

Results of the 2001 Valley of Peace Archaeology Project: Saturday Creek and Yalbac

Report submitted to the Department of Archaeology, Ministry of Tourism
Government of Belize

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Chapter 1

Ritual and Power in the Valley of Peace Area: 2001 Field Season

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Lisa J. Lucero

Introduction

The long-term goals of the VOPA project are to assess how replicating and expanding domestic rituals may have provided a means for aspiring Maya leaders to integrate people and acquire political power, defined here as the ability to exact goods and services from subjects. This process was gradual and incremental, and began with family-level rites, particularly dedication, termination, renewal, and ancestor veneration rites. Emerging Maya leaders expanded rituals into larger communal ceremonies that drew seasonal labor from dispersed farmsteads to civic-ceremonial centers. They conducted rites in progressively larger scale settings (e.g., houses to shrines to temples) incorporating ever larger groups of people (Cohen 1974:37-39; e.g., Vogt 1970:101). Elites began to expand these rituals during the Late Preclassic (c. 400 B.C.-A.D. 250) and continued to do so resulting in large-scale royal rites (Early Classic, c. A. D. 250-550), and eventually in the direct association of royal families with the divine (Late Classic, c. A.D. 550-850). The scale and degree to which ritual was used by Maya leaders was conditioned by the distribution of critical resources—land and water (Lucero 1999a, 1999b, in press; cf. Webster 1976). At one end of the political spectrum are regional hierarchical polities in areas with concentrated resources that were relatively easy for people to restrict (e.g., artificial reservoirs, agricultural land, trade routes/goods). Leaders attracted and kept followers and legitimized their power through ceremonies and other integrative events. At the other end of the spectrum are community-based organizations (like Saturday Creek) in areas with extensive and accessible resources less easily controlled (e.g., extensive alluvium) where wealthy landowners (elites) were only able to integrate local farmers through less elaborate ceremonies.

To document the replication and expansion of domestic rituals and explore the articulation of ritual and the emergence of political power, it is vital to collect detailed chronological, stratigraphic, and contextual information on ritual deposits from different structures (houses, elite compounds, palaces, temples) with long occupation histories--or before, during, and after the advent of rulership (c. 400 B.C.-A.D. 850). River centers like Saturday Creek are particularly suited to explore Classic Maya political systems because they typically have long occupation histories (e.g., 800 B.C. through A.D. 1500) and have the necessary structure types to assess ritual history, continuity, and change. In addition, while we have much information on ritual activities from large major centers, royals and elites, we have relatively little about minor centers and commoners (Deal 1988). Our focus at a minor center and relatively small structures (ranging from 1.24 to 5.4 meters in height) allowed us to acquire information about commoners and elites. In conjunction with data from previously studied major centers and future research at Yalbac (19 km distant from Saturday Creek), I soon will have an accurate picture of a regional ritual history and will be able to demonstrate its ties to the development of political leadership.

Expectations regarding ritual activities were the following: if Maya leaders replicated and expanded household rituals (dedication, termination, renewal, ancestor veneration), then we should have found evidence for these rituals at houses, elite compounds, range structures or palaces, and temples beginning in the Late Preclassic (c. 400 B.C.) and increasing in scale, especially in the Early Classic (c. A.D. 250-550), culminating in the Late Classic (c. A.D. 550-850). Evidence consists of similar depositional histories. Differences, however, between commoner, elite and royal contexts consist of increasing

quality, quantity, and diversity (of forms) of ritual deposits (e.g., Krejci and Culbert 1995) and location (houses, shrines, and temples).

In 2001 (January 25-May 4), Valley of Peace Archaeology (VOPA) crew members spent 4 days each week excavating two ancient Maya houses, one elite compound, and one temple/ball court at Saturday Creek, a minor river center (Figure 1.1). For one day each week, we focused our efforts at Yalbac, a medium-size major upland center. We collected enough data to generate a preliminary map of the center core, test excavated two plazas, and surveyed the hinterland. I briefly describe excavations at Saturday Creek, as well as preliminary mapping and testing at Yalbac. More detailed descriptions are in subsequent chapters.

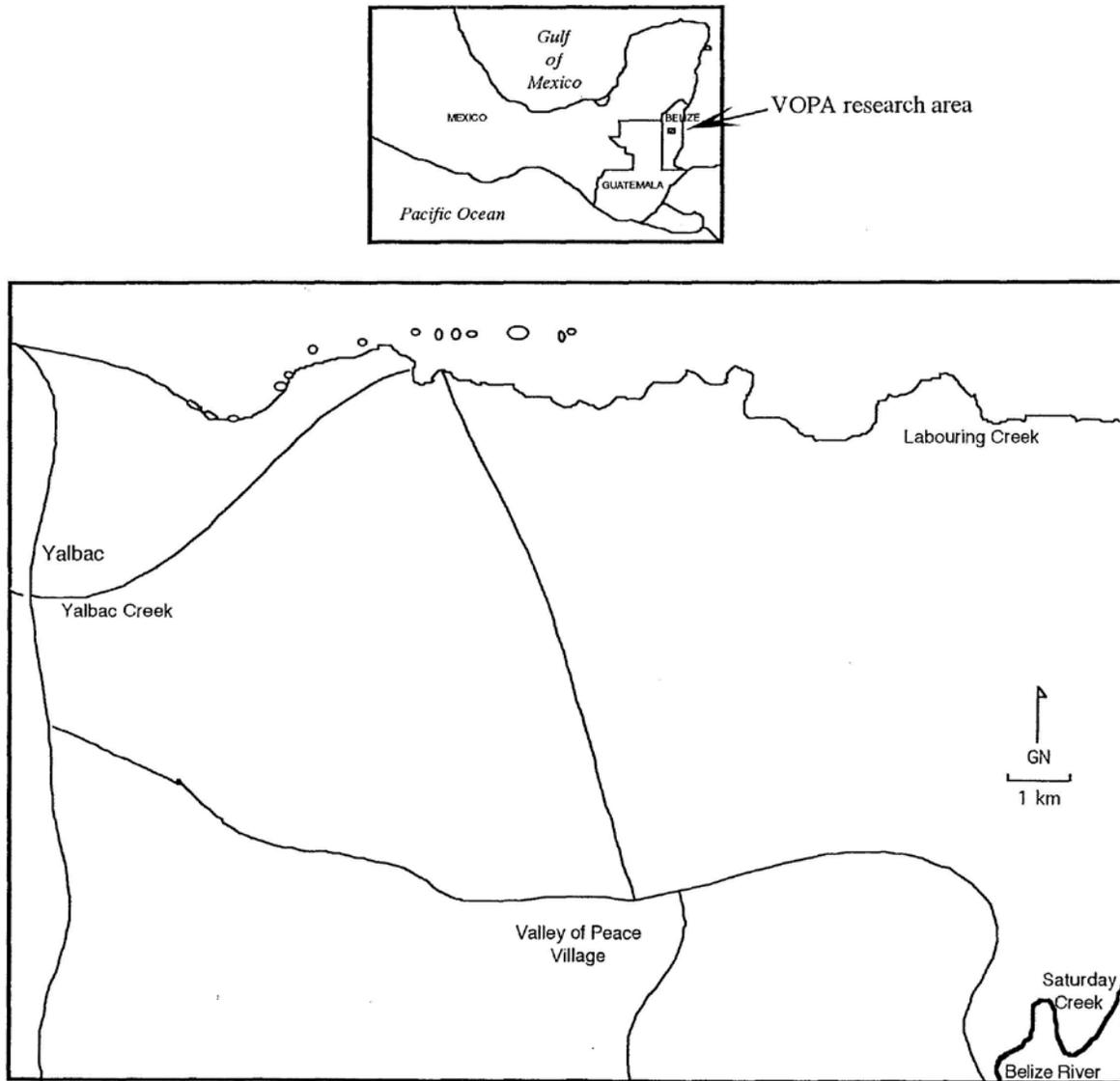


Figure 1.1 VOPA research area

2001 Season

Staff

The 2001 VOPA crew consisted of myself (PI); field supervisors Andrew Kinkella (Jan. 20-Feb

24), Natalie Smith, Cal State Northridge (Jan. 20-Feb. 4), Jennifer Kirker, Pennsylvania State University (Jan. 20-Feb. 4), James Conlon, University College London (Feb. 15-May 5), and Jennifer Ehret, University of Pennsylvania (Feb. 15-May 5). The crew also included 12 New Mexico State University (NMSU) field school (Anthropology 387/587) students (Jan. 19-May 5): graduate students David Brown, Sean Graebner, Julie Jeakle, and Gaea McGahee; NMSU undergraduate students Joseph Bergstrom, Nick Chamberlain, Yvette Coral, Sarah Field, Patrick Graham, Charles (Sonny) Hartley, Elizabeth Pugh, and Gabriela Sanchez. Finally, VOPA crew included field assistants from the Valley of Peace Village; Cleof Choc, Zedekiah Scott, Stanley Choc, Juan Antonio Lopes, Vicente Cal, Besi Alvarez (Rodriguez), Isabel Ascencio (Don Luna), Joel Portillo, Jeremias Portillo, Rene Penido, Rafilo Sansores, Julio Rodriguez, and Rafeal Magana. All of us participated in excavation, survey and mapping.

Funding and Expenses

Funding for 2001 was provided by a National Science Foundation grant (BCS-0004410). The below amounts include project and staff expenses only. NMSU field school students paid their own expenses (lodging, food, transportation, etc.). The total amount spent in Belize was \$46,566 (BZ). Of this total, \$6810 was paid to the Department of Archaeology for administrative and consolidation fees; \$16,354 for labor costs; \$1080 for social security; \$2100 for fuel for the F150 truck; \$1576 for fuel for the NMSU Minivan; \$1100 for vehicle costs including insurance and repair; \$7950 for food for staff; \$6396 for lodging at Banana Bank for staff; and \$3200 for supplies including internet, phone cards, field equipment, copying, etc.

Background

The research area (c. 200 sq. km; see Figure 1) is located in central Belize in the more hilly areas (40-120 m asl) north of the Belize River. It is considered both geographically and socio-politically part of the eastern periphery of the central Maya lowlands. The area falls within the drier subtype of the humid tropics. Vegetation is classified as Quasi-Rain forest, predominantly consisting of deciduous broadleaf forests with lime-adapted species and intermittent stands of high marsh forests (Lundell 1942; see Fedick 1988 for detailed soil and vegetation descriptions). As with much of the eastern lowlands, the study area lies on a limestone platform (Fedick 1988:76).

