 2004:307-309). In that sense, I expected to find significantly higher quantities of obsidian in elite house groups.

Table 3.6: Proportions of Obsidian in the Total Chipped Stone Assemblage of Late Preclassic House Groups

| | Elite House Groups | | Commoner Housegroups | | All Elite | All Commoners | Total |
|---|--------------------|-----------------|----------------------|---------|-----------|---------------|-------|
| | Unit 4 | Unit 5 (Str 13) | Unit 8 | Unit 10 | | | |
| Proportions of Obsidian in the Total Chipped Stone Assemblage | 13.4% | 17.4% | 13.6% | 13.8% | 14.5% | 13.7% | 14.1% |

Obsidian consumption was analyzed using the Proportion of Obsidian in the Total Chipped Stone Assemblage, equivalent to an Obsidian/Chert Ratio (Aoyama 1999; Fowler, et al. 1989; Johnson 1976a; McSwain, et al. 1991; Nelson and Clark 1998). The results, shown in Table 3.6 and Figure 3.9a, indicate that three families (Unit 4, Unit 8 and Unit 10) had a very similar access to obsidian, judging from the similar proportions of obsidian in their total chipped stone assemblage. Conversely, the elite family that inhabited Unit 5 (Structure 13) had an almost 4% higher proportion of obsidian in the total chipped stone assemblage, a result that may suggest the expected pattern of preferentially elite consumption, even if Unit 4, the other elite household, had a proportion more similar to the commoner households from Unit 8 and Unit 10. A more rigorous comparison of proportions used the bullet graphs presented in Figure 3.9a, which shows that the differences between Unit 5 and other households are highly significant, with a confidence between 95% and 99%. However, when the elite and commoner house group assemblages are grouped, the pattern is different (Table 3.6, Figure 3.9b), with elite and commoners having a comparatively similar access to obsidian.

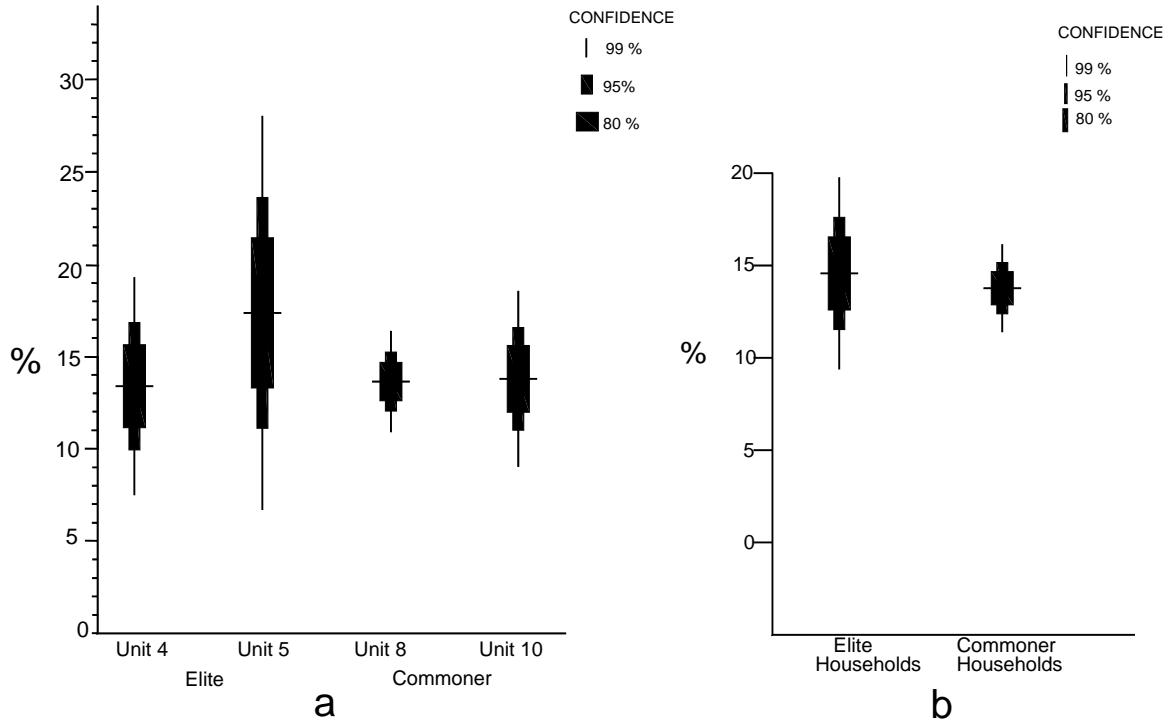


Figure 3.9: Bullet Graph of Proportions of Obsidian in the Chipped Stone Assemblage
a) In each house group; b) In elite and commoner house groups

3.3 FEASTING

Feasting activities have been recognized at the center of social, political, economic and religious events among the Mayas in contemporary times (Coe 1994; Redfield 1934; Vogt 1990, 2004), and during the Colonial period (Landa 1985). Furthermore, it is now widely accepted that feasting activities were also frequently carried out during the Classic period, and even earlier times (Brown 2001; Le Count 1996, 2001). In general terms, feasting can be defined as “any sharing between two or more people of special foods (i.e. foods not generally served at daily meals) in a meal for a special purpose or occasion” (Hayden 2001), and can be archaeologically identified by the presence of serving vessels (Hayden 2001:40, LeCount 1996, 1999).

Feasting behavior had been archaeologically analyzed using a broad dichotomy between two general kinds of feasts: 1) Inclusive feasting, and 2) Diacritical feasting. Inclusive feasts comprise events in which hosts attempt to promote solidarity and equality among group members, usually characterized by the presentation of large quantities of meals and common undecorated serving vessels. On the other hand, diacritical feasts are hosted by/for the wealthy and powerful members of society in order to enforce social inequalities, and are characterized by special foods served on special highly decorated serving vessels (Dietler 2001:75-87, Hayden 2001).

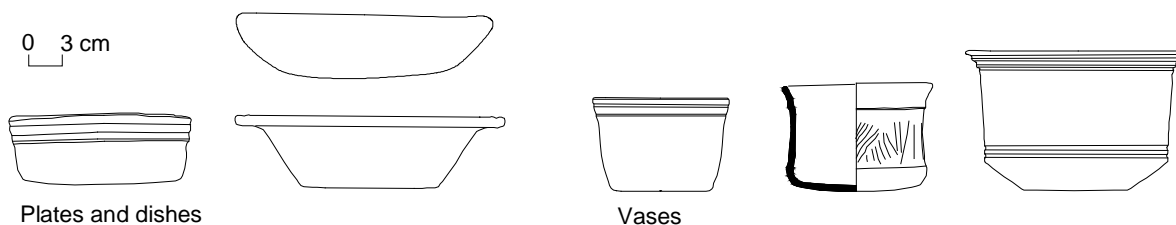


Figure 3.10: Late Preclassic Serving Vessels

Maya elite and commoners had access to a same basic staple, maize, which through the application of different processes was transformed into ordinary and special meals, such as cold and hot maize gruels (*pozol*, *sakha*, and *atole*, *ul*), and special tamales (*wah*), respectively. Previous shape and epigraphic studies of Late Classic highly decorated serving vessels provide an interpretation of specific serving uses, which is usually extrapolated to previous periods. The glyphic texts that are part of the vessel's decoration usually include its ancient (emic) designation, such as *lak* for shallow dishes and *yu'chib* for drinking vases. In addition, the inscriptions also mention the specific type of food that was served in the vessel, like plain tamales and special tamales with deer and iguana meat (Houston, et al. 1989; Taube 1989; Zender 2000). Regarding drinking vessels and special beverages, research has shown that cacao (chocolate) was probably the most important drink but not the only one, because vases could have also been used to drink *balché* (made from bark) and *chicha* beer (made from maize). Moreover, However, perishable plain or decorated gourds (*Lagenaria* sp.) were probably the most commonly used serving and drinking container, judging from ethnographic data and also a

small number of recovered archaeological examples, such as the painted gourds found at Cerén (Sheets 2002).

Vessel shape categories (Table 3.2) were analyzed using, with modifications, LeCount’s proposal that includes jars and cooking bowls as food preparation vessels, and bowls, platters and vases as serving vessels (LeCount 2001). However, it was not possible to detect a clear distinction between cooking and serving bowls in the Late Preclassic ceramic assemblage, so the analysis adds all bowls to the sum of platters and vases. Using LeCount proposal, dishes and plates are grouped together as platters, considering that these types of vessels had the same emic designation. The highly decorated serving vessels of the Late Preclassic period include plates/dishes and vases of the Altamira Fluted, Laguna Verde Incised and Correlo Incised-Dichrome ceramic types (Figure 3.10), characterized by the glossy surface treatment of the Sierra Red ceramic group together with decorated designs on rims and body.

Table 3.7: Proportions of Serving Vessels in Late Preclassic Household Ceramic Assemblage

| | Elite HG | | Commoner HG | | All Elite | All Commoners |
|---|----------|--------|-------------|---------|-----------|---------------|
| | Unit 4 | Unit 5 | Unit 8 | Unit 10 | | |
| Proportion of All Serving Vessels in the total ceramic assemblage | 67.6% | 72.7% | 45.6% | 56.6% | 68.1% | 49.5% |
| Proportion of Highly Decorated Platters and Vases in the total serving vessels assemblage | 14.6% | 4.3% | 23.1% | 0.6% | 13.3% | 14.1% |

The analysis of feasting activities at Late Preclassic El Lacandón compares: 1) The proportion of serving vessels among elite and commoner house groups’ ceramic assemblages, expecting that elite house groups had larger proportions of serving vessels because a bigger number of participants were attending (both inclusive and diacritical) feasts with more frequency than the comparatively smaller feasts of commoner households. In addition, 2) The comparison of proportions of highly decorated vessels will allow detecting if elite households were engaged to greater degree in diacritical feasting.

Table 3.7 shows the proportions of all serving vessels (bowls, vases and platters) in Late Preclassic house groups. It is possible to notice the presence of two clusters of house groups: 1) Unit 4 and Unit 8, elite households, with a proportion of serving vessels close to 70%, and 2) Structure 13 and Unit 10, commoner households with comparatively smaller proportions of

serving vessels (around 50%). Figure 3.11a is a bullet graph that shows that the observed differences are highly significant and have a significance of more than 99%. Also, when the sum of the total elite and commoner assemblages is compared (Table 3.7), we observe a big difference (18%) in the proportions of all serving vessels, which further suggests that elite households had a major proportion of serving vessels, a difference that also have a significance of more than 99%, as can be noticed in the bullet graph of Figure 3.11b.

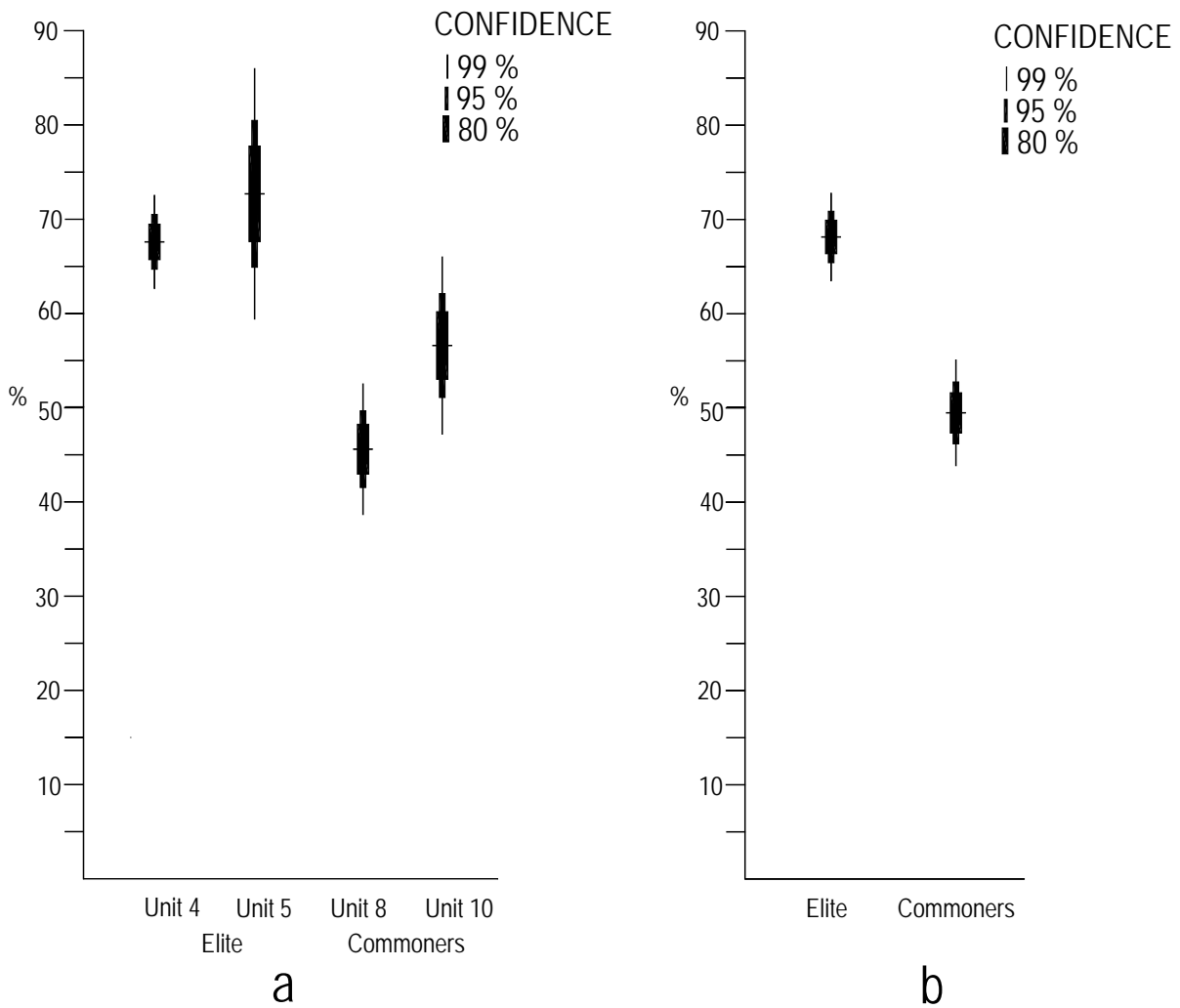


Figure 3.11: Bullet Graphs of Late Preclassic Proportions of Serving Vessels in the total ceramics assemblage

The second analysis considers the proportions of highly decorated vessels. Table 3.7 shows that the proportions of highly decorated platters and vases are grouped in two clusters: 1) Unit 4 and Unit 8, with a high proportion of highly decorated serving vessels (14% and 23.1% respectively),

and 2) Structure 13 and Unit 10, with comparatively smaller proportions of highly decorated serving vessels (4.3% and 0.6%, respectively). Figure 3.12a is a bullet graph that shows that these differences are not significant.

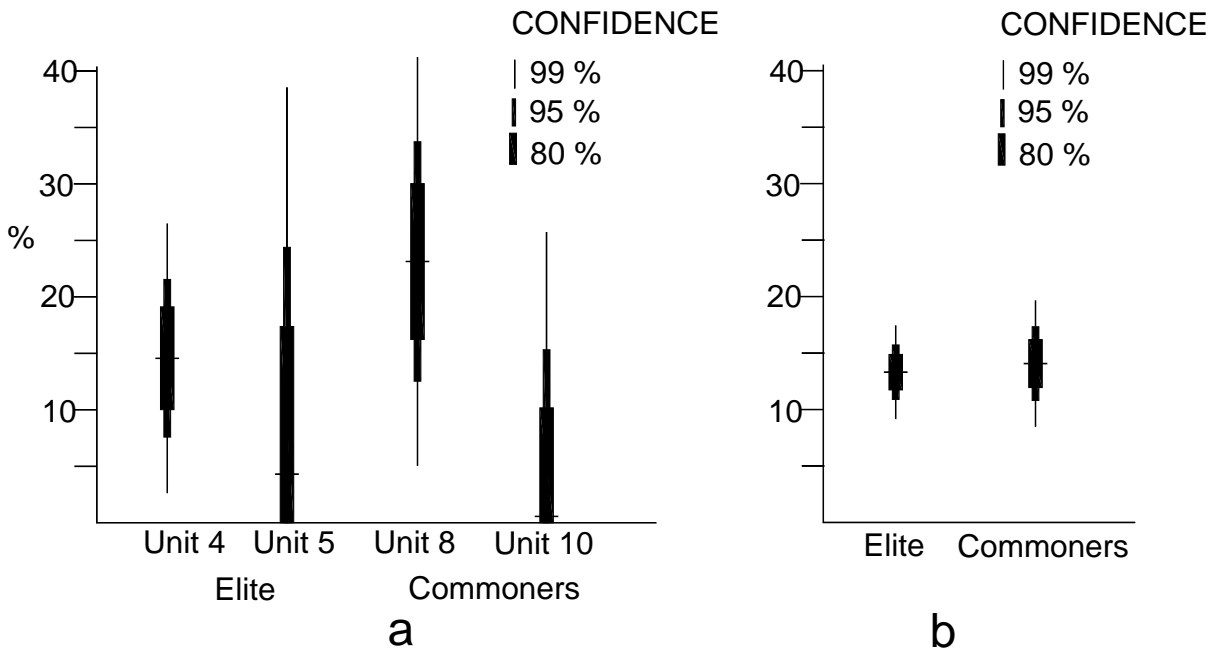


Figure 3.12: Bullet Graphs of Late Preclassic Proportions of Highly Decorated Platters and Vases in the serving vessels assemblage

In addition, when the sum of the total elite and commoner assemblages is compared (Table 3.7), we observe that the proportion of highly decorated vessels is almost the same (or less than a one percent), suggesting that both classes of households had similar access to that kind of vessels.

Overall, the comparison of Late Preclassic serving vessel's proportions suggest that elite households could organize bigger feasts than commoner households, events that were attend by larger groups of people using a great number of serving vessels. On the other hand, diacritical feasting was apparently not realized, considering that the proportion of highly decorated vessels in the serving vessels assemblage was almost identical.

3.4 HOUSEHOLD IDEOLOGY

The examination of elite and commoner household ideology during the Late Preclassic period relies on the analysis of artifacts related to domestic ritual (figurines and censers), and a scrutiny of burial practices and furniture, which provide a death-related scenario for the understanding of any ideological differences between elite and commoner households.

3.4.1 Domestic ritual

Censer fragments were not identified in the ceramic assemblage recovered from housegroup excavations, resembling a pattern already established at Tikal, where Late Preclassic censers were always associated with temples or specific ritual areas in elite house groups (Rice 1999:38). Moreover, household ritual areas, as identified in the eastern portion of house groups, organized according to *Tikal Plaza Plan 2* architectural layout (Becker 1991, 2003), were not identified in El Lacandón house groups.

3.4.1.1 Figurines - social context and function

Little research has been devoted to the understanding of figurine social context and function in Preclassic Mayaland compared to other regions of Mesoamerica (Flannery and Marcus 2005; Joyce 1993; Lesure 2002; Marcus 1998b). Probably the main cause of this is the comparatively minor number of recovered Preclassic-period Maya figurines, compared to other contemporary Mesoamerican societies such as the Olmec and Zoque people in the Grijalva River Basin of Chiapas (Lee 1969; Agrinier 2000), and the astoundingly larger Classic-period Maya figurine assemblage, which have been the object of more research. There is a general agreement among specialist regarding a shift in figurine presence in Preclassic artifact assemblages: hand-modeled, solid human figurines and hollow whistles are known for the Middle Preclassic Mamon phase (660-400 b. C.), and are almost completely absent in the reported Late Preclassic period ceramic collections of El Mirador, Uaxactun, Kaxob, and Cuello (Fowler 1984; Hammond 1991; Joyce 1993; McAnany 2004; Rands and Rands 1965). Following Lesure's (2002:590-591) considerations regarding figurine "meaning", the analysis here centers on: 1) An examination of the social context of figurines, specifically who used them in what spatial setting; and 2) A

“modest” social analysis, assuming a ritual function for figurines, where differential figurine quantities among house groups may be a reflection of how often figurine rituals were practiced (Drennan 1976; Lesure 2002). An assumption worth investigating is that elite households were more involved in ritual activities that included the use of figurines.

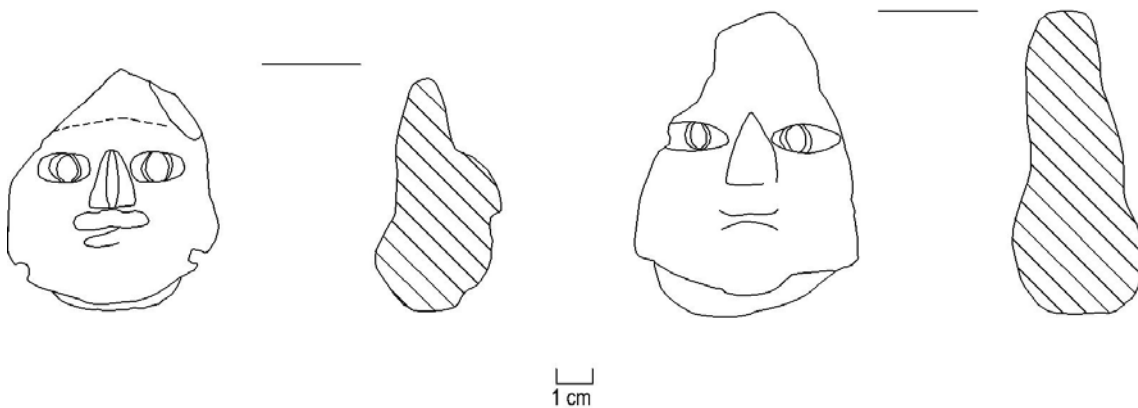


Figure 3.13: Late Preclassic Figurines from Unit 4

Fragments of modeled ceramic figurines were recovered in all excavated house groups (Table 3.2), the majority of them (n=30, 60 %) found at Unit 4. A chi square test, using the total number of sherds by excavation unit as a control for the amount of excavated deposit, indicates that the significant difference between house groups with respect to proportions of fragments of ceramic figurines is not a result of the vagaries of sampling ($\chi^2=13.424$, $df=3$, $.01 > p > .001$). The assemblage had only two identifiable human heads excavated in Unit 4 (Figure 3.13), and the other fragments were human limbs. The heads resemble a Late Preclassic figurine excavated at Cuello, Belize (Hammond 1991:177-179; Figure 8.19).

Unit 4 had considerable more access to ceramic figurines, which indicates more intensive figurine ritual performed by this elite household when compared to Unit 5, Unit 8 and Unit 10. This pattern is also evident in a comparison of ceramic figurine density calculated by grams per excavated cubic meter (Figure 3.14). It seems that elite households (Unit 4 and Unit 5) residents performed domestic figurine rituals more frequently than commoner households (Unit 8 and Unit 10) residents.

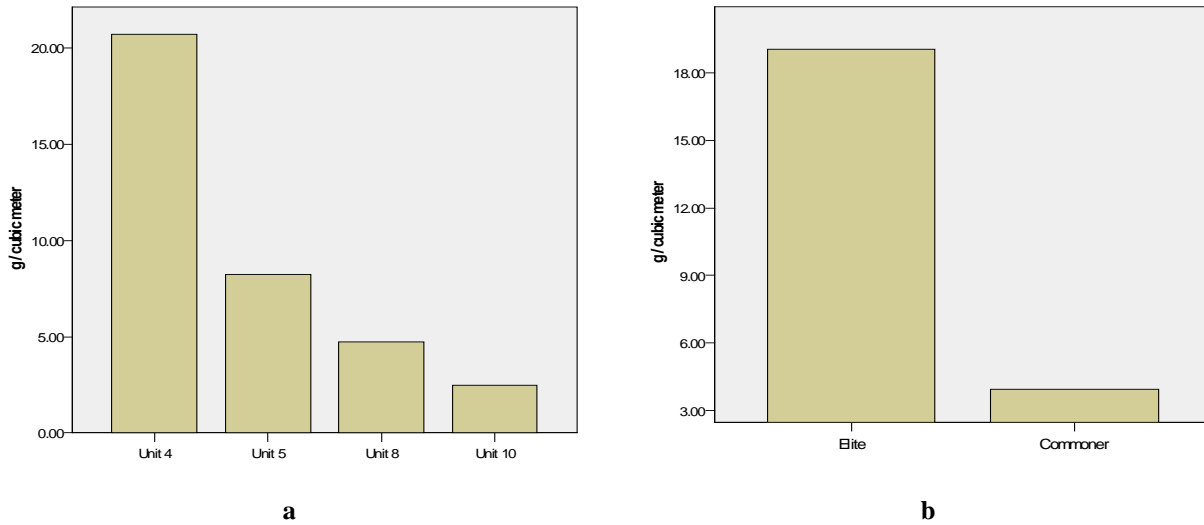


Figure 3.14: Late Preclassic Figurine Density.
a) Grams / cubic meter in all excavated households;
b) Grams / cubic meter in Elite and Commoner households

3.4.2 Burial practices and furniture

Preclassic Maya burial practices appear to relate to: 1) Social differentiation, and 2) Ritual elaboration (McAnany, et al. 1999). A total of ten Late Preclassic burials were recovered at El Lacandón (Table 3.8) eight located in patios and two within house mound construction fill, all interred in simple unlined pits that were backfilled. Sex and age identification of burials was realized by Christopher Reed (Appendix B).

Sex determination was impeded by local preservation conditions in two cases, and in one other case by age (a child of three years). Of those identified, the majority were males (n=5), and only two were females. In terms of age groups, the majority of the burials were adults (n=8), and the other two were children. Primary interment was the most frequent type of burial, with only one secondary type, which was also part of the only multiple burial: Burial 8/1a and 8/1b in Unit 8. However, in another two cases single internments were placed close to previous burials: Burials 4/6, 4/7 and 4/8 in Unit 4, and Burials 10/1 and 10/2 in Unit 10. Even if this is a small sample, significant emerged patterns according to: 1) Burial position and cover, and 2) Burial furniture. Appendix B contains a fuller description of the burial collection.

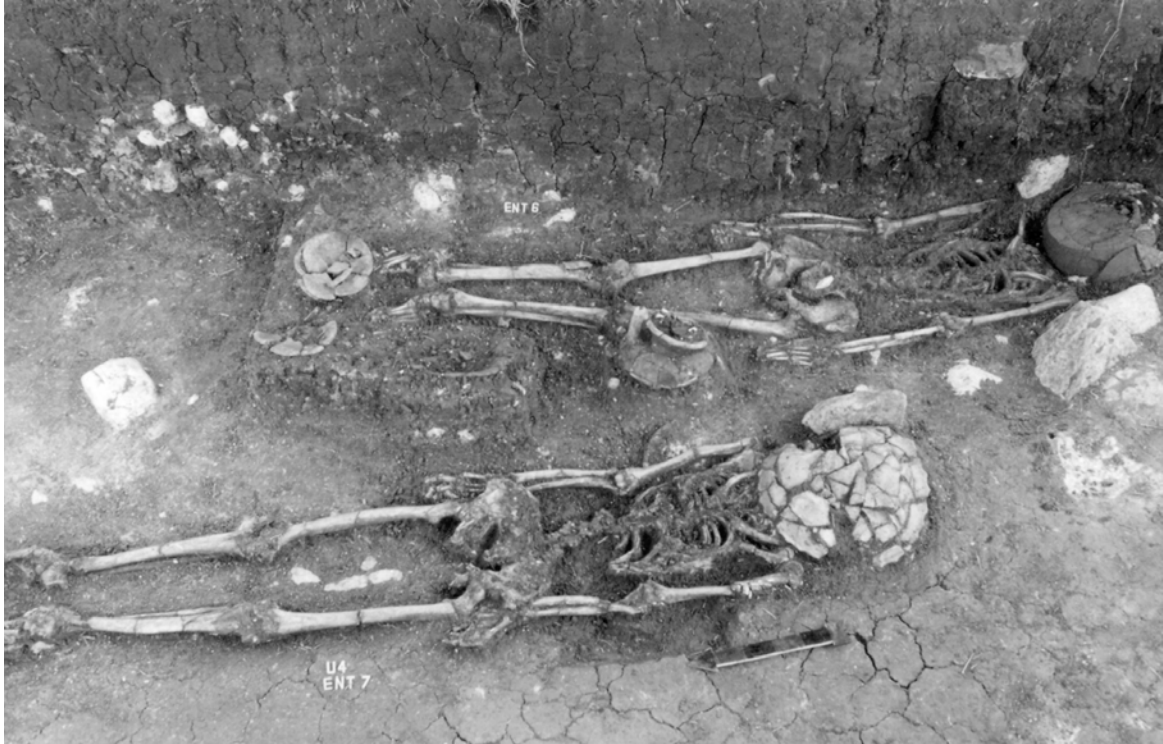


Figure 3.15: Late Preclassic Extended Burials
Burial 4/6 and Burial 4/7

The majority of burials were found in an extended, supine position, and only one burial was found in a flexed position. The preferred orientation was south (n=5), even if all the cardinal directions were identified (Table 3.8). The presence of a supine position has been interpreted as evidence of a less elaborated burial practice, while the presence of flexed and seated positions is usually interpreted as evidence of a more complex preparation and wrapping procedure (McAnany, et al. 1999:133) that would have allowed ritual display of a deceased high status person. This seems not have been the case in the Late Preclassic El Lacandón, where the only flexed burial was a three-years old child (Burial 4/8) who was interred atop the head covering of Burial 4/6, an adult male.

Table 3.8: Late Preclassic Burials

| Data / Burial #* | Elite House Groups | | | | Commoner House Groups | | | | | |
|--|--------------------|-------|-----|-------|-----------------------|-------|-------|-------|-------|-------|
| | 4/6 | 4/7 | 4/8 | 4/11 | 8/1a | 8/1b | 8/2 | 10/1 | 10/2 | 10/3 |
| Sex ¹ | M | M | N/A | M | N/A | N/A | M | M | F | F |
| Age | 27-31 | Adult | 3 | 25-30 | 3 | Adult | 24-27 | Adult | 19-24 | Adult |
| Type ² | P | P | P | P | P | S | P | P | P | P |
| Position ³ | ES | ES | F | EP | ES | N/A | ES | ES | ELC | ES |
| Orientation ⁴ | S | S | S | S | S | N/A | N | W | E | N |
| Body cover ⁵ | SH | SH | | | | | SB | | | |
| Vessel placement ⁶ | SV | SV | | | | | VP | | | |
| Jade bead | 1 | 1 | | | | | | | | |
| Chert point | 1 | | | | | | | | | |
| Fancy vessels ⁷ | 1 | 2 | | | | | 3 | 1 | 1 | |
| Sierra Red vessels | 1 | 1 | | 1 | | | | | | |
| Plain vessels ⁸ | 3 | 1 | | | | | | | | |
| Cocodrile teeth (<i>Cocodrylus acutus</i>) | | | | | | | | | 6 | |
| Shark teeth (<i>Carcharinus lamia</i>) | | | | | | | | | 2 | |
| Stingray spine (<i>Dasyatis</i> sp) | | | | | | | 1 | | 1 | |
| Freshwater shell | | | | | | | | | 5 | |
| <i>Spondylus</i> bead | | | | | | | | | 3 | |
| Bone bead | | 12 | | 2 | 1 | | | | 3 | |
| Bone perforator | | 1 | | | 1 | | | | | |
| Total grave goods | 7 | 18 | - | 3 | 2 | - | 4 | 1 | 21 | - |

*The first number corresponds to the excavation unit, and the number after the dash mentions the burial identification within the unit.

¹Sex. M: Male; F: Female; N/A: Not Available

²P: Primary; S: Secondary

³Position. ES: Extended, supine, hands at sides; EP: Extended, supine, hands at pelvis; ELC: Extended, supine, hands at sides and lower legs crossed; F: Flexed.

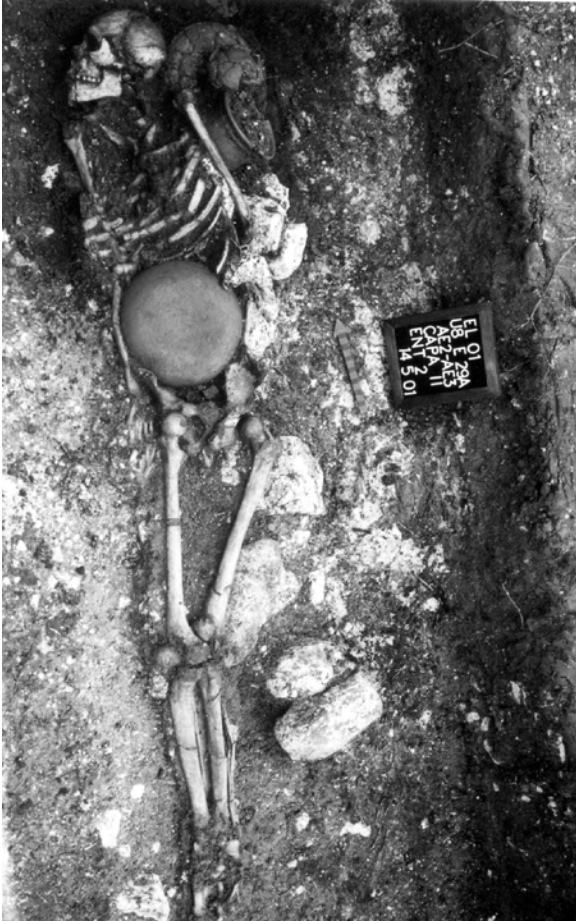
⁴Orientation. N: North; S: South; E: East; W: West

⁵SH: Flat stone over the head; SB: Body covered by non-worked stones.

⁶SV: Head covered by an inverted ceramic vessel; VP: Vessel on the pelvis.

⁷Fancy decorated vessels. Includes vessels assigned to the following ceramic types: Sacluc Black on Orange; Altamira Fluted, Laguna Verde Incised, Sierra Red Spouted Vessels and special forms.

⁸Plain vessels, probably Morfin Unslipped censers.



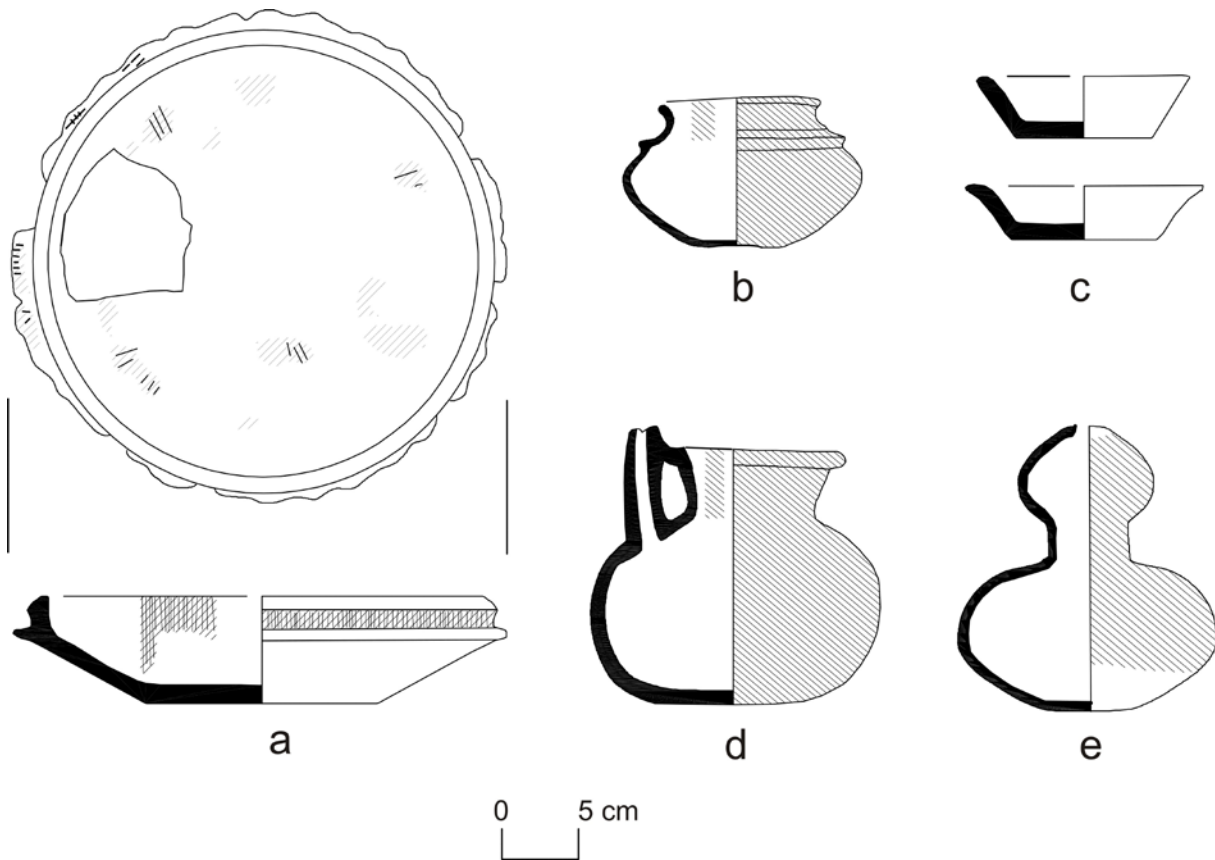
a



b

Figure 3.16: Late Preclassic Extended Burials
 a) Burial 8/2, b) Burial 10/1 and Burial 10/2

In addition, it was possible to detect some treatment differences regarding body cover. Two burials included flat stones that covered the head (Burials 4/6 and 4/7, which also had a ceramic vessel inverted over the head, as shown in Figure 3.15), and another burial had the entire body covered by large non-worked stones (Burial 8/2, with a vessel over the pelvis, shown in Figure 3.16a). These three burials were also associated with affluent grave furniture including abundant fancy ceramic vessels and ritually charged ornamental objects like stingray spines, animal bone beads, shell, jade beads, and plain censers (Table 3.8).