Previous Research

Preliminary survey results from the first field season (June 1-July 10, 1997) demonstrated a dispersed settlement pattern away from rivers, and more dense settlement along rivers (Lucero 1997; Lucero et al. n.d.). The major goals of the 1998 field season (May 23-July 7) were four, three of which focused in the Cara Blanca area: 1) survey for pools, caves and nearby settlement (Lucero 1999c); 2) test excavate a presumed ceremonial structure at the edge of a pool (Kinkella 2000); 3) explore a pool for offerings (Osterholtz 1999); and 4) map the river center of Saturday Creek (see Figure 1) (Lucero 1999d;). The major goal of the 1999 field season (May 11-July 1) consisted of collecting chronological data from the river center of Saturday Creek (see Figure 1) through a test pitting program. In addition, a brief return trip was made to Cara Blanca, Pool #1 to collect additional chronological data (Kinkella 2000). We also continued mapping Saturday Creek. Finally, We did a quick pace and compass map of the core area of Yalbac.

2001 Results

Saturday Creek

Saturday Creek is located along the Belize River on an extensive floodplain with over 100 structures (UTM 1916N/312E). The core area is located closer to the river than surrounding farmsteads on higher ground. The site datum, near SC-64 is at an arbitrary elevation of 100 m above sea level (see Poe 1999), though it is likely much lower (Figure 1.2). Two crew members (Kinkella and Graebner) also surveyed the south side of the river, which had surprisingly little settlement. The bank on the south side of the river, across from SC-45, was steep and difficult to climb because it was muddy and thick with bamboo. Kinkella and Graebner walked about 100 m southeast and about 200 m northeast and did not note any mounds present in

the relatively flat area. Further exploration is clearly necessary to evaluate settlement south of the river.

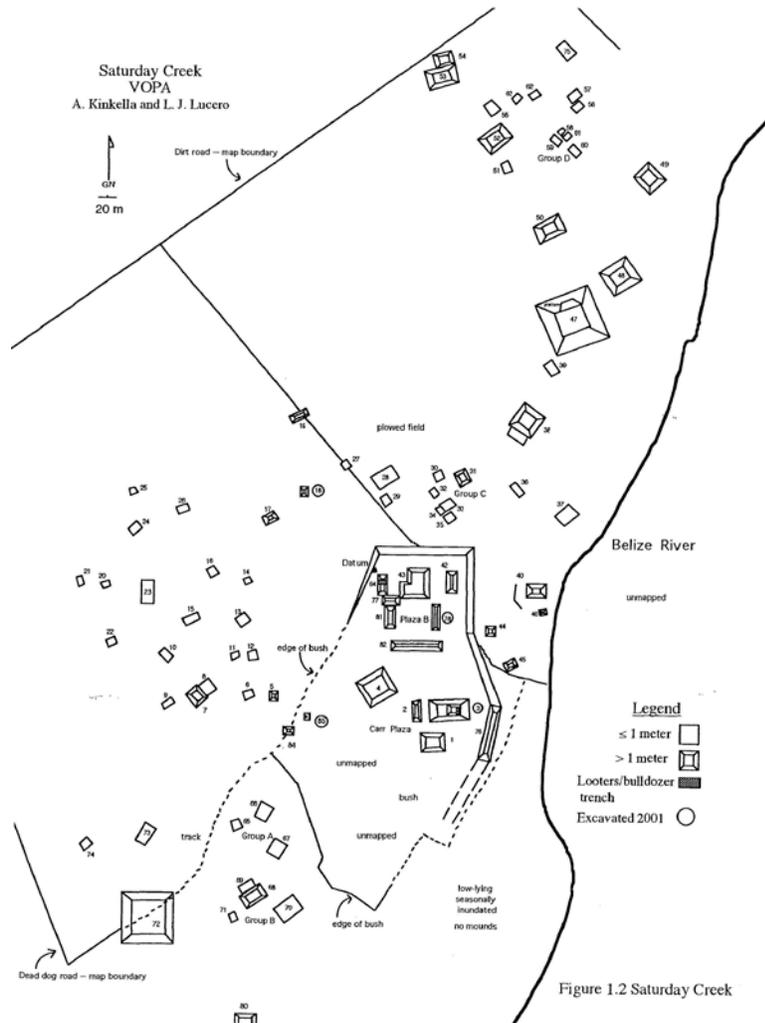


Figure 1.2 Saturday Creek

We mapped 79 structures in a 0.81 sq. km area (Lucero et al. n.d.). To maximize the range of ritual activities revealed, we excavated several structure types and sizes during the 2001 season: two solitary mounds (SC-18, SC-85), an eastern structure of an elite compound (SC-78, Plaza B), and a temple/ball court (SC-3). In general at each structure, we began by bisecting the mound with a 1 meter wide trench. At the two solitary mounds, we then horizontally exposed several living floors, excavating about 50% of SC-18 and 75% of SC-85. The large size of SC-78 only permitted us to bisect its width with a 2 meter wide trench and excavate several 2 x 2 m test pits placed within structure rooms (determined using post-hole tests). This method resulted in our exposing about 20% of the mound. We excavated a 1 meter wide trench at SC-3 including the ball court side wall and alley. We also excavated a 1 x 1 m test unit on the top center of SC-2 (26 x 17 m, c. 3 m high), the western half of the ball court.

Site datum coordinates were determined using UTM coordinates of the main site datum near SC-64 (Figure 1.3). We excavated following natural stratigraphy and used the Harris Matrix method of recording stratigraphy to highlight depositional sequences (see Harris 1989). After completion of each unit stratum, artifacts were logged in the field lab. The lab crew (two lab directors and rotating groups of two students) washed, sorted, labeled and bagged the artifacts, after which provenience information was input into the computer. Two experienced staff members, Ph.D. candidates James Conlon (University College London) and Jennifer Ehret (University of Pennsylvania) conducted ceramic analysis concurrent with excavation and have provided detailed chronologies for each mound in 100 to 200 year increments (see chapter 2). Their major source was Gifford et al. (1976), who used seriation on Barton Ramie ceramics to devise a chronology. We exported to the United States for analysis 56 carbon samples, 99

fauna samples, 27 macrobotanical samples, and nine 5-gram samples of human remains for chemical testing by Jennifer Piehl (Tulane University). Complete vessels, jade, obsidian, human remains, and other small items were deposited with the Department of Archaeology (Accession no. 10074). The remaining artifacts, consisting of ceramic rim and body sherds, chert lithics, were packaged in plastic containers and stored in the attic of Riverview at Banana Bank.

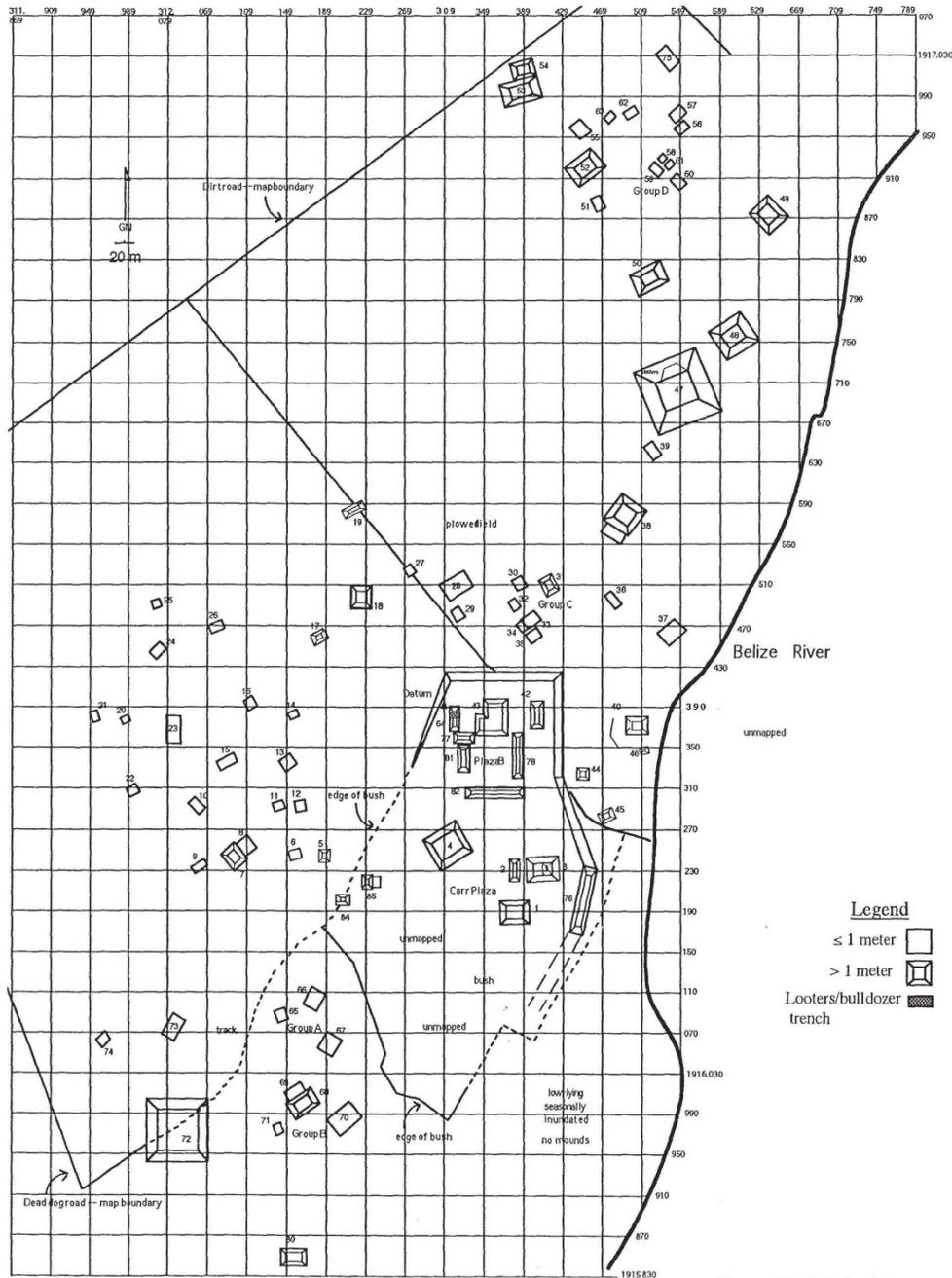


Figure 1.3 UTM grid

SC-18 (10 x 8 m, 1.24 m high), a commoner residence, consists of several construction phases dating from c. A.D. 400 through 1150. It is located at an elevation of 100.1 m asl, as is its site datum (220.46 E496.4N). Several thin plaster floors, most with 2-5 cm thick cobble ballasts (fill below floors), were constructed, one on top of the other. Single or double-course boulder walls provided the foundation for thatch or wattle and daub structures. SC-85 (6 x 4 m, 1.34 m in height), another commoner house,

also has a series of thin plaster floors, ballasts, and foundation boulders for wattle and daub structures. It is located at an elevation of 99.8 m asl (corrected from 100.1 m); its site datum (229E 220N until Feb. 26, after which it was 229E 222N) elevation was 100 m asl (the string was placed 20 cm above the surface). The Maya occupied SC-85 from at least c. A.D. 400 through 1150. The cobble-fill platforms at SC-18 and SC-85 ranged in thickness from 10-30 cm.

SC-78, the eastern structure of an elite plaza group in the north core area of Saturday Creek higher up on one of the terraces, consists of a stepped platform (29.4 x 9.5 m, 3.85 m in height) with several substantial domestic and specialized structures with thick plaster floors, ballasts and standing walls, as well as wattle and daub structures. It is located at a corrected elevation of 104.3 m asl, as is its site datum (384.3E 338N). Due to its size, we only exposed about 20% of the mound using 2 m wide trenches and 2 x 2 m excavation units. It was inhabited at least by 300 B.C. through A.D. 1500. Crew also cleaned up a new looters trench at SC-42 on its west side that exposed plaster floors and clay and boulder fill (and ceramics that dated from A.D. 600 to 900).

SC-3 is a temple (5 x 5 m, 2.4 m in height) on top of a stepped platform (48 x 24 m, 3 m in height), the western side of the latter forming the eastern half of a ball court. It is located at an elevation of 105.7 m asl, as is the site datum (402.03E 231.8N). The 1 m wide trench at SC-3 revealed several phases with steep, tiered walls, and a platform with several construction phases and plastered steps. Due to time constraints, we were not able to reach sterile at SC-3. Excavated material, however, dates from at least c. 300 B.C to A.D. 1500.

Construction materials are locally available¹. Limestone cobbles and boulders come from outcrops from hills located about 3.5 km northeast of Saturday Creek. Clay for fill is plentiful near and from the river, as well as limestone pebbles and cobbles.

Expectations were met in that evidence for ritual activities was recovered from all structures that date from c. 300 B.C. through A.D. 1150. Dedication caches were found at all structures and include intact miniature and regular vessels, speleothems (stalagmite or stalactite fragments from caves, considered sacred to the Maya as portals to the underworld or Xibalba), coral, worked and unworked marine shell, notched and un-notched obsidian blades and cores, and shaped tools made with plain or vibrantly colored chert. Speleothems, miniature jars, coral, and finely chipped chert and obsidian blades were largely found at SC-78, the elite structure. The earliest ritual deposits at SC-78 (e.g., fill dating to c. 300-100 B.C.) were similar, that is smaller and more simple in scale, to those found at SC-18 and SC-85 throughout the latter's entire occupation (e.g., shell, notched and un-notched obsidian blades, plain vessels). This pattern signifies that earlier, 'commoner' ritual deposits at SC-78 are the same as at the two commoner residences; and that later 'elite' buildings have the same depositional and ritual histories, but with a greater quantity, diversity, and quality of goods. At SC-3, a 10 m long looters trench on top of the temple exposed two major construction stages in the 1 to 2 m deep trench. A nearly complete polychrome plate (c. A.D. 290-550) was found in the center of the 1 m deep clay fill of the temple superstructure.

Termination deposits were also recovered from all four sites and consist of smashed, burned vessels on top of surfaces. For example, sometime around A.D. 700-900, the Maya at SC-78 burned an entire structure of wattle and daub. One wall collapsed on a deposit of several burned and smashed decorated vessels, a human ulna placed on top of a plate, shell, and an incised drilled marine shell pendant. Termination deposits at SC-18 and SC-85 consisted of smashed and burned vessels, most of which were undecorated, throughout their entire occupation (c. A.D. 400-1150). The looters trench at SC-3 exposed at least two burning events. The first consists of a layer of burned corozo nuts at the base of the superstructure. The second consists of burned daub, fire-cracked chert, and charcoal-flecked soil on top of the collapsed (destroyed) temple platform substructure.

We did not find obvious evidence for renewal activities (paired incensarios and/or lip-to-lip vessels with offerings), other than that indicated by the continual rebuilding of structures. However, the presence of dedication and termination deposits presupposes the existence of renewal rites since they are part of a continuum between termination and dedication rituals.

¹ NMSU student Patrick M. Graham conducted a survey of local available clays and limestone.

We found evidence for ancestor veneration rites at the two small houses that range in age from A.D. 400 to 1150 (see chapter 7). There are no noticeable changes in burial practices at commoner residences in the almost 800 years of occupation. SC-18 had five burials, three with inverted vessels over the remains and shell beads, one with a broken mano and metate and a deer antler, and one with obsidian blades. Only one of the seven burials at SC-85 did not have grave goods. Three were buried with inverted vessels and three with obsidian blades. Preliminary analysis of the burials indicates that males were buried with one to three vessels while females and children were buried with small items like obsidian blades and shell. We did not find burials at SC-78 where I expected to find some since eastern structures are usually elite ancestral shrines. The size of the platform may have resulted in our missing burials. We did not find burials at SC-3, since typically only royal family members are buried in temples, such as at Tikal and Palenque.

At the two commoner residences at Saturday Creek, the same household rites were conducted for almost 800 years. The Maya conducted small-scale rituals inside the home, likely for family members. At the elite compound, some rituals were conducted privately, and some probably involved community members. Its location on a terrace overlooking the majority of Saturday Creek's inhabitants facing an open plaza provided both privacy (it is not visible from below) and an arena for public participation. The more diverse and exotic offerings also distinguished the elites at SC-78. Communal labor likely built the temple ball court (SC-3), the latter which was accessible to all. Evidence (faunal remains, decorated serving vessels) indicates feasting activities near or in the ball court alley. On the top of the temple is another matter. Maya elites conducted dedication and termination rituals at the base of the temple, which is not visible from the ball court alley below. Its restricted access suggests that elites sponsored and performed both public and private rituals.

Yalbac

The major center of Yalbac (UTM 1922.7N/294.5E) is located in the uplands near pockets of good agricultural land along a perennial stream, Yalbac Creek, in central Belize (Figure 1.4) (see chapter 8). We mapped the core area with a theodolite using a closed traverse (see Brinker and Wolf 1977:144, 216). We collected points to generate a preliminary map of the 19 monumental core structures and 24 looter trenches. The core consists of at least five major temples, several range structures, a ball court, possible causeways, three large plazas, and an acropolis over 20 meters tall. We also excavated 1 x 2 m test pits in the centers of Plazas 2 and 3 to collect chronological information.

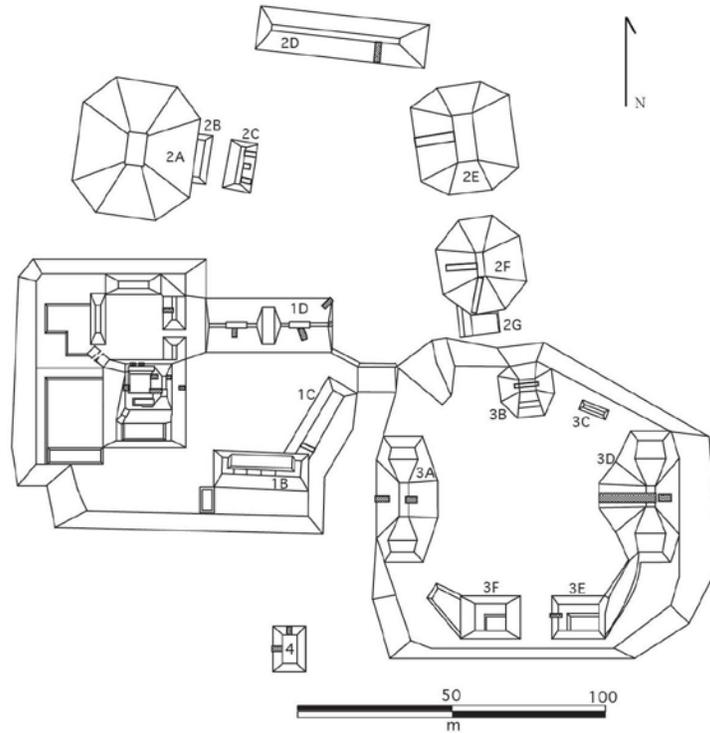


Figure 1.4 Yalbac

Finally, we surveyed the area peripheral to the core using compass and pace. Survey crews walked 1000 m transects, east and west, at 50 m intervals using an all weather, roughly north-south road as a baseline. The majority are solitary mounds. Crews also mapped groups of three to six structures, all constructed with cut stone. Surface ceramics were collected from 78 structures, which predominantly date to c. A.D. 700-900, but range from c. A.D. 400 to 1150-1500. Over 150 hinterland structures were mapped in an area roughly 5 km². The highest density of structures are found northwest of Yalbac in hilly areas with good agricultural soils.

Yalbac's location near pockets of good agricultural land and a potential trade route allowed rulers the means to acquire a degree of political power. Rulers likely sponsored and conducted large-scale ritual events from the acropolis, ball court, or one of the several temples. I also expect that commoner farmers living nearby participated in ceremonies, contributed goods and labor to the political party, and continued to conduct the same rites at home, but on a much smaller scale.

Concluding Remarks

Results from the 2001 field season clearly demonstrate that major expectations were met regarding documenting ritual history. Eventually, I hope to link such ritual history to the rise of political leaders once comparable data have been collected from Yalbac in the 2002 and 2003 seasons. The variable distribution of resources and people presented a unique challenge to ambitious Maya leaders seeking power. While resources varied by area, the strategies used by leaders to situate and advance political power were similar, entailing the replication and expansion of traditional rituals, particularly dedication, termination, renewal, and ancestor veneration rites.

The results of this study and my model on how emerging leaders used several types of traditional rituals in various settings to acquire political power will contribute to the anthropological literature on the emergence of political power.

ACKNOWLEDGMENTS

I would like to thank the Department of Archaeology for their continued support, especially Acting Archaeology Commissioner George Thompson. Long-term support has also been provided by Robert Vitolo. I also want to thank John and Carolyn Carr for providing housing at Banana Bank Lodge, friendship, support, and wonderful food. David Lee and Jennifer Piehl also contributed to VOPA, particularly providing invaluable advice and assistance with evaluating construction histories and excavating and analyzing human remains, which we appreciate tremendously. In addition, I want to thank Banana Bank staff Antonio and Albert, Frank Thompson at Yalbac, Michael Plowey and Genesia of Yalbac Cattle and Ranch, my staff, Mrs. Scott for her wonderful lunches, and the Martinez family for their delicious breakfasts, hot coffee, and hospitality.