- a) Sacluc Black on Orange plate/dish, Burial 4/7.
- b) Sierra Red miniature jar, Burial 4/7.
- c) Morfin Unslipped censers, Burial 4/6.
- d) Sierra Red spouted jar, Burial 4/6.
- e) Sierra Red special vessel, shape similar to Hongo Composite; Burial 8/2.

Figure 3.17: Late Preclassic Vessels found only in burials

Grave furniture included both vessels not crafted specifically for this purpose –the general ceramic analysis identified the same shapes—and others recovered only as burial offerings. In any case, the majority of the burial-related vessels were general domestic use vessels include glossy red slip vases and dishes with direct rim and fluted decoration. Vessels recovered only in burial contexts include a Sacluc Black on Orange plate/dish, a Sierra Red spouted jar, and a Sierra Red vessel that closely resembles the traditional shape of the Hongo Composite type (Forsyth 1989) (Figure 3.17). Spouted jars have been called “chocolate pots”, a function supported by the analysis of dry residues collected from interiors of Belize vessels (Powis, et al. 2002), and are interpreted as good indicators of the high social status of the

deceased (McAnany, et al. 1999). Jade beads, another accepted high status indicator, were found only in Burials 4/6 and 4/7, both deceased males from Unit 4.

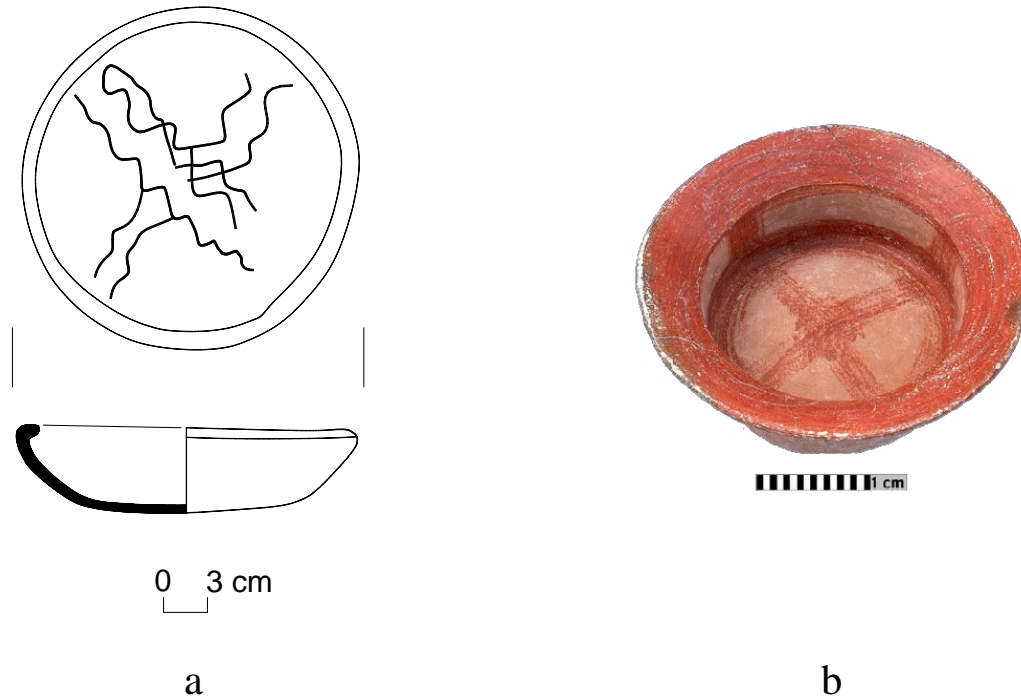


Figure 3.18: Late Preclassic Cross Motif Comparison

a) On the interior of a Laguna Verde Incised dish, Burial 8/2, Unit 8 at El Lacandón; b) On the interior of a Society Hall Red bowl, Burial 1-2e, Operation 1 at Kaxob (McAnany 2004).

Other mortuary goods are indicators of domestic ritual, specifically communication with the ancestors, e.g. bloodletting using stingray spines and perforators made of animal bone (McAnany 1995; Schele and Freidel 1990). Later, the blood was collected on strips of bark paper that were burned with copal incense (*pom*) in special containers. Stingray spines were found associated with male (Burial 8/2) and female individuals (Burial 10/2), and bone perforators were found associated with a male individual (Burial 4/7) and a child (Burial 8/1a). Bark beaters used to manufacture paper were found in burials at Unit 4 and Unit 8. Plain bowls used as censers were found close to the feet of Burials 4/6 and 4/7. These four vessels are similar to the Morfin Unslipped ceramic type (Culbert 1993, Figures 7, 9 and 12) and show remains of fire-clouded on interior.

Additional iconographic information regarding ancestor veneration and Maya cosmological ideas consists of a cross or quadripartite motif incised on the interior of a vessel

found in Burial 8/2 (Figure 3.18). Cross or quadripartite signs have been interpreted as symbolic references to the world tree and the Milky Way (Freidel, et al. 1993:59-122; McAnany, et al. 1999:139-141), and have been found in scarce numbers in the Belize Area and Tikal (McAnany 1999:140).

Overall, Late Preclassic burials provide a glimpse of social differentiation, specifically in terms of ideological patterns. Unit 4 elite burial furniture (Burials 4/6 and 4/7) is more abundant and relates to status differentiation linked to the special significance of jade preciousness and chocolate consumption (Freidel, et al. 2002; Freidel and Schele 1988). The funerary goods from Unit 8 and Unit 10, such as stingray spines, censers and bone perforators, seem to reflect more general Maya ideas regarding ancestor veneration. Similar arrangements of social differentiation expressions have been detected at other Late Preclassic periphery communities such as Cuello (Hammond 1999) and K'axob (McAnany et al 1999), both Northern Belize communities with a long Middle to Late Preclassic occupation that show burials patterns and ancestor veneration linked to a shift towards centralized power structure. In contrast, evidence from the comparatively small and briefly occupied Late Preclassic community of El Lacandón suggests that its socioeconomic system did not develop locally but arrive with founders who already had ascribed status.

3.5 SOCIOPOLITICAL PATTERNS AND THE EARLY CLASSIC TRANSITION

Regional data regarding Late Preclassic political organization anywhere in Mayaland are still scarce. Concerning the Palenque region, it is accepted that during the previous Middle Preclassic it had a Mixe-Zoque population, mainly concentrated in the Middle Usumacinta subdivision (Ochoa 1978, 1983; Rands 1977). After that, the region experienced the arrival of Maya migrants during the Late Preclassic, probably linked in some way to state-level development at El Mirador about 300 b. C. (Clark 2000; Clark, et al. 2000; Sharer 1992; Sharer and Traxler 2006). This “colonization” may have involved the incorporation and/or assimilation of pockets of local populations, as evidenced by the substitution of Mixe-Zoque-related local ceramics by Maya-related ones at Trinidad, Paso Nuevo, Palenque and Chinikiha. In addition, this colonization also included the initial occupation of areas previously vacant, like Nututún, El Lacandón, Chancalá-

La Cascada, San Juan Chancalaito, and Reforma de Ocampo (Liendo 2005, 2011; Rands 2002). An analogous example occurred in the Chiapas Highlands and the adjacent Upper Grijalva Basin, with Maya colonization over an area with limited Mixe-Zoque population starting at 200 b.C. (Bryant and Clark 1983; Clark 2000; Clark, et al. 2000). Future research will help to understand how these Upper Grijalva Basin communities were connected to El Mirador in terms of economic and political issues, considering a distance of 226 kilometers of separation (Figure 3.19).

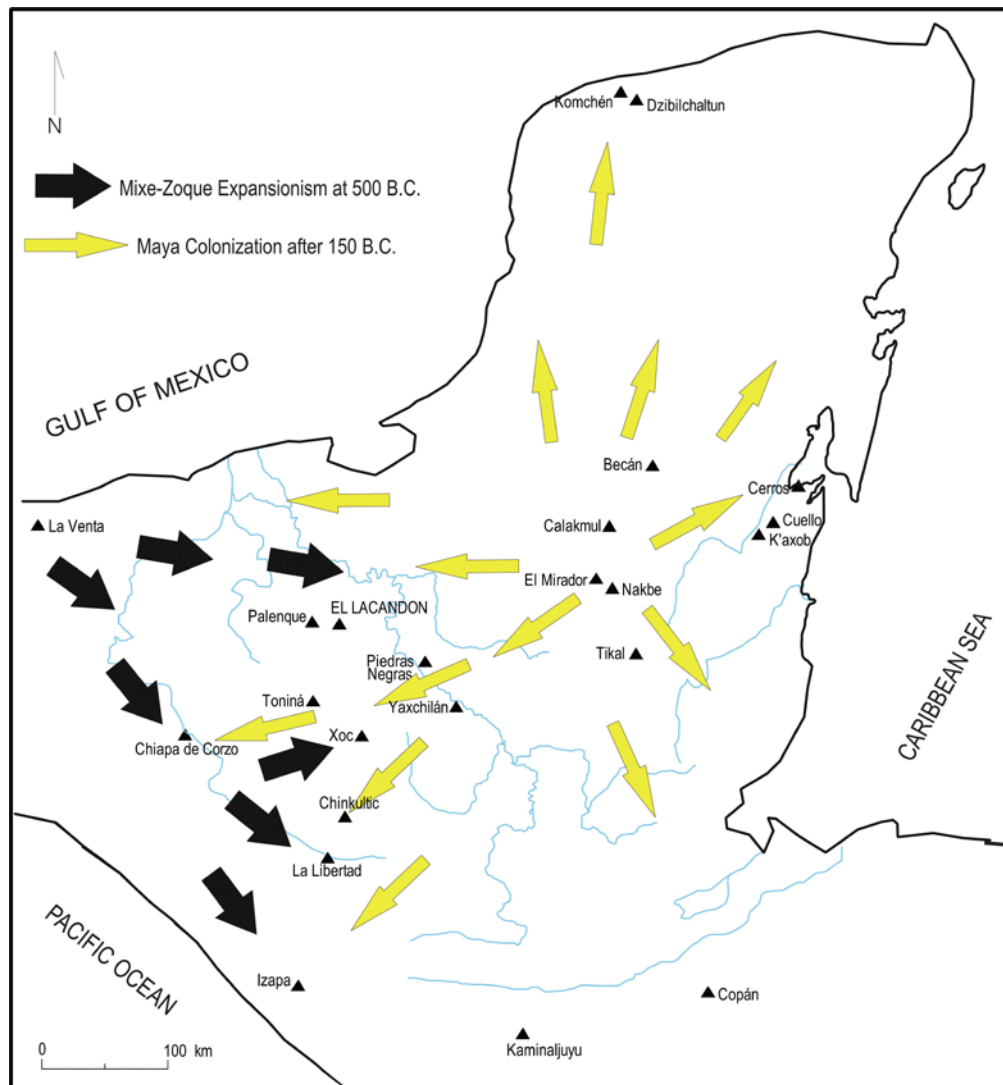


Figure 3.19: Mixe-Zoque and Maya Expansion
(based on Clark, et al. 2000; Sharer and Traxler 2006)

Recent research at Palenque and Piedras Negras –two of the later dynastic capitals in the Northwest Region—failed to find large Late Preclassic temple buildings, which denotes that the

region did not experienced a process of early political complexity similar to the Peten and Belize regions, where local elites were able to invest commoner's labor in buildings decorated with stucco masks that reveal the central role of ideology, ancestor veneration and a complex pantheon of deities in Maya state development (Clark et al. 2000; Demarest 2005:83). Even so, materials recovered in 96 test pits excavated at Palenque allowed us to identify that the site area at the end of the Late Preclassic was 30 ha, divided into two discrete clusters, each one with a population close to 265 inhabitants (López Bravo 2005; López Bravo, et al. 2003; López Bravo and Venegas Durán 2012). At that same moment, El Lacandón had an area of 5.7 ha and a population about 100 inhabitants (Figure 3.19). This data suggests an emerging political system centered on Palenque that will became a political capital during the Early Classic period (A.D. 150/200-600).

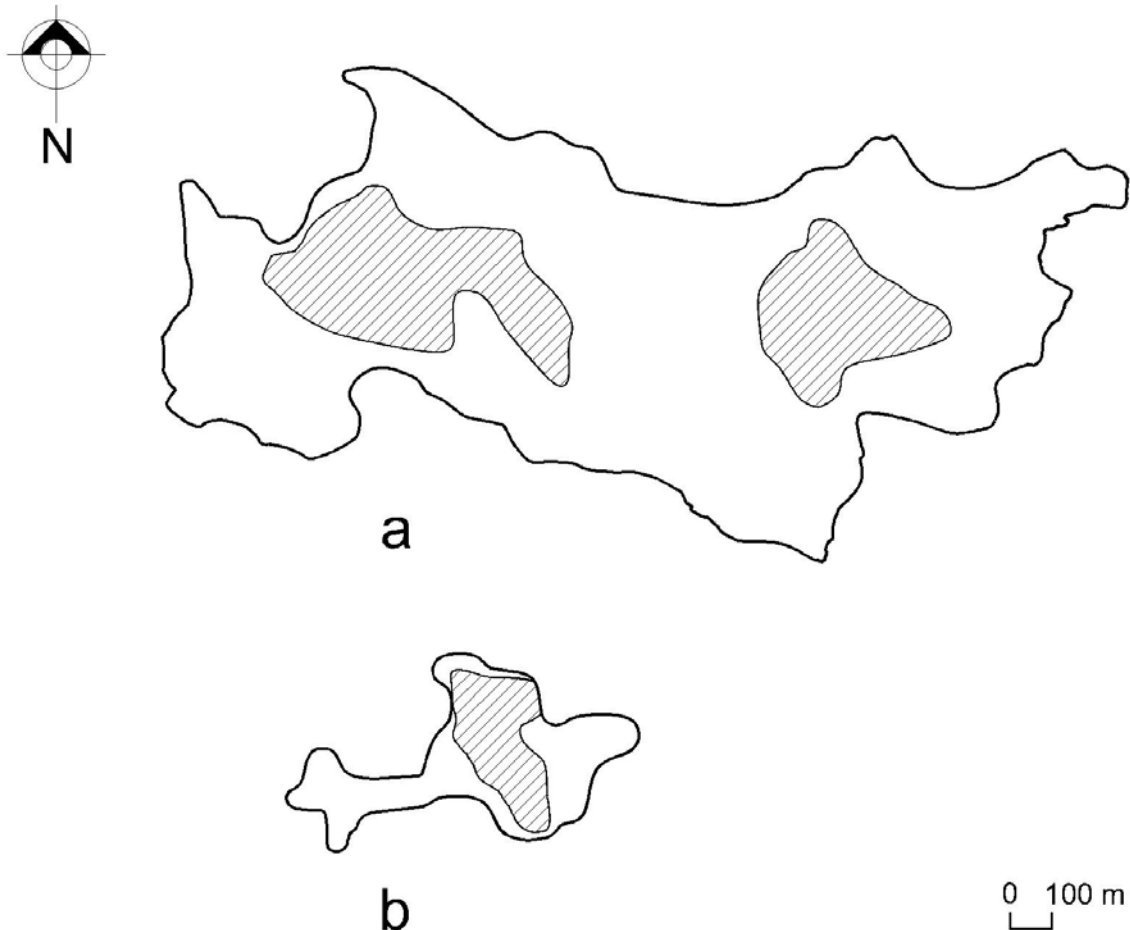
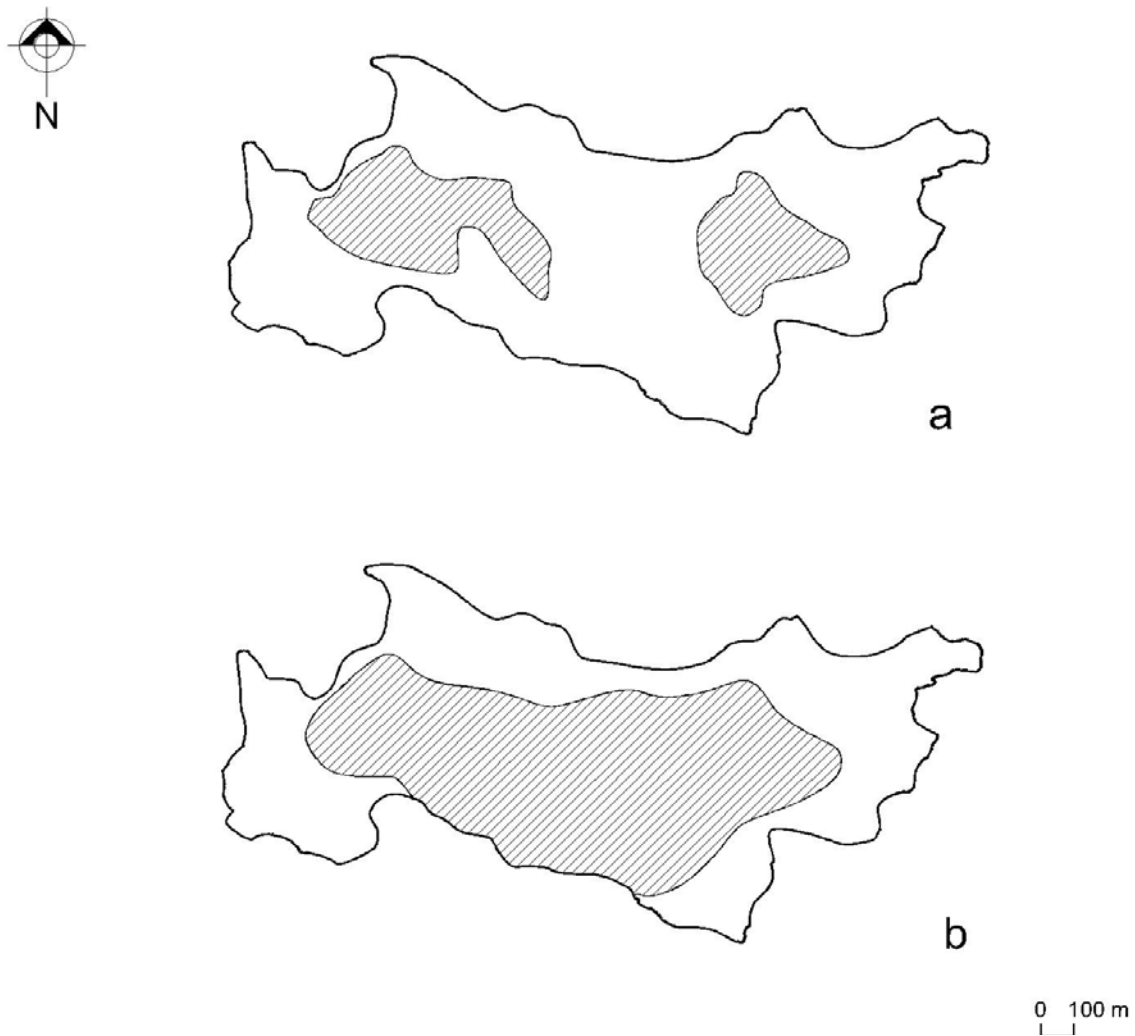


Figure 3.20: Comparison of Late Preclassic Site Area at Palenque and El Lacandón
a) Late Preclassic occupation at Palenque. Map redrawn from Barnhart 2001.
b) Late Preclassic occupation at El Lacandón

The development of dynastic capitals in the Northwestern Zone apparently correlates with El Mirador's demise, after A.D. 150. The interpretation of collapse factors is still uncertain: possible fortification walls around three sides of El Mirador suggest high levels of warfare; and lake sediment analysis show the presence of an intensive drought period. Further settlement research in that area will help to understand if local people stayed in the region or moved away, attaching themselves to burgeoning centers in the Peten and Belize areas (Webster 2002:188-190), or even to more distant areas, such as the Northwestern Zone.



a)Palenque size at the end of the Late Preclassic period (A.D. 150-200)
b)Palenque size at the end of the Early Classic Period (A.D. 600). Map redrawn from Barnhart 2001.

Figure 3.21: Palenque size increase during the Late Preclassic-Early Classic transition (López Bravo and Venegas Durán 2012)

The end of the Late Preclassic period in the Northwestern Zone is characterized by a process of population concentration in several centers that became dynastic capitals during the Early Classic period. For example, El Lacandón was abandoned around A.D. 150/200, and its population probably moved to Palenque. In the Upper Usumacinta Region, analogous evidence suggest that Fideo and Esmeralda (Figure 2.2b), two Late Preclassic small communities, were abandoned at the start of the Early Classic when population was absorbed by Piedras Negras (Golden, et al. 2005; Houston, et al. 2003). Further research will perhaps identify similar processes around other dynastic capitals of the Middle and Upper Usumacinta subdivisions such as Pomoná and Yaxchilán (López Varela 1989, 1995, 1998; Martin and Grube 2000).

The foundation of the Palenque dynasty is marked by the accession of K'uk' Balam I on A.D. 431, at the end of the Early Classic period. By that moment, Palenque's two previously separated settlement clusters had united, with an area of 70 ha and a population of 3700 residents (Figure 3.20). This was probably the result of continuing concentration and the development of an urban/rural dichotomy marked by a densely populated capital surrounded by a comparatively empty agricultural sustaining area (Rands 1973:161; Liendo Stuardo 2002:95-101). It seems that households lost their ability to settle close to their fields, possibly as a consequence of an increase in political integration (de Montmollin 1987; Liendo Stuardo 2002:110).

3.6 SUMMARY

Domestic life in El Lacandón's Late Preclassic community was analyzed through an evaluation of household economy, feasting, and ritual and burial practices. The analysis of stone tools production suggest obsidian blade production was organized as a household level production, with non-specialized individuals making tools sporadically to provision their own family, and also an additional amount that could have been exchanged with other households. In addition, it seems that obsidian production was not dependant on elite interests, and commoner households were more intensely involved in the manufacturing of obsidian blades. Other production activities, such as paper production, wood working and paper/cloth imprintings were realized by households of both statuses. It seems that obsidian arrived to El Lacandón by means of exchange routes linked to the relationships between the elites of El Mirador and Kaminaljuyu. At the

community, obsidian was probably pooled by the elite before its local redistribution, a pattern inferred by the presence of El Chayal obsidian as the predominant source in all households. However, commoner and elite households had access to similar quantities of obsidian in their chipped stone assemblage, which suggest that obsidian was not preferentially consumed by elite households.

Feasting activities were more frequently carried out at elite households, who could organize bigger feasts than commoner households, events that were attend by larger groups of people using a great number of serving vessels. On the other hand, diacritical feasting was apparently not carried out.

Ritual and burial practices give additional hints about status differences and El Lacandón's inhabitants' use of ancestor veneration practices. Several people in architecturally elite households were buried with elaborately decorated vessels and other highly valued items such as jade beads. Items associated with ancestor veneration such as figurines, stingray spines, bone perforators and vessels with the cross motif were distributed along elite and commoner households.

Finally, the abandonment of the Late Preclassic community of El Lacandón is apparently an instance linked to the process of emergence of political capitals in the Northwestern Zone after El Mirador's demise around A.D. 150. It seems that El Lacandón's inhabitants moved to Palenque, which already was the largest center of the region. This process of population nucleation also occurred at other emerging polities, such as Piedras Negras.

4.0 THE LATE CLASSIC COMMUNITY

The analysis of the Late Classic period occupation of El Lacandón focuses on its relationship with Palenque, which functioned as the capital of a dynasty that exercised control over a large portion of the Northwestern Zone. Through an analysis at the household and community levels, this chapter provides a general view of domestic life in a Late Classic secondary-center of a Maya state. The analysis of El Lacandón's Late Classic community is divided into two chapters: Chapter 4 includes household economy, feasting and household ideology, and Chapter 5 will address sociopolitical patterns at the community and regional level.

After abandonment at the end of the Late Preclassic, El Lacandón was uninhabited during the Early Classic (A.D. 150/200 – 600) and was reoccupied during the second half of the Late Classic period. The new inhabitants expanded the original site area to 16 ha (Figure 4.1), identified by the surface presence of ceramic materials of the Murciélagos (A.D. 680-750) and Balunte (750-810) Palenque ceramic complexes (Bishop 1994; Rands 1987). Using a recently revamped terminology, the second part of this occupation could also be identified as Terminal Classic (Rice, et al. 2004).

The present chapter is divided into four sections: 1) An introduction that presents the general excavation results, 2) A section dedicated to the analysis of household economy, 3) A section that analyze social patterns among households in terms of feasting and gifting practices, and 4) A section dedicated to the analysis of household ideology in terms of ritual and burial practices.

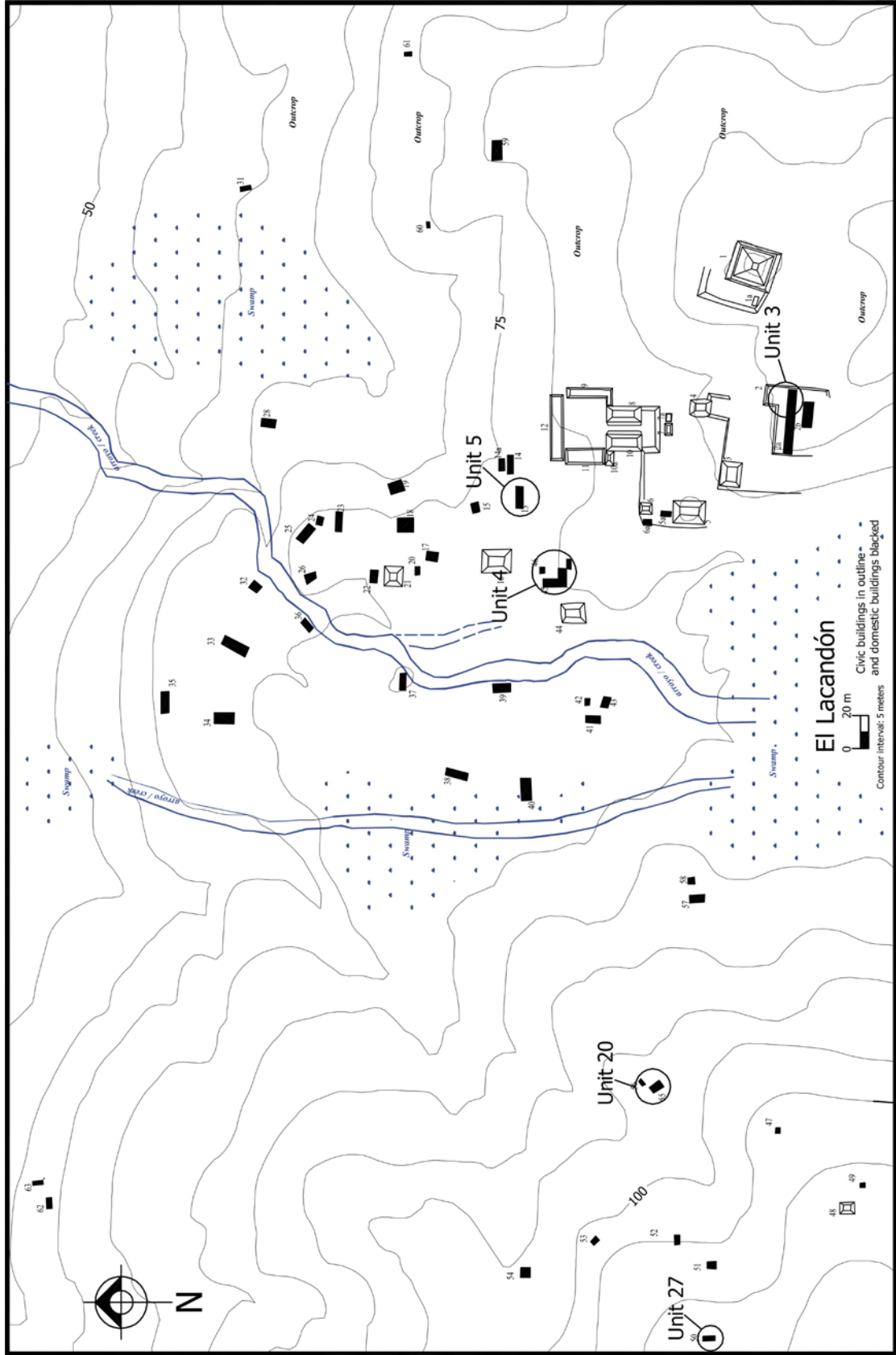


Figure 4.1: Excavations carried out at Late Classic house groups

4.1 HOUSE GROUP ARCHITECTURAL STATUS

Late Classic households were selected to excavation seeking a sample of elite and commoner families from the different sectors of the community. House group status was assigned using 1) Proximity to the Civic Precinct, 2) Construction quality, and 3) House mound area (Table 4.1). The excavation of Unit 3 was planned to explore the lifeways of the local ruling family, considering its architectural setting in the Civic Precinct. Unit 4 and Unit 5 were identified as residences of elite households due to the presence of cut stones and their specific location in the vicinity of a pyramid (Structure 44) and the Ballcourt. On the other hand, Unit 20 and Unit 27 were classified as dwellings of commoner households because they were built with non-modified stones in the West Sector of the site, and are located 370 and 530 m from the Civic Precinct, respectively.

House construction techniques did not change from those previously described for the Late Preclassic period: all excavated house mounds were earth platforms with stone retaining walls that supported pole and thatch rooms. However, a major construction technique shift occurs in special purpose civic structures, with stone walls and typical Maya corbelled vault roofs used for the construction of Structures 3 and 5, two temples in the Civic Precinct (already described in Chapter 2).

Table 4.1: Late Classic Excavated House Groups at El Lacandón

| Characteristics / Unit / Structure # | Super elite | Elite | | | Commoners | | |
|--|-------------------|--------------|-----|--------------|---------------|----|---------------|
| | Unit 3 Str. 2b | Unit 4 45 | 45a | Unit 5 13 | Unit 20 55 | 56 | Unit 27 50 |
| Distance to Civic Precinct (m) | | | 60 | 22 | 370 | | 530 |
| Construction Quality ^a | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| Length (m) | 40 | 14 | 6 | 14 | 8 | 6 | 8 |
| Width (m) | 5 | 11 | 3 | 6 | 5 | 3 | 4 |
| Area (m ²) | 200 | 100.5 | 18 | 84 | 40 | 18 | 32 |
| Visible on surface | X | X | | X | X | X | X |
| Detected in excavation | | | X | | | | |

^aConstruction Quality: 1)Worked stones; 2)Non-worked stones

4.1.1 Late Classic House Group excavations

Unit 3 comprises a range and a rectangular structure, built upon a 2.5 meters high “L” shaped platform facing north in the uppermost terrace of the Civic Precinct (Figures 4.1, 5.1). The

position, stone work and area of these buildings suggest they were the residence of the local ruling family. Excavations were done: 1) In the eastern portion of the supporting platform, 2) In front of Structure 2a, and 3) Along the east retaining wall of the sustaining platform (Figure 4.3).



a



b

Figure 4.2: Excavations carried out at Unit 3
a) View of Str. 2b-sub-1 and Str. 2b-sub-2 from the north.
b) View of the sunken room and steps of Str. 2b-sub-1 from the north.

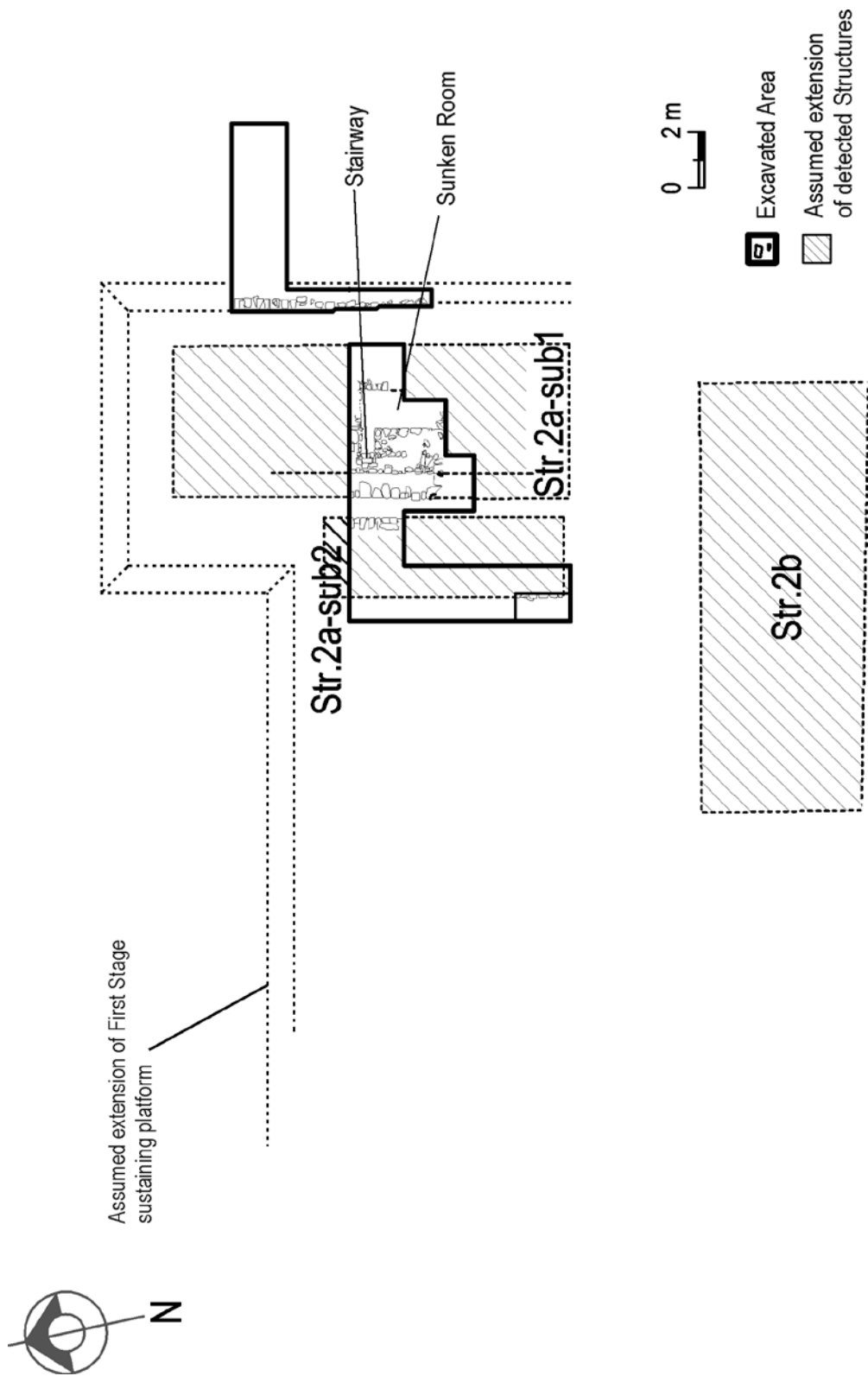
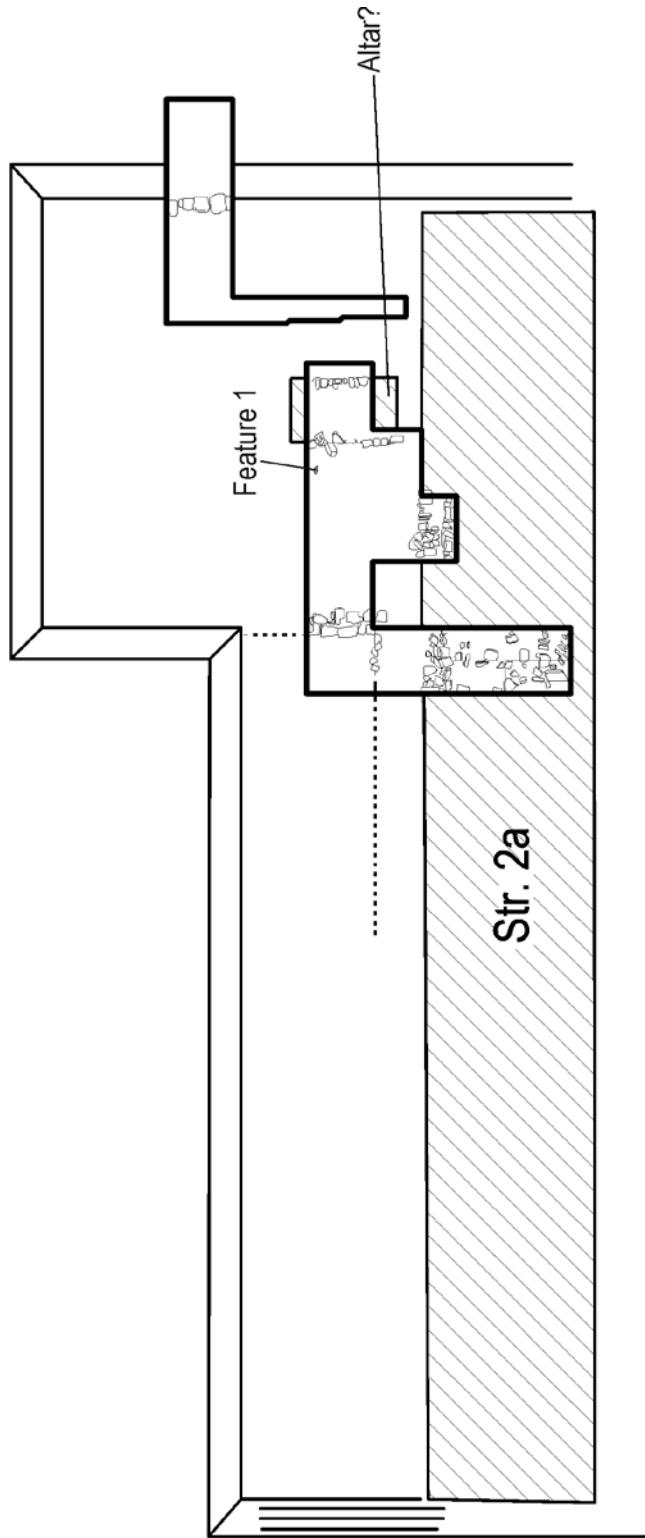


Figure 4.3: Excavations carried out at Unit 3 (Structures 2a and 2b)
 a) First Building Stage



b) Second Building Stage

An earlier Late Preclassic occupation of Unit 3 was inferred from the presence of Sierra Red materials in stratigraphic layers beneath the final occupation of the terrace, specifically in a test pit located to the east. However, it was not possible to associate this materials with a structure built during this period. Two Late Classic building stages were identified in the excavations. The first stage probably includes three buildings, Structures 2a-sub-1, 2a-sub-2, and 2b, all of them organized in a patio oriented to the east that was built on an initial platform level probably two meters above the terrace (Figures 4.3a and 4.3b). The retaining walls of the largest building, Str. 2a-sub-1, were made of medium-size worked stone. Later on, the structure was expanded, and a second east wall, made of larger worked stones, was added (Figures 4.3a and 4.3b). This expansion also narrowed the corridor between Str. 2ab-sub-1 and Str. 2a-sub-2. A sunken room was found in the center of Str. 2a-sub-1, accessible from the top of the structure by a stairway of three steps. Stucco remains were found in the walls and floor of the room, which might have been designed as a tomb. The absence of archaeological materials hampered a clear interpretation of the substructure's use, which was later filled during the construction of Structure 2a during the Late Classic (Figure 4.2b).