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Chapter 2

Time and Space in the Belize Valley: Results of the Ceramic Frequency Analysis of Saturday Creek, 2001

James M. Conlon and Jennifer J. Ehret

Introduction

The Valley of Peace Archaeology project 2001 field season's overall focus was on collecting data on ritual history (c. 300 B.C -A.D. 950) at two previously unstudied ancient Maya centers, Saturday Creek at the eastern end of the Belize Valley, and Yalbac, roughly due north of Barton Ramie (Figure 2.1). The long term goal of the Valley of Peace Archaeological Project (VOPA) is to evaluate if and how, early Maya leaders, and later, rulers, appropriated traditional rituals to suit political ends (Lucero 1999:42).

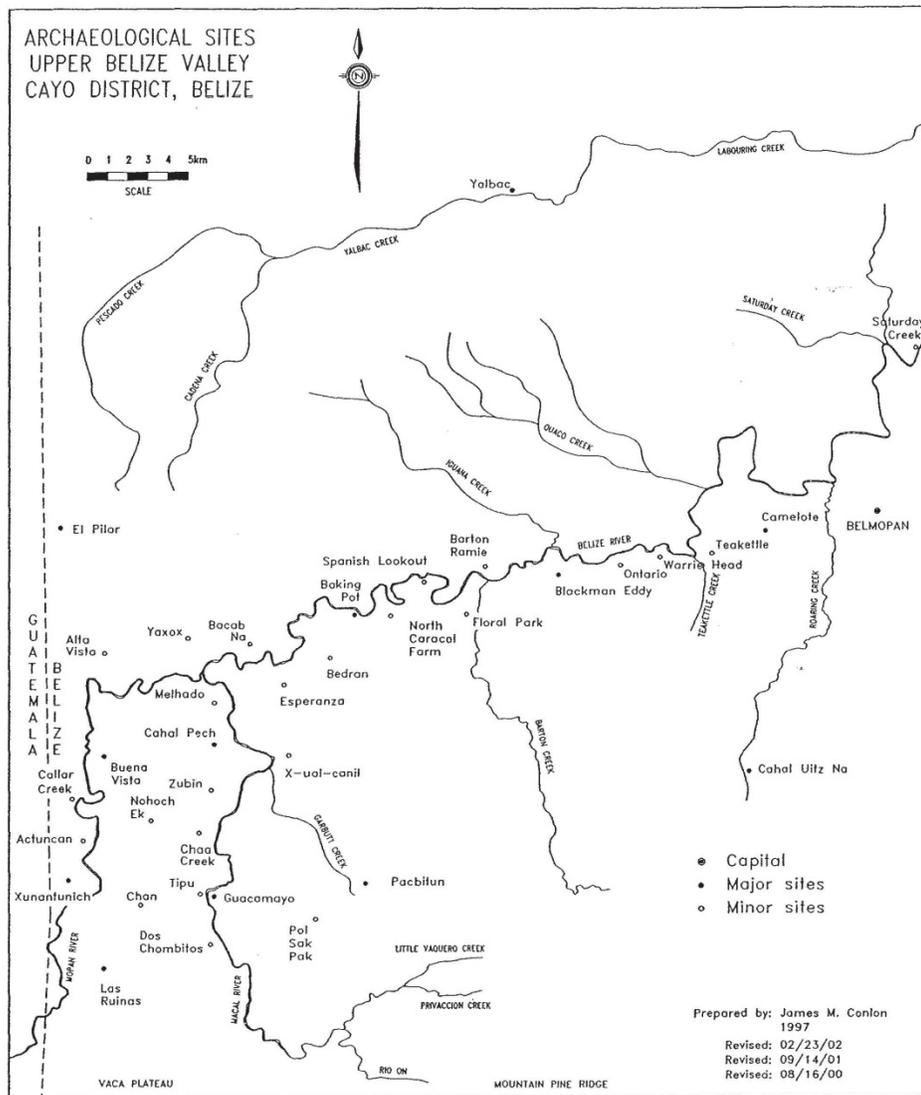


Figure 2.1 Archaeological sites, upper Belize Valley, Cayo District, Belize.

As project ceramicists it was our primary responsibility to provide the temporal context to discuss the appropriation of ritual. The authors of other papers in this volume present their observations on some form or aspect of ritual appropriation, to one degree or another. Thus, we shall focus our discussion on the chronology and comparison of ceramics recovered from Saturday Creek in 2001. Sean Graebner (chapter 8) previews operations and findings at Yalbac more fully, but we will present some preliminary observations of our own on this site's chronology. For the site of Saturday Creek, we will focus our attention on presenting results of the ceramic analysis based on the excavations at four mounds in 2001 (SC-3, SC-18, SC-78, and SC-85). This analysis provides the basis for initial chronological assessment of Saturday Creek and, subsequently, allow for evaluating associations with the rest of the Belize Valley.

Method

In order to construct a chronological sequence for Saturday Creek, we primarily employed Gifford's 1976 ceramic monograph from Barton Ramie. We employed Gifford (1976) for typing sherds because of Saturday Creek's relative proximity to Barton Ramie (approximately 24 km), and also because it remains the benchmark for any ceramicist working in the general area. We performed a type-variety analysis and compiled a type-variety mode data base, the latter of which has not been subjected to analysis as yet.

The type-variety analysis formed the basis for generating ceramic group constructs employed in assessing potential community affiliations. As Ball (1993:245) notes:

...Native potters may conceptualize their products in terms of form classes (Arnold 1985; Reina and Hill 1978), but they still produce them as surface-finish groups in many respects actually more amenable to most archaeological manipulations. I do not here to in any way belittle the importance of form-oriented ceramic studies, but to reemphasize the value of the ceramic group as an analytical reflection of the individual pottery-producing community. In combination, a specific finish group and paste variant archaeologically fingerprint a single producer community or workshop. Given the continued absence of more direct evidence concerning production loci, this is an important point for the analyst to keep in mind.

The identification of ceramic producer communities is a much easier task than understanding the precise mechanisms by which these communities were formed (Ball 1993:245). Therefore, in our analytical exercise, we chose to undertake only the discernment of community markers evident at Saturday Creek by evaluating its conformity and individuality in comparison to Barton Ramie. Thus, the goals of our ceramic analysis at Saturday Creek were: 1) to gain a preliminary understanding of the chronological sequence of the site via a ceramic type-variety analysis; and 2) to assess similarities and differences in the ceramic groups of Saturday Creek and Barton Ramie for evaluating "community" composition, and subsequently, intersite relationships. We present raw and relative frequencies for Saturday Creek using ceramic groups as a basis of comparison. Although we have constructed a chronological sequence for Saturday Creek, and assigned phase names, we shall continue here to refer to the Barton Ramie phase and complex names for the simple sake of its familiarity with most readers (Figure 2.2).

MAJOR PERIODS	TIME	SATURDAY CREEK	BARTON RAMIE	BAKING POT	UAXACTUN	SEIBAL
CLASSIC	late					
		late facet	late facet	late facet		
		Hunchu	New Town	Nakxul		
	early	early facet	early facet	early facet		
		Taxin		Xamon		Bayal
CLASSIC	terminal				3	
	late	Laknik	Spanish Lookout	Xibnoh	Tepeu 2	Tepejilote
		Nakmal	Tiger Run	Manlil	1	
	early	Huntuk	Hermitage	Hulche	3	
					Tzakol 2	Junco
PRECLASSIC	prolo-classic					
		Yakan	Floral Park	Paxche		late facet
		A.D.				Chicanel
		B.C.	Munhal	Mount Hope	Utsul	Conluse
	late		Bakcha	Barton Creek	Balche	early facet
PRECLASSIC						
		late facet	late facet	late facet	Mamom	Escoba
	middle	Wahil	Jenny Creek	Wasi		
		early facet	early facet	early facet		Real

Figure 2.2 The Saturday Creek phase sequence.

Yalbac Results 2001

Before proceeding to our analysis of Saturday Creek, we would like to take the time here to briefly discuss ceramic findings at Yalbac. Yalbac is a medium sized center, roughly 19 km due north of Barton Ramie. It is situated on the Yalbac Creek whose headwaters originate near El Pilar to the west (see Figure 2.1). Ceramic recovery from Yalbac in 2001 included from looter's trenches (59 sherds) and two plaza excavation units (95 sherds) in the epicenter, and surface collection in the periphery (133 sherds).

Overall

The ceramic sequence for Yalbac is based on only 287 sherds from all contexts. Another 288 sherds were recovered from a cache of three whole but fragmented ollas uncovered in Plaza 3, and are not included in the ceramic frequency data. Yalbac demonstrates similar overall development to Saturday Creek (Figure 2.3), but with a decreased Protoclassic period component, as is often the case with upland sites of the Belize Valley (Awe and Campbell 1989:30 and 40; Cheetham 1992:4; Conlon 1992:78, 80-81, 1993:183-185; Conlon and Awe 1991:11; Conlon et al. 1994:230; Gifford 1976:111; Sunahara 1993:71; see also Lincoln 1985:58). However, the minimal Protoclassic data from Yalbac more likely remains a result of limited vertical excavation data, as exemplified by the Protoclassic component revealed in the Plaza unit results (see below).

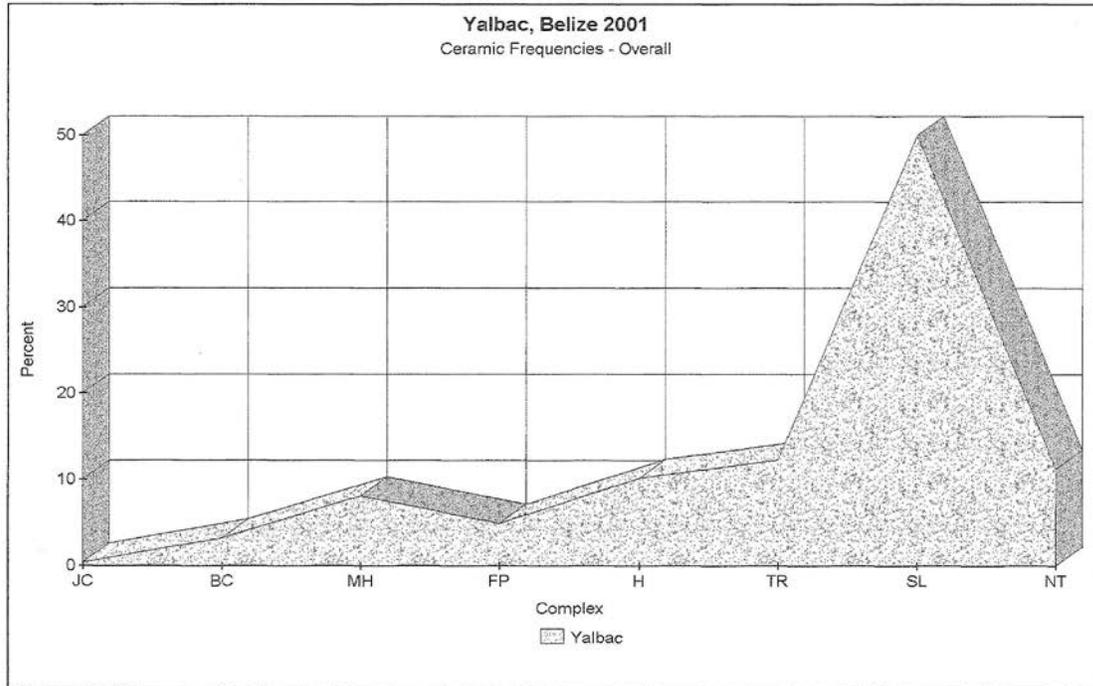


Figure 2.3 Ceramic frequencies, overall, Yalbac 2001.

Epicenter

The time range results from looter trench operations are more indicative of what basically amounts to the surface collection nature of the operations rather than accurately reflecting Yalbac's overall developmental sequence (Figure 2.4). The Late Preclassic spike in the Mount Hope phase is explainable by the recovery of a handful of sherds from a very deep looter's trench, penetrating several phases of construction, in the main structure at Yalbac. The New Town spike is a result of the discovery of 27 fragments of a whole Daylight Orange vessel found on the surface. This occurrence most likely represents Early Postclassic period post abandonment activity, rather than continued occupation. Discontinuous Terminal to Postclassic occupation is further suggested by the relative infrequency of Terminal Classic period sherds of the Vaca Falls ceramic group recovered from within the epicenter.

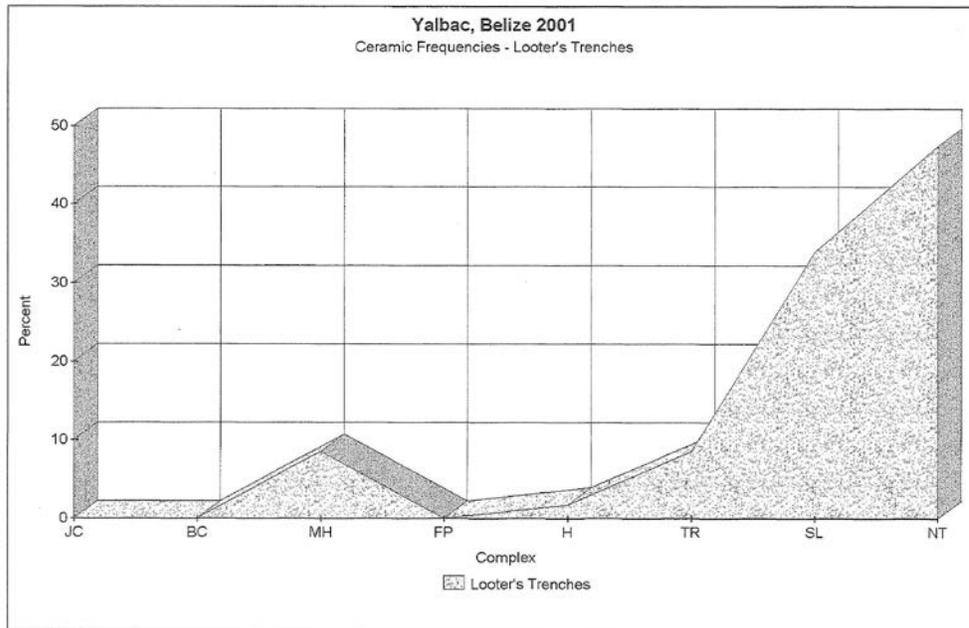


Figure 2.4 Ceramic frequencies, looter's trenches, Yalbac 2001.

Vertical excavation in two of the three main plazas reveals a different picture of epicenter development at Yalbac. Plaza 2 and 3 have roughly opposite developmental sequences. Plaza 2 has a stronger and earlier component than Plaza 3, but is diminished in the Late Classic period (Figure 2.5). Plaza 3 has a similar Early Classic period component, comparable to Plaza 2, but has a stronger Late Classic period component (Figure 2.6). However, Plaza 3 may have had a Preclassic inception similar to Plaza 2. The apparent lack of a Preclassic period component from the unit in Plaza 3 may be hidden by the intrusive nature of the Early Classic period caching of three whole ollas.

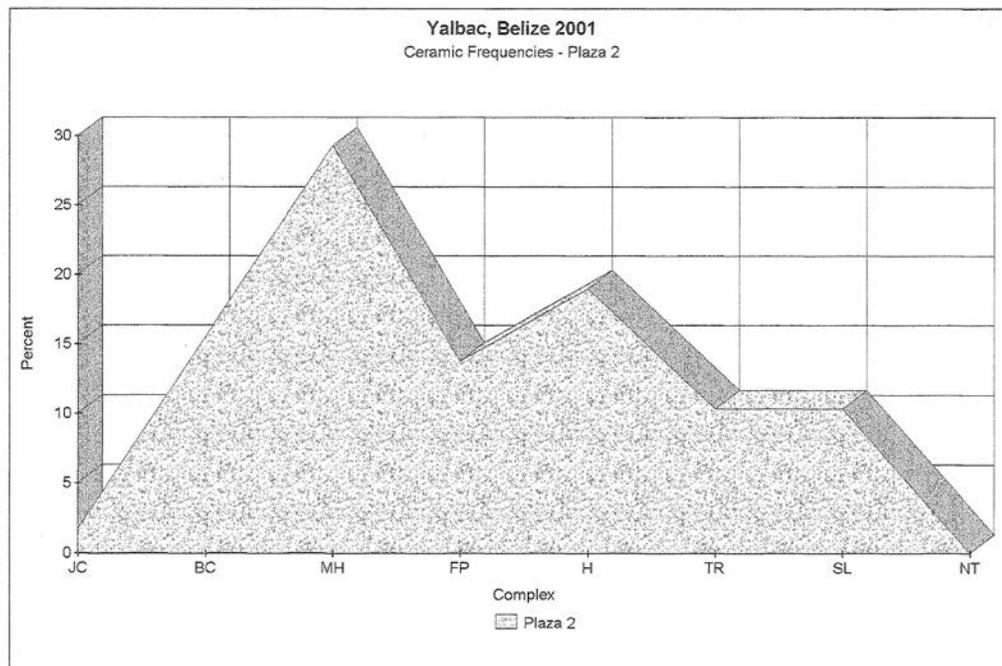


Figure 2.5 Ceramic frequencies, Plaza 2, Yalbac 2001.

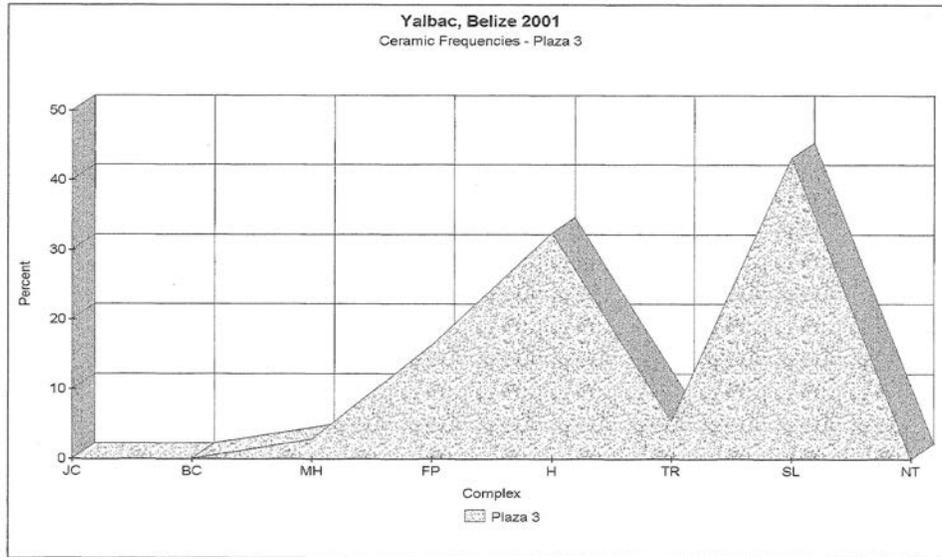


Figure 2.6 Ceramic frequencies, Plaza 3, Yalbac 2001.

Periphery

In the periphery of Yalbac, surface collection produced 133 sherds from roughly 20 general locales (Figure 2.7). These more general locales are defined as on or near mounds, and even in vacant or distant areas of the periphery with no mound association. No phase earlier than Hermitage was recovered, and only 2 of the 20 locales (10 percent) produced Postclassic period material. We encountered a similar phenomenon in our surface collection operations at Baking Pot for the Belize Valley Archaeological Reconnaissance (BVAR) Project (Ehret and Conlon 2000). We wish to emphasize the lack of ceramic material pre-Early Classic period (before A.D. 300), as it likely pertains to the field method of surface collecting, rather than a lack of earlier ceramic types likely waiting to be revealed through excavation.

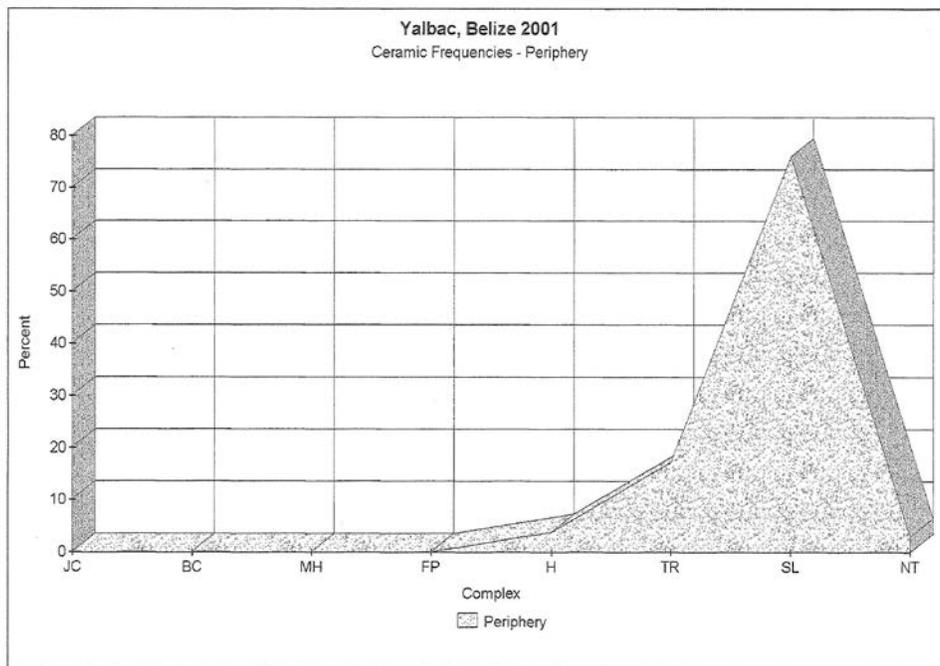


Figure 2.7 Ceramic frequencies, periphery, Yalbac 2001.