A major shift in Unit 3's architectural organization occurred as a result of the second building stage: Structures 2a-sub-1 and 2a-sub-2 were covered, and a new retaining wall allowed the platform to expand 3.5 meters to the east. A new platform level was used to build a 40 m x 5 m west-east oriented range, Structure 2a, the largest domestic building of the site, with an estimated area of 200 m². This structure was faced by a long stairway of two steps made of worked stones, which served to climb to the upper level, with a height of sixty centimeters. A small, rectangular structure that probably functioned as an altar structure was added in front of Structure 2a (Figure 4.3b).



Figure 4.4: Feature 1/Unit 3
a) View of excavation; b) View of the vessel after restoration

Limited excavations realized in the upper level of Structure 2a did not detect vaulted roof stones or stone walls, which indicates this building was covered by a perishable, pole and thatch structure. A small amount of Late Classic ceramic materials were found in front of the stairway, and also Feature 1, a plain Balunté-period serving bowl almost certainly laid down as a termination offering (Cameron 1993) at the moment the Late Classic community was abandoned by its inhabitants (Figure 4.4). The vessel was found complete, only lacking a portion at the center of its bottom section, a pattern usually named “ritual killing”.

The only burial that can be associated to Unit 3 was located in the vicinity of Structure 3, a temple built 20 m to the north of the northwestern corner of the supporting platform, in the same terrace level (Figure 4.1). This interment, designated Burial Str3/1, was found inside the most elaborate crypt found in the excavations (Figure 4.16a).

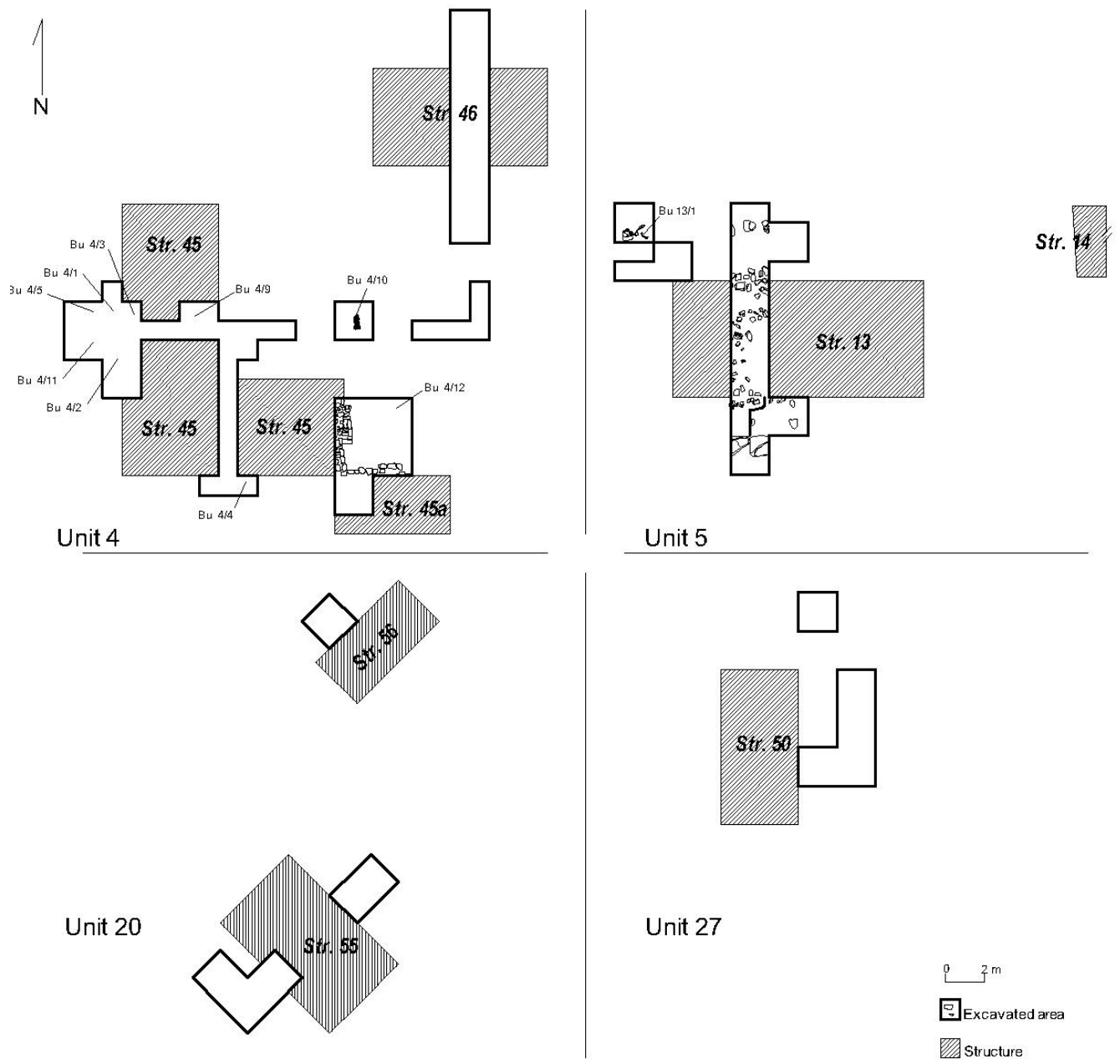


Figure 4.5: Late Classic Excavations at Unit 4, Unit 5, Unit 20 and Unit 27

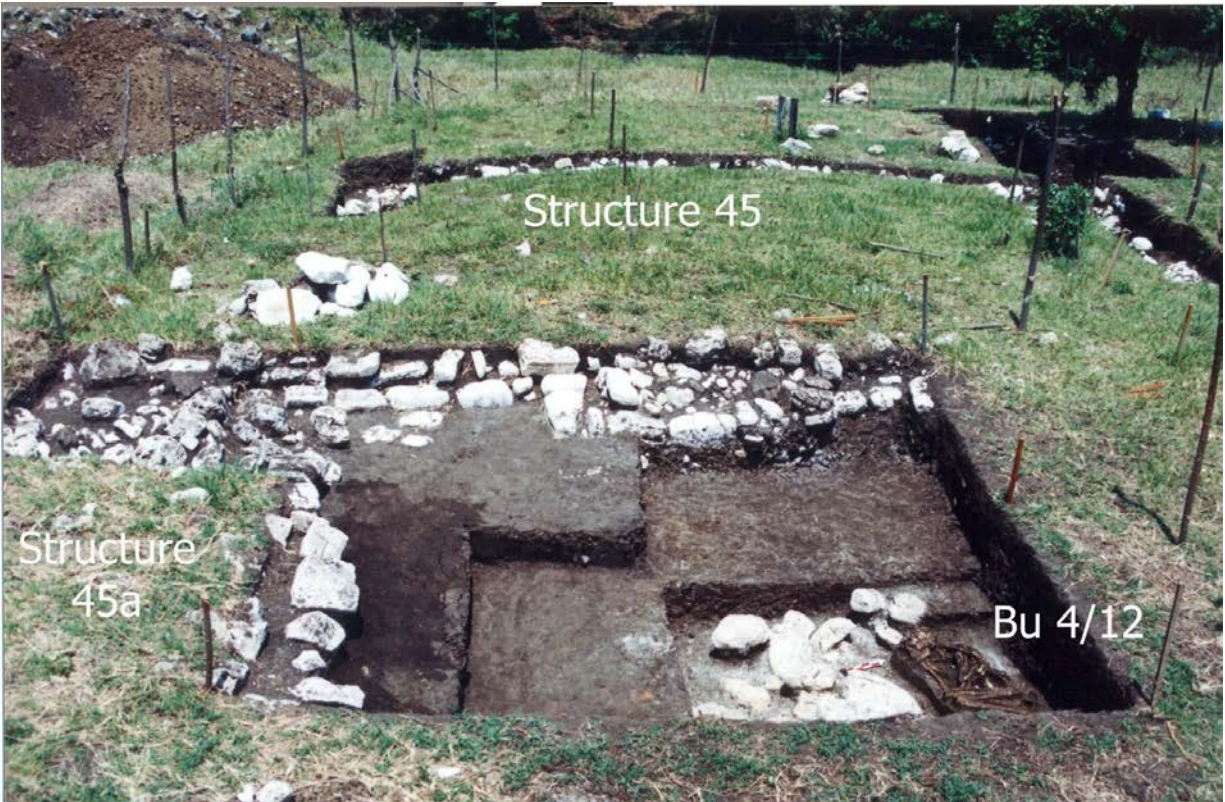


Figure 4.6: View of Structures 45 and 45a from the east

The Late Classic period inhabitants of Unit 4 made several architectural modifications to the Late Preclassic architectural layout. As previously mentioned (Chapter 3), the west section of the courtyard was filled, and Structure 45 was built on this new patio level. The building is shaped as an “L” and has an area of 100.5 m², which makes it the second largest house mound of the Late Classic community. A new building, Structure 45a, was built in the south section of the patio, while the north portion of the patio was closed by Structure 46, a Late Preclassic building that was apparently not highly modified, considering the presence of a Late Classic occupation layer directly atop Late Preclassic materials and burials (Figures 3.2 and 4.5).

The location of Structures 45, 45a and 46 indicates the patio was oriented to the east, with the west, north and south sections closed, isolating the house group from the plaza in front of Structure 44, a small pyramid (Figures 4.1, 4.5 and 4.6). Instead Unit 4 was oriented towards the

Ballcourt. A total of nine Late Classic burials were found in Unit 4: seven of them were recovered at the front, back and inside Structure 45, and another two in the patio (Figure 4.5).

Unit 5 comprises Structure 13, a rectangular structure made with large modified stones. Excavation results suggest the structure has only one constructive stage and a large roofed area close to 84 m², which ranks it among the largest house mounds of the Late Classic community and the probably residence of an elite household, judging from its setting in close proximity to the Ballcourt. The discovery of two burials in the vicinity of the structure suggests that Structure 13 was the southern edge of a patio oriented to the north and with Structure 14 as the eastern edge. (Figures 4.1 and 4.5).

Unit 20 and Unit 27 are located in the West Sector of the site, built on top of natural ledges on hill slopes that rise a total of 25 m above the Civic Precinct (Figure 4.1). Materials recovered in surface collections and excavations show that the West Sector was inhabited only during the Late Classic period. Unit 20 comprises Structures 55 and 56, two buildings around a patio open to the northeast. Finally, Unit 27 contains Structure 50, the excavated house mound most distant from the Civic Precinct. In both cases, the excavations show that these commoner house groups had a comparatively low construction quality when compared to the elite households around the civic precinct, considering that they were built with non-modified stones of irregular size and shape. No burials were recovered in Unit 20 and 27 (Figure 4.5).

4.2 HOUSEHOLD ECONOMY

This section examines patterns of exchange, production and consumption that provide a glimpse of household economic organization within El Lacandón Late Classic community. Economic comparisons between households are presented in two ways: 1) A comparison of all households' assemblages, and 2) A comparison of the assemblages of Unit 3 (defined as *super elite* household) and the aggregates of commoner and elite households. In general terms, a comparison of all individual assemblages allow the detection of patterns that reflect more clearly the specific decisions that each household could make as an independent social unit. On the other hand, the comparison of super elite, elite, and commoner aggregates allow the understanding of the gap that existed between the local ruling family and subjugated elites and commoners in

general. Finally, a special effort was made to compare El Lacandón data with information collected in household excavations at Palenque, in order to explore the economic similarities and differences that existed between the capital and a secondary center.

Table 4.2: Late Classic Artifacts

| Artifacts and Excavation Data ^a | Super Elite HG | Elite HG | | Commoner HG | |
|--|----------------|----------|--------|-------------|---------|
| | Unit 3 | Unit 4 | Unit 5 | Unit 20 | Unit 27 |
| Exc Vol (Cu M) | 21.89 | 27.1 | 12.1 | 5.9 | 7.4 |
| Total Rim Sherds | 405 | 1555 | 414 | 203 | 101 |
| Storage and Cooking Jars | 134 | 622 | 150 | 79 | 54 |
| Cooking Bowls | 95 | 313 | 127 | 61 | 17 |
| Serving Bowls | 66 | 341 | 113 | 28 | 11 |
| Vases | 106 | 242 | 22 | 34 | 15 |
| Platters | 4 | 37 | 2 | 1 | 4 |
| Cojolita Vases and Platters ^b | 100 | 245 | 16 | 34 | 14 |
| Chablekal Gray Vases ^c | 6 | 23 | 6 | 0 | 1 |
| Censers | 3 | 13 | 1 | 1 | 2 |
| Figurine fragments | 83 | 177 | 36 | 12 | 0 |
| Fossilized Shark Teeth | 0 | 1 | 0 | 0 | 0 |
| Total Chipped Stone | 73 | 864 | 518 | 109 | 24 |
| Obsidian | 69 | 265 | 147 | 28 | 2 |
| Chert | 4 | 600 | 371 | 81 | 22 |
| Grinding stone | 17 | 1 | 0 | 2 | 3 |
| Short greenstone celts | 0 | 5 | 0 | 0 | 0 |
| Mold fragments | 0 | 1 | 1 | 0 | 0 |

HG: House groups

^aThis table does not include materials recovered in burials

^b These objects are already counted in the “vases” and “platters” rows

^c These objects are already counted in the “vases” row

4.2.1 Stone tools production

The analysis of Late Classic stone tools production follows the same principles mentioned in Chapter 3. In addition, El Lacandón Late Classic obsidian blade production data was compared to available obsidian assemblages from Palenque in order to evaluate their similarity or divergence. Chert artifacts production was organized according to the formats previously

observed for the Late Preclassic, with households manufacturing unspecialized percussion flakes modified by retouch and crudely made scrapers, drills and chopping tools, as expressed on Table 4.3. Judging from the proportions of debitage, the data suggests that both elite and commoner housegroups were making their own chert tools. Exceptions were Unit 3, the residence of the local ruling family, and Unit 20, a commoner house group, families that probably acquired chert tools manufactured in other households (considering the comparatively small amount of debitage).

Table 4.3: Late Classic Chert Artifacts

| | Super Elite HG | Elite House Groups | | Commoner House Groups | |
|------------------|-----------------------|---------------------------|---------------|------------------------------|----------------|
| | Unit 3 | Unit 4 | Unit 5 | Unit 20 | Unit 27 |
| Flake Cores | 0 | 12 | 67 | 11 | 4 |
| % | 0.0% | 2.0% | 18.1% | 13.6% | 18.2% |
| Flakes | 0 | 18 | 37 | 68 | 3 |
| % | 0.0% | 3.0% | 10.0% | 84.0% | 13.6% |
| Blades | 0 | 2 | 0 | 0 | 0 |
| % | 0.0% | 0.3% | 0.0% | 0.0% | 0.0% |
| Scrapers | 0 | 0 | 1 | 1 | 0 |
| % | 0.0% | 0.0% | 0.3% | 1.2% | 0.0% |
| Drill | 0 | 1 | 0 | 0 | 0 |
| % | 0.0% | 0.2% | 0.0% | 0.0% | 0.0% |
| Bifaces/Choppers | 0 | 5 | 4 | 1 | 1 |
| % | 0.0% | 0.8% | 1.1% | 1.2% | 4.5% |
| General Debitage | 4 | 562 | 262 | 0 | 14 |
| % | 100.0% | 93.7% | 70.6% | 0.0% | 63.6% |
| Total | 4 | 600 | 371 | 81 | 22 |
| % | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

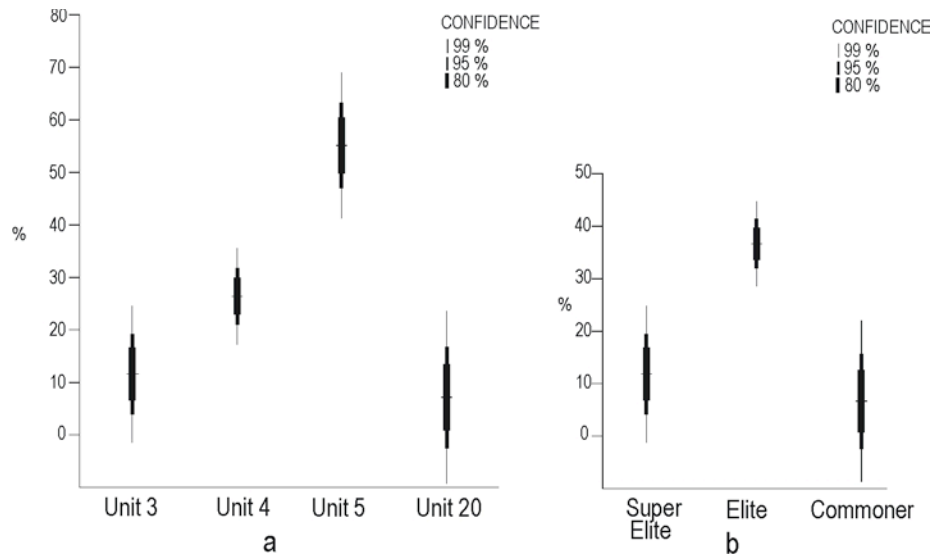
Technological analysis of recovered obsidian artifacts reflects the production of prismatic blades, as noticed for the Late Preclassic period. However, prismatic cores and shatter were absent in the assemblage (Table 4.4). Obsidian blade production was analyzed comparing the proportions of flakes in the total obsidian assemblage of Unit 3, Unit 4, Unit 5, and Unit 20, with flakes as the only detected category of debitage, and considering that a proportion of flakes larger than 20% signals a house group dedicated to production (Norris 2002:166-207). As shown in Figure 4.7a, there is a significant difference in the proportions of Unit 3, the super-elite household, when compared to Unit 4 and Unit 5, classified as elite households. Unit 3, Unit 20 and Unit 27 seem to have not been involved in production, considering that prismatic blades account for more than 87 % of their obsidian assemblage, while Unit 4 and Unit 5 can be

identified as the loci of blade production (26.8% and 55.1% of flakes in the obsidian assemblage, respectively).

Table 4.4: El Lacandón Late Classic Obsidian Technological Analysis

| | Super Elite HG | Elite House Groups | | Commoner HG | | Total |
|---------------------------------------|-----------------------|---------------------------|---------------|--------------------|----------------|--------------|
| | Unit 3 | Unit 4 | Unit 5 | Unit 20 | Unit 27 | |
| Obsidian prismatic blades | 60 | 194 | 66 | 26 | 2 | 348 |
| % | 87.0 % | 73.2 % | 44.9 % | 92.9% | 100 % | 68.1% |
| First, Second and Third Series Flakes | 9 | 71 | 81 | 2 | 0 | 163 |
| % | 13.0 % | 26.8 % | 55.1 % | 7.1% | 0.0 % | 31.9 % |
| Total | 69 | 265 | 147 | 28 | 2 | 511 |

Considering that Unit 5 and Unit 4 were the domicile of elite households, it seems possible that obsidian blade production was preferentially carried out by elite households during the Late Classic period, organized as household-scale production for their own specific needs with a small amount dedicated to local exchange (Costin 1991; Peacock 1982; Santley and Kneebone 1993; Van der Leeuw 1976). A comparison using a bullet graph (Figure 4.7a) shows that the differences are highly significant. This difference is more evident in a comparison of the total assemblages of elite and commoner households, as shown in Table 4.4 and Figure 4.7b, where it is possible to notice a highly significant variation of 30% in the proportion of flakes in the obsidian assemblage of elite and commoner households. Conversely, Unit 3, the residence of the local ruling family, and Units 20 and 27, two commoner house groups, seem not to be involved in obsidian blade production.



(Unit 27 was omitted because the assemblage lacks flakes)

Figure 4.7: Comparison of estimated proportions and error ranges for proportions of flakes in the total obsidian Late Classic assemblage for a) All House Groups, and b) Elite and Commoner House Groups

4.2.1.1 Obsidian blade production at Palenque

The production of obsidian blades at Palenque was evaluated using the lithic assemblages of elite households and a midden recovered in the Palace. At this date, domestic excavations at Palenque have explored Group B, Group C, and Group I, house groups that have been identified as residences of elite households according to: 1) Architecture planning, 2) Stone quality, 3) Location in the immediate proximity of the Civic Precinct, and 4) Burial practices and furniture (López Bravo 1994, 1995, 2000). Research conducted at the Palace allowed the identification of an area dedicated to domestic activities of the royal household at the end of the Late Classic period, activities that eventually resulted in the formation of a midden found near the Palace platform (Liendo Stuardo 2003). These excavations recovered a substantial obsidian assemblage dating to the Murcielagos-Balunte ceramic complexes (see Table 4.5). Late Classic Palenque obsidian assemblages seem more diverse than El Lacandón assemblages, taking into consideration the presence at Palenque of core, core fragments, and shatter fragments. Present research in Palenque is now recovering a sample of obsidian from commoner households in the periphery of the civic precinct, which eventually will be available to compare with the results of the present study (López Bravo et al. 2003, 2004a).

Table 4.4: Obsidian Technological Analysis of Murcielagos-Balunte Domestic Contexts at Palenque

| | Palace midden | Group C | Group B | Group I | Total |
|--|------------------|---------|---------|---------|-------|
| Prismatic blades | 1364 | 552 | 397 | 1128 | 3441 |
| % | 96.5% | 77.5% | 82.7% | 75.8% | 84.1% |
| First, Second and Third Series Flakes | 33 | 117 | 44 | 159 | 353 |
| % | 2.3% | 16.4% | 9.2% | 10.7% | 8.6% |
| Shatter | 0 | 9 | 16 | 15 | 40 |
| % | 0.0% | 1.3% | 3.3% | 1% | 1% |
| Core and core fragments | 16 | 34 | 23 | 186 | 259 |
| % | 1.1% | 4.8% | 4.8% | 12.5% | 6.3% |
| Total | 1413 | 712 | 480 | 1488 | 4093 |
| % Total Debitage (Flakes+Shatter+Cores) | 3.5 % | 22.5 % | 17.3 % | 24.2 % | 15.9% |
| Expected Blades (calculated core and core frags. x 100 x 3) | 4800 | 10200 | 6900 | 55800 | 77700 |
| Expected/Observed Blades Ratio | 3.5 | 18.5 | 17.4 | 49.5 | 22.6 |

As mentioned before, the diversity of Palenque's obsidian assemblages allowed the analysis of the following indicators of production intensity: 1) Proportion of flakes in the total assemblage, equivalent to Flake Pieces / Total Pieces ratio; 2) Proportions of total debitage (flakes, shatter and cores) in the total assemblage (This indicator is equivalent to the Debitage Pieces / Total Pieces Ratio, adapted from Norris 2002:165-166); and 3) Expected/Observed Blade Ratio, calculated assuming that each core produced a total of 100 prismatic blades that then break into three fragments, one proximal, one medial and one distal (Aoyama 1999; Clark 1997; Norris 2002; Santley and Barrett 2002; Sheets and Muto 1972). As mentioned before, (Chapter 3) it was expected that proportions of total debitage larger than 20% will express blade production, and values greater than 1 for the Expected/Observed Blade Ratio should indicate that a portion of the production of each house group was consumed in a different loci, and eventually could had entered into an exchange system.

Table 4.4 shows that all excavated loci at Palenque were areas with household-scale blade production, with variations in terms of intensity. The obsidian assemblage of the Palace midden shows the smallest proportion of flakes and also the smallest proportion of total debitage (2.3% and 3.5% respectively). These proportions allow its identification as a non-producing area, a conclusion that does not correlate with the abundant presence of cores and core fragments. A possible explanation could be that flakes and debitage were deposited in a different place

(considering those pieces can be more dangerous than exhausted core and core fragments due to a sharp cutting edge).

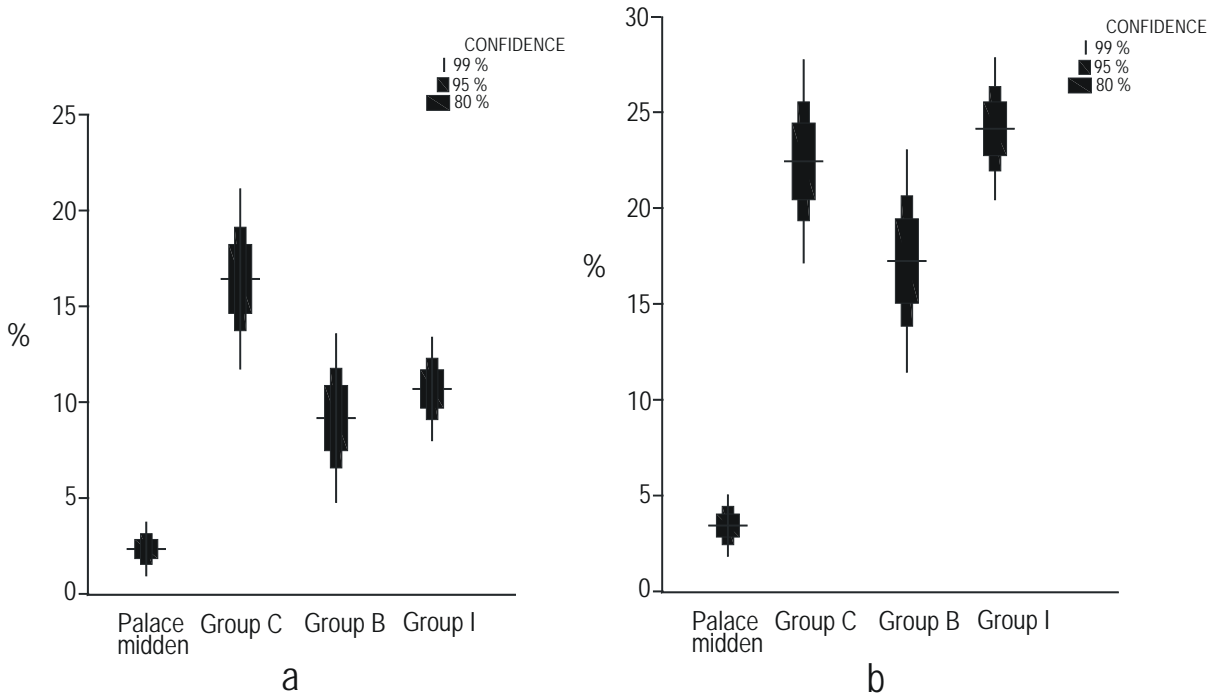


Figure 4.8: Comparison of estimated proportions and error ranges for a) proportions of flakes, and b) proportions of total debitage, in the obsidian assemblage of Murcielagos-Balunte domestic elite contexts at Palenque

The obsidian assemblages of Group C, Group B and Group I have higher proportions of flakes (16.4%, 9.2% and 10.4%) that correlate with higher proportions of total debitage (22.5%, 17.3% and 24.2%). These results suggest the inhabitants of Group C, Group B and Group I carried out a more intense, household-level production, than people living in the Palace. The analysis of Expected/Observed Blade Ratio also matches these results, considering that Group C, Group B and Group I have comparatively larger Expected/Observed Blades Ratio (18.5, 17.4 and 49.5, respectively), a pattern that suggest some amount of the production was mainly for consumption outside the household. Conversely, the assemblage of the Palace midden had the smaller Expected/Observed Blade Ratio (3.5), which suggests a production dedicated mainly to satisfy the needs of the royal household. Figure 4.8 is a comparison, using a bullet graph, of estimated proportions and error ranges for flakes and total debitage. It demonstrates that the differences between the Palace's midden and Group C, Group B and Group I are highly significant, with a confidence higher than 99%.

A comparative evaluation of El Lacandón and Palenque obsidian assemblages (Table 4.4 and Table 4.5) suggests that at both sites obsidian blade production during the Late Classic period was preferentially carried out at some elite households, and later the blades may be exchanged to commoner households at each place. Previous research suggested that Late Classic obsidian blade production was preferentially realized at Palenque and several centers in the second level of a regional exchange network, such as Yoxiha and El Arenal, from where obsidian blades were distributed to surrounding communities (Johnston 1976a:126, Table 12). This pattern differs from the observed in the periphery of Aguateca, a Late Classic Maya polity in the Petén region where blade production was concentrated on elite households that resided in the capital (Aoyama 2007; Eberl 2007). Consequently, blades produced by El Lacandón elite families probably circulated to commoner families in the community and immediate surroundings. An example of a similar pattern has been inferred for the obsidian assemblage of Ceren, El Salvador, a small rural community whose inhabitants presumably would travel to sites at the top of the local settlement hierarchy to obtain obsidian tools whose manufacture was “beyond the ad-hoc specialist abilities of most commoner households” (Sheets 2000:218-220).

4.2.2 Figurine production

Mold fragments give a hint of figurine production at El Lacandón during the Late Classic period, an activity apparently associated only with elite households, judging from the presence of a mold fragment in each of the ceramic assemblages of Unit 4 and Unit 5 (Table 4.2). The two recovered molds were used to make flat, thin faces that were lately incorporated to the front of modeled heads, which in turn were applied to modeled complete bodies (Figure 4.9). The mold fragments were found in Unit 4 and Unit 5, two elite households, while thin faces (interpreted as production debris) were recovered only in Unit 4. This production technique has been previously identified in well-known figurine assemblages such as Palenque’s, and is also present in Jonuta and Piedras Negras (Bishop 1994; Butler 2004 [1935]; Flores Jiménez 2000; Rands and Rands 1965), all of them important Late Classic figurine production communities in the Northwestern Zone.

Table 4.5: Late Classic Figurine Production Artifacts

| No | Unit / Structure | Length (cm) | Wide (cm) | Thickness (cm) | Weight (gr) |
|-----------------------|------------------|-------------|-----------|----------------|-------------|
| <i>Mold fragments</i> | | | | | |
| 1 | 4/45 | 3.5 | 4.4 | 1.38 | 17.6 |
| 2 | 5/13 | 5.5 | 5.94 | 1.51 | 33.8 |
| <i>Figurine faces</i> | | | | | |
| 1 | 4/45 | 3.53 | 2.89 | 1.45 | 13.3 |
| 2 | 4/45 | 3.8 | 3.33 | .7 | 11.4 |
| 3 | 4/45 | 3.66 | 3.05 | .89 | 13.7 |

In addition, Late Classic figurine producers also used molds to make whistles, ocarinas, and parts to be combined with hand-modeled figurines, all artifacts recovered at El Lacandón that could have been either locally produced or imported from another place, such as Palenque, where previous research suggest high quantities of mold-made figurines were produced (Bishop 1994), most of them probably in elite households (Flores Jiménez 2000).

Overall, the data hint that the elite households that inhabited Unit 4 and Unit 5 were able to produce small quantities of composite figurines made with a mixture of mold and hand-molded techniques, judging from the small size of the recovered sample of production refuse. It is possible to speculate that some of those figurines were exchanged with local households, considering that they were present in the assemblages of both elite and commoner households, excepting Unit 27 (see Table 4.2).

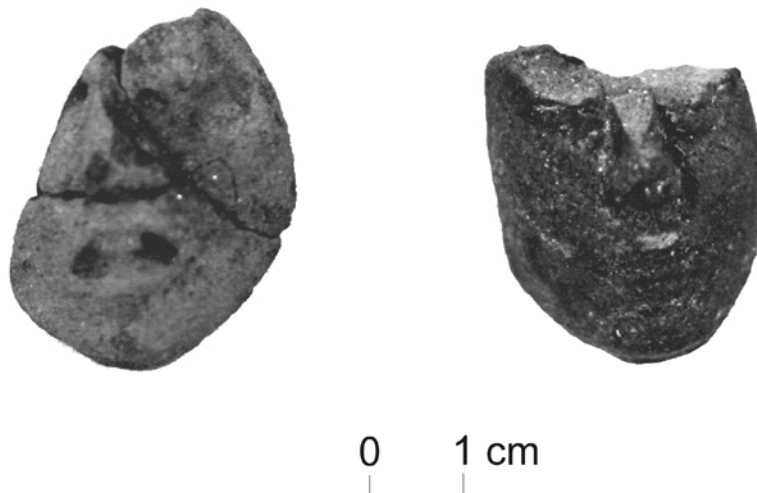


Figure 4.9: Unit 4 Mold-made Figurine Faces

4.2.3 Wood carving

As mentioned in Chapter 3, the preferred use of greenstone celts (*hachuelas*) was wood carving (Clark 1988:139). Four greenstone celts fragment and a complete example were identified in the lithic assemblage of Unit 4, an elite household. Previous research indicates that these artifacts were fabricated in communities along the Motagua River in Guatemala, using local metamorphic materials such as jadeite, or other jadeite-like greenstone, and later were exchanged as ready-made objects using the obsidian exchange networks previously described (Clark 1988, Sheets 2000). The dimensions (Table 4.6) of the complete case and a calculation of fragment's total size classify all El Lacandón examples as small and long celts. According to Clark's classification: small celts have a length between five to eight centimeters, while celts of the long class are at least twice as long as they are wide (Clark 1988:139).

The artifacts in El Lacandón sample were possibly used to cut down trees or secondary vegetation during agricultural activities. Moreover, they could also functioned as chisels or gouges for making wood objects, such as small statues and masks. At Late Classic Palenque, greenstone celts have been found in debris deposits around Temples II, IV and V of the North Group and also in excavated elite households (Ruz 1958a, 1958b).

Table 4.6: Late Classic Greenstone Celts/Axes

| No | Unit / Structure | Conservation | Length (cm) | Wide (cm) | Thickness (cm) | Weight (gr) | Material |
|----|------------------|--------------|-------------|-----------|----------------|-------------|--------------------------|
| 1 | 4/45 | Incomplete | 4.33 | 2.16 | 2.44 | 21.4 | Green |
| 2 | 4/45 | Incomplete | 2.97 | 2.83 | 1.33 | 15.3 | Green |
| 3 | 4/45 | Incomplete | 2.73 | 3 | 1.3 | 13.4 | Dark green-black streaks |
| 4 | 4/45 | Complete | 4.18 | 1.66 | 1.26 | 13.5 | Dark green |
| 5 | 4/45 | Incomplete | 1.96 | 1.89 | 1.37 | 9.7 | Green |

4.2.4 Stone tools raw material acquisition

As previously explained (Chapter 3), we lack information about chert sources in the region. On the other hand, geological provenance analysis of Late Classic obsidian artifacts at El Lacandón exhibits continuity with Late Preclassic patterns, with El Chayal as the dominant source followed

by Ixtepeque and San Martin Jilotepeque in the majority of elite and commoner house groups, excepting Unit 27, the residence of a commoner household, where a comparatively small sample of only two prismatic blades was recovered. As mentioned in Chapter 3, this pattern probably relates to elite control of obsidian. Additionally, the analysis provides data regarding the insertion of El Lacandón into a trade network of Central Mexico obsidian, specifically materials from the Zaragoza and Pachuca sources (Table 4.7)

Table 4.7: Late Classic Obsidian Sources at El Lacandón

| Source / Excavation Unit | | Super Elite | Elite House Groups | | Commoner HG | | Total |
|--------------------------|------------------------|-------------|--------------------|--------|-------------|---------|-------|
| | | Unit 3 | Unit 4 | Unit 5 | Unit 20 | Unit 27 | |
| Guatemalan Sources | El Chayal | 79.7% | 78.0% | 81.6% | 53.6% | 0.0% | 77.6% |
| | Ixtepeque | 17.4% | 14.4% | 11.6% | 39.3% | 100.0% | 15.8% |
| | San Martin Jilotepeque | 2.9% | 5.7% | 6.8% | 7.1% | 0.0% | 5.6% |
| Central Mexico Sources | Zaragoza | 0.0% | 0.8% | 0.0% | 0.0% | 0.0% | 0.4% |
| | Pachuca | 0.0% | 1.1% | 0.0% | 0.0% | 0.0% | 0.6% |

El Chayal was the most common obsidian source in Mayaland during the Late Classic period, a pattern that is clearly present at the Northwestern Zone and El Lacandón. However, it is possible to perceive a difference in source proportions when El Lacandón materials are compared to other sites in the region (Table 4.8). A larger proportion of Ixtepeque and San Martin Jilotepeque sources at El Lacandón probably relates to sample chronology inconsistencies between it and other sites: Palenque and Yaxchilán materials are samples of the entire Classic period (*ca.* A.D. 200-810), while El Lacandón obsidian, as previously explained, correspond to the reoccupation of the site at the end of the Late Classic, between A.D. 720 and 810 (Johnson 1976a, b; Brokmann 2000). Research in other regions of Mayaland have shown that the presence of Ixtepeque obsidian increased during the Terminal Classic, a pattern that has been interpreted as evidence of new coastal trade routes along the Caribbean Sea and the Gulf of Mexico (Braswell 1997; Braswell, et al. 2004; Nelson and Clark 1998). Late Classic exchange routes and some associated trading nodes are presented on Figure 4.10.

Pachuca green obsidian is usually interpreted as evidence of contacts between Mayaland and Central Mexico. This easily recognizable material appeared for the first time during the Preclassic, and increased dramatically during the Early Classic at Tikal (Moholy-Nagy 1996), moving through a route marked by Teotihuacan-related communities that ended at Kaminaljuyu

in the Guatemalan Highlands, from where it lately moved through the well established overland and riverine routes to the Maya Lowlands (Nelson and Clark 1998:313). Moreover, the type of Central Mexico obsidian pieces generally found in Mayaland suggests this obsidian arrived mostly as finished artifacts, specifically prismatic blades (Nelson and Clark 1998:306-307). The routes changed after A.D. 800 (Terminal Classic period), when Pachuca materials probably arrived to Mayaland via a Gulf of Mexico route managed by the Putún Maya, as indicated by the distribution of green obsidian at Isla Cerritos and Chichen Itza, in the northern Yucatan peninsula, and several sites in Belize (Braswell 1997:548-549; Braswell, et al 2004: 182-185; Nelson and Clark 1998:319). Specifically for the Northwestern Zone, this route was probably connected via Xicalango, a trading center located in the Tabasco coast, from where the obsidian could have been taken up the Usumacinta River (Figure 4.10).

Table 4.8: Late Classic Obsidian Sources in the Northwestern Zone

| | Source / Site | Palenque ^a (Johnson 1976a) | El Lacandón | Yoxiha (Johnson 1976a) | Piedras Negras ^b (Hruby 2000) | Tonina ^c (Rodriguez- Loubet 1990) | Yaxchilán (Brokmann 2000) |
|------------------------------|---------------|---|-------------|------------------------------|---|--|---------------------------------|
| Guatemalan Sources | El Chayal | 94.0 % | 77.6% | 95.7 % | 85.4 % | 98.1 % | 90.3 % |
| | Ixtepeque | 1.5 % | 15.8% | | 8.3 % | | 9.0 % |
| | San Martin | | | | | | |
| | Jilotepeque | 0.8 % | 5.6% | 2.9 % | 0.0 % | | 0.0 % |
| Central Mexico Sources | Zaragoza | 3 % | 0.4% | 1.4 % | 6.3 % | 1.9 % | 0.0 % |
| | Pachuca | 0.0 % | 0.6% | | 0.0 % | | 0.7 % |

^a Pachuca materials were not present in Johnson's sample, but ongoing analysis at Palenque has found a piece of green obsidian in Group C's lithic assemblage (González Cruz, personal communication 2005).

^b Materials of the Pachuca source were identified in Piedras Negras according to Hruby (2000:233), but they were not included in the final table of his article (Hruby 2000, Figure 3).

^c Tonina obsidian allocation analysis does not make a distinction between different types of gray obsidian, which here are assigned as El Chayal.

Pachuca green obsidian had been identified in the Northwestern Zone at both Late Classic political capitals, such as Palenque, Yaxchilán and Piedras Negras, and also at minor centers such as Yoxiha (Brokmann 2000; Hruby 2000; Johnson 1976a, b; Rodriguez-Loubet 1990). At El Lacandón, Pachuca obsidian was probably oriented to elite use considering its scarcity and location: three prismatic blade fragments found at Unit 4, the residence of an elite household.

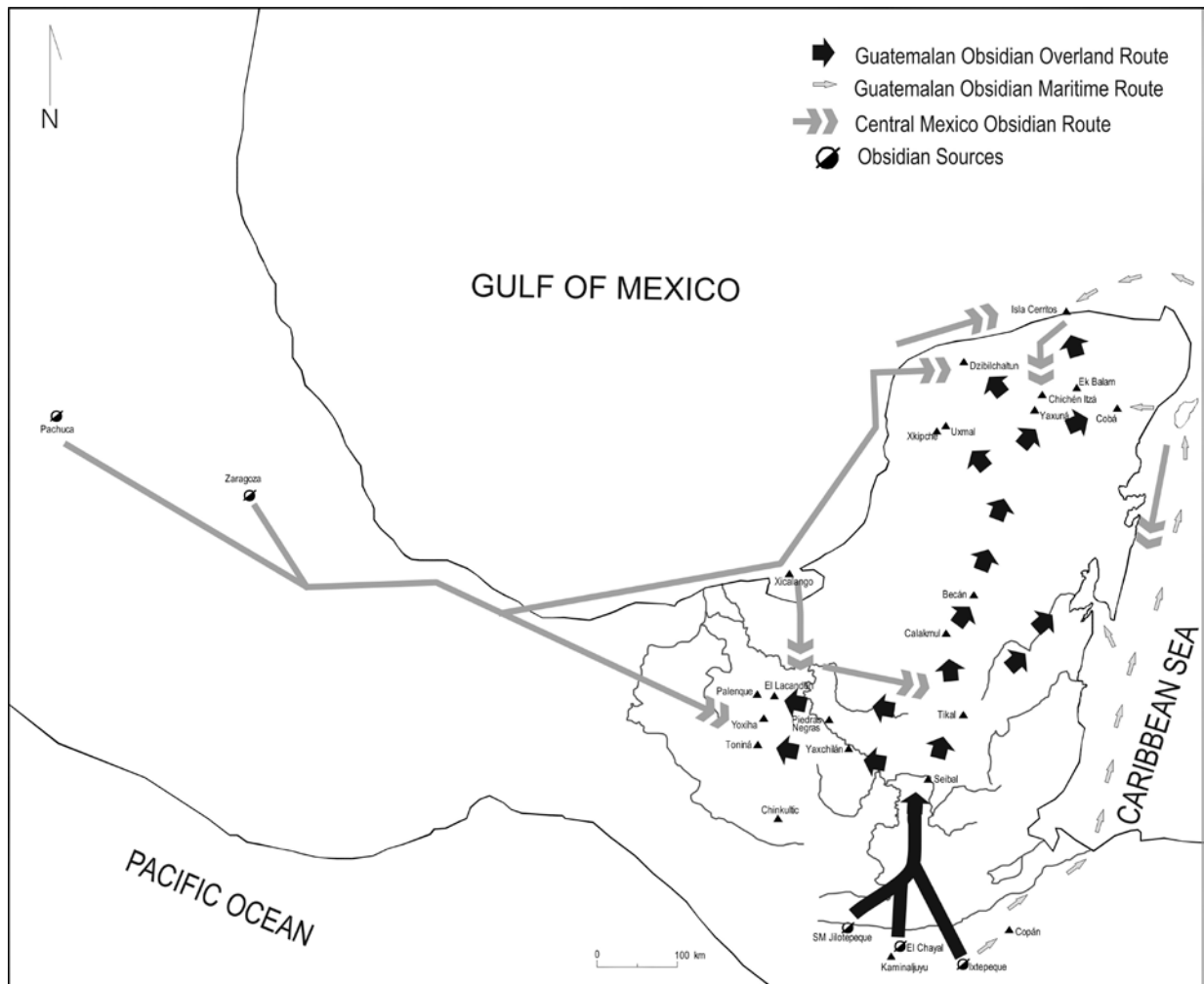


Figure 4.10: Late Classic Obsidian Exchange Routes (Hammond 1972; Nelson and Clark 1998)

4.2.5 Obsidian consumption

The analysis of Late Classic obsidian consumption was done using the same criteria as in the Late Preclassic analysis (Chapter 3). Chipped stone assemblages were analyzed in order to detect differential proportions of chert and obsidian consumption that correlate with status: elite families are hypothesized to have more access to obsidian, an exotic material that arrived via long distance trade, while commoners preferentially used chert, a local resource comparatively easier to obtain. Obsidian was a relatively scarce material in short supply that was probably more

frequently used in ritual activities such as bloodletting (Demarest 2004:158; Fowler, et al. 1989:165). As mentioned in Chapter 3, analysis uses Proportion of Obsidian in the Total Chipped Assemblage, equivalent to Obsidian/Chert Ratio (Aoyama 1999; Fowler, et al. 1989; Johnson 1976a; McSwain, et al. 1991; Nelson and Clark 1998). Table 4.9 shows the results of these analyses, which are distributed in three different clusters, likely related to differential access to obsidian, which can also be seen in Figure 4.11a.

The first cluster includes Unit 3, the residence of the local ruling family, which had the advantage of a more elite position and direct connections with Palenque that allowed them to obtain and use a chipped stone assemblage that included 94.5% of obsidian tools. The second cluster contains two elite house groups (Unit 4 and Str. 13) and one commoner house group (Unit 20), which had very similar obsidian proportions (between 25.7% and 30.6%). Finally, the third cluster consists of Unit 27, which was the commoner house group with the least obsidian access (8.2%). Figure 4.11a shows that the difference between the first and second cluster is highly significant, with more than 99% confidence.

Table 4.9: Proportion of Obsidian in the Total Chipped Stone Assemblage of Late Classic House Groups

| | Super Elite | Elite House Groups | | Commoner House Groups | | Totals | | |
|----------|-------------|--------------------|--------|-----------------------|---------|-------------|----------|-------------|
| | Unit 3 | Unit 4 | Unit 5 | Unit 20 | Unit 27 | Super Elite | Elite HG | Commoner HG |
| Obsidian | 94.5% | 30.6% | 28.4% | 25.7% | 8.3% | 94.5% | 34.8% | 18.4% |

The comparison of elite and commoner aggregates suggest elite house groups have 16% more obsidian in their total chipped stone assemblage than commoner house groups, a difference that is significantly high (Figure 4.11b), with a confidence of more than 99%. Overall, consumption of obsidian artifacts during the Late Classic period at El Lacandón seems to correlate with differences in status affiliation judging from the comparison of elite and commoners chipped stone assemblages. However, in the comparison of all excavated house groups, it is possible to notice a pattern slightly different: the local ruling family that resided at Unit 3 was overwhelmingly more able to obtain obsidian for its domestic purposes, but some commoner households, like Unit 20, were able to acquire a proportion of obsidian artifacts that was not extremely lower than the amount obtained by other elite households such as the residents of Unit 4 and Unit 5.

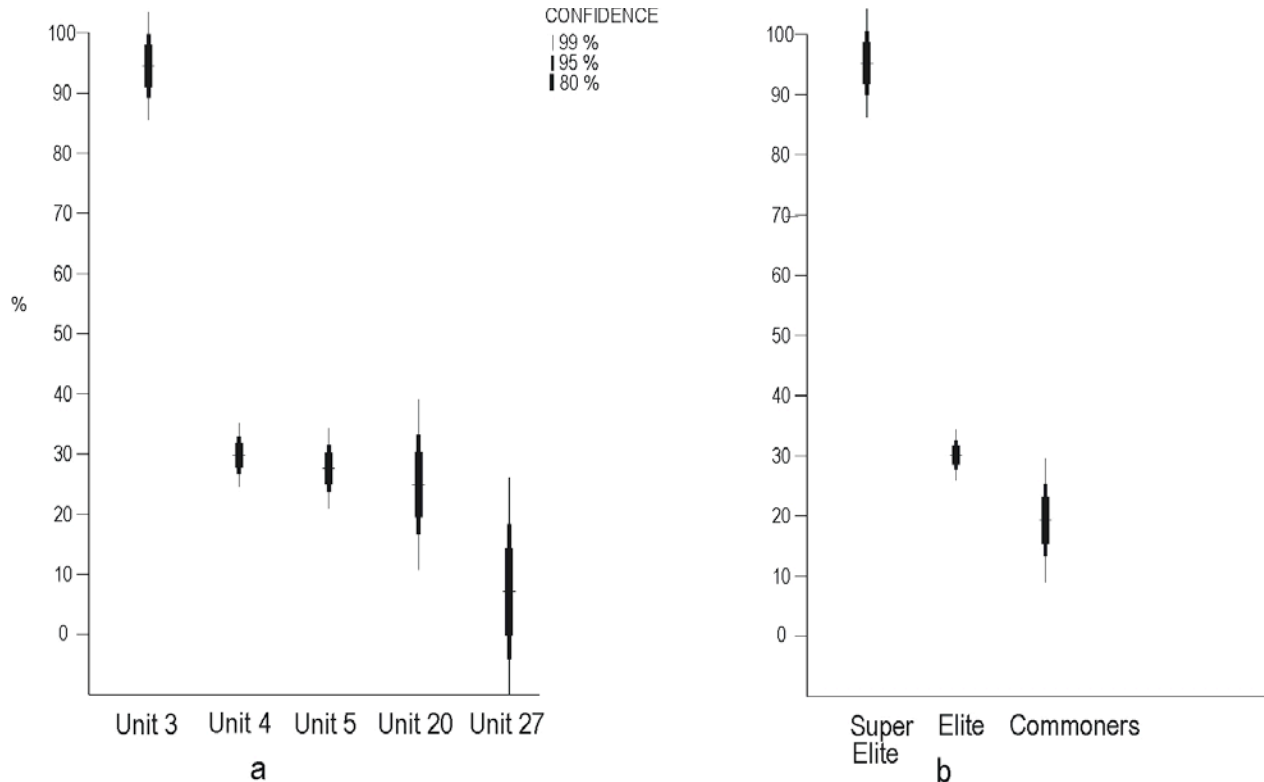


Figure 4.11: Comparison of estimated proportions and error ranges for proportions of obsidian in the total chipped stone assemblage for: a) All Late Classic excavations, and b) Late Classic Elite Households vs. Commoner Households.

4.3 FEASTING

Late Classic feasting analysis relies on three different analyses, which consisted of the comparison of: 1) Proportions of all serving vessels among elite and commoner house group's ceramic assemblages, that will allow detecting the intensity of both kinds of feasts; and 2) Proportions of highly decorated serving vessels in the Total Serving Vessels assemblage, which will allow detecting if elite households were engaged to greater degree in diacritical feasting (Dietler 2001; Hayden 2001; LeCount 2001); in addition, 3) The proportions of Chablekal Gray ceramics in the Total Serving Vessels Assemblage will be used as an indicator of elite vs.

commoner access to exotic ceramics, following LeCount's observation (1999:254) that exotic ceramics could work as a political currency, with local elite attempting to consolidate support by bestowing luxury ceramic items down the social hierarchy. Another part of the analysis compares serving and exotic vessels usage at Palenque and El Lacandón.

Late Classic serving vessels assemblages of El Lacandón (and Palenque) includes vases and dishes with thin walls, incised decoration sometimes including glyphs, and red slip rim bands, previously described as Cojolita ceramic group (Liendo 2002:197), vessels that were locally manufactured in the Palenque polity, probably in areas close to the capital (Rands and Bishop 1982). In addition, the decorated serving vessels of the Murcielagos and Balunte ceramic complexes include Chablekal Grey vases, characterized by fine paste, thin walls and punctuated, incised and dentate-stamping decoration, classified as Chicxulub Incised, Cholul Fluted and Telchac Composite ceramic types (Figure 4.12). Compositional paste analysis has established that these vessels were produced in the Northwestern Zone, specifically in the Middle Usumacinta and Tabasco Plains areas, probably outside Palenque's political realm, but the precise location of manufacturing workshops is still not identified (Bishop and Rands 1982; Foias and Bishop 2005; Houston, et al. 2001; López Varela 2005; Rands, et al. 1982).

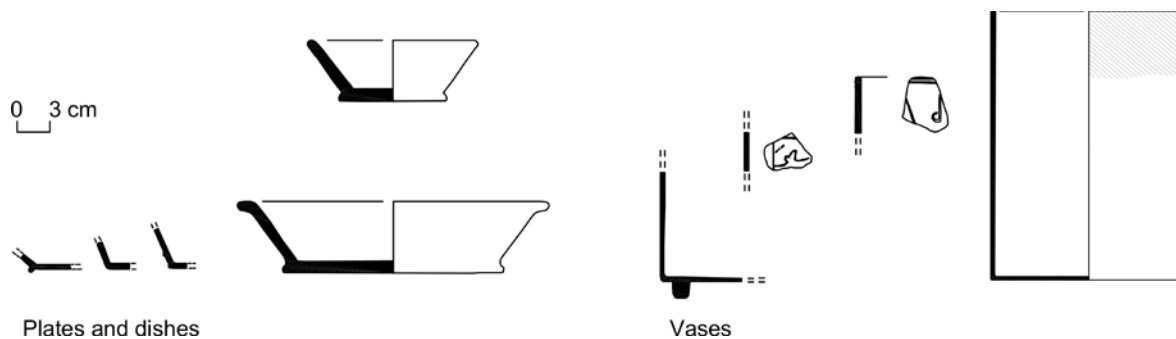


Figure 4.12: Late Classic Serving Vessels

4.3.1 El Lacandón Late Classic serving vessels distribution

Table 4.10 shows the proportions of all serving vessels in the Late Classic ceramic assemblages (Analysis #1). It is possible to notice two different clusters: 1) A cluster of house groups with a

proportion of plain serving vessels around the 40% of the total assemblage, (Unit 3 and Unit 4), and 2) A cluster of house groups with a proportion of plain serving vessels around 30% of the total assemblage (Unit 5, Unit 20 and Unit 27). In general terms, the pattern seems to correlate with status assignation: Unit 3, the residence of the local ruling family, has the larger proportion of serving vessels of all house groups, and Unit 4, an elite household, has a comparatively similar 39.9% of serving vessels. Conversely, Unit 20 and Unit 27, the residences of commoner households, had comparatively smaller proportions (31% and 29.7%). Finally, Unit 5, the residence of another elite household, had a proportion of serving vessels that was closer to the proportions of the commoner house groups than to the elite house groups. Figure 4.13a is a comparison of the proportions using a bullet graph that shows that the observed differences between the clusters are highly significant and have a confidence between 95% and 99%.

The contrastive pattern is enhanced when we compare the differences between super elite, elite and commoner house groups (Table 4.10): the super elite household (Unit 3) has a 13% larger proportion of serving vessels than the commoner households, while the aggregate of elite households has a 5% smaller proportion of serving vessels than the super elite household. Figure 4.13b is a bullet graph that shows that these differences are highly significant, with a confidence between 95% and 99%.

Table 4.10: Late Classic Proportions of Serving Vessels at El Lacandón’s House Groups

| | Super Elite | Elite HG | | Commoner HG | | Totals | | |
|---|-------------|----------|--------|-------------|---------|-------------|-------|-----------|
| | Unit 3 | Unit 4 | Unit 5 | Unit 20 | Unit 27 | Super Elite | Elite | Commoners |
| Proportion of All Serving Vessels in Total Ceramic Assemblage | 43.5% | 39.9% | 33.1% | 31.0% | 29.7% | 43.5% | 38.4% | 30.6% |
| Proportion of Highly Decorated Vases and Platters in Total Serving Vessels Assemblage | 60.2% | 43.2% | 16% | 53.9% | 50% | 60.2% | 38.3% | 52.7% |
| Proportions of Chablekal Gray vases in the Total Serving Vessels Assemblage | 3.4% | 3.7% | 4.4% | 0 | 3.3% | 3.4% | 3.8% | 1.1% |

The analysis of the proportions of Highly Decorated Vases and Platters in the Total Serving Vessels assemblage (Analysis #2) shows a different pattern: Unit 3 –the super elite household— has the highest proportion (60.2%), followed by a 53.9% and a 50% of Unit 20 and

Unit 27 respectively, both residences of commoner households. On the other hand, comparatively smaller proportions are detected in Unit 4 and Unit 5 (43.2% and 16%) (see Table 4.10 and Figure 4.14). Highly decorated vessels were widely available, suggesting that diacritical feasting was performed in both elite and commoner households. It seems possible to suggest that when Highly Decorated Vessels are more frequent at specific loci, its realization probably included attendees coming from closer house groups, such as Unit 4 and Unit 5 attending feastings at Unit 3, the house of the local ruling family. Moreover, Unit 20 and Unit 27, located on the west fringe of the community, were apparently able to organize comparatively more diacritical feasting than Unit 4 and Unit 5, and then be separated from Unit 3's feasts.

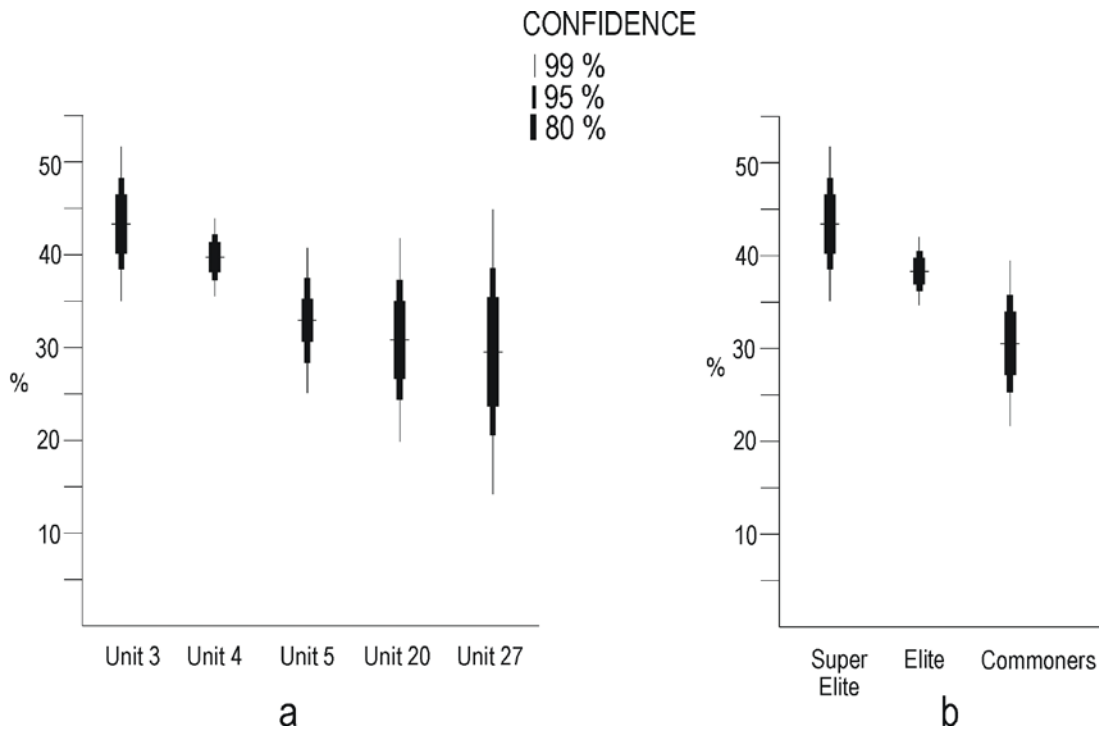


Figure 4.13: Comparison of estimated proportions and error ranges for proportions of all serving vessels in the total ceramic assemblage for a) All Late Classic Households, and b) Late Classic Elite and Commoner Households

The analysis of Chablekal Gray materials shows that they were distributed across the entire El Lacandón Late Classic community, and in similar proportions across super elite, elite and commoner households (Table 4.10). Unit 5 had the largest proportion (4.4%) and Unit 27 the smallest proportion (3.3%) of Chablekal Gray in the entire serving vessels assemblage, and Unit 20 was the only house group that lacked the ceramic group in its ceramic assemblage. A

comparison using super elite and the aggregates of elite and commoner ceramic assemblages shows the super elite and elite household have similar proportions of Chablekal Gray materials and a small difference of 1.1% more than the commoner households. This difference is highly significant with a confidence between 95% and 99%, as noticed in the bullet graph shown in Figure 4.15b.

In conclusion, the comparison of proportions of all serving vessels at elite and commoner households show a pattern similar to the expected: it seems that elite families at El Lacandón had higher numbers of serving vessels than commoner families. Considering that the distribution of these vessels could be considered a good reflection of the participation in feasting activities (with plates used to serve *tamales* and vases to drink *chocolate*, as previously mentioned in Chapter 3), the observed pattern suggest that elite families were able to organize larger feasts (of all kinds) than commoner families. And among these elite families, the local ruling family apparently organized the larger feasts.

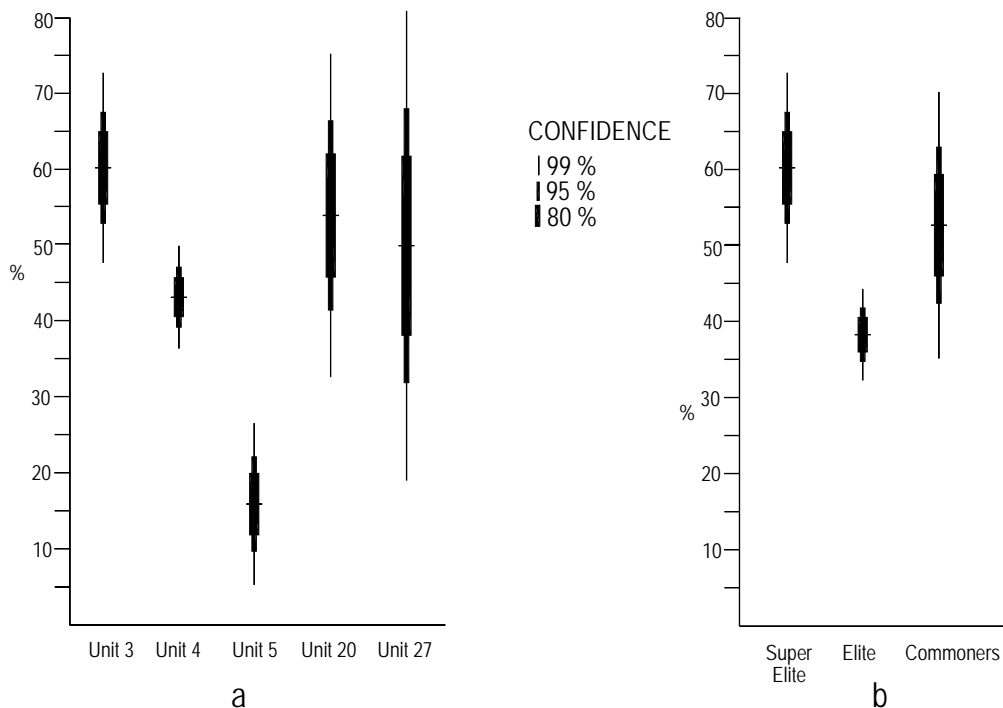


Figure 4.14: Comparison of estimated proportions and error ranges for proportions of Highly Decorated Vases and Plates in the serving vessels assemblage for a) All Late Classic excavations, and b) Late Classic Elite and Commoner Households

Highly decorated vessels were more frequent at Unit 3, the house of the local ruling family, and at Unit 20 and Unit 27, commoner houses on the western fringe of El Lacandón, suggesting the existence of spheres of diacritical feasting that could be associated both to elite affiliation and also to ward or barrio membership, considering that Unit 20 and Unit 27 were the residence of commoner families that lived far away from the civic center, and then they could realize feasts independent of the ones managed by the local ruling family, which could attract mostly elite households living close to the civic precinct.

Regarding the distribution of exotic serving vessels, the pattern observed is very different: Chablekal Gray materials are distributed in similar proportions in house groups' assemblages, excepting Unit 20. Chablekal Gray vases probably functioned as a political currency (LeCount 1999:254), with local elite attempting to consolidate support by bestowing luxury ceramic items down through the social hierarchy, a political decision that was then reflected in a broader distribution of fine pottery among all social strata (Le Count 1996, 1999).

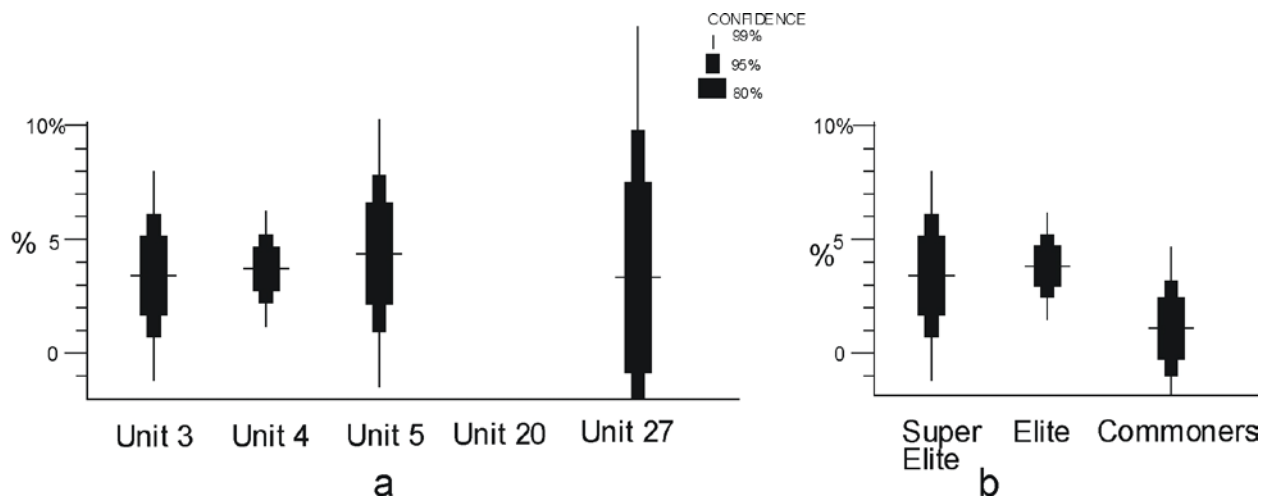


Figure 4.15: Comparison of estimated proportions and error ranges for proportions of Chablekal Gray Vases in the Serving Vessels assemblage for a) All Late Classic excavations, and b) Late Classic Elite and Commoner Households

4.3.2 Palenque Late Classic serving vessels distribution

Serving vessels proportions at Palenque were calculated for the ceramic assemblages of the Palace midden and Group B, an elite household, both mentioned previously in this chapter (López Bravo 1995). In addition, materials from commoner housegroups were included in the comparison, using ceramics recovered in nine test pits excavated in the Picota Group and another eleven test pits excavated in the Nauyaca Group (López Bravo, et al. 2003, 2004b). The Picota and Nauyaca Groups are located in the western sector of Palenque along the Picota stream (Barnhart 2001), and have been classified as commoner house groups according to the criteria used at El Lacandón.

Table 4.11: Late Classic Proportions of Vessels' Shape at Palenque (Murciélagos and Balunté ceramic complexes)

| | Palace Midden | Group B | Picota | Nauyaca |
|--|--------------------|--------------|------------------|---------|
| | <i>Super elite</i> | <i>Elite</i> | <i>Commoners</i> | |
| Total Sherds | 679 | 719 | 501 | 354 |
| Cooking and Storage Jars | 227 | 302 | 230 | 156 |
| Cooking Bowls | 210 | 168 | 178 | 136 |
| Serving Bowls | 41 | 156 | 15 | 7 |
| Vases | 148 | 70 | 53 | 40 |
| Platters | 53 | 23 | 25 | 15 |
| Cojolita Vases and Platters | 113 | 74 | 78 | 55 |
| Chablekal Vases | 88 | 19 | 0 | 0 |
| Proportions of Serving Vessels in Total Assemblage | 35.6% | 34.6% | 18.6% | 17.5% |
| Proportions of Highly Decorated Vessels in the Total Serving Vessels Assemblage | 83.1% | 37.3% | 83.9% | 88.7% |
| Proportions of Chablekal Gray in Total Serving Vessels Assemblage | 36.4% | 7.6% | 0.0% | 0.0% |

Table 4.11 shows the results of vessel's shape analysis at Palenque. It is possible to notice that the proportions of serving vessels in the ceramic assemblages (analysis #1) are distributed in two different clusters: the first cluster includes the Palace midden and Group B (an elite house group) with a proportion of serving vessels around 35%, and the second cluster

includes the Picota and Nauyaca Groups, with a proportion of serving vessels around 18%. A bullet graph comparing the proportions is presented in Figure 4.16a, which shows that the observed difference between clusters is highly significant, with a confidence of more than 99%. According to these results, it seems that the local dynasty that lived at the Palace, and the elite family that inhabited Group B, were able to organize larger feasts than outlying commoner households.

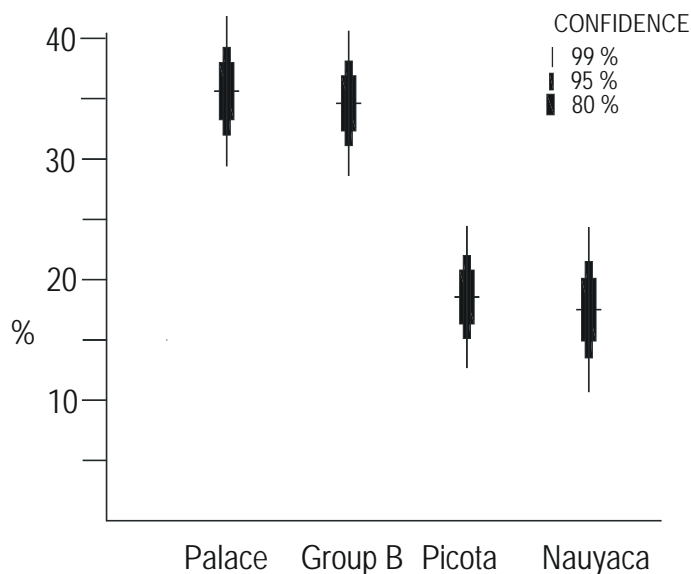


Figure 4.16: Comparison of estimated proportions and error ranges for proportions of Total Serving Vessels in Palenque's Late Classic Ceramic Assemblages

In terms of the proportions of Highly Decorated Vessels in the Total Serving Vessels assemblage (analysis #2), the two commoner house groups, Picota Group and Nauyaca Group, presented the most abundant quantity (83.9% and 88.7%, respectively), which were relatively similar to the proportions observed at the Palace midden (83.1%), and Group B had a comparatively smaller proportion (37.3%). A bullet graph comparing the proportions is presented in Figure 4.17a, which shows that the observed differences among households are highly significant, with a confidence of more than 99%. Considering the location of the different house groups, the pattern seems similar to the previously mentioned for El Lacandón's house groups that is, commoner families living far away from the Palace could organize large diacritical feastings, which were comparatively larger than the organized by the elite family of Group B, an elite household located close to the Palace whose members probably attended the feasts organized there.

The third kind of analysis relates to the proportions of Chablekal Gray vases in the total serving assemblage. Table 4.11 shows that Chablekal Gray materials were found in the Palace midden and Group B, an elite house group, and were absent in the assemblages of the Picota and Nauyaca Groups, two commoner house groups. The Palace midden had the largest proportion of Chablekal Gray vases, with 36.4% of the total serving vessels assemblage, and Group B has a comparatively smaller proportion of 7.6%. The comparison of these proportions is presented on a bullet graph in Figure 4.18, which shows that the observed difference between the Palace midden and Group B is highly significant, with a confidence of more than 99%.

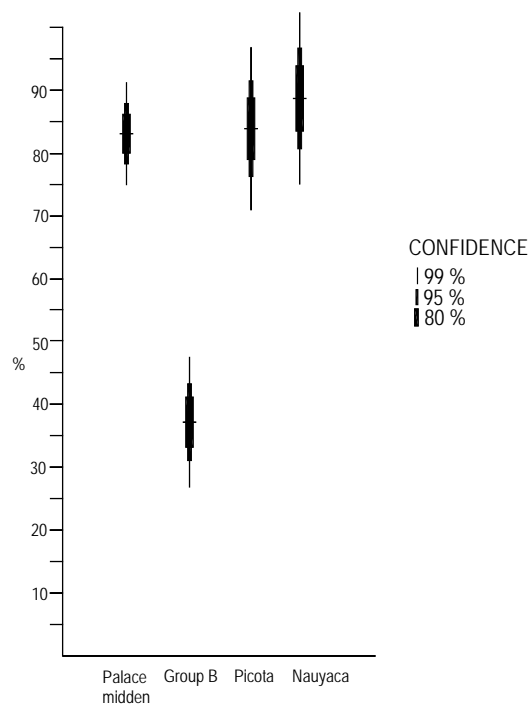


Figure 4.17: Comparison of estimated proportions and error ranges for proportions of Highly Decorated Plates and Vases in Total Serving Vessels in Palenque's Late Classic Ceramic Assemblages

In conclusion, the proportions of all serving vessels in Palenque ceramic assemblages suggest a clear difference in the amount of serving vessels that were present in the Palace, elite and commoner households. The proportions observed at the Palace midden and the Group B assemblages suggest that feasts of comparable large size were organized at these loci, a pattern that evidently contrasts with the smaller feasting capacity of the Picota and Nauyaca Groups. Regarding the proportions of highly decorated vessels, the pattern detected suggest that commoner households located in the periphery of the city could be involved in an intensive

diacritical feasting sphere that worked separated from the one organized by the Palenque dynasty in the Palace.

In addition, the Palace and Group B had higher quantities of Chablekal Gray vases, which were not present in Picota and Nauyaca’s assemblages. In Palenque, the access to this highly symbolic kind of vessels was restricted to the elite, and was significantly more abundant in the Palace midden.