Saturday Creek Results 2001

Overall

Results of the type variety analysis on nearly 5800 sherds from Saturday Creek produced a range from the late Middle Preclassic period to the late Postclassic (c. 600 B.C.-A.D. 1300) (Figure 2.8). Saturday Creek evolves slowly in the Middle and early Late Preclassic (c. 600 B.C.-A.D. 1). It begins to burgeon at the end of the Late Preclassic and into the Early Classic (A.D. 1-A.D. 600), leveling off in the early Late Classic (c. A.D. 600-700), before peaking late in the Late and Terminal Classic (c. A.D. 700-1000). Postclassic (c. A.D. 950-1300) material is minimal but represents a continued occupation.

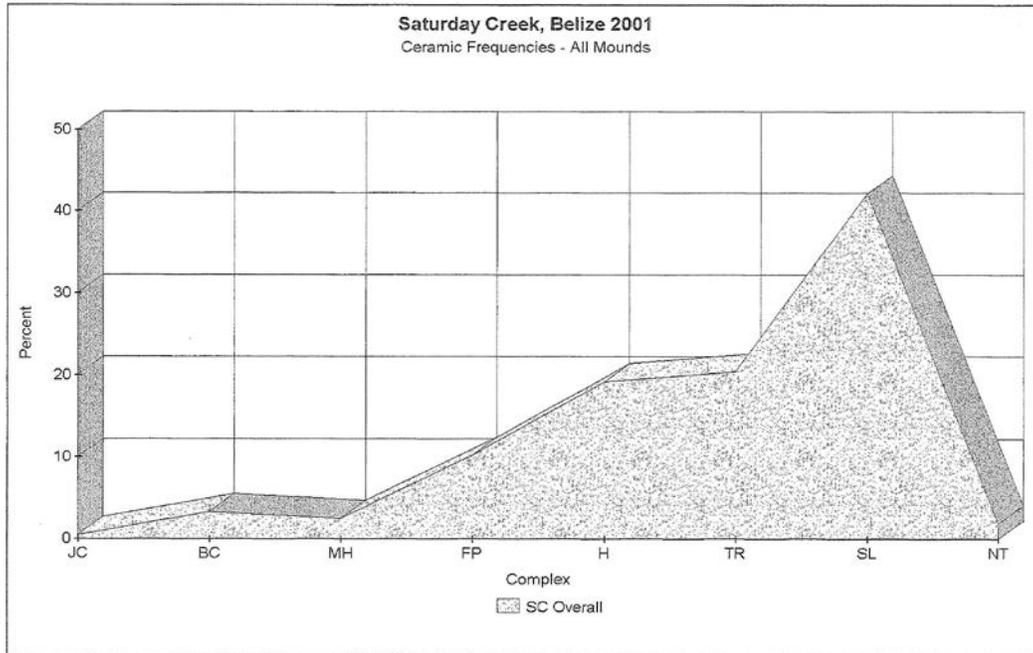


Figure 2.8 Ceramic frequencies, all mounds, Saturday Creek 2001.

Mounds

The overall picture of Saturday Creek was compiled using the raw frequencies from the excavations of individual mounds (Figure 2.9). Individual mound development appears roughly comparable throughout Saturday Creek's developmental history, with the exception of SC-3. SC-3's development appears to be more even and diminutive in comparison to SC-18, SC-78, and SC-85. Aside from SC-3, the most noticeable difference in development occurs at SC-85 where a higher occurrence of ceramic types from the Protoclassic and Early Classic periods are concentrated.

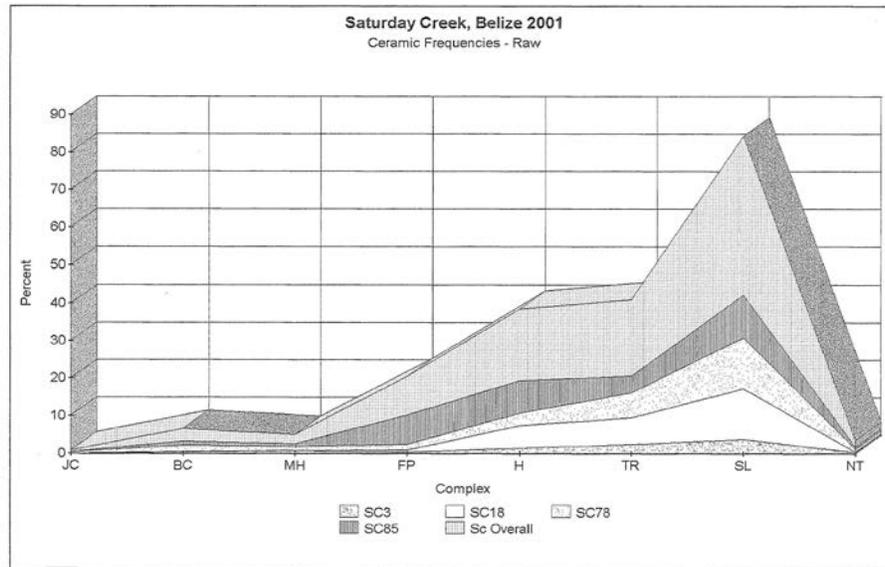


Figure 2.9 Ceramic frequencies, raw, Saturday Creek 2001.

Raw ceramic frequencies, though, are not the best comparative data. Raw frequencies tend to overemphasize differences that are more often based on non comparable sherd quantities excavated from individual mounds. At Saturday Creek we encountered a condition where an almost inverse relationship of sherds recovered to mound volume exists. In other words, SC-3, the largest mound volumetrically in our excavation sample, produced the fewest sherds (529), while the smallest mound volumetrically, SC-85, produced the most (1944 sherds). In order to reveal real differences in ceramic frequencies over time, we employed a weighted average strategy to equalize the raw data, eliminating comparative discrepancies in recovered sherd totals from each mound (Figure 2.10).

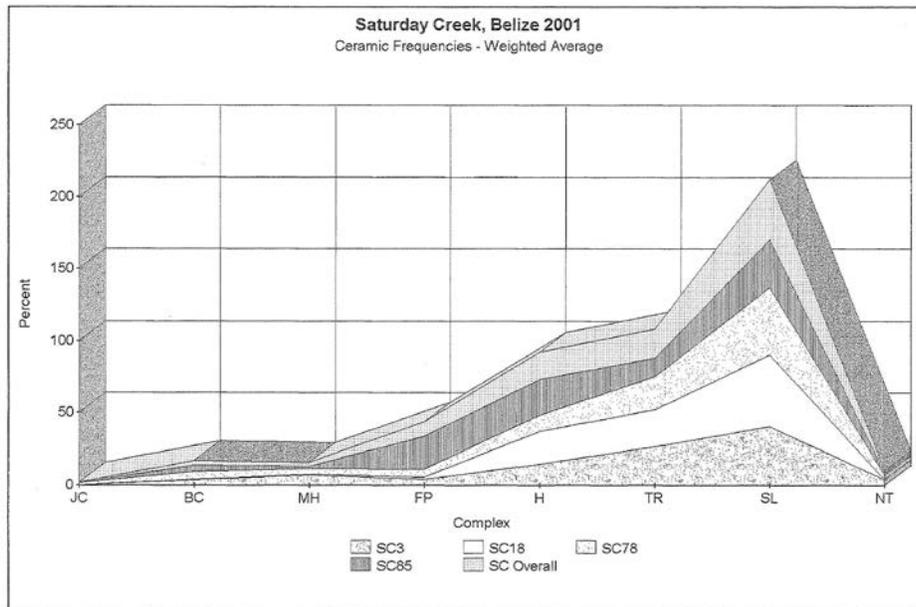


Figure 2.10 Ceramic frequencies, weighted average, Saturday Creek 2001.

Figure 2.10 then corrects for discrepancies in frequencies of sherds recovered by mound. Thus, the vertical "Percent" axis of the "stacked" chart represents a cumulative percentage of all four mounds and Saturday Creek overall. In other words, for the Spanish Lookout phase, the four mounds all have roughly

an equally weighted average occurrence of ceramics from this time period (c. A.D. 700-900), comparable with Saturday Creek overall at approximately 40% of the total sherds recovered from all operations. In this representation one can see how each mound participated in each phase relative to the overall composition more clearly. For example, SC-3 can be seen to be more fully participating in all phases of development without any decrease in intensity during the Tiger Run phase. It can also be more clearly seen that SC-18, though it possesses a Preclassic period component, does not begin to flourish until the Hermitage phase (c. A.D. 300-600).

To summarize, all mounds, except SC-18, follow similar developmental trends from the Preclassic period to Postclassic period. SC-85 exhibits a greater intensity than other mounds during the Late Preclassic and Early Classic periods and SC-18 does not become fully functioning and incorporated into Saturday Creek until the Early Classic period.

Intersite Comparison by Period

We shall now focus on the basic developmental trends revealed by the ceramic group frequency analysis of Saturday Creek in comparison with Barton Ramie.

Preclassic (c. 600 B.C-A.D. 300)

The recovered Preclassic period element of Saturday Creek is small, but some significant differences from the Barton Ramie assemblage warrant comment. The Jenny Creek phase (95.83% of all sherds from SC-78) is represented equally by the Joventud and Savana ceramic groups. All ceramic groups of the Barton Creek phase are represented (51.06% of sherds from SC-78 and 37.77% from SC-85), but the Flor ceramic group is much more abundant than at Barton Ramie (9 times more). Both the Hillbank and Sapote ceramic groups dominate while the Sierra group is less than half that of Barton Ramie's. In the Mount Hope phase (46.15% of sherds from SC-78 and roughly 25% each from both SC-3 and SC-85) both the Quacco Creek and San Felipe ceramic groups are two times more abundant than at Barton Ramie. For all phases of the Preclassic period the redware frequencies established for Barton Ramie are basically reversed at Saturday Creek.