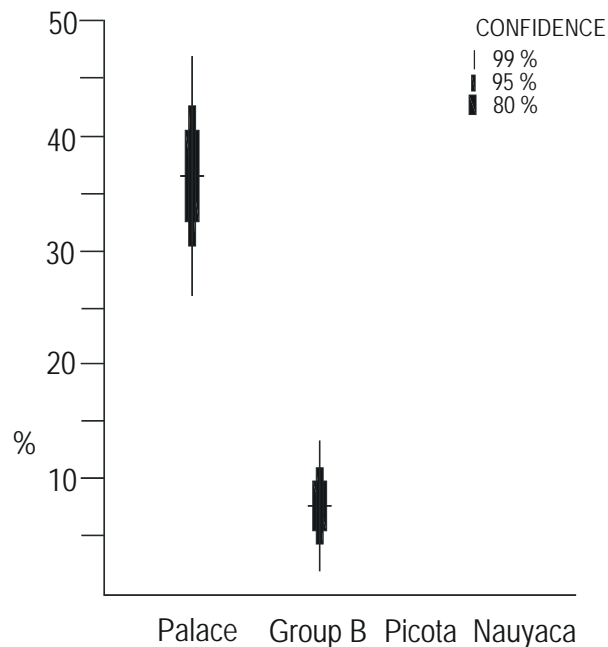


Figure 4.18: Comparison of estimated proportions and error ranges for proportions of Chablekal Gray in Total Serving Vessels Assemblages at Palenque

4.3.3 El Lacandón and Palenque feasting comparisons

In general terms, feasting intensity at El Lacandón is more homogeneous in elite and commoner households than in Palenque, where the difference between household’s classes is more evident. In addition, both El Lacandón and Palenque’s elite households had the largest quantities of serving vessels, which was more evident in the residences of the ruling families: Unit 3 at El Lacandón and the Palace in Palenque.

The distribution of Highly Decorated Vessels was found to be similar in El Lacandón and Palenque: households located close to the residence of the ruling family had lesser amount of

them, while commoners located in the periphery were able to have larger quantities, maybe because they developed their own system of diacritical feasting which was independent of the system observed in the center of the communities.

The most interesting observed difference was the distribution of exotic serving vessels. Chablekal Gray vases were found homogenously distributed among elite and commoner households at El Lacandón, suggesting that they worked as a political currency (LeCount 1999:254), with local elites attempting to consolidate commoner support by bestowing luxury ceramic items. On the contrary, commoner households in Palenque did not have access to Chablekal Gray materials, suggesting a more restricted distribution controlled by the dynasty, as reflected in the comparatively highest proportion present in the Palace midden.

4.4 HOUSEHOLD IDEOLOGY

As mentioned in the Introduction, the analysis of Late Classic Maya household ideology at El Lacandón will be framed into a comparison between a Palenque-oriented *great tradition* and a *little tradition* locally developed at El Lacandón.

4.4.1 Domestic ritual

Domestic research at Palenque has established the presence of ritual areas –altars or shrines—in the eastern portion of elite residential units, a pattern that shows considerable resemblance to the *Plaza Plan Two* identified at Tikal and other Maya centers (Becker 1991, 2004). These altars were recognized as a result of the presence of censers and a special architectural design: the small stepped pyramids substructures with inset corners found in Group C and Group IV, and the inner shrines of Group B (López Bravo 1995, 2000, 2004), all of them usually associated to the most wealthy tombs of each household. Furthermore, censer fragments were found also in Palenque’s elite household domestic middens, a pattern more similar to El Lacandón’s ritual artifacts provenience, where surface and excavation data did not allowed the identification of domestic altars. As at Palenque, fragments of ceramic figurines were recovered in all residential

excavation units, following a trend already know in Mesoamerica regarding an almost exclusive domestic realm for the production and use of figurines (Flores Jiménez 2000).

4.4.1.1 Censers

Previous research in Palenque has shown the presence during the Murcielagos and Balunte periods of four different domestic censer categories: 1) cylindrical censer stands with depiction of gods and ancestors, either of the tier-of-heads or complete figure decoration types; 2) crudely-made bowls used to burn *copal* censer atop censer stands; 3) hourglass-shaped biconical *braseros*; and 4) ladle censers with solid or hollow handles and animal decoration (Cuevas García 2007; López Bravo 1995, 2000, 2004; Rands, et al. 1979; Rice 1999). In comparison, the domestic censer collection of El Lacandón (Table 4.12) was limited to two of these categories, ladle censers and censer stands, that were collected from elite house groups (13 ladle censers fragments from Unit 4 and one fragment from Structure 13), and one commoner residential unit (one hollow censer stand fragment from Unit 20).

A chi square test, using the total number of sherds by excavation unit as a control for the amount of excavated deposit, indicates that there is a high risk that the observed differences are a result of the vagaries of sampling ($\chi^2=5.625$, $df=4$, associated probability between 50% and 20%).

Table 4.12: Late Classic Ritual Artifacts Assemblage

| Ritual items | Unit 3 | Unit 4 | Unit 5 | Unit 20 | Unit 27 |
|-------------------------------------|--------|--------|--------|---------|---------|
| Cylindrical censer stands fragments | 2 | - | - | 1 | - |
| Ladle censers fragments | - | 13 | 1 | - | - |
| Total censers fragments | 0.7% | 0.9% | 0.2% | 0.5% | - |
| Figurine fragments | 20.7% | 11.7% | 8.5% | 5.6% | - |
| Fossilized Shark teeth | - | 1 | - | - | - |

(proportions calculated by total sherds per unit, see sherd number in Table 4.2)

4.4.1.2 Fossilized shark tooth

Previous iconographic research in Mayaland has shown that a shark tooth was a specific attribute of the Jaguar World of the Underworld, one of the Palenque Triad Deities (Cuevas García 2007; Schele 1986). Shark teeth have been found in several offerings in Palenque's elite households

and temples, and were substituted occasionally by fossilized examples, such as the one found in El Lacandón's Unit 4. Ongoing research in Palenque focus on the search and ritual using of fossils coming from Tertiary deposits, suggesting these objects may be interpreted as a connection to ancient Maya beliefs, specifically related to ideas of an ancient time when the earth was covered by sea and the gods made the land emerge from this primordial water (Cuevas García 2008; Cuevas García and Ortega 2012). El Lacandón's shark tooth is shown in Figure 4.19a.

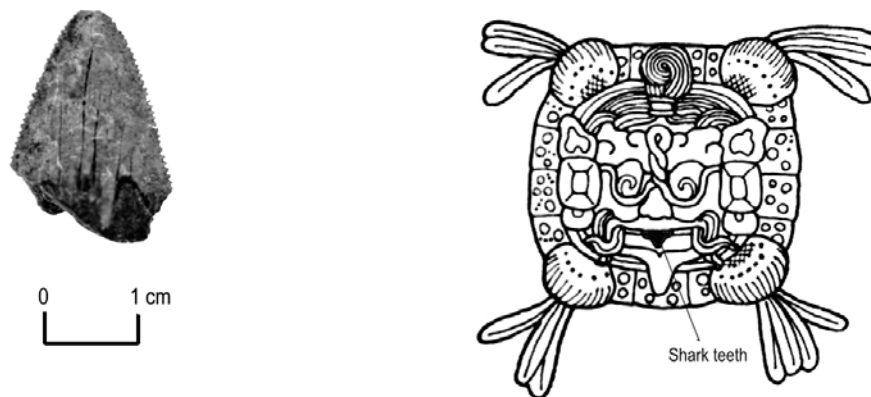


Figure 4.19: Ritual Use of Shark Teeth. a) Fossilized shark tooth found in Unit 4; b) Shark tooth of the Jaguar God of the Underworld (G-III), Temple of the Sun tablet, Palenque, (Cuevas García 2008; Cuevas García and Ortega 2012; Schele 1986).

The presence of this object, which was probably found in a nearby quarry and then transported to El Lacandón, suggest that the Late Classic ritual use of fossils was shared by elite households in the capital and in the rural area.

4.4.1.3 Figurines

The figurine assemblage recovered at El Lacandón Late Classic households is larger than the Late Preclassic one: it grew from 45 to 308 recovered fragments, that were found in superelite, elite and commoner households, excepting Unit 27 (Table 4.2). Figurine fragments were more abundant in Unit 4, a elite household (177 fragments) and in Unit 3, the residence of the local ruling family (83 fragments); and were less frequent in commoner households (20 fragments in Unit 20 and none in Unit 27). Late Classic figurines in the Palenque region usually depict several types of individuals, ranging from simple gender representations (men and women) to more specific socially-important individuals, dwarfs and gods, and also different animals (Flores

Jiménez 2000; Rands and Rands 1956). Analysis of El Lacandón's figurine fragments showed a similar pattern.

A chi square test, using the total number of sherds by excavation unit as a control for the amount of excavated deposit, indicates that the significant difference between excavation units with respect to proportions of fragments of ceramic figurines is not result of the vagaries of sampling ($\chi^2=47.368$, $df=4$, $p > .001$). Unit 4 and Unit 20 had considerable more access to ceramic figurines, which indicates more intensive figurine ritual performed by these households when compared to Unit 3, Unit 5 and Unit 27. This pattern is also evident in a comparison of ceramic figurine density calculated by grams per excavated cubic meter (Figure 4.20a). When we observe the aggregate of elite and commoner households (Figure 4.20b), it seems that elite households (Unit 4 and Unit 5) residents performed domestic figurine rituals more frequently than both super elite household (Unit 3) and commoner households (Unit 20 and Unit 27) residents.

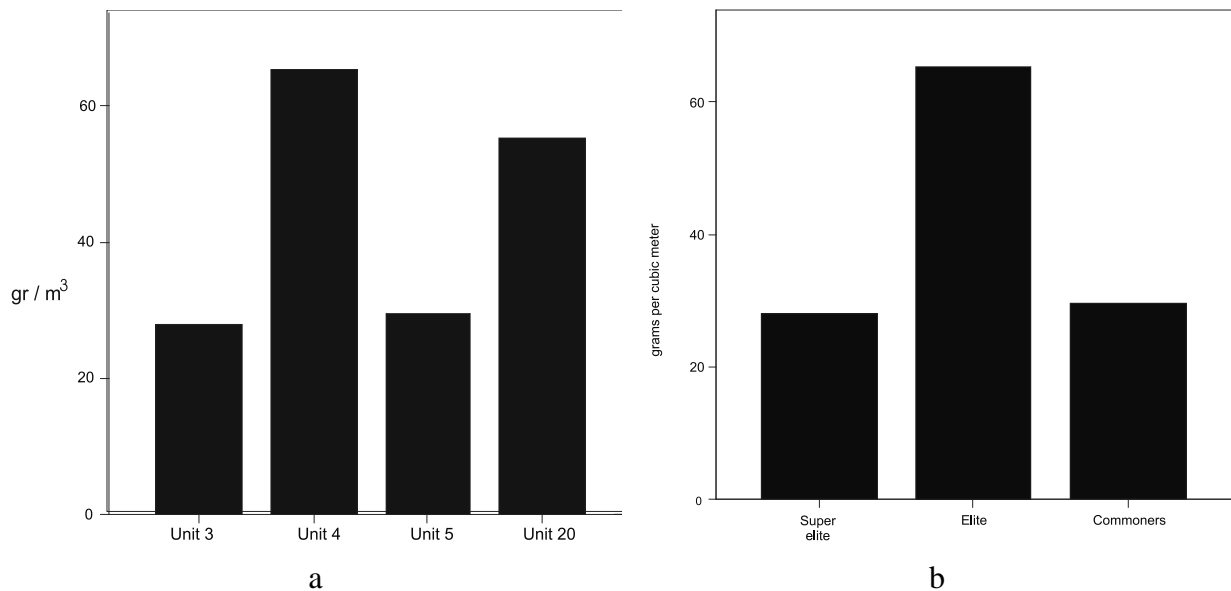


Figure 4.20: Figurine density (grams per cubic meter), in: a) all house groups; b) aggregate of elite and commoner house groups. Unit 27 lacked figurine fragments.

4.4.2 Burial practices and furniture

A sample of 12 Late Classic burials was recovered from elite house groups associated to the Civic Precinct: nine individuals from Unit 4, two individuals from Structure 13, and another one recovered in the proximity of Structure 3, a small temple located 20 m to the north of the supporting platform of Unit 3, in the same terrace (Figure 4.1). Graves were found both in patios and in residential structure's fill (Figure 4.5). The lack of recovered burials from Unit 20 and Unit 27 could be linked to 1) A comparatively small occupational sequence during the period, and 2) Smaller excavated area. However, this section of El Lacandón also lacks good contextual preservation, due to current land use and looting, which may explain the destruction of burial internments.

Table 4.13: Late Classic burials

| Data/Burial # | 4/1 | 4/2a | 4/2b | 4/3 | 4/4 | 4/5 | 4/9 | 4/10 | 4/12 | 5/1a | 5/1b | Str3/1 |
|--------------------------|------------|-------------|-------------|------------|------------|------------|------------|-------------|-------------|-------------|-------------|---------------|
| Sex | F | M | N/A | N/A | F | M | M | F | N/A | N/A | N/A | M |
| Age | A | A | 10 | A | 31-35 | A | A | A | A | SA | A | 35-39 |
| Type | S | P | S | P | P | S | P | P | P | P | S | P |
| Position | N/A | ES | N/A | FR | FL | N/A | FL | FS | FR | FR | N/A | ES |
| Orientation | N/A | N | N/A | E | N | N/A | N | N | W | W | N/A | N |
| Body cover | PC | CG | CG | BC | PC | | | PG | PC | | | CG |
| Red pigment | | | | | | | | | X | | | |
| Jade bead | | | | | | | | | | | | 2 |
| Obsidian macroflake | | | | | | 1 | | | | | | |
| Ceramic spindle whorl | | 1 | | | | | | | | | | |
| Manatee rib | | 1 | | | | | | | | | | |
| Total grave goods | - | 2 | - | - | - | 1 | - | - | - | - | - | 2 |

All Late Classic burials were found in elite contexts

Age: A: adult; SA: subadult

Position: ES: extended, supine; FR: flexed, right; FL: flexed, left; FS: flexed, supine

Body cover: CG: crypt of good worked stoned; BC: crypt made of irregular stones; PC: simple cist with non-worked stone cover; PG: cist with cover of flat stones

N/A: not available

Four of the burials, identified as secondary internments in Table 4.13, were found disarticulated, lacking bones and in poor preservation conditions. Two of them were recovered in association of more well preserved primary interments (Burials 4/2a and 4/2b in Unit 4, and Burial 13/1a and Burial 13/1b in Structure 13), a pattern commonly interpreted as the outcome of grave reuse, with portions of earlier interments curated during subsequent entombments (Ruz

Lhuillier 1968; Welsh 1988). The other two secondary interments are probably the result of current land use disturbances.

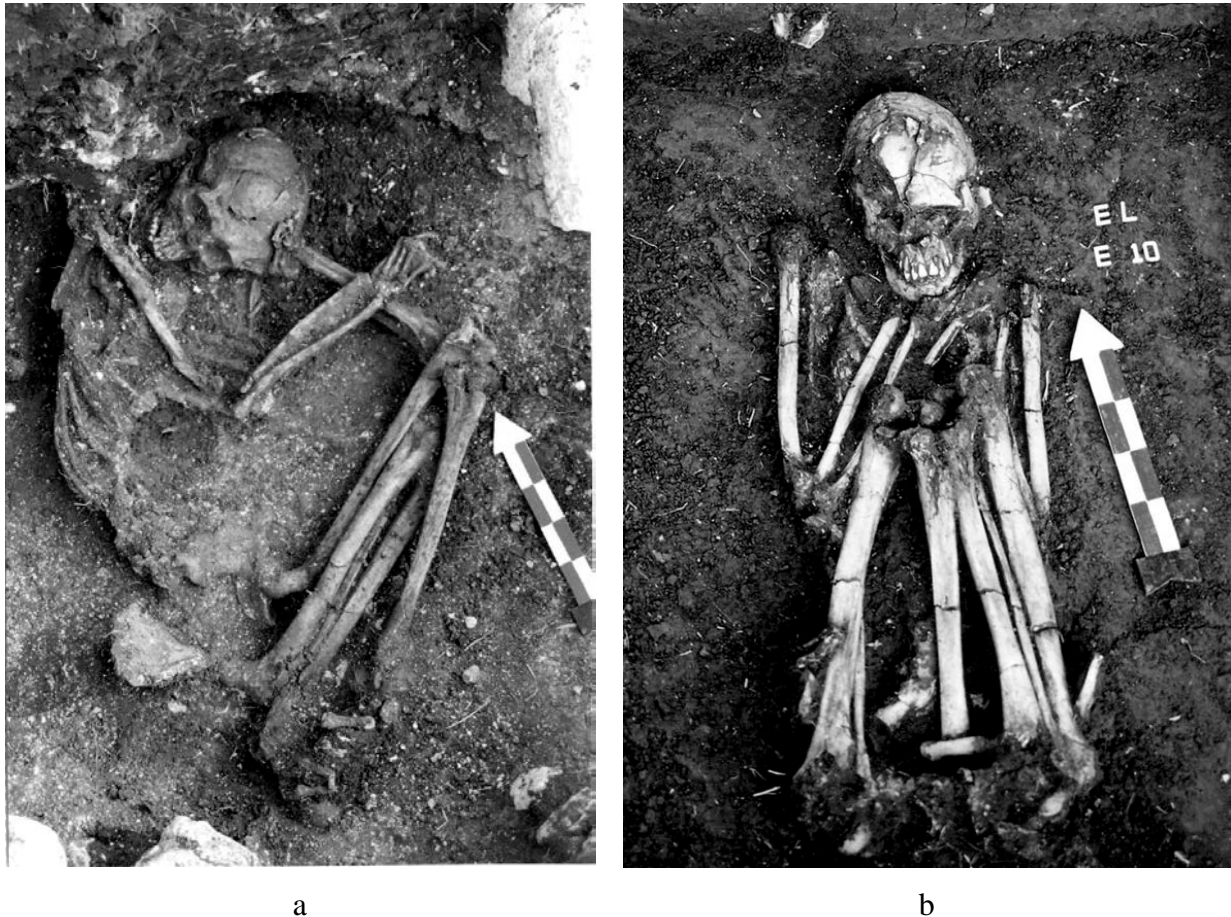


Figure 4.21: Late Classic Flexed Burials
a) Burial 4/4, it was inside a stone lined cist covered by slabs;
b) Burial 4/10 was inside a simple pit and covered by two flat slabs

Late Classic graves were rather simple and included a significantly minor grave furniture assemblage. The most common grave type was the simple pit, occasionally transformed into cist due to crudely made stone lining and ceiling. The majority of the primary interments had a flexed position and their head was preferentially oriented to the north (Table 4.14). The recovered evidence suggests that corpses were deposited lacking a special packaging treatment, as evidenced in the postures observed after body decay (Figure 4.21a). The flexed position fluctuated by the left or right side, and only one of the internments, Burial 4/10, was found in a tightly flexed supine posture, suggesting the presence of a firmly wrapped funerary bundle (Figure 4.21b). Burial 4/12 received also a special treatment: its body wrap was sprinkled with a

red pigment that, after decay, impregnated bone surface. Funerary offerings were minimal: a large obsidian flake associated to Burial 4/5, a secondary interment, was the only recovered funerary item in simple pits and cists.



Figure 4.22: Late Classic Crypts
a) Crypt of Burial 3/1; b) External niche and manatee rib of Crypt 4/2a-b; c) Walls of Crypt 4/2a-b

The two excavated crypts had a comparatively high construction quality that truthfully correlates with furniture value, body position and head orientation. The primary internments of both crypts were deposited on a north-oriented, extended position, which suggests this was a body treatment reserved to, or at least a privilege of, the upper section of the El Lacandón elite. The crypt of Burial Str3/1 had walls made of well-cut horizontally placed stones covered by two layers of stone slabs (*lajas*). (Figure 4.22a). Grave furniture included two small cylindrical jade

beads (with a length of 0.9 and 1.1 cm), the most valuable items of the entire Late Classic grave assemblage. The individual was the male of more advanced age at death of the Late Classic burial sample (35-39 years old), and was buried inside a tight wrap inferred by the closeness of the knee bones of both legs.

Crypt 4/2a-b had walls made of vertically positioned roughly shaped slabs and a single layer slab cover. Two burials were found in the crypt: a primary burial of an adult male and a secondary interment of a 10 years old child of indetermined sex. The furniture included a spindle whorl coarsely made from a Sierra Red ceramic sherd, and a complete manatee rib (*Trichechus manatus*), recovered inside a stone box attached to the exterior of the crypt (Figure 4.22b). Manatee, or “water cow”, is a giant aquatic mammal that can reach a weight of 680 kg of meat and fat with high protein value. Manatees were abundantly present in the deep sections of the Usumacinta River and associated marshes and lagoons in the northern portion of the Intermediate Plains. Burned, cut, and carved manatee ribs have been found in Palenque elite residential units, where they were used as tools and for adornment production (Zúñiga Arellano 2000:48-49). Additionally, this crypt was a good example of the practice of grave reuse, judging from Burial 4/2b, a secondary interment that was rearranged probably during the entombment of Burial 4/2a (Figure 4.22c).

Table 4.14: Murcielagos-Balunte ceramic periods Late Classic Domestic Burial Practices (primary internments)*

| Body treatment / site | | El Lacandón (n=8) | Palenque (n=65) |
|-----------------------|----------|----------------------|--------------------|
| Position | Extended | 25 % | 83.1 % |
| | Flexed | 75 % | 16.9 % |
| Orientation | North | 62.5 % | 98.5 % |
| | East | 12.5 % | 1.5 % |
| | South | -- | -- |
| | West | 25 % | -- |

*Gómez Ortíz 1999; López Bravo et al 2004.

El Lacandón’s primary interment practices were compared to chronologically similar samples from Palenque residential units (Gómez Ortíz 1999; González Cruz 1993, 1994a; López Bravo 1995; López Bravo, et al. 2004b; Rands and Rands 1961; Ruz Lhuillier 1968), as showed in Table 4.14. The most common Late Classic body position at Palenque was extended (83.1%),

a pattern different from the observed at El Lacandón, where the most common body position was flexed (75%). Late Classic burial orientation at Palenque was preferentially with the head to the north (98.5%), while El Lacandón's sample, even if the most common orientation was also to the north (62.5%), shows more diverse practices, with burials oriented to the east and west (12.5% and 25% respectively).

These analyses suggest that the ideology of super elite (Unit 3) was intimately related to Palenque's *great tradition* practices, according a preferred extended body position and head oriented to the north. On the other hand, elite households' ideology was more diverse, considering the more abundant presence of flexed internments oriented to the north, east and west, which was possibly related to a local *little tradition*.

4.5 SUMMARY

Domestic life in El Lacandón's Late Classic community was analyzed through an evaluation of household economy, feasting, and ritual and burial practices; and a special effort was made to compare El Lacandón's observed patterns with patterns detected in other research made in elite and commoner households in the capital of the Late Classic Palenque polity. The analysis of stone tools production suggest obsidian blade production was organized as a household level production at elite households, with the residents of Unit 4 and Unit 5, two elite households, producing for their specific needs with a small amount dedicated to local exchange. Interestingly, Unit 3, the super elite household that was the residence of the local ruling family, was not involved in obsidian blade production, as was the case of Units 20 and 27, the excavated commoner households. A similar pattern was observed in Palenque, where obsidian blade production was more intense in elite households (Group C, Group B and Group I) than in the Palace, the residence of the local dynasty. Chert production at El Lacandón was different, with both elite and commoner housegroups were making their own chert tools, excepting Unit 3 and Unit 20, families that probably acquired chert tools manufactured in other households. Figurine production was also detected in Late Classic households, with the residents of Unit 4 and Unit 5, both elite families, producing small quantities of composite figurines, suggesting this activity was not restricted to the capital. Wood carving was identified by the presence of greenstone

celts, which hints to an activity carried out only by Unit 4, an elite household. Obsidian acquisition exhibits continuity with Late Preclassic patterns, with El Chayal as the dominant source, followed by Ixtepeque and San Martín Jilotepeque, and small amounts of Zaragoza and Pachuca, two Central Mexico sources. As previously mentioned, obsidian was probably pooled by the elite before its local redistribution, and it was also more abundant in the chipped stone assemblage of Unit 3, the residence of the local ruling family (94.5%).

Feasting activities in El Lacandón were more homogeneous in elite and commoner households than in Palenque, where the difference between household's classes is more evident. Both El Lacandón and Palenque's elite households had the largest quantities of serving vessels, which was more evident in the residences of the ruling families: Unit 3 at El Lacandón and the Palace in Palenque. The distribution of Highly Decorated Vessels was found to be similar in El Lacandón and Palenque: households located close to the residence of the ruling family had lesser amount of them, while commoners located in the periphery were able to have larger quantities, maybe because they developed their own system of diacritical feasting which was independent of the system observed in the center of the communities. The most interesting observed difference was the distribution of exotic serving vessels. Chablekal Gray vases were found homogeneously distributed among elite and commoner households at El Lacandón, suggesting that they worked as a political currency, while commoner households in Palenque did not have access to Chablekal Gray materials, suggesting a more restricted distribution controlled by the dynasty, as reflected in the comparatively highest proportion present in the Palace midden.

Ritual and burial practices give additional hints about the importance of a local *little tradition* that was developed against a Palenque-related *great tradition*. Household ritual areas and cylindrical censer stands fragments were practically absent, and burial practices—specifically body position and orientation—were more diverse at El Lacandón than at Palenque.

5.0 LATE CLASSIC SOCIOPOLITICAL PATTERNS

This chapter will cover information regarding the position of El Lacandón inside the functioning of the Late Classic Palenque polity during the 8th century (Murciélagos and Balunté ceramic complexes), when the capital, Palenque, reached a population peak close to 8000 persons living in around 1400 dwellings (Barnhart 2002), and, according to epigraphic decipherment, became the paramount political center of a vast portion of the Northwestern Zone of Mayaland before its collapse during the first half of the 9th century (Figure 5.1). Regional settlement patterns and civic precinct planning data will be used to understand the political frame of El Lacandón as a 2nd or 3rd level center of the Palenque polity's political hierarchy.

5.1 EL LACANDÓN AND THE LATE CLASSIC PALENQUE POLITY

Research dedicated to the examination of the size and organization of the Palenque polity has used mainly epigraphic criteria to propose the existence of a large state with a developed political hierarchy (Marcus 1976, 1993). Only recently new research has been dedicated to settlement patterns, providing information that will enhance our understanding of the Palenque polity and its functioning. To this date, this research has covered 450 km² of the eastern section of the polity, and has been able to identify two different areas, separated by a buffer or inner frontier: 1) The Inner Hinterland, consisting of the capital and its relatively empty sustaining area, and 2) The Outer Hinterland, a physiographic region with different population distribution patterns (Liendo Stuardo 2002a, b, 2005, 2011). In general terms, both areas are included in the 20-30 km radius that defines a detected region of intense ceramic exchange (Bishop 1993; Rands 1967a; Rands and Bishop 1980). Finally, it is necessary to include a third area, denominated

Remote Hinterland, which marks the maximum political abilities of the Palenque dynasty as reflected in the overseeing of other local dynasties such as the ruling families of Moral-Reforma and Pomoná (Martin 2003). Figure 5.1 is a map of the reconstructed Palenque polity and other polities in the Northwestern Zone at the beginning of the 8th century.

Ongoing settlement patterns research in the Palenque region (Liendo Stuardo 2002b, 2002c, 2005; Liendo Stuardo and López Bravo 2005) has determined a pattern of uneven population distribution across the four districts that make up the eastern section of the Palenque polity (Figures 5.2, 5.3). Each of these sections (designated as “micro-regions” in Liendo Stuardo 2005) is linked to a civic center that is part of a hierarchical political system. A preliminary assessment of this system is presented on Table 5.1, which is based on Liendo’s data and published observations, but does not pretend to be a final word about the research.

Table 5.1: Palenque Polity Civic Hierarchy

| Level | Political Function | Characteristics | Sites |
|--------------|---------------------------|---|---|
| PH-1 | Polity capital | Civic precinct with large number of multipyramid plazas, a ballcourt | Palenque |
| PH-2 | District capital | Civic precinct with small number of multipyramid plazas and a ballcourt | El Lacandón, Chinikihá, San Juan Chancalaito, Lindavista (n=4) |
| PH-3 | Sub-district capital | Minor civic precinct (one or two plazas) and a ballcourt | Xupá. La Providencia, La Cascada, Reforma de Ocampo, Santa Isabel (n=5) |
| PH-4 | Local center | Minor civic precinct (one plaza), no ballcourt | PH 140, Sulusum, Chancalá, Nututún, Belisario Domínguez, El Bari (n=6) |
| PH-5 | Basal village/ hamlet | No civic buildings | (n=432) |

(Based on Liendo Stuardo 2005, 2011; de Montmollin 1995; with modifications)

The Palenque pocket district comprises 37 km² in the immediate vicinity of the ancient city of Palenque, the paramount center of the polity (Liendo 2002). To the east, El Lacandón district includes an area of 154 km² along the Chacamax River, and can be divided into three sub-districts: El Lacandón, La Providencia, and Xupa. The Chinikiha district includes an area of

80 km² that is separated from El Lacandón district by a “buffer” area without archaeological sites. The Chancala Valley district is formed by La Cascada, San Juan Chancalaito and Reforma de Ocampo sub-districts, with a total area of 80 km², and was also separated from El Lacandón district by an area empty of dwellings between Xupa and La Cascada sub-districts. Finally, the Plains district covers an area of 320 km² characterized by a very sparse occupation (Figure 5.2, Figure 5.3). The presence of these two vacant sections suggests the existence of an “inner frontier” that marked a section of more intense political and economic relations between the Palenque pocket and El Lacandón districts when compared to the Chancala Valley, Chinikiha and Plains districts.

It is necessary to mention that the consideration of this empty buffer as an “inner frontier” still depends on ongoing research that eventually will provide information necessary to understand if the Chinikihá and Chancala Valley districts were actually separated polities or at least politically connected to other Late Classic dynastic capital instead of Palenque, such as Pomoná or Piedras Negras (Figure 5.1), the largest known political centers in the eastern proximity of Palenque. However, if we consider the population that resided at Chinikihá and San Juan Chancalaito (54 and 37 dwellings) and compare it with Piedras Negras (436 dwellings) and Palenque (1400 dwellings), these communities fit better as second level centers of Palenque’s political hierarchy, the big center more closely located (Barnhart 2002; Nelson 2005). We still lack settlement information about Pomoná, which eventually will help to further clarify this aspect. An alternative scenario may situate Chinikihá and San Juan Chancalaito as paramount centers of occasionally independent small polities, a possibility that could be resolved with the interpretation of more epigraphic data, considering that the deciphered inscriptions of three known Chinikiha monuments suggest the site was independent of Palenque, Pomoná and Piedras Negras (Stuart and Morales Cleveland n.d.).

Analyses of the relationship between a urban center and its immediate periphery have suggested the existence of a “process of ruralization” that develops a network of subject settlements connected to a urban center, and conversely creates a relatively depopulated countryside (Cowgill 2004; Trigger 2003; Yoffee 2004). The next section of this chapter will compare settlement patterns across districts in the east section of the Palenque polity in order to detect variability in population distribution at the end of the Late Classic period.

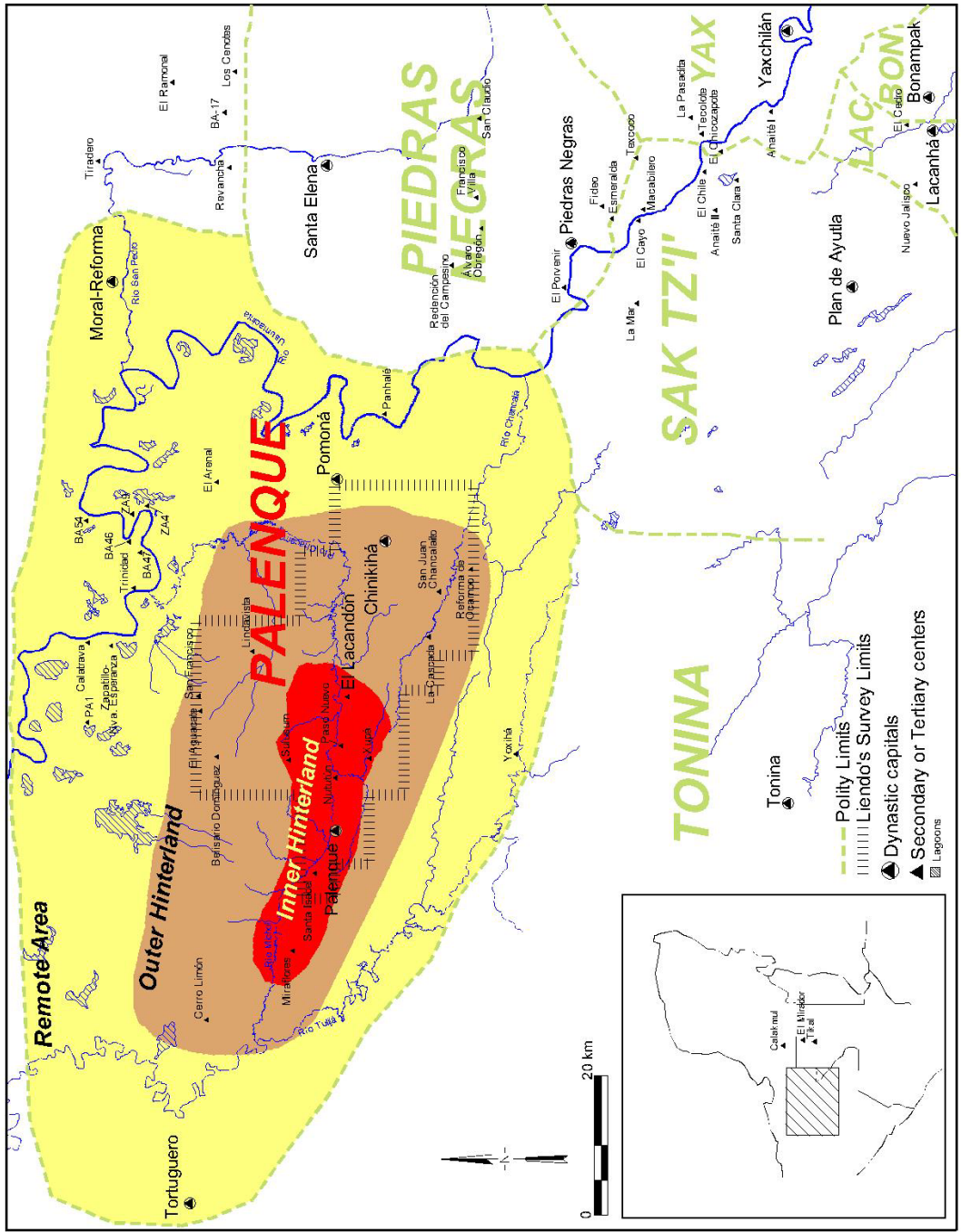


Figure 5.1: Late Classic polities in the Northwestern Zone (Redrawn with modifications from Anaya 2001; Anaya, et al. 2003b; Liendo Stuardo 2005, 2011)

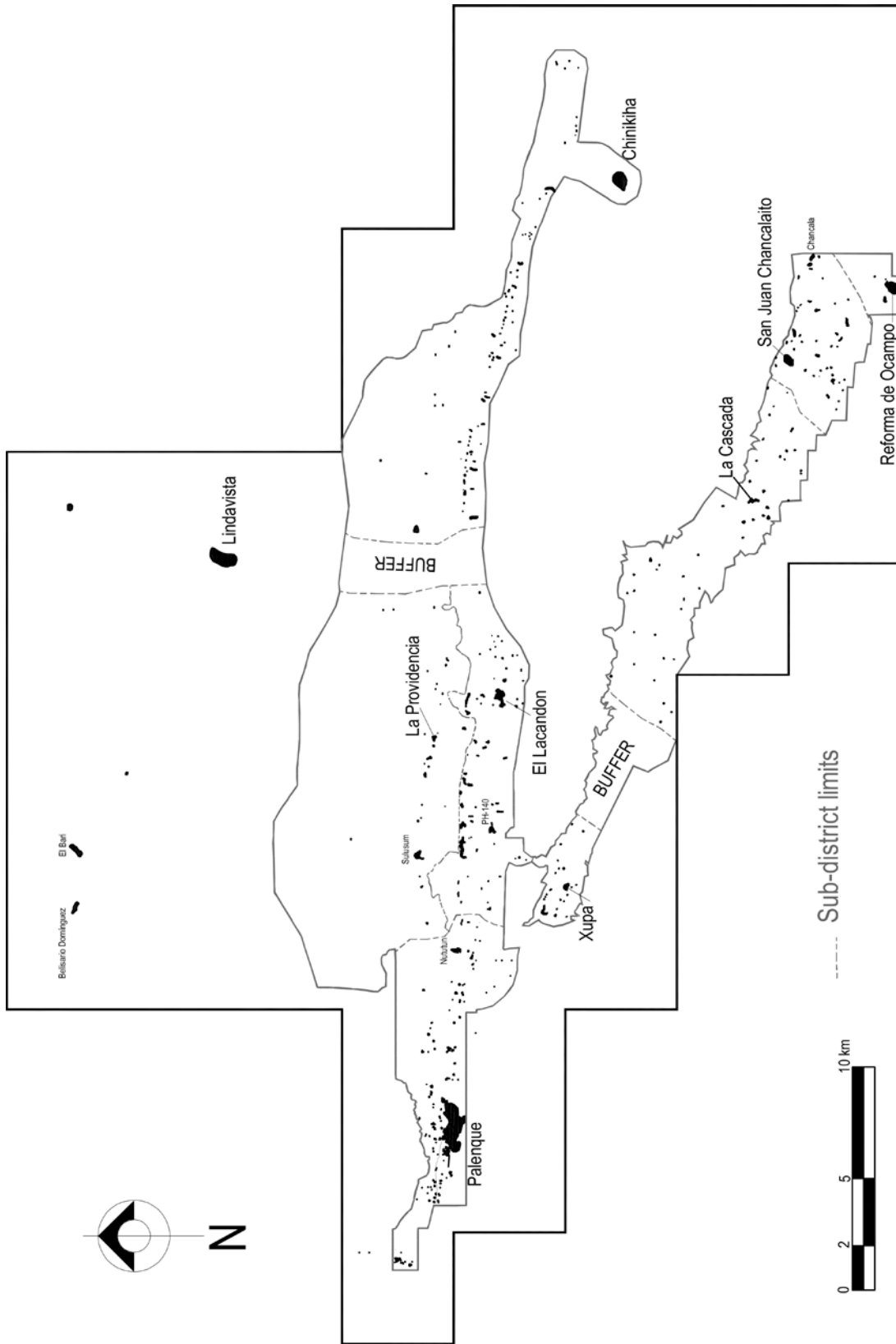


Figure 5.2: Districts and subdistricts in the eastern half of the Late Classic Palenque polity (Redrawn, with modifications, from Liendo 2005. For exact location, see inset in Figure 2.3).

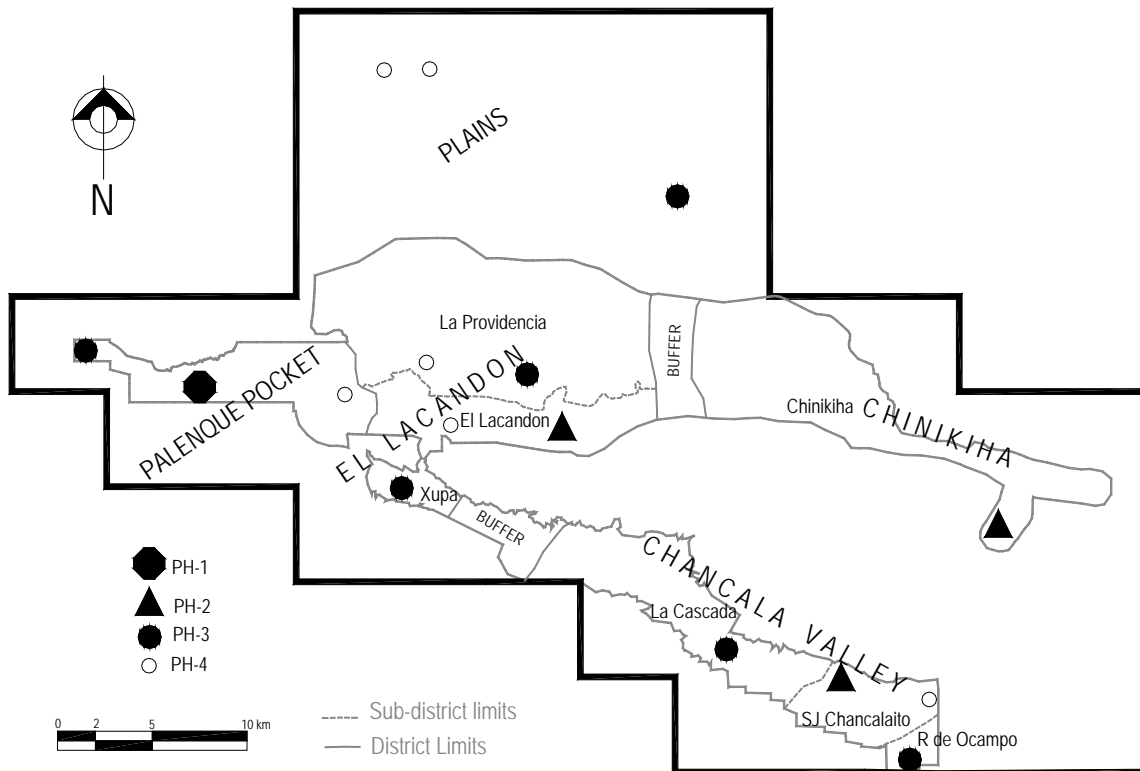


Figure 5.3: Major Centers, Districts and Sub-districts in the eastern section of the Palenque polity (See inset in Figure 2.3 for the specific location of this area. Redrawn with modifications from Liendo Stuardo 2005.)

5.1.1 Late Classic population distribution among districts and capitals

Following de Montmollin's consideration regarding the use of architectural remains to reconstruct ancient settlement patterns in the Upper Grijalva region of Mayaland (de Montmollin 1989, 1995), nucleation indices can be used to perceive a degree of variation in terms of political centralization, considering that a high index value for capitals reflect the capacity of rulers to decide where their subjects live (de Montmollin 1995:180). Table 5.2 shows a comparison of nucleation indices of districts in the eastern section of the Palenque polity. These indices measure the proportion of people living in the capital relative to the total district population, expressed as the percentage of the total number of dwellings. The categorization of dwelling's status was realized using the same criteria applied to El Lacandón's house mounds in Chapters 2, 3 and 4.

Table 5.2: Nucleation Indices at District and Sub-district Capitals

| | DWELLINGS | | | | | | | | |
|-----------------------------------|------------|------------|-----------|-----------|------------|-----------|------------|------------|-----------|
| | ALL | ELITE | | | COMMONERS | | | | |
| | DWE | DWE CAP | NI % | AE DWE | EDW CAP | NI % | AC DWE | COD CAP | NI % |
| <i>INNER HINTERLAND DISTRICTS</i> | | | | | | | | | |
| PALENQUE POCKET | 1721 | 1452 | 84 | 266 | 261 | 98 | 1455 | 1191 | 82 |
| EL LACANDÓN | 459 | 52 | 11 | 25 | 5 | 20 | 431 | 47 | 11 |
| <i>OUTER HINTERLAND DISTRICTS</i> | | | | | | | | | |
| CHANCALA VALLEY | 332 | 37 | 11 | 16 | 4 | 25 | 316 | 31 | 10 |
| CHINIKIHA | 225 | 54 | 24 | 7 | 7 | 100 | 218 | 47 | 22 |
| PLAINS ^a | 73 | 31 | 42 | N/A | N/A | N/A | N/A | N/A | N/A |
| <i>Sub-districts</i> | | | | | | | | | |
| El Lacandón | 341 | 52 | 15 | 15 | 5 | 33 | 323 | 47 | 15 |
| La Providencia | 74 | 9 | 12 | 8 | 2 | 25 | 66 | 7 | 10 |
| Xupa | 44 | 13 | 30 | 2 | 2 | 100 | 42 | 11 | 26 |
| La Cascada | 102 | 21 | 21 | 4 | 1 | 25 | 98 | 20 | 20 |
| SJ Chancalaito | 148 | 37 | 25 | 6 | 4 | 67 | 142 | 31 | 22 |
| R de Ocampo | 82 | 51 | 62 | 6 | 6 | 100 | 76 | 45 | 59 |

Key to DISTRICTS and sub-districts, as marked on Figure 5.1. PALENQUE POCKET: Palenque's hinterland in Liendo 2002, for comparison purposes Palenque was counted as district capital. EL LACANDÓN: El Lacandón, La Providencia, Xupa. CHANCALA VALLEY: La Cascada, San Juan Chancalaito, Reforma de Ocampo. CHINIKIHA: Chinikiha.

ALLDWE: all dwellings; DWECAP: all dwellings in the section capital; NI: nucleation index = proportion of district population residing at the capital; AEDWE: all section elite dwellings; EDWCAP: elite dwellings in the capital; ACDWE: all section commoner dwellings; CODCAP: commoner dwellings in the capital.

^aPlains district information is still scarce and incomplete, which did not allow the presentation of different subdivisions data. N/A: non available data.

Data taken from maps and site database of Proyecto Arqueológico Integración Política en el señorío de Palenque, directed by Rodrigo Liendo Stuardo (Liendo Stuardo 2011), and Barnhart 2002, with modifications.

When the hinterland or inner core district data is taking into consideration, the nucleation index illustrates that Palenque concentrated 84% of the total population of its district, including the 98% of the district's elite and 82% of commoners, a pattern of extreme nucleation that started at the end of the Late Preclassic (López Bravo 2005). The process continued during the following Early and Late Classic periods (previously mentioned in Chapter 3), as evidenced in the Palenque pocket district settlement pattern's history, which has been interpreted as the result

of political centralization, forced settlement and a “top-down” management of agricultural production (Liendo 2002c:191).

Different patterns emerge from the nucleation indices comparison of the other districts, which can be divided in two clusters: 1) El Lacandón and Chancala Valley districts with a low nucleation index (11%), which reflects a smaller amount of individuals residing in the capital, while the majority was distributed across the districts; and 2) The Chinikihá and Plains districts, with a comparatively bigger nucleation index (42% and 24%, respectively) that reflects a larger number of individuals residing in the capital. In any case, no district has a nucleation index comparatively similar to the observed in the Palenque pocket population, which can be interpreted as 1) The result of a more centralized political system, or 2) The presence of smaller district populations that should be easier to nucleate in the proximity of the capital. However, even if the Chinikihá and Plains districts have small number of inhabitants (reflected in 225 and 73 dwellings, respectively), an examination of their distribution across the district area lacks evidence of population concentration around the district capitals (Figure 5.1), a pattern expected if the inhabitants were targets of the district capital’s political attraction.

In terms of elite distributions, Table 5.2 shows that the Palenque pocket and Chinikihá districts have a very high elite nucleation index (98% and 100%), which contrasts with the lower indices of El Lacandón and Chancala Valley districts (20% and 25% respectively). Conversely, only the Palenque pocket has a high nucleation index for commoners (82%), who had an urban life separated from their farm plots, while the commoners of the El Lacandón, Chancalá Valley and Chinikihá districts were attached to their farm plots outside the district capital, which only concentrated the 11%, 19%, and 22% of the total commoner population of the district, respectively. In order to evaluate elite and commoner population distribution among district rulers’ centers, analysis was realized calculating distribution indices of total population (Table 5.3), elite (Table 5.4) and commoners (Table 5.5). Elite and commoner population data for the Plains district is still not available, so this district was not considered for the elite and commoner population comparison among districts.

Table 5.3: Population Distribution Across Civic Hierarchies

| Civic Level / Districts | Palenque Pocket | El Lacandón | Chancala Valley | Chinikiha | Plains |
|------------------------------------|----------------------------|--------------------|----------------------------|------------------|---------------|
| 2 | 84 ^a | 11 | 11 | 24 | 42 |
| 3 | 1 | 11 | 22 | | |
| 4 | 1 | 3 | 8 | | 38 |
| 5 | 14 | 75 | 59 | 76 | 19 |

Key: Percentage distribution indices = number of dwellings at all sites on a civic hierarchy level divided by total dwellings in the district (de Montmollin 1995:181).

^aFor comparative purposes, Palenque urban data is used as equivalent of its district hierarchical level 2 in Tables 5.3 to 5.5.

Table 5.3 shows that 84% of the Palenque pocket district resided at the top of the district's civic hierarchy, a "top-heavy" pattern that is comparatively similar only with the Plains district population distribution (42% of the population resided at the top of the district's civic hierarchy), even if district area and site distribution are very different (Liendo Stuardo 2005). This "top-heavy" population distribution seems linked to political centralization, with a relatively large number of individuals easily observed by agents of the political regime. On the other hand, El Lacandón, Chancalá Valley and Chinikiha districts illustrate an opposite system, with the majority of the population distributed at the lower end of the civic hierarchy (75%, 59% and 76%, respectively). This "bottom-heavy" distribution seems more connected to a decentralized format with more individuals living outside of civic centers, a residential pattern that allowed them to be less easily reached by agents of the political regime (de Montmollin 1995:182).

Table 5.4 shows that for elite population distribution, the Palenque pocket district elite households were heavily concentrated in the city (98%), with comparatively small presence in civic centers of lesser hierarchical levels and a rather scarce proportion in sites without civic-ceremonial buildings. The Chinikihá district shows a similar pattern, with the entire elite population residing in the district's capital. Again, a different pattern emerges at the El Lacandón and Chancalá Valley districts, where the elite population was distributed along the entire civic hierarchy, heavily concentrated at 3 and 4 level centers (half of the population), and only a 20-25% settled in the district's capital.

Table 5.4: Elite Population Across Civic Hierarchies

| Civic Level / Districts | Palenque Pocket | El Lacandón | Chancala Valley | Chinikiha |
|------------------------------------|----------------------------|--------------------|----------------------------|------------------|
| 2 | 98 | 20 | 24 | 100 |
| 3 | 1 | 8 | 44 | |
| 4 | 1 | 44 | 13 | |
| 5 | | 28 | 19 | |

Key: Percentage distribution indices for elite population=dwellings at all sites on a civic hierarchy level divided by total number in its district (de Montmollin 1995:181).

Elite and commoner distribution data is not available for the Plains district.

The comparison of commoner population nucleation presented in Table 5.5 shows that commoner population is highly concentrated at Palenque, with 81% of the district's commoner households. This arrangement is probably linked to a political decision to create an area of low population density around the city that were used to satisfy the agricultural needs of its inhabitants, a system that also included a urban residence for most of the elite population (Liendo Stuardo 2002b). Among the other districts, the Chinikihá district has the largest proportion of commoners residing at the capital (25%), but anyway share with the El Lacandón and Chancalá Valley districts a pattern characterized by commoners living preferentially close to their fields and outside of the civic centers, with the majority of them located in level 5 sites of the political hierarchy (75%, 64% and 75%, respectively) but anyway associated with elite households (Table 5.3), excepting at the Chinikihá district.

Table 5.5: Commoner Population Across Civic Hierarchies

| Civic Level / Districts | Palenque Pocket | El Lacandón | Chancala Valley | Chinikiha |
|------------------------------------|----------------------------|--------------------|----------------------------|------------------|
| 2 | 81 | 13 | 10 | 25 |
| 3 | 1 | 3 | 21 | |
| 4 | 1 | 9 | 5 | |
| 5 | 17 | 75 | 64 | 75 |

Key: Percentage distribution indices for commoner population=number of dwellings at all sites on a hierarchical level divided by total number in its district (de Montmollin 1995:181).

Elite and commoner distribution data is not available for the Plains district.

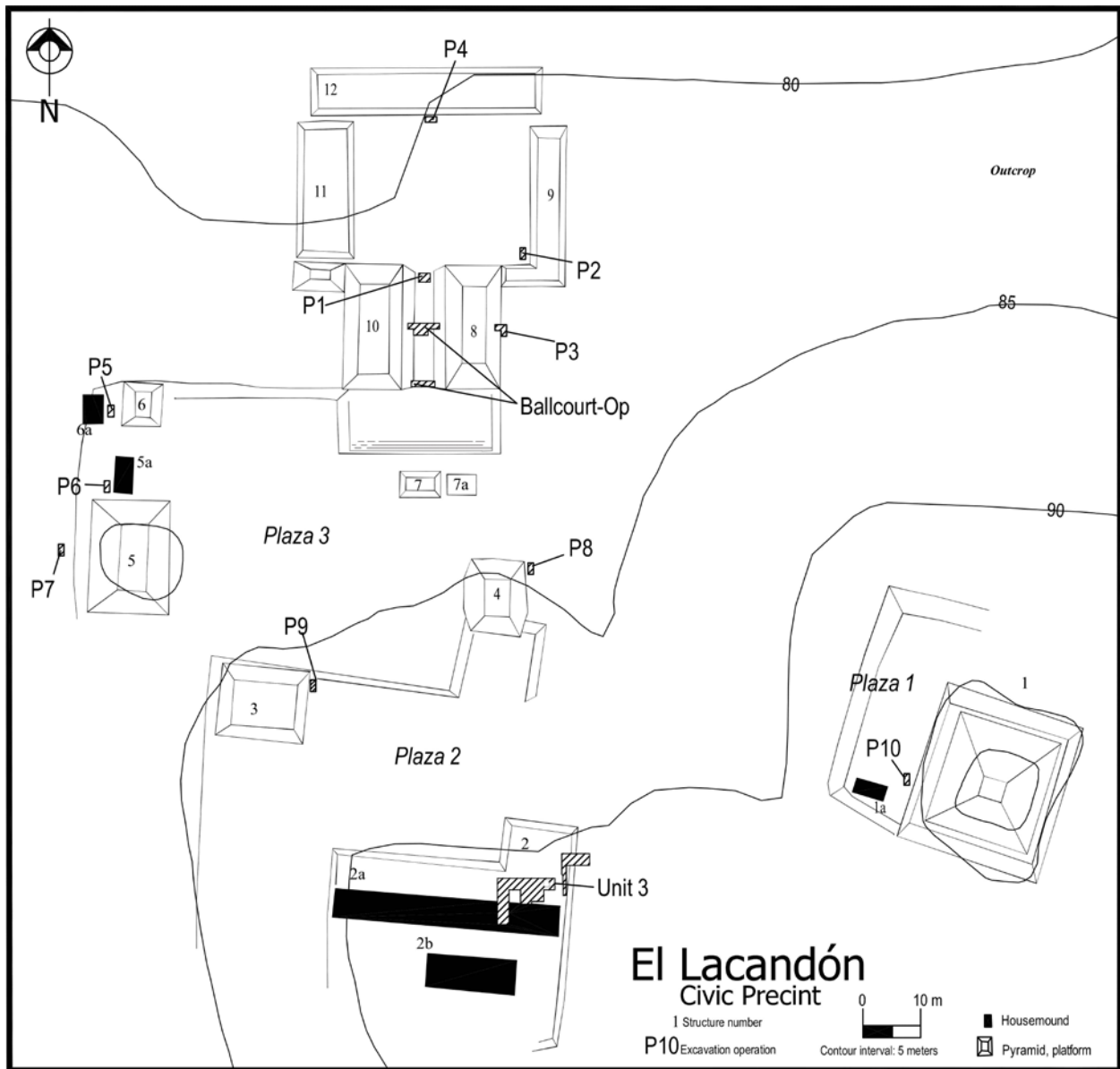
Overall, settlement patterns data show that El Lacandón and Chancalá Valley districts were organized in a different way than the Palenque pocket around the polity's capital. El Lacandón and San Juan Chancalaito, as district capitals, were the residence of sub-rulers that were not able to centralize their subject populations in a pattern similar to the one observed at the Palenque pocket, developing a system that depended on elites and commoners distributed along the entire political hierarchy. On the other hand, the inhabitants of the Chinikihá and Plains districts were more nucleated in their district capital, but never reached the nucleation levels observed in the Palenque pocket.

5.2 EXCAVATIONS AT EL LACANDÓN'S CIVIC PRECINCT

Research in the civic precinct had two main objectives: 1) Obtain a clear chronological evaluation of the area, and 2) Analyze specific architectural aspects, in terms of construction and design, that could be compared to Palenque's and other Northwestern Zone civic precincts. A total of ten 2 x 1 m test pits were excavated in the vicinity of different buildings in the civic precinct, in addition to two larger operations in the Ballcourt alley, and excavations carried out at Unit 3, Unit 4 and Unit 5 described in previous chapters (Figures 5.5, 4.1, and 3.1). The results of these studies show that the civic precinct area was originally occupied during the Late Preclassic, and experienced architectural transformation during the Late Classic occupation, when the structures visible on surface were built. All ten test pits were excavated to sterile bedrock, which was reached at 60-80 cm below modern surface. In all cases, a layer composed of black clay and rubble was located beneath humus, which usually had Late Classic ceramic materials occasionally mixed with small amounts of Late Preclassic artifacts. A second layer of dark brown clay and pebbles was found under it, with abundant Late Preclassic artifacts at Pit 3, Pit 7 and Pit 9. This layer was found resting on bedrock (Figure 5.6).

A total of six excavations were carried out in the Ballcourt: three in the playing alley, two in the northern end zone and one more on the outer edge of Structure 8, the eastern lateral structure (Figure 5.5). These operations were planned to evaluate ballcourt chronology and dimensions of the last constructive stage, in order to make comparisons with the Palenque ballcourt and others in the Northwestern Zone. The playing alley central operation allowed the

identification of a layer of packed pebbles that probably supported a stucco floor, and a drum-shaped limestone central marker, with a badly eroded surface that did not permit the recognition of carved decoration (Figure 5.7, 5.8a). The object was found with a slightly inclination to the east, probably the result of a modern looting attempt that damaged a stone box or small crypt located beneath it. However, this looting attempt was not completed, because it was possible to recover a complete jade earspool beneath the marker (Figure 5.8a, b). In addition, two Late Preclassic Sierra Red complete vessels were recovered 40 cm to the north (Figure 5.8c).



P1: test pit; excavation areas hatched.

Figure 5.4: Excavations in the Civic Precinct

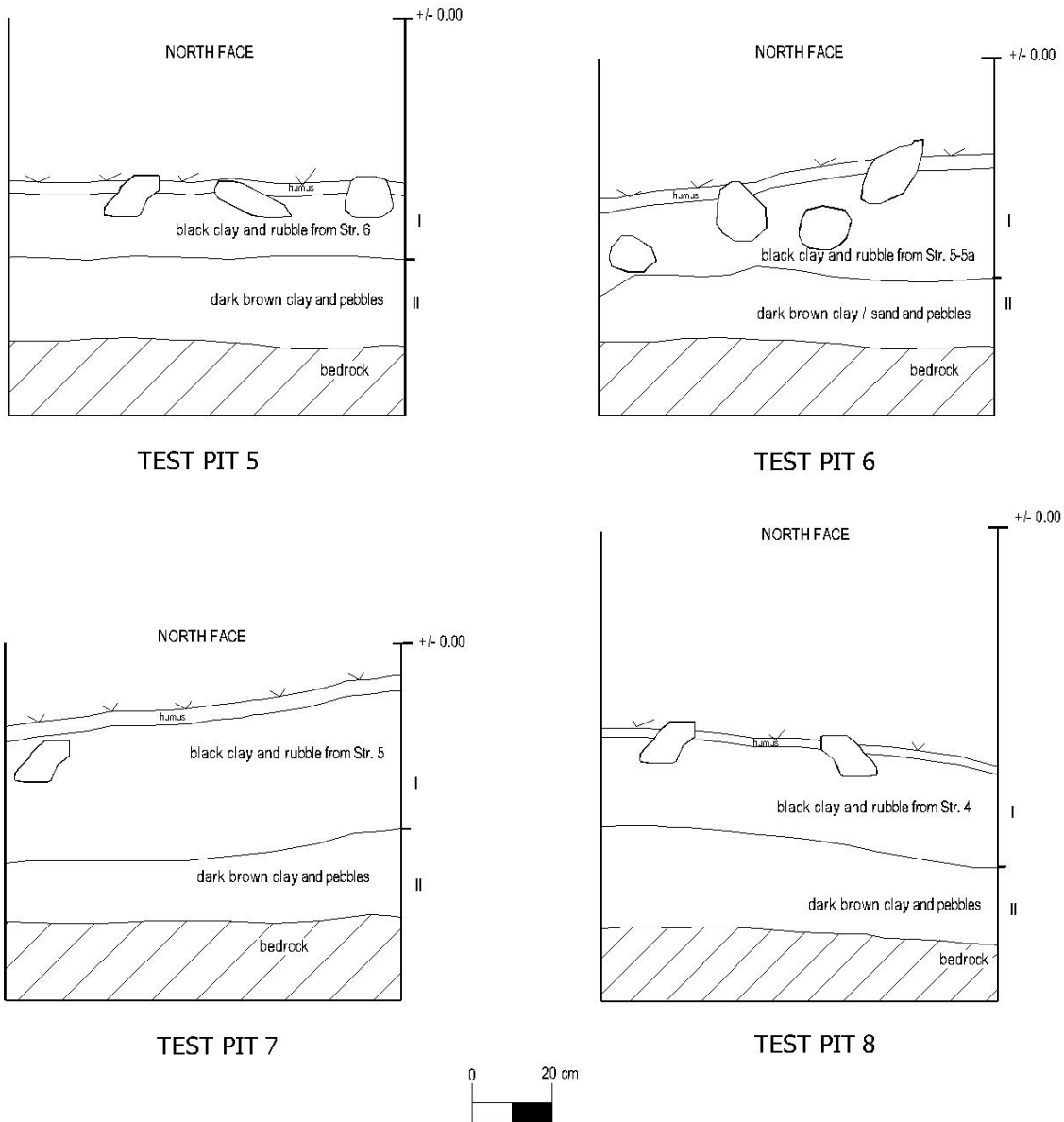


Figure 5.5: Profiles of Test Pits 5, 6, 7, and 8

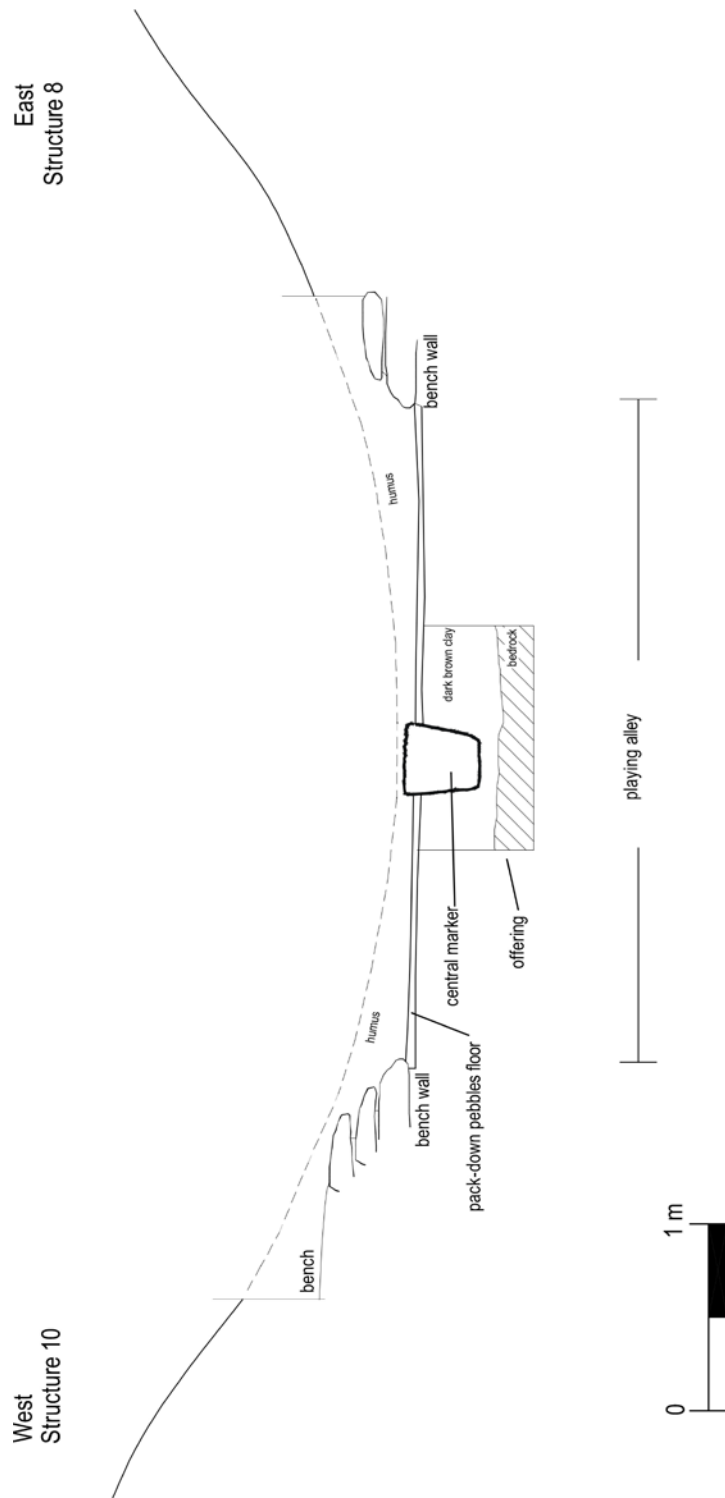
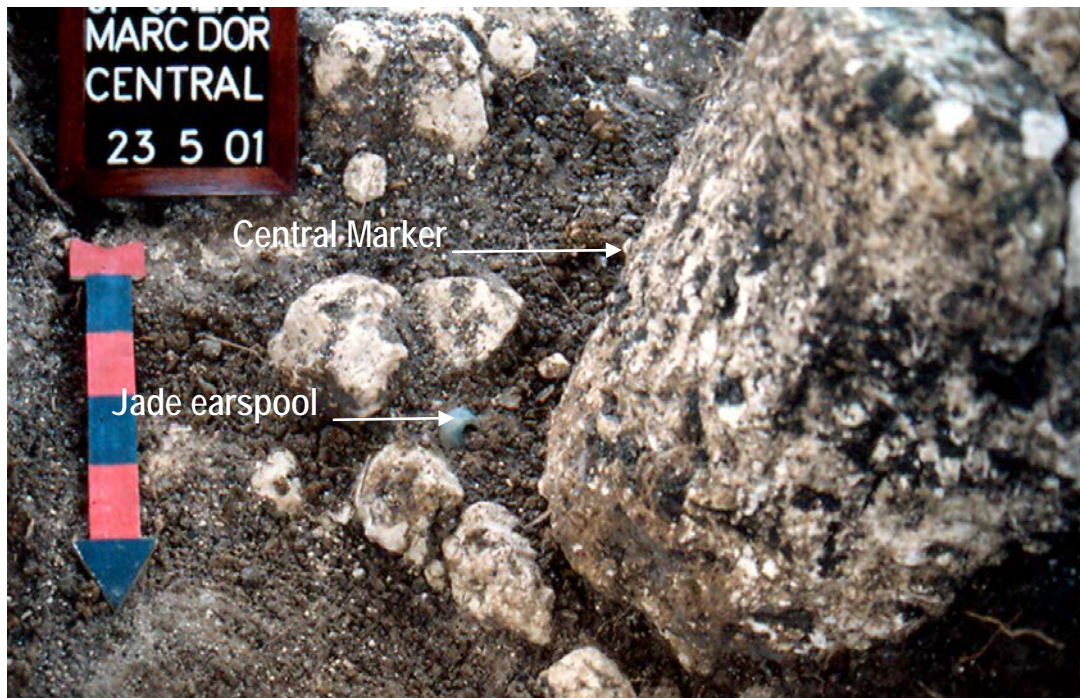


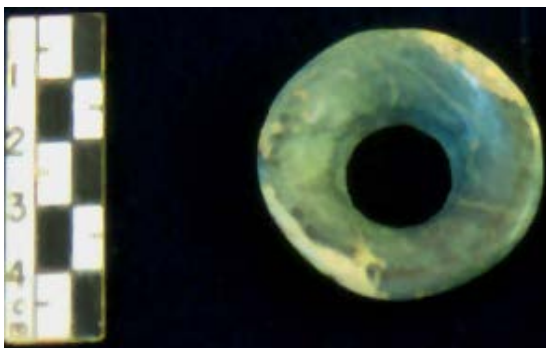
Figure 5.6: Ballcourt playing alley central operation – excavation profile

A second operation was realized in the southern edge of the alley, where a second marker of similar shape and size was found. The south marker was in his original position, resting on a human skull fragment. In addition, Pit 1 was excavated in the northern edge of the alley, but no marker or offerings were located in it. It seems possible that the north marker was removed from

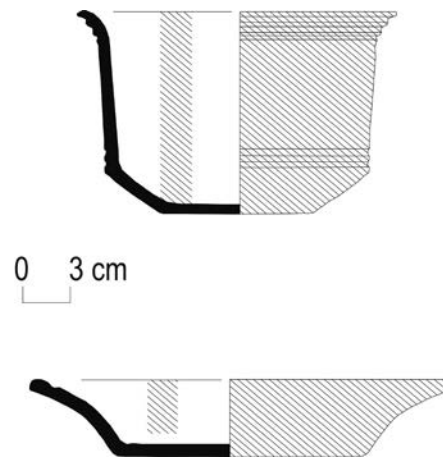
its original location due to looting practices, but the surface examination of the entire northern edge did not allow the recuperation of the entire marker or fragments of it. The three alley operations confirmed the presence of a sloping bench wall made of three rows of stones with finely carved surfaces (Figure 5.7).



a



b



c

Figure 5.7: Ballcourt central marker and offerings

a) Central marker excavation and jade earspool, b) Jade earspool, c) Late Preclassic Sierra Rojo vase and plate.

The operations made in the northern end zone (P2 and P3 in Figure 5.5) did not recover information regarding the presence of a stucco or stone floor, while the associated ceramic materials were only of the Late Classic period, a different pattern of the observed in the alley, where both Late Preclassic and Late Classic materials were common. Finally, the excavation of a trench in the external edge of Structure 8 allowed the identification of the last constructive stage, which included a stepped arrangement of two retaining walls of well-finished stones (Figure 5.9).

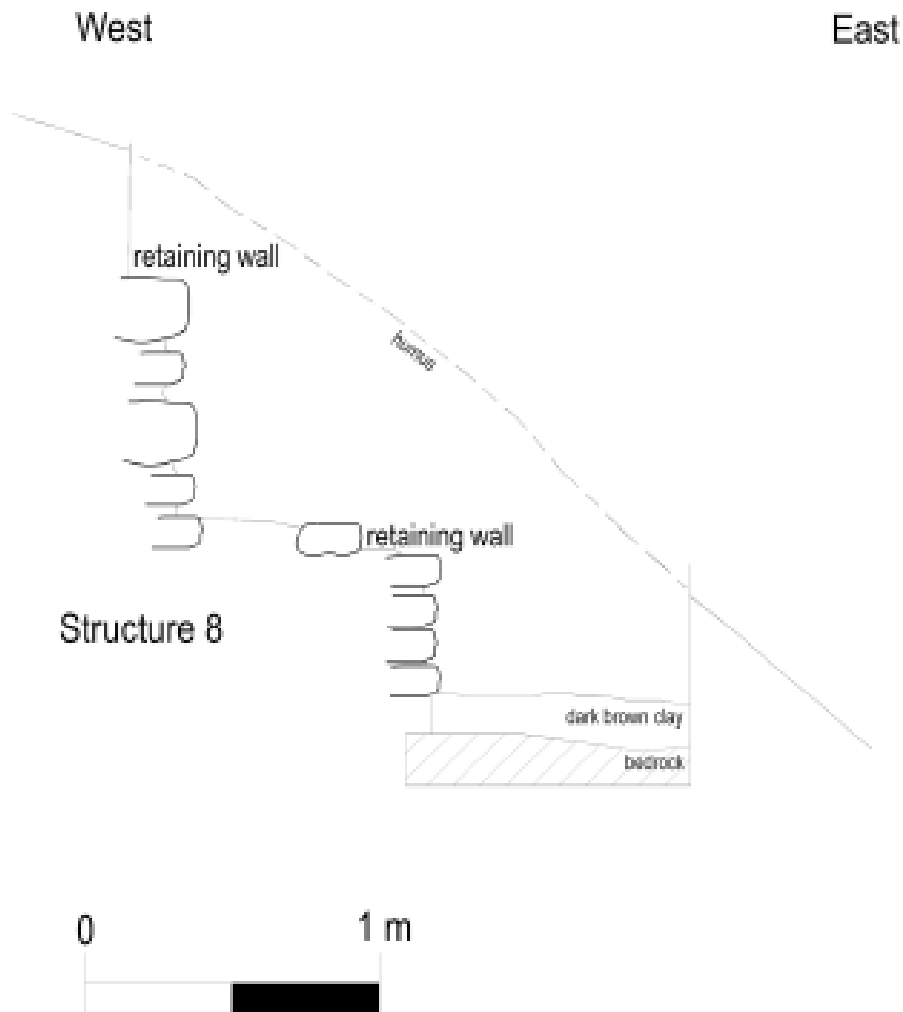


Figure 5.8: Structure 8 outer surface excavation profile

Overall, the excavations corroborate, in general terms, the chronological occupation patterns identified with surface and shovel test ceramic collections mentioned in Chapter 2. However, the limited size of the Civic Precinct excavations outside of Unit 3 did not allow the identification of Late Preclassic structures such as Unit 8 and Unit 10, mentioned in Chapter 3. In

that sense, Unit 3 was the only civic precinct locality where it was possible to notice buildings that were erected during an earlier period than the observed in surface, but those constructive phases were built during the Late Classic period, as explained in Chapter 4.

The Late Preclassic materials recovered in the Ballcourt central marker's vicinity – specifically the two complete Sierra Red vessels—, and the absence of household-related features, such as burials, suggest that Late Preclassic civic buildings were located in the same area of the Late Classic Civic Precinct. These structures were probably modified at the moment of the Late Classic re-settlement of the site, and their materials reused, or, if they were of a smaller size, they were enclosed inside the Late Classic structures. Further research in the Civic Precinct should tackle this issue.

5.3 CIVIC PRECINCT PLANNING

Civic precinct planning has been defined as a deliberate, self-conscious aspect of settlement patterning. An important assumption is that such civic planning systems are linked to the spatial traditions of a particular society. In Mayaland, it is widely argued that arrangement patterns of buildings in the civic precincts are related to general cosmological ideas (Ashmore 1986, 1989, 1991, 1992). The architectural center of power is equated with the center of the universe, and by association, locates the political and religious actors on specific places that convey authority. This model, denominated "Peten Template" was originally identified at Tikal, where there are different cases with variation in scale and magnitude, sometimes related to specific rulers (Ashmore 1991, 1992).

In general terms, a Peten Template is characterized by a north-south axis as the most relevant direction, which can be viewed as the most important guideline of civic precinct organization. Additional elements for the east-west axis are also important, in order to form a triangle with the north, frequently suppressing or omitting the marker of the southern direction. A ballcourt can be added as a transitional element between the north and south directions, and causeways are used in some instances for connecting the elements. As previously noted, the cosmological idea provides a link between site planning and cosmology. For the Peten Template model, the main symbolical implications are: a) A south direction with terrestrial and underworld

associations, and b) A north direction with a celestial association. Also, the south direction can be marked either with an elite residence, as in Tikal's central plaza, or by means of a structure with underworld associations, as in Tikal's "Twin Pyramid Complexes" (Ashmore 1986, 1989, 1991, 1992).

An emulation of civic architecture planning may relate to political affiliation with more revered or powerful places. This emulation can take different shapes, including specific design, plaza planning and building orientation (Ashmore 2005; Ashmore and Sabloff 2002; Ashmore, et al. 2004; Chase 1998; de Montmollin 1989, 1995; Houk 1996). In that sense, we should look for the presence or absence of Palenque-related spatial patterns in the civic precincts of centers located in intermediate levels of the civic hierarchy, to check for degrees of emulation/affiliation.