Protoclassic (c. A.D. 1-250)

With regards to the Protoclassic period ceramic groups, Saturday Creek shares many similarities with the comparably situated riverine settlement of Barton Ramie. The Protoclassic component of Saturday Creek is most abundant at SC-85 (76.40% of all Floral Park phase sherds). All three ceramic groups of the Floral Park phase are represented in equal proportions to the Barton Ramie ceramic frequencies.

Early Classic (c. A.D. 300-600)

The Early Classic period at Saturday Creek is roughly similar to that of Barton Ramie's. It is better represented as a proportion of all periods than most of the Belize Valley upland sites (mainly in SC-85, 44.30% and SC-18, 31.30%). The Dos Hermanos ceramic group, however, is preferred over the Minanha ceramic group, much like the redware frequency reversal established in the Preclassic period at Saturday Creek. Furthermore, the Fowler, Pucte and Actuncan ceramic groups are all better represented (four to six times more) than at Barton Ramie.

Late Classic (A.D. 600-900)

Early Facet (c. A.D. 600-700)

Most all ceramic groups of the early Late Classic are equally represented in comparison to Barton Ramie (roughly equal percentage between all mounds). However, the Mountain Pine ceramic group is five times more abundant while the Macal and Teakettle Bank ceramic groups are slightly weaker.

Late Facet (c. A.D. 700-900)

The late facet of the Late Classic phase continues to follow the trend of reversed redware

frequencies and is represented roughly equally among all mounds, with SC-3 somewhat under represented. Saturday Creek suffers from a diminished presence of the Belize ceramic group (only 28.15% that of Barton Ramie's component). An increased frequency of the Dolphin Head ceramic group makes up for some of this deficiency. Furthermore, the Dolphin Head Red ceramic type showed some anomalies. They are typically, as described at Barton Ramie (Gifford 1976:227-230), slipped on the interior of the vessel and part way down the exterior. At Saturday Creek there was a high proportion of "inside-out" Dolphin Head Red sherds, unslipped on the interior but slipped on the exterior. Even more lacking than Belize Red is Mount Maloney Black (12.21% of Barton Ramie's frequency), though this slack is taken up by Achote Black (Mount Maloney and Achote frequencies are basically reversed from the Barton Ramie frequencies).

Terminal Classic (c. A.D. 850-1000)

The Terminal Classic is the most difficult period to define for most Mayanists. Our understanding of this period has been hampered by a lack of data from sites that have both a Late Classic and Postclassic period sequence framing the Terminal Classic (Bey III et al. 1997:238; see also Andrews V and Sabloff 1986:455). Furthermore, this has led to numerous temporal schemes. Both Andrews V (1981) and Smith (1971) date the Terminal Classic to A.D. 800-1000 in the northern Maya Lowlands. Sharer (1985:245) suggests the "generally accepted" temporal classification of the Terminal Classic period corresponds to c. A.D. 800-900, favoring the "early facet" Terminal Classic of Andrews V and Smith above. In northern Belize this time period likely falls somewhere between A.D. 900-1000 (e.g., Masson 1997:293), or the "late facet" of Andrews V and Smith. In the Central Peten lakes region the Terminal Classic falls somewhere between A.D. 850-950 (Rice 1987a:11).

Although there exists a preponderance of ceramic sequences for the Maya Postclassic period (A. and D. Chase 1985:11), the transition from the Late Classic to the Postclassic period can be summed up as one of continuity and overlap (e.g., Ball 1979a, 1979b; A. Chase 1985:198; A. and D. Chase 1985:13; D. Chase 1982b; Graham 1985:221; Harrison 1996:184; Pendergast 1985:91). We similarly see chronological continuity and overlap from the Late Classic to Postclassic period at Saturday Creek. The main continuity at Saturday Creek revolves around the Vaca Falls, Yaha Creek, and Cayo ceramic groups, all of which have their underpinnings in the Late Classic period. While having origins in the late facet of the Late Classic period (c. A.D. 700-900), the aforementioned ceramic groups continue to evolve and distinguish themselves as period markers at Saturday Creek in a distinct Terminal Classic period (c. A.D. 850-1000).

Vaca Falls Red likely runs the entire late facet of the Late Classic period, but an increased occurrence of Kaway Impressed at Saturday Creek likely bespeaks of a Terminal Classic placement into the 10th century A.D. Similar modes and pastes of Roaring Creek Red also provide evidence for the Terminal Classic period overlap with shared similarities in modes and paste to the Daylight ceramic group of the Early Postclassic period. Also included in this phase are Cayo Unslipped: Variety Unspecified (red slipped). Cayo Unslipped: Variety Unspecified (red slipped) make up only 0.5% of the Cayo ceramic group at Barton Ramie, but are as abundant (equally represented) as Cayo Unslipped: Cayo Variety at Saturday Creek. The Yaha Creek ceramic group, also ollas with red slipped rims, comprise only 2.14% at Barton Ramie, but represent 10.96% of the Terminal Classic period at Saturday Creek. Thus, the red-rimmed olla phenomenon at Saturday Creek is most likely a chronological occurrence, that is, a later event than at Barton Ramie.

Postclassic (c. A.D. 950-1300+)

As with the Terminal Classic period, discerning temporal divisions for the Postclassic period has been an equally difficult task for Mayanists. The ever increasing sample of ceramics from Postclassic sites has resulted in "almost as many different ceramic sequences and types as there are excavated sites" (A. and D. Chase 1985:11). At Barton Ramie the ceramics of the New Town ceramic complex were considered to be of a poorer quality compared to the Classic period wares (Gifford 1976:288). Initially, the Postclassic ceramics of Barton Ramie were considered to be a relatively short term phenomenon that was restricted to the earlier part of the Postclassic period (c. A.D. 900-1250) (Gifford 1965:384; Willey et

al. 1965:568; see also Sharer and Chase 1976:288).

However, contrary to Gifford (1976:288), at Saturday Creek we see many continuities and overlap of modes and surface finish with the previous Terminal Classic period. Recent review of the New Town phase has suggested that the late facet extends no further than the Middle Postclassic at Barton Ramie (c. A.D. (P. Rice 1979: 80-81; A. Chase 1982). Subsequently, this heralded the general understanding today "that the break between the Classic and Postclassic traditions arguably occurs between the fall of Chichen Itza and the rise of Mayapan around A.D. 1200" (Sabloff and Henderson 1993:5; see also Andrews V and Sabloff 1986:451-452). Bey III et al. (1997:239) suggest the Terminal Classic should refer instead to the period after the end of major construction at Uxmal and other Puuc sites, roughly A.D. 925-1100. This temporal scheme may hold true for the northern lowlands, even as far south as Lamanai (which has few similarities to the Belize Valley in terms of ceramic frequencies), and many more northern affiliations in the Postclassic (Linda Howie-Langs, personal communication 2002) (Figure 2.11). But, as the Belize Valley was predominantly "influenced" by Peten ceramic styles throughout much of its history, not much support for the northern temporal division of an extended Terminal Classic period can be found in the Belize Valley. Thus, the early-facet Post Classic of Saturday Creek (and Baking Pot), corresponds roughly to what Bey III et al. (1997) term the Terminal Classic, overlapping the Terminal Classic at the beginning of the Postclassic (c. A.D. 950).

In the early facet of the Postclassic period (A.D. 950 to 1150), the Daylight ceramic group is four times more abundant at Saturday Creek than at Barton Ramie. It has been suggested that Daylight Orange may be a derivative from the Late to Terminal Classic Taak ceramic Group of northern Belize (D. Chase 1982; A. and D. Chase 1985:13). We have already noted similarities of Roaring Creek Red to Daylight Orange at both Saturday Creek and Baking Pot (see Terminal Classic section above). This continuity between ceramic types and across sites seems to undermine identifying a specific site of origin for these ceramic types. The main focus of interest in these two ceramic types remains centered on their similarities. Any differences between these types can be attributed to slipping technique and spatial distinctions of accepted or preferred mode between sites as individual potters subsumed attributes preferred by themselves (Sharer and Chase 1976:288).

While possibly originating in northern Belize, for the present, site origin of these ceramic types remains enigmatic. Similar continuity of ceramic types between periods can be seen at Saturday Creek. Specifically, the Augustine ceramic group is not as prevalent at Saturday Creek as it is at Barton Ramie. This, along with a lack of Belize Red at Saturday Creek, indicates a Belize Red-to-Augustine Red connection as further evidenced at Baking Pot where these two ceramic types are both more abundant (Ehret and Conlon 2000).

Finally, the Paxcaman ceramic group component at Saturday Creek is suggestive of a late phase occupation in the Postclassic period, but its ephemeral nature suggests this occupation likely did not survive much beyond A.D. 1300 (see Rice 1979: 80-81; A. Chase 1982; A. and D. Chase 1985:13-14).

To sum up, keeping in mind the general distinctions revolving around the reversed frequencies of the redware ceramic groups, the external slipping of Dolphin Head Reds, and the preponderance of red slipped olla rim, the ancient Maya of Saturday Creek can best be remembered as the upside-down, inside-out, red-rimmed olla people.

Discussion

We have used Barton Ramie as a basis for comparing the overall ceramic character of Saturday Creek. We can describe Saturday Creek as comprising a distinct "community" in so much as a distinctive black paste variant is evident during the Classic period (Ball 1993:254). Cahal Uitz Na (Conlon and Ehret 1999), located further to the south of Saturday Creek and near the headwaters of the Roaring Creek River (Figure 2.12, see also Figure 2.1), also demonstrates its own paste variant of brown to red brown, distinguishing it as another, separate, community at the eastern end of the Belize Valley. The communities of Saturday Creek, and Cahal Uitz Na, suggest a lessened degree of affiliation with the rest of the Belize Valley in this eastern zone.