The civic precinct of Palenque is the result of almost seven hundred years of uninterrupted architectural modifications that started probably at the beginning of the Early Classic period and extended until the abandonment of the site at the end of the Late Classic (Bishop 1994; López Bravo 2005; Rands 1987; Schele 1986). Epigraphic and ceramic evidence allows the interpretation of its construction sequence, and the understanding of a general outline apparently laid out in the Early Classic and later modified, depending upon the specific building programs of consecutive rulers. Relevant for this analysis are four groups of buildings and the plazas associated to them: 1) The Temple of the Inscriptions and the Palace, 2) The Ballcourt, 3) The North Group Plaza, and 4) The Group of the Cross and the South Acropolis (Figure 5.11). Previous research has allowed the understanding of three different moments: the earlier civic planning during the Early Classic period; the reorganization occurred as consequence of the construction of the Temple of the Inscriptions during the 7th century A.D.; and a subsequent building program focused on the Group of the Cross.

Even with subsequent additions, the civic precinct of Palenque can be interpreted as a Peten Template case, with three major elements corresponding to a principal north-south axis: 1) The North Group, 2) The Ballcourt, and 3) The Palace. The North Group is located on the limit of the natural platform, constituting the actual boundary of the civic precinct on that direction. It includes the Temple of the Count, facing the west, and a row of five temples facing the south. A rectangular plaza is formed by this group of buildings, which is limited on the south side by the platforms associated to the Ballcourt

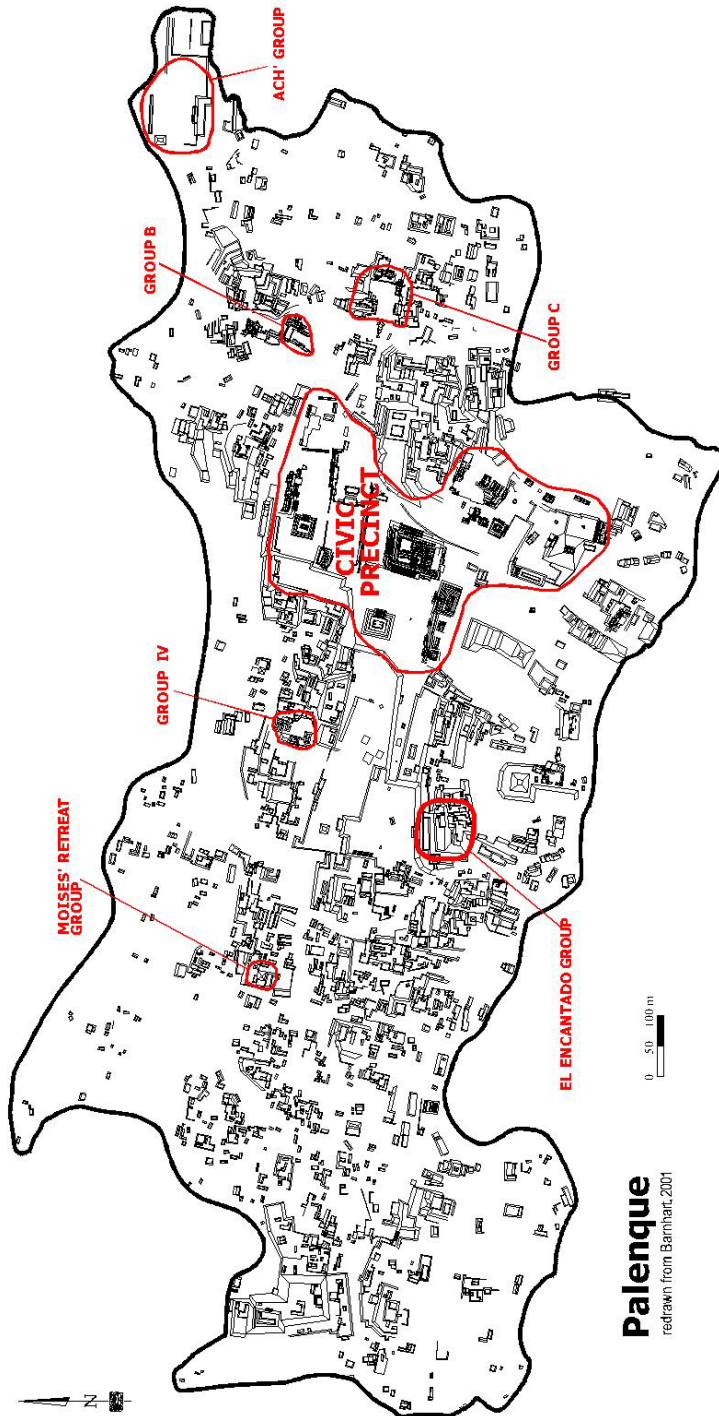


Figure 5.9: Civic Precinct and Selected Elite Household Plazas in Palenque

Located to the south, the Ballcourt Group is constituted by the two mounds of the ballcourt itself and a serie of low platforms that define a rectangular plaza and also separates it from the North Group Plaza. The Ballcourt is oriented on the north-south direction, and belongs

to the type II (open-ended with apron and cornice) of the general ballcourt classification (Taladoire 2001; Taladoire and Colsenet 1991).

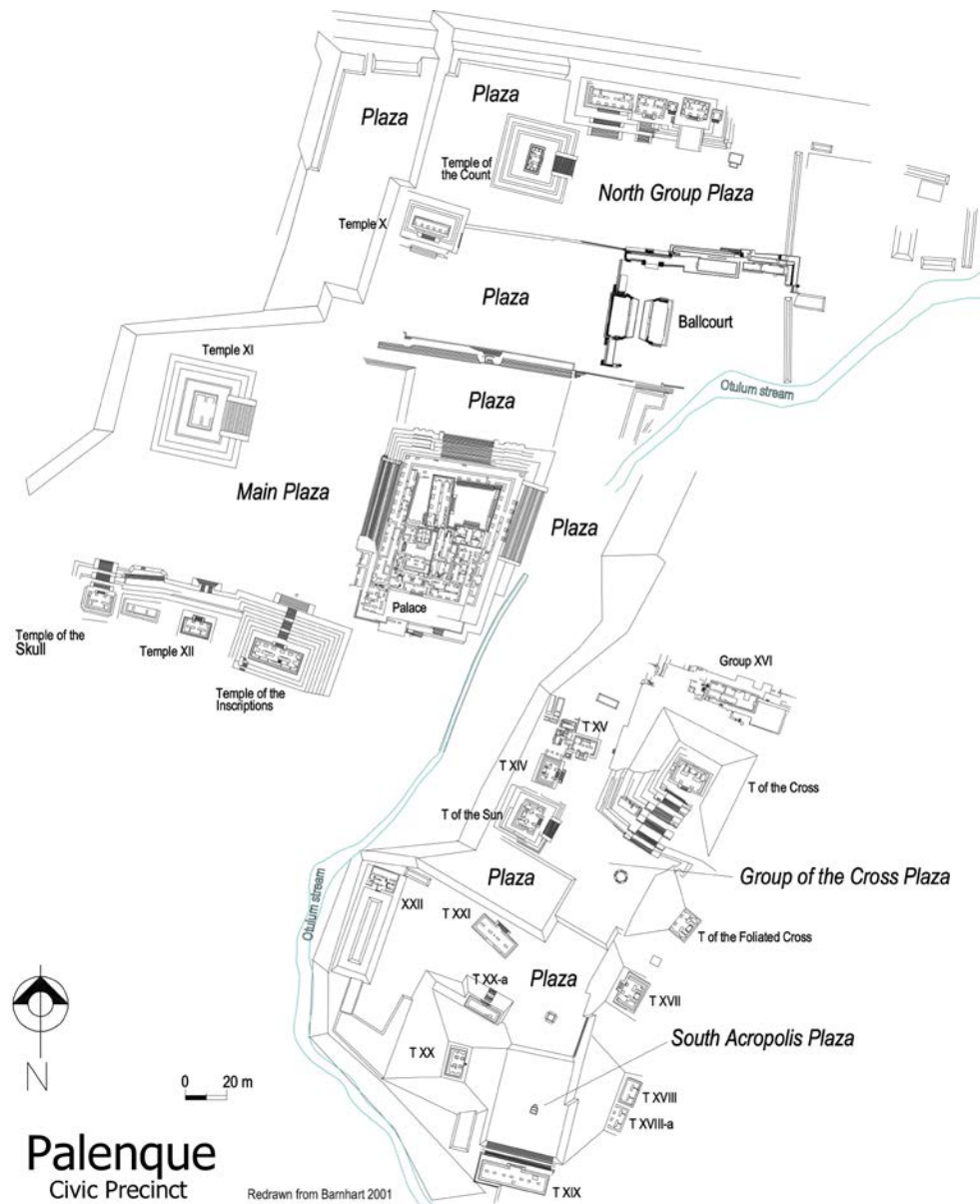


Figure 5.10: Palenque Civic Precinct

The Palace occupies a south position in the civic precinct of Palenque. This group of buildings was constructed upon an artificial trapezoidal platform, and includes four courtyards limited by range structures and a tower. Unfortunately, it has not been possible to identify which of the structures was actually the south marker, as in the case of Tikal’s central acropolis, but we

can assume a general set of elite activities, including residential activities, which also support the Peten Template model. The identification of markers for the east-west direction is difficult, and can be related to the actual extension of the intermediate terrace. We can suggest either the Temple of the Count of Temple XI as the west marker, but both appear to have been erected in later periods (Schele 1986).

An important later shift in the civic precinct's original layout relates to the construction of the Temple of the Inscriptions, commissioned by Pakal as his funerary monument and dedicated after his death on A.D. 682 (Robertson 1983; Schele and Freidel 1990). A large plaza was defined by this building on the south side and the Palace on the east. A small building, Temple X, was erected to mark the north direction. The Temple of the Inscriptions was conceived as a mortuary-commemorative monument, and became the central point of the whole civic-ceremonial precinct, changing the whole architectural template. As marker of the south direction, the Temple of the Inscriptions is highly related to the underworld, which is reinforced by the presence of Pakal's tomb. An interesting parallel is the orientation of Pakal's body, with the skull oriented to the north, the direction for rebirth (Schele and Freidel 1990).

A second shift relates to the construction of the Group of the Cross realized by his son Kan Balam II. This building program included the construction of the Temple of the Sun, the Temple of the Cross and the Temple of the Foliated Cross. These structures represent a cosmological map, with the Temple of the Sun and The Temple of the Foliated Cross marking the sun's daily east-west trajectory. Ashmore (1989:285) has noted the lack of a marker right to the south of this group, but more recent research has signaled a mortuary function for Temples XVIII, XVIIIa and XX in the South Acropolis (Morales Cleveland 1999; Ruz 1958b), a pattern similar to the previously described for the Temple of the Inscriptions (and Pakal's tomb) as the south marker of the civic precinct. The temples of the Group of the Cross were dedicated between A.D. 690 and 692, at the beginning of the Murciélagos ceramic complex, and have a distinctive plan, resulting from the addition of a small sanctuary in the rear of the interior gallery, an architectural design absent in other buildings at Palenque's civic precinct. The presence of an inner sanctuary at other civic precincts is usually interpreted as a contemporaneity marker (Schele 1986:125).

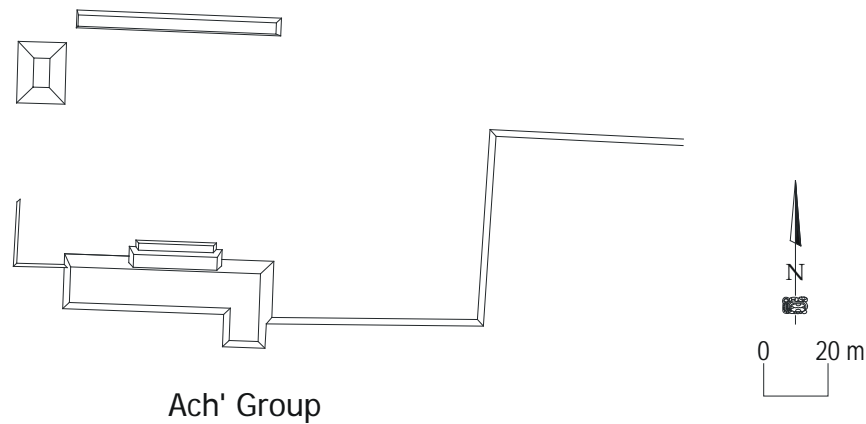


Figure 5.11: Ach' Group layout
(Redrawn from Barnhart 2001, with modifications)

Other Palenque civic layouts have been suggested for La Picota area, where the largest canalized system was built in order to allow the develop of a large open plaza (French 2002), but closer buildings lack clear evidence of urban planning; and the Ach' Group, the only large plaza built in the plains and located to the northeast of the civic precinct (Figures 5.11, 5.10). The Ach' group is formed by a fifty meters long range structure built atop a six meters platform, which presides over a large plaza limited to the north by another range structure and to the west by a pyramid. Research in the area found several agricultural terraces linked to the east of the plaza, which have been used to interpret the group as an administrative facility linked to production and/or redistribution activities (Barnhart 2001, 2005).

Taking into account the previously presented data, a comparison of civic precinct planning between Palenque and subordinate centers was performed with a focus in two different aspects: 1) The presence of a layout that shows similarities with Palenque's civic precinct and/or additional templates, and 2) An analysis of visible architectural aspects, specifically in terms of Palenque-related temple design and ballcourt architecture. These comparisons are presented in the following sections.

5.3.1 Civic precinct templates at subordinate centers

The seven civic precincts presented in Figure 5.12 belong to archaeological sites from the 2nd and 3rd level in the political hierarchy. In general terms, all the layouts conform to the identified north-south Maya template, which in this case includes the residence of the ruling family (generally a range structure), one or several pyramids or temples and a ballcourt. However, no subordinate center civic precinct has a northern marker with a Palenque's North Group arrangement, and also they lack the precise location of these buildings as noticed at Palenque: El Lacandón and Chinikihá have the most clear plaza arrangement, but only at El Lacandón the ballcourt is located to the north of the residence of the ruling family, in a pattern similar to Palenque's Palace, while ballcourts at Chinikihá, La Providencia and La Cascada are located to the south of the interpreted residence of the ruling family. Moreover, Xupá, Santa Isabel, and San Juan Chancalaito were built following a completely different pattern following a west-east orientation of range structures and pyramids, while ballcourts maintained a north orientation, excepting at San Juan Chancalaito where the playing alley was built with a west orientation.

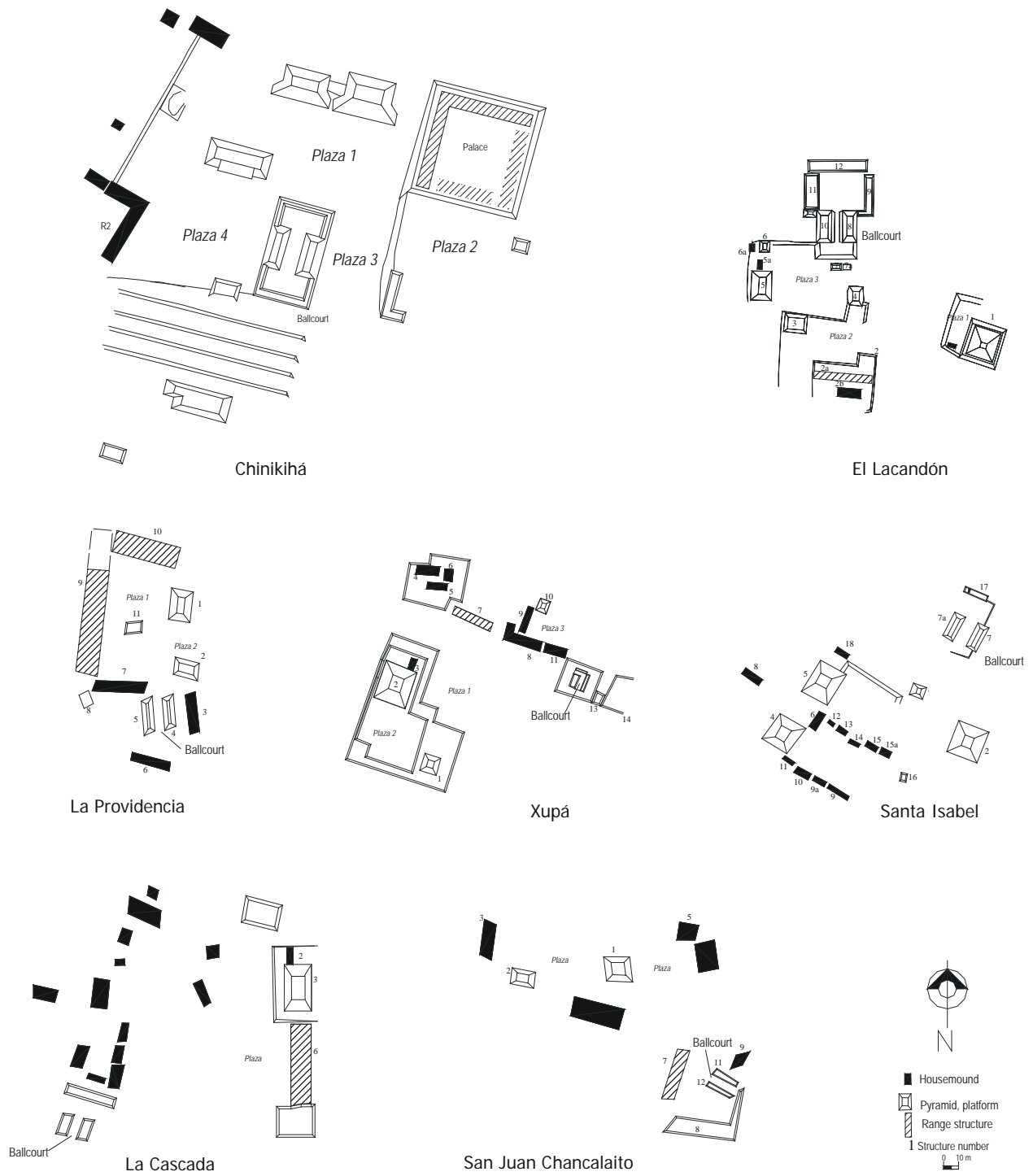


Figure 5.12: Civic Center Planning Comparison

On the other hand, El Lacandón’s civic precinct looks similar to Palenque’s Ach’ Group, with a west-east oriented range structure presiding over a plaza with a temple attached to the east side, as is possible to notice in the organization of Plaza 2 of El Lacandón (Figures 5.11 and

5.12), which includes Structure 2a, its supporting platform and Structure 3, which have been interpreted as a temple considering its architectonic characteristics visible on surface.

Overall, subordinate civic centers in the Palenque polity were designed by their builders to reflect general Maya cosmological ideas, without an evidently Palenque-related plan in most cases. El Lacandón civic center planning is the most similar to Palenque, considering a general north orientation and the ballcourt located to the north of the residence of the ruling family. Furthermore, El Lacandón's civic precinct planning also relates to the Ach' Group template, which could be interpreted as the result of the similar activities that were carried out in places designed by an administrative hierarchy, or be the decision of a specific elite group that decided to build a rural compound that reflected the planning of its urban residence.

5.3.2 Civic precinct's architecture

Civic precinct's architecture has been occasionally used as evidence of Palenque's interaction with other Northwestern Zone centers, specifically in terms of temples built with an inner sanctuary (Andrews 1975, 1989). However, this type of analysis lacks a good sample, considering the scarce research in subordinate civic centers. Temples with inner sanctuaries similar to the buildings of the Group of the Cross have been identified at El Retiro and Xupá (Blom 1926), and a temple at La Cascada (Maler 1908) seems more similar to Temples I and III of the North Group, as shown in Figure 5.12. Extensive looting of Structure 3 at El Lacandón allows the observation of some aspects of its original architectural design (Figure 2.9). I did not excavate the structure but it was possible to examine portions of its façade and walls, and some interior characteristics are visible in a looting trench. It seems that Structure 3 had two corridors and three doors, characteristics that can be interpreted as another example of the Cross Group architecture, even if it is still necessary to excavate in order to determine the presence of an inner sanctuary. In any case, the building was erected during the Murciélagos ceramic complex Late Classic re-occupation of the site. Other example of specific chronology has been documented for the Xupá temple, where the decipherment of a monument fragment established it was inaugurated in 682, a few years before the Cross Group at Palenque, a date that helps to sustain that these types of buildings located at subordinate centers were erected at the beginning of the Murciélagos ceramic complex (Martha Cuevas and Guillermo Bernal, personal communication).

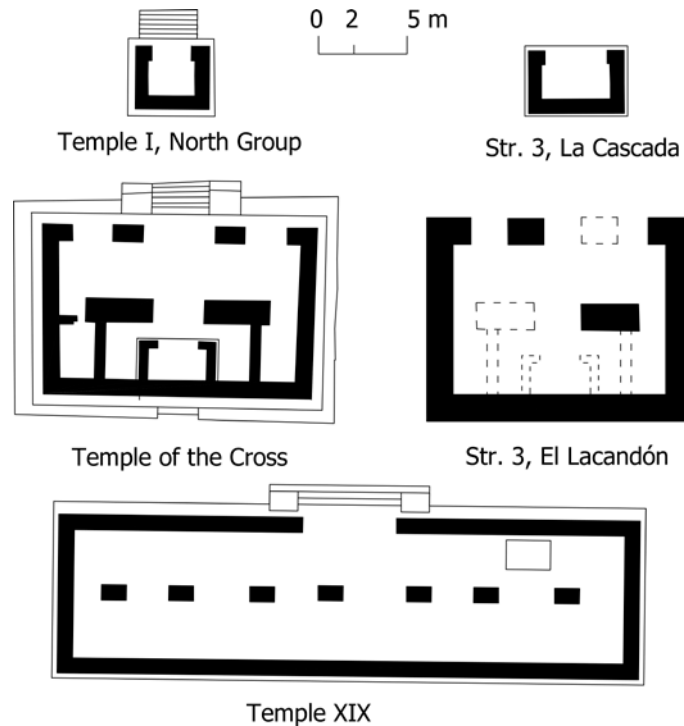


Figure 5.13: Temple Architecture Comparison
 (Temple I, Temple of the Cross and Temple XIX are located in Palenque's civic precinct)

Ballcourt architecture marks the place where ancient Maya elites played rubber ballgames that were infused with ritual and political importance, and also the place where important pre- and post-game rituals/feasts for a wider audience were carried out (Cohodas 1991; de Montmollin 1997; Fox 1996; Schele and Freidel 1991; Taladoire 2001). Until recently, the absence of ballcourts at subordinate civic centers in the Northwestern Zone was interpreted as the result of political centralization, with ballcourts only built in dynastic capitals and linked to a military ideology presented on their associated monuments (Taladoire 1991:174). However, ongoing research in the region is improving the documented ballcourt record at both dynastic capitals and their subordinate centers (Juárez Cossío 2003; Martos López 2005; Liendo Stuardo 2005) and also providing more specific information of the Palenque polity (Liendo Stuardo and López Bravo 2005).

Table 5.6: Ballcourt data of the Northwestern Zone of Mayaland

| | PH | Type | Axis | Alley Length | Alley Wide | Monuments |
|----------------------|-----------|-------------|-------------|---------------------|-------------------|--------------------|
| Palenque | 1 | II | NS | 22 | 9 | |
| Santa Isabel | 3 | II | NE-SW | 18 | 8.7 | |
| El Lacandón | 2 | VII | NS | 22 | 8.7 | Markers |
| La Providencia | 3 | II | NS | 22 | 6.5 | |
| Xupá | 3 | VII? | NS | 11 | 4 | |
| La Cascada | 3 | II | NS | 15 | 6 | |
| San Juan Chancalaíto | 2 | II | NW-SE | 20 | 5.5 | |
| Chinikihá | 2 | VII | NE-SW | 28.8 | 10.4 | |
| Lindavista | 2 | II | EW | 24 | 5.5 | |
| Piedras Negras I | 1 | I | NE-SW | 21.3 | 11 | Markers |
| Piedras Negras II | 1 | II | NE-SW | 18 | 12 | Markers |
| Yaxchilán I | 1 | II | NE-SW | 19 | 4.5 | Markers |
| Yaxchilán II | 1 | II | NE-SW | 18 | 5 | |
| Plan de Ayutla | 1 | VII | NE-SW | 20 | 14 | Markers |
| Moral-Reforma | 1 | II | NS | N/A | N/A | Sculpture |
| Toniná I | 1 | VII | NS | 29 | 6 | Sculptures/markers |
| Toniná II | 1 | II | EW | 20 | 7.6 | Sculptures/markers |

KEY. PH: civic center position in political hierarchy; II: open-ended, benches on the sides of the playing field; VII: enclosed ballcourt with benches and dissimilar end zones; NS: north-south; NW-SE: northwest-southeast; EW: east-west; NE-SW: northeast-southwest; N/A: information not available. Alley Length=mound length; Alley Wide includes benches.

References: (Juarez Cossío 2003; Liendo Stuardo and López Bravo 2005; Martos López 2005; Satterthwaite 2005 [1944]; Taladoire 2001; Taladoire and Colsenet 1991).

Ballcourt architectural remains are highly suitable for comparison, considering that their main characteristics are easier to observe on the surface even in cases of modern disturbance and looting. Table 5.6 shows a general description of ballcourts in the Northwestern Zone, including those located in the Palenque polity capital and subordinate civic centers, and others from capitals of adjacent polities (Piedras Negras, Yaxchilán, Plan de Ayutla, Moral-Reforma and Toniná, for their specific location see Figure 2.). The first interesting feature is the difference in the number of ballcourts in the capitals, suggesting two different regional practices: Palenque, Plan de Ayutla and Moral-Reforma have only one ballcourt, while the other paramount centers – Piedras Negras, Yaxchilán and Toniná—have two playing alleys. In general terms, the majority of the ballcourts in the Palenque polity complain to the orientation expected according to the Maya template: a north-south orientation. The San Juan Chancalaíto ballcourt has the only northwest-southeast orientation, while the Lindavista alley shows an east-west orientation, a feature only present at Toniná. Considering ballcourts in other political capitals, Moral-Reforma,

Piedras Negras and Yaxchilán's ballcourts show a northeast-southwest orientation, while Moral-Reforma and the main Tonina's ballcourt have the common north-south orientation.

In terms of ballcourt size, we could expect that alley length and alley wide in ballcourts located in subordinate centers of the Palenque polity should reflect the proportions observed in the capital's ballcourt, considering that design emulation could relate to political affiliation with more revered or powerful places (Ashmore 2005, Ashmore and Sabloff 2005; Ashmore, et al. 2004). However, the observed surface data does not agree completely with this prediction: Xupá and La Cascada's dimensions are considerable smaller, but a controlled excavation could help to clarify this issue, considering that the dimension pattern was clearly present at El Lacandón, the only excavated ballcourt in a subordinate center. These operations allowed the recovery of markers and associated offerings, described at the beginning of the chapter. Drum-shaped markers were not discovered in the Palenque ballcourt (Ruz Lhuillier 1952, 1962), and the markers recovered at Toniná, Yaxchilán and Piedras Negras are shaped as flat disks (Satterthwaite 2005[2004]; Taladoire 1991:166; Becquelin and Baudez 1979). The only other drum-shaped marker in the Northwestern Zone was found at the center of Plan de Ayutla's ballcourt, with a jade earspool and a fossilized shark teeth as offerings (Martos López 2005:5).

Finally, Table 5.6 shows that the preferred ballcourt architecture in the Palenque polity was Type II, open-ended with lateral benches. However, two ballcourts were built enclosed: El Lacandón and Chinikihá. Interestingly, Type VII ballcourts seem more related to capitals outside the Palenque polity such as Plan de Ayutla and Toniná, but a dissimilar northern end zone is only present at Toniná in the Northwestern Zone and Chinkultic and Ojo de Agua in the Chiapas Highlands (Taladoire 1991:169).

Overall, El Lacandón civic precinct's architecture suggests a mixture between Palenque features and others from outside the capital and even the entire polity. On one hand, civic center planning was intended to depict similarities with a Palenque template, such as the position of the residence of the ruling family and the ballcourt located to the north, a temple that resembles the Cross Group design and a playing alley with the same dimensions that at Palenque. On the other hand, despite this clear demonstration of affiliation, the local elite could decide to attach themselves also to ideas outside the polity but not linked to a closer political realm such as Piedras Negras, but instead related to far away polities as Plan de Ayutla and Toniná, as reflected in ballcourt type and drum-shaped markers.

5.4 SUMMARY

This chapter has shown some hints regarding the functioning and organization of El Lacandón as a 2nd level center in the political hierarchy of the Palenque polity. As a district capital, El Lacandón did not exercise a centralized system as intense as the observed for the Inner Hinterland around the polity's capital, but instead presided over elite and commoners distributed along the district and in the different levels of the political hierarchy. This decentralized pattern allowed to the inhabitants the possibility of a negotiated local identity that included features common at Palenque but also others typical of other political capitals.

In terms of civic precinct planning, El Lacandón was shaped using a very general Palenque template that located the ballcourt to the north of the ruler's residence, and also resembles the organization of the Ach' Group, a large plaza located outside of Palenque's civic precinct. However, the El Lacandón elite inhabitants were able to apply also patterns that linked them to groups living outside the capital and to other paramount centers outside the Palenque polity: the ballcourt is a copy of Palenque's in terms of dimensions, but belongs to a different type found at Chinikihá, Plan de Ayutla and Toniná.

6.0 CONCLUSIONS

This dissertation has tried to unpack the concepts associated with centralized and decentralized models of state integration, specifically in terms of the household level, as a contribution to the ongoing theoretical discussion regarding Ancient Maya political and economical structure. In addition, it presents methodology and empirical evidence for characterizing the relations between an ancient Maya capital –Palenque—and a secondary center of its political realm –El Lacandón—through the analysis of specific trends inside the basic social and economic unit: the household. Contrary to what was originally suspected and planned for, El Lacandón did not have a continuous span of Late Preclassic through Late Classic occupation. Instead it proved to have a 600 year long Early Classic hiatus that extends into the first part of the Late Classic period. So, instead of studying diachronic transformations within El Lacandón, the project turned to comparing two discrete occupations in the community, a Late Preclassic one and a Late Classic one. Additionally, the scope of study for the Late Classic occupation at El Lacandón was widened by using old and new excavation, mapping, and survey data from Palenque and its hinterland region. The patterns at El Lacandón were compared to those at its capital, Palenque, and El Lacandón was clearly placed within the geopolitics of the Palenque kingdom.

6.1 TWO POINTS IN TIME

This study has shown the functioning of two communities that were settled in a specific space but were separated by a time lapse of 600 years: 1)The intrusive or colonial Late Preclassic community; and 2)The secondary center of the Palenque polity at the end of the Late Classic period. The foundation of the first community is linked to the arrival of Maya migrants associated to state-level development at El Mirador about 300 b. C. (Clark 2000; Clark, et al.

2000; Sharer 1992; Sharer and Traxler 2006), and its abandonment correlates with the development of dynastic capitals in the Northwestern Zone after El Mirador's demise around A.D. 150, such as Piedras Negras, and specifically Palenque.

The end of the Late Preclassic period in the Northwestern Zone is characterized by a process of population concentration in several centers that became dynastic capitals during the Early Classic period. This study has shown that, for example, El Lacandón was abandoned around A.D. 150/200, and its population probably moved to Palenque (López Bravo and Venegas Durán 2012). In the Upper Usumacinta Region, analogous evidence suggest that Fideo and Esmeralda (Figure 2.2b), two Late Preclassic small communities, were abandoned at the same time and their population was absorbed by Piedras Negras (Golden, et al. 2005; Houston, et al. 2003).

The foundation of the Palenque dynasty is marked by the accession of K'uk' Balam I on A.D. 431, at the end of the Early Classic period. By that moment, Palenque's two previously separated settlement clusters had united, with an area of 70 ha and a population of 3700 residents (Figure 3.20). This was probably the result of continuing concentration and the development of an urban/rural dichotomy marked by a densely populated capital surrounded by a comparatively empty agricultural sustaining area (Rands 1973:161; Liendo Stuardo 2002:95-101). It seems that households lost their ability to settle close to their fields, possibly as a consequence of an increase in political integration (de Montmollin 1987; Liendo Stuardo 2002:110).

The reoccupation of El Lacandón was marked by the foundation of the Late Classic community during the 8th century A.D. At that time Palenque was the largest city of the Northwestern Zone and was the political capital of a vast realm. After three hundred years of dynastic rule and its ascend to political prominence under the rule of Pakal II, the organization of the Palenque polity required the foundation of a community that functioned as a 2nd-level center in the political hierarchy, to preside over elite and commoners distributed along the southern margin of the Chacamax river.

6.2 DIFFERENCES IN HOUSEHOLD ECONOMIC PATTERNS

The analysis of household economic patterns was carried out following three specific trends: production, raw materials acquisition and consumption. Obsidian was used as both a rare, imported material that was distributed among households, and also to the characterization of the main productive activity of the analysis: prismatic blade production. Chert was also useful for the analysis of production and complemented the characterization of chipped stone consumption. Other examples of productive activities were the manufacturing of bark paper, woodcarving, roller stamp imprint, and figurine production. In terms of consumption, the analysis focused in differential access to obsidian, and feasting, evidenced in the differential quantities of serving vessels.

During the Late Preclassic period, obsidian blade production was organized as a household level production, with non-specialized individuals making tools sporadically to provision their own family, and also an additional amount that may be exchanged with other households. Blade production was not dependant on elite interests, and commoner households were more intensely involved in the manufacturing of obsidian blades. Households of both statuses realized other production activities, such as paper production, woodworking and paper/cloth imprintings.

The pattern was different during the Late Classic period, when the focus of blade production changed to elite households, being absent from both the super elite Unit 3 and commoner households Units 20 and 27. This new pattern closely emulates Palenque's, where elite households –Units C, B and I—were more intensively dedicated to blade production.

Wood carving –evidenced by the presence of greenstone axes—was an activity performed at both elite and commoner households during the Late Preclassic, and during the Late Classic was concentrated in Unit 4, an elite household. Figurine production, which was not detected during the Late Preclassic, was also performed in elite households –Units 4 and 5—during the Late Classic.

Overall, the analysis shows a trend to concentration in El Lacandón's Late Classic households of obsidian blade production, woodcarving and figurine production. This pattern does not fit into the interventionist state program, which would seek the development of a capital-rural dichotomy, with production removed from the smaller communities and the

subsequent establishment of specialized workshops at the capital, so we can conclude that in terms of production Palenque's state used non-interventionist strategies that facilitated the concentration of production in local elite households. In addition, the analysis of Palenque's collections does not show the existence of specialized workshops: production was still organized at the household level, and only presents more intensity.

El Lacandón's households Late Preclassic obsidian consumption shows a pattern of similar proportions between elite and commoner households. During the Late Classic, obsidian became more frequent, as evidenced by higher proportions in the total chipped stone assemblage, but it also appears evidence of a more concentration in elite households than in commoner households. This differential access is clearly evidenced in the chipped stone assemblage of Unit 3, the super elite household, where a 94.5% of the chipped stone was obsidian. In general terms, this pattern fits also with a non-interventionist strategy, with commoner household's wealth decreasing as local elites strived to maintain –or even maximize—its standard of living.

Feasting activities were preferentially realized in El Lacandón's elite households during the Late Preclassic, with serving vessel's proportions suggesting that elite households could organize bigger feasts than commoner households, events that were attend by larger groups of people using a great number of serving vessels. On the other hand, diacritical feasting was apparently not realized, considering that the proportion of highly decorated vessels in the serving vessels assemblage was almost identical.

The Late Classic feasting analyses include a comparison with Palenque's households, and several significant changes were detected. In general terms, feasting intensity at El Lacandón is more evenly distributed in elite and commoner households than in both the Late Preclassic El Lacandón community and in Late Classic Palenque. These differences were more evident in the Late Classic comparison, with differences between household's classes more tangible at Palenque than at El Lacandón. In addition, both El Lacandón and Palenque's elite households had the largest quantities of serving vessels, which was more evident in the residences of the ruling families: Unit 3 at El Lacandón and the Palace in Palenque.

The distribution of Highly Decorated Vessels was found to be similar in El Lacandón and Palenque: households located close to the residence of the ruling family had lesser amount of them, while commoners located in the periphery were able to have larger quantities, maybe

because they developed their own system of diacritical feasting which was independent of the system observed in the center of the communities.

The most interesting observed difference was the distribution of exotic serving vessels. Chablekal Gray vases fragments were found evenly distributed among elite and commoner households at El Lacandón, suggesting that they worked as a political currency (LeCount 1999:254), with local elites attempting to consolidate commoner support by bestowing luxury ceramic items. On the contrary, commoner households in Palenque did not have access to Chablekal Gray materials, suggesting a more restricted distribution controlled by the dynasty, as reflected in the comparatively highest proportion present in the Palace midden.

6.3 DIFFERENCES IN HOUSEHOLD IDEOLOGY

The analysis of household ritual relied on the differential distribution of figurines and censers, and in burial practices patterns. Censer fragments were not identified in the general ceramic assemblage during the Late Preclassic period, but were detected as funerary offerings. Figurine fragments were scarce, which is an observed pattern in other Late Preclassic Maya communities, and were more abundant in elite households, specifically in Unit 4. It seems that elite households (Unit 4 and Unit 5) residents performed domestic figurine rituals more frequently than commoner households (Unit 8 and Unit 10) residents.

The majority of burials were found in an extended, supine position, and only one burial was found in a flexed position. In terms of orientation, the preferred orientation was south, even if all the cardinal directions were identified. The presence of a supine position has been interpreted as evidence of a less elaborated burial practice, while the presence of flexed and seated positions is usually interpreted as evidence of a more complex preparation and wrapping procedure (McAnany, et al. 1999:133) that would have allowed ritual display of a deceased high status person. This seems not have been the case in the Late Preclassic El Lacandón, where the only flexed burial was a three-years old child (Burial 4/8) who was interred atop the head covering of Burial 4/6, an adult male.

Regarding household ideology, the abundance of funerary offerings found in Late Preclassic burials provide a glimpse of social differentiation, specifically related to the

expression of ideological patterns. Unit 4 elite burial furniture (Burials 4/6 and 4/7) is more abundant and relates to status differentiation linked to abundant furniture and prestige items (jade, chocolate pots). On the other hand, funerary goods from commoner households Unit 8 and Unit 10, such as stingray spines, censers and bone perforators, seem to reflect general Maya ideas regarding ancestor veneration. Similar arrangements of social differentiation expressions have been detected at other Late Preclassic periphery communities such as Cuello and K'axob (Hammond 1999; McAnany et al 1999), both Northern Belize communities with a long Middle to Late Preclassic occupation that show burials patterns and ancestor veneration linked to a shift towards centralized power structure. In contrast, evidence from the comparatively small and briefly occupied Late Preclassic community of El Lacandón suggests that its socioeconomic system did not develop locally but arrive with founders who already had ascribed status.

Several changes were detected in this observed pattern during the Late Classic. Figurines became more abundant in both elite and commoner households, but this variation disappears in the aggregate analysis, which shows that domestic figurine rituals were more frequent at elite households than in both the super elite Unit 3 and in commoner households.

Late Classic burials were found in elite and super elite contexts, but we were not able to conclude if this was related to smaller excavation areas or to modern land use disturbances. Elite graves (Units 3 and 5) were rather simple and included a significantly minor grave furniture assemblage. The most common grave type was the simple pit, occasionally transformed into cist due to crudely made stone lining and ceiling with the majority of interments deposited in a flexed position and their head preferentially oriented to the north. The flexed position fluctuated by the left or right side, and only one of the interments, Burial 4/10, was found in a tightly flexed supine posture, suggesting the presence of a firmly wrapped funerary bundle. Burial 4/12 received also a special treatment: its body wrap was sprinkled with a red pigment that, after decay, impregnated bone surface. Funerary offerings in pits and cists were minimal: a large obsidian flake associated to Burial 4/5, a secondary interment, was the only recovered funerary item in simple pits and cists.

The two excavated crypts had a comparatively high construction quality, highly valued furniture and similar body position and head orientation. The interments of both crypts were deposited on a north-oriented, extended position, which suggests this was a body treatment reserved to, or at least a privilege of, the upper section of the El Lacandón elite. The crypt of

Burial Str3/1, located in the proximity of super elite Unit 3, had stone walls covered by two layers of stone slabs, and grave furniture included two small cylindrical jade beads, the most valuable items of the entire Late Classic burial furniture assemblage. The individual was the male of more advanced age at death of the Late Classic burial sample (35-39 years old), and was buried inside a tight wrap inferred by the closeness of the knee bones of both legs.

Crypt 4/2a-b was found in Unit 4, an elite household. It had walls made of vertically positioned roughly shaped slabs and a single layer slab cover. Two burials were found in the crypt: a primary burial of an adult male and a secondary interment of a 10 years old child of indetermined sex. The furniture included a spindle whorl coarsely made from a Sierra Red ceramic sherd, and a complete manatee rib.

El Lacandón's primary interment practices were compared to chronologically similar samples from Palenque residential units. The most common Late Classic body position at Palenque was extended (83.1%), a pattern different from the observed at El Lacandón, where the most common body position was flexed (75%). Late Classic burial orientation at Palenque was preferentially with the head to the north (98.5%), while El Lacandón's sample, even if the most common orientation was also to the north (62.5%), shows more diverse practices, with burials oriented to the east and west (12.5% and 25% respectively).

Overall, these analyses suggest that the ideology of the super elite household (Unit 3) was intimately related to Palenque's *great tradition* burial practices, according a preferred extended body position and head oriented to the north. On the other hand, it seems that Unit 4, an elite household, had an ideology that included more diverse practices that diverge from the detected in Late Classic Palenque, considering the more abundant presence of flexed internments oriented to the north, east and west, which was possibly related to a local *little tradition*. This pattern fits into a non-interventionist format.

6.4 DIFFERENCES IN SOCIOPOLITICAL PATTERNS

El Lacandón's Late Classic civic precinct's architecture presents features developed both in Palenque and also others from outside the capital and even the entire polity. In general terms,

civic center planning was intended to depict similarities with a Palenque template, such as: 1) the southern position of the residence of the ruling family that correlates with a ballcourt located to the north; 2) the presence of a temple with the same plan design that the buildings of Palenque's Cross Group and 3) a playing alley built with the same dimensions as Palenque's.

On the other hand, despite this clear demonstration of affiliation, the local elite could decide to attach themselves also to ideas outside the polity but not linked to a closer political realm such as Piedras Negras, but instead related to far away polities as Plan de Ayutla and Toniná, as reflected in ballcourt type and drum-shaped markers, features not present in Palenque.

The analysis of elite and commoner household distribution in the immediate hinterland of Palenque and adjacent districts allowed us to understand by the first time the functioning and organization of the Palenque polity. As a district capital, El Lacandón did not exercise a centralized system as intense as the observed for the Inner Hinterland around the polity's capital, but instead presided over elite and commoners distributed along the district and in the different levels of the political hierarchy. In general terms, this decentralized pattern seems linked to a non-interventionist state that allowed El Lacandón's inhabitants the possibility of a negotiated local identity that included features common at Palenque but also others typical of other political capitals.

6.5 FUTURE RESEARCH

The majority of the recent attempts to understand Classic period Maya political systems have used epigraphic evidence for the reconstruction of capital-hinterland interaction and macro-scale geopolitics. As vivid as those reconstructions can be, the nature of the evidence does not allow a complete view of Ancient Maya society because available inscriptions do not concern the everyday activities of most of the population. This research attempted to develop fieldwork strategies that allow us to discern the effects of political, economic and social integration on the everyday life of the population, which could be profitable undertaken at the household and community level.

For example, with reference to the Palenque region, El Lacandón's abandonment at the end of the Late Preclassic period, and the possible movement of its population into a growing

Palenque city, suggests an important line of research that should revisit ceramic collections, and eventually led to new excavations, of rural communities with a Late Preclassic occupation, such as Nututun, Paso Nuevo, Reforma de Ocampo and others (Figure 2.2), in order to assess if those communities were also involved in this process. This line of research will allow a detailed archaeological examination of the development of Palenque as a political capital at the beginning of the Early Classic period, which will be contrasted with current interpretations based on epigraphic analysis.

Ongoing research in Palenque (López Bravo and Venegas Durán 2012) and its hinterland (Liendo 2011, 2012) provide a general framework for the design of more research oriented to the analysis of the relationships between commoner and elite households at both secondary centers, such as El Lacandón, and also in the capital. Further research in Palenque itself should include the analysis of one of the city's barrios, with small excavations that will help to understand the economic, ideological and political connections among elite and commoner households that supposedly belong to a common patrilocal lineage (López Bravo and Venegas Durán 2012). In terms of economic integration, further research should study continuity and changes in household economic organization in the area directly adjacent to the capital, and then compare it with the results of the present study that concerns an area more distant from the city.

Previous research in the Inner Hinterland (Liendo Stuardo 2002a, b) provided an analysis of the organization of agricultural production, and may be enhanced with more excavations in elite and commoner rural households that may provide a better chronological assessment and a more detailed view of the organization of productive activities (such as obsidian blade production and ceramic production) and differences in consumption of obsidian, chert, jadeite and other imported materials.

In terms of household ideology, future research should address the differences observed between a Palenque (capital)-oriented *great tradition* and a *little tradition* associated to the rural population distributed along the different districts of the Palenque polity. This dissertation has shown that, at the end of the Late Classic, there were significant differences in terms of burial practices in elite households of El Lacandón and Palenque, which may be useful to compare with other materials recovered in other secondary centers.

Regarding political integration, the analysis of civic-precinct planning allowed the understanding of similarities and differences between the capital and El Lacandón. Further

excavation of civic-precinct buildings (temples, ballcourts, large residential platforms) at second-level communities such as Xupa, La Cascada, Reforma de Ocampo, and San Juan Chancalaito, will provide us with a more detailed chronology and a detailed set of building plans that may be compared to Palenque's architectural template, in order to understand another dimension of the relationships between local and capital elites, a line of research that is being applied at different polities of the Maya Region, such as Copan in Honduras (Canuto 2002; Saturno 2000); Xunantunich in Belize (LeCount and Yaeger 2010); Aguateca in Guatemala (Eberl 2007) and the border between Yaxchilan and Piedras Negras, in the Northwestern Zone (Golden et al 2005; Houston et al 2001, 2003).

APPENDIX A

CERAMIC ANALYSIS


Analysis of El Lacandón's ceramics was realized following the lines of research previously established by Robert L. Rands (1967b, 1973, 1974, 1977, 1987, 2002), the main investigator of the ceramics of the Palenque region during five decades, with further development by Elena San Román Martín (2005a, 2005b), who was in charge of the analysis of the ceramic collections of the Palenque Project (INAH-México), under the direction of Arnoldo González. Vessel and rim shapes were analyzed following the directions established by the analysis of Seibal's ceramics (Sabloff 1975), with modifications by San Román.

This Appendix contains a catalog of Late Preclassic complete vessels.

A.1 COMPLETE VESSELS FROM THE LATE PRECLASSIC PERIOD

Late Preclassic ceramic pastes were fragile and hard, with coarse and grainy texture. Two different ranges of color were identified: a reddish-brown, yellow (7.5 YR 6/6, 7/6) to yellowish red (SYR 5/6); and a light brown (10YR 8/4). Quartz sand is very common as a natural inclusion, and in some cases ground calcite was used as temper.

Table A.1: Complete Vessels from Unit 4, Burial 6

| Photo | Feature | Type | Shape | Diam. (cm) | Description |
|--|-------------|-------------------------|--|------------|---|
|  | 9 | <i>Morfin Unslipped</i> | Bowl with flared sides and everted rim | 16 | Light brown paste (10YR 8/4), with quartzite and mica inclusions. Fire-closed on interior. Culbert 1993, Fig. 7, 9, 12 |
| | 10a (upper) | <i>Morfin Unslipped</i> | Bowl with flared sides and direct rim | 14.5 | Light brown paste (10YR 8/3), with quartzite and mica inclusions. Culbert 1993, Fig. 7, 9, 12 |
| | 10b (below) | <i>Morfin Unslipped</i> | Bowl with flared sides and everted rim | 15.5 | Light brown paste (10YR 8/4), with quartzite and mica inclusions. Fire-closed on interior and exterior. Culbert 1993, Fig. 7, 9, 12 |





| | | | | | |
|---|----|-------------------|---------------------------------------|----|---|
|  | 12 | <i>Sierra Red</i> | Jar with spout | 11 | Light brown paste (10YR 8/4), with quartzite and mica inclusions. Exterior red slip (10R 4/8). Very similar to shapes described in Culbert 1993, Fig. 4c, 9b; Adams 1971, Chart 3, 4 a-b; but this vessel had a supported spout |
|  | 14 | <i>Sierra Red</i> | Dish with flared sides and direct rim | 32 | Light brown paste (10YR 8/4), with quartzite and mica inclusions. Exterior red slip (10R 4/8). |

Table A.2: Complete Vessels from Unit 4, Burial 7.

| Photo | Feature | Type | Shape | Diam. (cm) | Description |
|---|---------|-------------------------|---|------------|--|
|  | 4 | <i>Morfin Unslipped</i> | Bowl with flared sides and direct rim | 14 | Light brown paste (10YR 8/4), with quartzite inclusions. Poorly shaped and finished. Fire-clouded on interior. Culbert 1993, Fig. 7, 9, 12 |
|  | 5 | <i>Altamira Fluted</i> | Dish with vertical sides and direct rim with three flutes | 16 | Light brown paste (10YR 8/4), with quartzite inclusions. Interior and exterior red slip (10R 4/8), with large, brown |



| | | | | | |
|---|---|-------------------------------|--|------|---|
| | | | | | (7.5YR 4/4) stains. Forsyth 1989:21; Smith and Gifford 1956:170. (The separation between Sierra Rojo and Altamira Fluted is not clear, verify with Elena San Román, she uses the distinction) |
|  | 6 | <i>Sierra Red</i> | Restricted orifice small shouldered jar | 10.5 | Vessel with incurved sides, small outcurved neck, recurved sides and one ridge. Red slip (10R 4/8) in the exterior and the interior rim. Shape similar (but more complex) to Adams 1971, Fig. 14-1; Forsyth 1989, Fig. 7 <i>MMM</i> , Fig. 8 <i>NNN</i> |
|  | 8 | <i>Sacluc Black on Orange</i> | Lateral-flange dish with exterior rim bolster and composite silhouette | 28 | Light brown paste (10YR 8/3), with quartzite inclusions. Decoration by black parallel lines (with a width of 2.4-2.6 mm) in orange slip (5YR 6/8 reddish yellow). The decoration covers the interior and the exterior until the flange. Shape similar to Forsyth 1989:55-56, Fig. 6, A.; Adams 1971:28. |

Table A.3: Complete Vessels from Unit 8, Burial 2.




| Photo | Feature | Type | Shape | Diam. (cm) | Description |
|---|---------|---|--|--|--|
|  | 5 | <i>Laguna Verde Incised or Correlo Incised Dichrome</i> | Bowl (vase?) with outcurved sides, basal and upper molding, direct rim | 13.5 | Yellow paste (10YR 7/6) with interior and exterior red slip (10R 4/8). Parallel incisions in the central section of the body (between moldings), a section without slip. It's difficult to conclude if this was the result of damage. The shape is similar to Adams 1971, Chart 3, 4C1; and also to Ii |
|  | 4 | <i>Laguna Verde Incised</i> | Plate or Dish with incurved sides | 20 | Light brown paste (10YR 8/4) with interior and exterior red slip (10R 4/8). Pre-slip internal incisions. Shape similar to Culbert 1993, Figure 13a; verify others. Popular shape in the region, as observed in Rands 2002; present in San Roman's Palenque catalog. |
|  | 6 | <i>Sierra Red</i> | Mushroom stand | 2, (orifice), Center diam= 16 cm; Height=17.5 cm | Light brown paste (10YR 8/4), very thin walls (4 mm). Exterior decorated with red slip (10R 4/8). It lacks the unslipped and fingernail impressed upper surface that is a unique attribute of the type Hongo Composite. This example is a complete vessel with a flat base, which is different from the open-base examples known from other sites. Compare to Adams 1971, Fig. 19b; Ball 1977:195-196; Forsyth 1989:33; Sabloff 1975, Figs. 165-166. |

Table A.4: Complete Vessels from Unit 10, Burial 1



| Photo | Feature | Type | Shape | Diam. (cm) | Description |
|---|---------|------------------------|---------------------------------------|------------|--|
|  | 1 | <i>Altamira Fluted</i> | Vase with flared sides and direct rim | 12 | Light brown paste (10YR 8/4). Exterior and interior red slip (10R 4/6). Two horizontal flutes below the rim. |

Table A.5: Complete Vessels from Unit 10, Burial 2

| Photo | Feature | Type | Shape | Diam. (cm) | Description |
|---|---------|------------------------|---|------------|--|
|  | 2 | <i>Altamira Fluted</i> | Vase with vertical sides and composite silhouette (Beaker?) | 20.5 | Light brown paste (10YR 8/4), with quartzite and mica inclusions. Exterior and interior red slip (10R 4/8). Three horizontal flutes below the rim and two more in the base. Similar in shape to Adams 1971, Fig. 12 d. |

APPENDIX B

BURIALS

Report for Burials Recovered from El Lacandón, a Classic Maya Site in Chiapas, Mexico
J. Christopher Reed

The analysis of the human skeletal material recovered from the Maya site of El Lacandón in Chiapas, Mexico was conducted from August 14 to August 25, 2001. Much of the skeletal material from El Lacandón had been still very much imbedded in the soil matrix at the time of observation, so analysis was not as complete as possible. Many of the flat bones and crania were left in the matrix at the time of excavation, and some were subsequently left in the soil matrix at the time of analysis due to preservation and laboratory protocol issues. It was determined that due to the condition of the bones it was best to keep them in the matrix until a careful and controlled removal of the bones could be performed in a laboratory setting. The bones exhibit varying degrees of diagenetic damage, but most of the burials were recovered in poor condition due to taphonomic processes. The soil condition at the site of El Lacandón is not conducive to bone preservation. The vast majority of the recovered skeletal material is extremely friable and the flat bones and small bones, such as phalanges, often fell apart at the touch.

Analysis of the skeletal material for age, sex, condition, pathology and other basic characters was conducted and scored according to the standards documented in *Standards for Data Collection from Human Skeletal Remains* (Buikstra and Ubelaker 1994). Sex was determined in 14 of the burials, with 9 male and 5 females. Skeletal indicators of sex in the other six are undetermined, wither due to bad preservation or the presence of soil matrix. Fourteen of the individuals were determined to be adults, and four juveniles. An estimate of age was made when enough of the skeletal elements were present, using either the appearance of the auricular

surface (Lovejoy, et al. 1985) or the pubic symphysis (Brooks and Suchey 1990). Dental development was used to estimate the age of subadults, using the method summarized by Ubelaker (Ubelaker 1989). Very few bones were preserved well enough to take measurements for stature or other estimates.

The majority of the observed pathology is in one of two categories: periostitis on the tibiae, and dental carries and calculus. Periostitis is an inflammation of the periostium of the bone. This inflammation may be associated with another infection, and usually the whole bone will be affected in these cases (Schwartz 1995). Carries, or tooth decay, is generally caused by starch and sugars in the diet. Some burials have carries, but most do not. This may indicate a difference in diet between the individuals. Carries are a demineralization of the teeth that develop due to a lowered pH in the mouth. This lowering of the pH is often due to the ingestions of starchy foods, like maize (Schwartz 1995). Dental plaque is the result of the matrix built by bacteria in the mouth. Dental calculus is the result of mineral deposits adhering to the plaque matrix (Schwartz 1995). Some unique pathology is present, and is mentioned in the detailed description of each burial below. Stature was calculated where possible, using formulas generated by Genovés (Genovés 1967) for prehistoric Mesoamerican populations.

Overall, a total of nineteen burials were analyzed, one with two individuals represented in the burial. Unit 4 of the excavations contained the most burials by far, totaling 12. Burials were also recovered from units 3, 8, 10 and 13. Many of the analyses, as in cases of age and the auricular surface, the significant structure crumbled as the bone and matrix dried.

BURIAL 3/1

Burial 3/1 is reasonably well preserved, and was recovered from a burial cist. Two jade beads associated with the burial were also recovered. The cranium is about 70% complete, with all of the facial bones missing. The left os coxa is about 60% complete, and the long bones are about 80% complete, with the epiphyses damaged. All of the cervical vertebrae were found in anatomical position and left as such in the soil matrix. The bones of the pelvis are in decent condition. The age range of this individual is 35 to 39 years based on the appearance of the auricular surface of the left os coxa (Lovejoy et al., 1985). The sex of the individual is male, as

indicated by the ventral arc of the pelvis and the major indicators of the skull (nuchal crest, mastoid process, supraorbital margin, glabella, and mental eminence). The cranium has been purposefully deformed during growth to give the head an elongated appearance (Figure 1). Such deformation can be found throughout the Maya region. The saggittal suture of the cranium has been obliterated prematurely. This suture should not close until at least the sixth decade of life. This deformation of the cranium may have caused the premature obliteration of the saggittal suture. The cranium has some cut marks suggestive of perimortem trauma, but the cuts look recent because of the difference in discoloration between the outside and inside of the bone. These cut marks were probably created at the time of excavation (Figure 2). These cuts have the typical “chatter marks” usually seen in trowel damage. All of the mandibular teeth, except for the left canine and first incisor, were lost premortem. The maxilla was not recovered. The right tibia was used to estimate stature by the formula presented in Genovés (1967). The stature of the individual is estimated to be 162.352 +/- 2.812 cm.

BURIAL 4/1

Burial 4/1 is an extremely fragmented and poorly preserved burial. There appears to be only one individual, as there is no duplication of the skeletal elements present. Only an estimated 10% of the skeleton is present. The sex of the individual is probably female, but this is only based on the appearance of the mastoid processes of the skull (temporal bones were present, in bad condition). A portion of the left mandible was recovered, and the presence of a fully erupted third molar indicates the age to be an adult. No more specific age determination could be made.

BURIAL 4/2

Burial 4/2 contained two individuals. Burial 2a is an adult, probably male based on cranial indicators. The remains are in very poor condition. The presence of fully erupted upper and lower third molar indicates the age to be an adult, but no better estimate could be made given the

condition of the skeletal material. Cranial features indicate that the individual is a male. Both tibiae were affected by periostitis, which is usually a secondary infection. There is evidence of periodontal disease in the left maxilla and the right mandible, and plaque on all of the observable teeth.

The condition of the remains of burial 4/2b is very poor. This individual is a juvenile, which is indicated by the stage of tooth development. Based on the eruption of both second upper premolars and the lower left second molar, the child was approximately 10 +/- 30 months (Ubelaker, 1989). The sex estimation of subadults is in much dispute, so was not attempted in the analyses of the skeletal material from El Lacandón. Most of the dentition in the subadult burial has at least some dental plaque.

B.4 BURIAL 4/3

The individual in burial 4/3 had been interred in a flexed position. The bones are in very poor condition. All of the bones of the skull are represented, but highly fragmented. The age of the individual could only be determined to be an adult. The bones are too damaged to make a determination of sex. The skeleton is less than half complete, with the majority of the remains represented by long bones. Only four maxillary teeth are present, with most of the mandibular teeth in tact. Some calculus is present on the upper right maxillary canine and first premolar, and the mandibular left first incisor, right first and third molars. There is scarring from periostitis on both tibiae.

BURIAL 4/4

Again, this burial is in poor condition. The overall skeleton is about half complete, and what bones have been preserved are quite damaged. The individual is an adult, and the estimation of age by the analysis of the auricular surface of the right os coxa is 31 to 35 years of age (Lovejoy et al., 1985). At the time of analysis, this part of the os coxa was barely held together by the soil

surrounding the bone. The sex is female, as indicated by the greater sciatic notch and the preauricular sulcus on the left os coxa. The cranial indicators, the mastoid process, and the supraorbital margin, also show female characteristics. An interesting pathological condition is found in this individual. Two deciduous teeth have remained in the maxilla in spite of the eruption of the adult teeth. Both the deciduous upper right canine and upper first molar are have remained in the maxillary alveolar bone (Figure 3).

B.6 BURIAL 4/5

Burial 4/5 is very poorly preserved; perhaps 10% of the skeleton is present, represented mostly by cranial bone fragments. The sex could not be determined within a comfortable degree, but the mastoid processes do indicate a male. The individual is an adult, as a fully erupted third molar is present, but no age estimation could be made due to the condition of the burial. There is evidence of periostitis on both tibiae.

BURIAL 4/6

The bones of Burial 4/6 are poorly preserved, but better than most of the burials from El Lacandón. About 75% of the skeleton is represented in the remains. Enough of the cranium and pelvis was preserved to make both age and sex determinations. The sex of the individual is male, with the cranial indicators decidedly masculine, however two of the pelvic indicators, the greater sciatic notch and the preauricular sulcus, are feminine. The overall robusticity of the individual points to a male. The left auricular surface was preserved, and indicates an age estimate of 27 to 31 years (Lovejoy et al., 1985). Pitting from periostitis is present on both parietal bones of the skull and on both tibiae. The cranium was purposefully deformed in an anterior-posterior direction, typical of what is commonly known as “cradleboarding.” There is calculus present on all of the mandibular teeth, and the right second incisor around the dental arcade to the second right premolar on the maxillary teeth. The left tibia is preserved well

enough to measure the absolute length. This measurement was used to estimate a height of 169.702 +/- 2.812 cm using the formula from Genovés (1967).

B.8 BURIAL 4/7

Bones are poorly preserved, but about 70% of the skeleton is represented. The individual is male, based on the cranial indicators. No specific age indicators were preserved, however the presence of fully erupted third molars (all four are present), indicating the individual was an adult. There is calculus present on all of the teeth that could be observed. There are carries on the occlusal surface of both the left maxillary first and third molars, and an interstitial carries on maxillary second molar, between it and the first molar. One point of note, the cranium is abnormally thick, at least in comparison to the other burials from the site. A thickened diploë (the spongy bone of the skull) often indicates anemia, but the skull is not thickened in this manner, but simply seems to be individually anomalous.

BURIAL 4/8

Only a few cranial and pelvic fragments are present for this individual, as these are the bones of a young child. Bones of subadults, because they are small and somewhat fragile, are often more susceptible to taphonomic processes, and are sometimes destroyed all together by the chemistry of the soil. The long bones are so fragmented that most of them are unrecognizable. One recognizable bone is a tibia of undetermined side. This tibia shows evidence of periostitis (Figure 4). Given the stage of observed tooth development, this individual is an estimated 3 years, +/- 12 months (Figure 5) (Ubelaker, 1989:64).

BURIAL 4/9

One of the most poorly preserved burials recovered. Most of the long bones represented, but are in many small fragments. The os coxae have been left in the soil matrix, and may be unrecoverable due to their state of preservation. The presence of fully erupted third molars shows that the individual was an adult at the time of death. Some of the cranium is preserved, and the sex of the individual is male based on the appearance of the right mastoid process and the glabella.

BURIAL 4/10

The bones of the lower limbs of this individual are relatively well preserved, but the bones of the upper body are badly preserved. The os coxae crumbled as the soil matrix dried during the analysis. The sex of the individual is female, based on the sciatic notch of the left os coxa, and from cranial indicators. The age of the individual could not be narrowed beyond adult, which is indicated by the presence of all four fully erupted third molars. Calculus is present on the majority of observable teeth. One caries is present on the occlusal surface of the left mandibular third molar. The estimated stature of this individual is 163.702 +/- 3.816 cm based on the length of the right femur using the formula from Genovés (1967).

BURIAL 4/11

Poorly preserved, with approximately 45% of the skeleton present. The majority of the long bones and the bones of the skull are in good condition. The sex of the individual is male based on cranial indicators (nuchal crest mastoid processes, left supraorbital margin, and the mental eminence of the mandible). None of the sex indicators of the pelvis were preserved well enough to help with the analysis. One pubic symphysis was preserved well enough to estimate the age of the individual at death. The age at death is estimated to be between 25 and 30 years (Brooks and

Suchey, 1990). The right tibia is in reasonably good condition and has evidence of periostitis. Stature could be estimated using the right tibia. The stature of this individual is 165.782 +/- 2.812 cm, using the tibia length and regression formula from Genovés (1967).

BURIAL 4/12

Possibly the most poorly preserved burial. The bone is extremely friable and crumbles to the touch. Most of the bones were left in the soil matrix, because that was all that is holding them together. Part of the cranium crumbled in an attempt to remove it from the soil matrix. The os coxae also were in extremely bad condition. No sex determination or age estimation could be made due to this bad preservation. The age could not be determined beyond being an adult, with fully erupted third molars. The majority of the teeth are still present in the alveolus.

BURIAL 8/1

Two individuals were present in Burial 8/1. The first individual (Burial 8/1a) is a subadult. The bones of this burial are very fragmented, with most of the fragments appearing to be less than 2 cm. Fragments are present from the cranium, the ribs, and the long bones. This individual is a child, and is approximately 3 years +/- 12 months based on the development of the dentition. Because this is such a young individual, and the fragmented nature of the bones, sex could not be determined. Caries were present on the left first maxillary deciduous molar, the left mandibular first deciduous molar, and the right first mandibular deciduous molar.

The second individual (Burial 8/1b) is an adult, but only fragments of the right maxilla, maxillary alveolus, and six adult teeth, the right first incisor through the right first molar, still present in the alveolus are evidence that a second individual is present. There is some resorption of the alveolar bone, indicating probable periodontal disease. Calculus is present on all of the adult teeth present, except the second right maxillary incisor. Since only teeth are present to represent this individual, sex could not be determined.

BURIAL 8/2

Poorly preserved, but better than most burials recovered from the site. This burial had some unique features, namely a ceramic dish had been placed over the pelvic region, and three large stones were placed over the burial as well. The individual is male, as indicated by the standard pelvic and cranial indicators. Both os coxae and the cranium were in good enough condition to observe most of the sex indicators. Both auricular surfaces were intact when observed, and an age of 24 to 27 years of age using the Lovejoy et al. (1985) method. The os coxae, however, were beginning to crumble when analyzed. Evidence of periostitis is present on both tibiae. No other postcranial pathology was observed. The majority of the teeth have an abundance of plaque present. The right femur was preserved well enough to take a few measurements. The stature of this individual was estimated at 163.333 ± 3.417 cm using femur length and the regression formula from Genovés (1967).

BURIAL 10/1

As with most of the burials, this one is in very poor condition. While the majority of the long bones are represented, all are very fragmented. The cranium is also in many pieces. The individual is probably a male, based on the appearance of the mastoid process of the temporal bone and the nuchal crest of the occipital bone. No discernable age other than adult, based on the dentition, could be determined. Seven carious lesions are present in the dentition. All are interstitial and/or around the cervix of the tooth. Cavities are visible on the second right maxillary premolar, the right maxillary canine, the left maxillary second incisor, the left maxillary canine, between the two left maxillary premolars, on the cervix of the second maxillary premolar, between the second and third left maxillary molars, and between the mandibular left canine and first premolar, and on the cervix of the left mandibular first premolar.

BURIAL 10/2

This burial was recovered in very poor condition. Only parts of the cranium that were recovered are a small piece of the occipital and the right part of the mandible. Most of the skeletal remains from this burial are long bone fragments. The individual is probably a female, based on the width of both sciatic notches of the two os coxae. Both os coxae are in bad condition, but the sciatic notches are intact. No other sex indicators present in this burial. The auricular surface was also intact at the time of analysis, and indicates an age at death of 19 to 24 years according to the Lovejoy et al. (1985) method. Both tibiae show scarring from periostitis on the anterior margins.

BURIAL 10/3

This burial is in very poor condition. The bones from the entire left side are missing; the arms, legs, and pelvis are all not present for that side. Most of the cranium is present, but fragmented and friable. The sex of the individual is female, shown by indicators on both the cranium (right mastoid, right supraorbital margin, glabella and mental eminence) and pelvis (right sciatic notch only). Age is indeterminate, other than the fact that the individual was an adult at the time of death, based on the presence of a third molar. There is evidence of periodontal disease, especially in the mandible. A great deal of calculus present on the teeth that were not lost.

BURIAL 13/1

Two individuals were recovered, one juvenile and one adult. Only tiny friable cranial fragments represent the juvenile individual. The first right maxilla and first right mandibular molars were recovered for the child, but there is not enough information to comfortably estimate the age. Small fragments of the cranium, ribs, vertebrae, and long bones represent the adult. No

bone measurements possible to the fragmentary nature of the bones. Neither sex nor age of either individual could be determined.

TABLE B.1: BURIAL DATA

| Burial | Condition | Age | Sex | Stature (cm) | | Pathology |
|---------------|------------------|------------------------|------------|---------------------|-----|---|
| 3/1 | Good | 35 to 39 years | Male | 162 2.812 | +/- | Cranial deformation, premortem tooth loss |
| 4/1 | Very poor | Adult | Female | N/A | | N/A |
| 4/2a | Very poor | Adult | Male | N/A | | Periostitis, periodontal disease |
| 4/2b | Very poor | 10 years +/- 30 months | N/A | N/A | | Dental calculus |
| 4/3 | Very poor | Adult | N/A | N/A | | Periostitis, dental calculus |
| 4/4 | Poor | 31 to 35 years | Female | N/A | | Retained deciduous teeth |
| 4/5 | Very poor | Adult | Male | N/A | | Periostitis |
| 4/6 | Good | 27 to 31 years | Male | 169 2.812 | +/- | Cranial deformation, periostitis, dental calculus |
| 4/7 | Poor | Adult | Male | N/A | | Dental calculus and carries |
| 4/8 | Very poor | 3 years +/- 12 months | N/A | N/A | | Periostitis |
| 4/9 | Very Poor | Adult | Male | N/A | | N/A |
| 4/10 | Poor | Adult | Female | 163 3.816 | +/- | Dental calculus, carries |
| 4/11 | Poor | 25 to 30 years | Male | 165 2.812 | +/- | Periostitis |
| 4/12 | Bad | Adult | N/A | N/A | | N/A |
| 8/1a | Poor | 3 year +/- 12 months | N/A | N/A | | Carries |
| 8/1b | Poor | Adult | N/A | N/A | | Periodontal disease, dental calculus |
| 8/2 | Poor | 24 to 27 years | Male | 163.333 3.417 | +/- | Periostitis, dental calculus |
| 10/1 | Very poor | Adult | Male | N/A | | Numerous carious lesions |
| 10/2 | Very poor | 19 to 24 years | Female | N/A | | Periostitis |
| 10/3 | Very poor | Adult | Female | N/A | | Periodontal disease, dental calculus |
| 13/1a | Bad | Subadult | N/A | N/A | | N/A |
| 13/1b | Bad | Adult | N/A | N/A | | N/A |

APPENDIX C

HOUSE GROUPS SURFACE DATA

TABLE C.1: House Groups Surface Data

| Unit # | Str # | Lenght (m) | Width (m) | Height (m) | Area (m ²) | Construction Quality |
|--------|-------|---------------|--------------|---------------|---------------------------|-------------------------|
| 1 | 60 | 4 | 3 | 0.3 | 12 | 1 |
| 2 | 59 | 11 | 5 | 1 | 55 | 1 |
| 3 | 2a | 40 | 5 | 0.7 | 200 | 2 |
| 3 | 2b | 11 | 6 | 0.8 | 66 | 2 |
| 4 | 45 | 14 | 11 | 0.6 | 100.5 | 2 |
| 4 | 45a | 6 | 3 | 0.4 | 18 | 2 |
| 4 | 46 | 9 | 5 | 0.8 | 45 | 2 |
| 5 | 13 | 14 | 6 | 0.6 | 84 | 2 |
| 6 | 14 | 12 | 6 | 1 | 72 | 2 |
| 6 | 14a | 8 | 4.5 | 0.45 | 36 | 1 |
| 7 | 15 | 6 | 4 | 0.85 | 24 | 1 |
| 8 | 29 | 5 | 4 | 0.4 | 20 | 1 |
| 8 | 30 | 6 | 4 | 0.3 | 24 | 1 |
| 9 | 28 | 9 | 5 | 0.3 | 45 | 2 |
| 10 | 27 | 7 | 8 | 0.4 | 56 | 1 |
| 11 | 32 | 7 | 6 | 0.4 | 42 | 1 |
| 12 | 36 | 8 | 4 | 1 | 32 | 1 |
| 13 | 33 | 10 | 5 | 0.5 | 50 | 1 |
| 14 | 34 | 9 | 5 | 0.4 | 45 | 1 |
| 15 | 37 | 7 | 3 | 1 | 21 | 1 |
| 16 | 38 | 11.5 | 5 | 0.56 | 57.5 | 1 |
| 17 | 40 | 13 | 6 | 0.5 | 78 | 1 |
| 18 | 41 | 10 | 4.5 | 0.53 | 45 | 1 |
| 18 | 42 | 4.5 | 3 | 0.48 | 13.5 | 1 |
| 18 | 43 | 7 | 5 | 0.66 | 35 | 1 |
| 19 | 57 | 10 | 5 | 0.85 | 50 | 1 |
| 19 | 58 | 5 | 4 | 0.4 | 20 | 1 |
| 20 | 55 | 8 | 5 | 0.6 | 40 | 1 |
| 20 | 56 | 6 | 3 | 0.57 | 18 | 1 |
| 21 | 47 | 4.5 | 3 | 0.65 | 13.5 | 1 |
| 22 | 49 | 3.5 | 3 | 0.3 | 10.5 | 1 |

| | | | | | | |
|----|----|-----|-----|------|-------|---|
| 23 | 54 | 7.5 | 6 | 0.6 | 45 | 1 |
| 24 | 53 | 5 | 3 | 0.6 | 15 | 1 |
| 25 | 52 | 7 | 3 | 0.6 | 21 | 1 |
| 26 | 51 | 7 | 4 | 0.54 | 28 | 1 |
| 27 | 50 | 8 | 4 | 0.6 | 32 | 1 |
| 28 | 35 | 12 | 6 | 0.3 | 72 | 2 |
| 29 | 31 | 7 | 6 | 0.69 | 42 | 1 |
| 30 | 61 | 5 | 2 | 0.6 | 10 | 1 |
| 31 | 19 | 9 | 6.5 | 0.55 | 58.5 | 1 |
| 32 | 18 | 10 | 8.9 | 0.6 | 89 | 1 |
| 33 | 17 | 7 | 5.5 | 0.55 | 38.5 | 1 |
| 33 | 20 | 5.5 | 2.9 | 0.32 | 15.95 | 1 |
| 34 | 22 | 8 | 4.5 | 0.6 | 36 | 1 |
| 35 | 26 | 7 | 5 | 1.5 | 35 | 1 |
| 36 | 23 | 9.5 | 3 | 1.15 | 28.5 | 2 |
| 36 | 24 | 6 | 4 | 0.4 | 24 | 1 |
| 36 | 25 | 12 | 5 | 2 | 60 | 1 |
| 37 | 62 | 7 | 3.8 | 0.4 | 26.6 | 1 |
| 37 | 63 | 8 | 4.5 | 1.36 | 36 | 1 |
| 38 | 43 | 11 | 5 | 0.4 | 55 | 1 |
| | 1a | 5.8 | 3 | 0.15 | 17.4 | 1 |
| | 5a | 6 | 3 | 0.3 | 18 | 1 |
| | 6a | 5 | 3.5 | 0.3 | 17.5 | 1 |

Construction quality: 1) Unmodified stones, 2) Worked stones

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