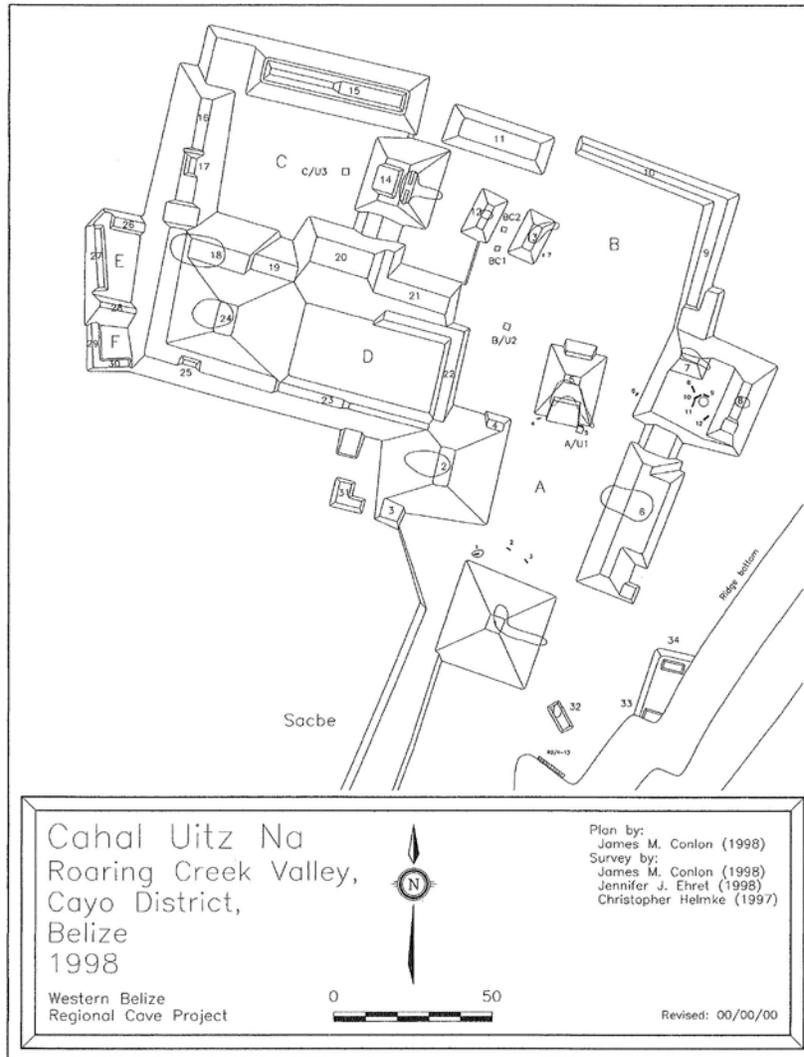


Figure 2.12 Cahal Uitz Na, Roaring Creek Valley, Cayo District, Belize, 1998

However, while paste variants and surface finish commonalities can, in general, identify distinct communities, this criteria alone is not sufficient for this purpose. The paste variants described for Saturday Creek and Cahal Uitz Na more appropriately correspond to the utilization of local clays found within community boundaries. Thus, while paste variants can demonstrate resource acquisition and production nodes, we need to further comparatively assess both preferred forms and surface finishes with regard to ceramic group frequencies in order to accurately evaluate community distinctiveness.

The distinctiveness of Saturday Creek and Cahal Uitz Na is not necessarily based on their propensity for nonconformity on the eastern margins of the valley. Recently the Belize Valley has been characterized as being divided east from west by the respective preference for redwares (Belize Red type) versus blackwares (Mount Maloney Black type, or Fugitive Blackware) in the Late Classic period (Connell 2000:399; see also LeCount 1994). The general trend is one of an increased occurrence of Fugitive Blackware at Xunantunich, the Chaa Creek zone, and, according to Aimers (personal communication 2002) Tipu. Further to the south of Tipu, at Minanha (Iannone, 2001), the Fugitive Blackware domination seems to abate in favor of an increased occurrence of brown slipped vessels (Iannone, personal communication 2002).

To the east, Fugitive Blackware diminishes in frequency at Baking Pot, although Aimers (personal communication 2002) notes its presence in the epicenter of Group I. At Baking Pot the preferred Late and

Terminal Classic surface finish is red, and specifically, the Belize Red type. In the periphery of Baking Pot there is a minimal occurrence of Fugitive Blackware, however, the Achote Black ceramic type frequency substitutes for the diminished Fugitive Blackware presence (Conlon and Moore 1998; Piehl, personal communication 2002). The Fugitive Blackware occurrence in the epicenter of Baking Pot, along with its decreased presence in the periphery, reflects not just its general availability but also the degree to which those Maya of the epicenter of Baking Pot chose to participate in the Xunantunich "ceramic community" interaction sphere.

As stated earlier, we were not so concerned with investigating the mechanisms of site center interaction, our main emphasis was to evaluate the ceramic database of Saturday Creek for identifying community distinctiveness. We wished mainly to highlight how utilizing ceramic group frequencies as a comparative database can reveal significant differences between individual site centers such as Saturday Creek and Barton Ramie. In as much that Xunantunich demonstrates an increased frequency of Fugitive Blackware and Baking Pot is dominated by the Belize Red type in the Late Classic period, neither of these play even a minor role at Cahal Uitz Na or Saturday Creek. While the east-red versus west-black trend holds true as a generalization of the Late Classic period Belize Valley, both blackwares and redwares of this period exhibit distinctive frequencies more aptly described via individual site centers.

The more acute distinctions that site center specific analyses produce not only help identify individual communities, but also the individuality of any community. A community's ability to choose their wares, whether black or red, is what identifies it as a distinct community. Furthermore, if ceramics tend to be produced by individual local manufacturers (e.g., Fry 1980; Jones 1986; Pyburn 1996; Rice 1987b), and centers tend to be consumers rather than producers (Ball 1993:245), then Saturday Creek may very well have been a local center.

Summary

The ceramic assemblage recovered from Saturday Creek in 2001 demonstrated an association with the rest of the Belize Valley. However, it did not strictly follow the compositional character of Barton Ramie. The main differences at Saturday Creek revolve around redwares, blackwares, and a distinctive paste preference.

At Saturday Creek, in almost all phases, there was a reversed, though not completely inverted, preference for the "lesser" redware ceramic groups in comparison to Barton Ramie. The ancient inhabitants of Saturday Creek further asserted their individuality with their nonparticipation in the Fugitive Blackware interaction sphere centered to the west, choosing rather to employ Achote as their preferred blackware in the Late Classic period.

The black paste variant identified at Saturday Creek, like the Achote preference, is significant for demonstrating the former inhabitants ability to chose what ceramic types they manufactured locally, rather than be bound by directly importing more common ceramic types from their Belize Valley neighbors to the west. While Saturday Creek's location at the eastern end of the Belize Valley arguably diminished its ability to participate in the predominant Belize Valley interaction spheres of the Late and Terminal Classic periods, centered around Xunantunich and Baking Pot, we are of the opinion the several differences exhibited at Saturday Creek represent discreet choices made very much of their own volition. We suggest Saturday Creek was very much a local center, one whose local ceramic production and characteristically distinct ceramic group frequencies may be representative of an economic center, albeit on a reduced scale and with minimal influence beyond its own community.

Conclusion

The 2001 excavations at Saturday Creek successfully produced a preliminary chronology for occupation at the site. This knowledge was crucial for an understanding of both the site and the region's settlement history. Similar future research and analysis at Yalbac will further help correlate assemblage types and chronology, as well as determine what links there were between the Belize Valley to the south and also to the sites of northern Belize. A broader perspective of ancient developmental trends beyond the Belize Valley will eventually demonstrate the different roles both Yalbac, and the Belize Valley, played in the eastern lowlands.

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Chapter 3

SC-18: A Wealthy Maya Farming Residence

Lisa J. Lucero and David L. Brown

The ancient Maya who formerly lived at SC-18 appeared to have been relatively well-off farmers who could afford to build plaster floors with ballasts and acquire exotic goods including jade, obsidian, hematite, slate, and marine shell. Their location on fertile alluvium indicates that former occupants likely farmed the immediate area for almost 800 years, as we describe below.

Mound SC-18 is a solitary mound located approximately 130 m north-northwest from the main site datum (see Figure 1.2). The mound is presently situated in a modern agricultural field farmed by Mennonites. Over a period of 10-15 years, Mennonites have worked the land using heavy machinery, procuring two harvests per year. A bulldozer initially cleared the jungle, scouring the immediate area of the core of Saturday Creek, followed by a decade or more of heavy plowing and tillage of the soil, with at least twenty plantings and harvests. These mechanized activities have resulted in post-depositional, surface and subsurface disturbances. For example, the contemporary surface 'plow zone' activities influence more recent deposition by dragging or smearing surface and subsurface materials, churning the soils and archaeological deposits to create an 'artifact shadow.' The subsurface stratigraphy is compressed by the tonnage of machinery passing over it, crushing archaeological remains below. This compactive pressure, accompanied by natural factors or environmental formation processes (e.g., rain, bioturbation, root activity) have transformed the stratigraphic layers, along with their material contents, in varied ways. In the case of SC-18, the stratigraphic layers undulate and the features, artifacts, and burials were compressed or crushed.

SC-18 is approximately 30 (north-south) x 38 m (west-east), about 1.24 m in height, and is oval in shape (Figure 3.1; burials are noted on planview by number). The actual size of the structure(s), however, is about 10 x 8 m, and likely comprised a commoner residence of which we were able to expose about 50%. It consists of several construction phases dating from c. A.D. 400 through 1150 (though we recovered ceramics dating as early as 300-100 B.C.). Several thin plaster floors, most with 2-5 cm thick cobble ballasts (fill below floors), were constructed, one on top of the other. Single or double-course boulder walls provided the foundation for thatch or wattle and daub structures.

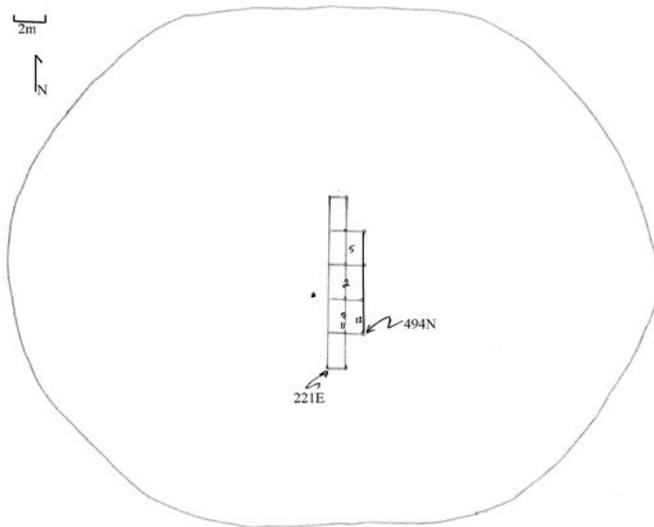


Figure 3.1 SC-18 mound plan view and trench

The center of the mound is located at 312.221 E 1916.498 N. From this point, eight 2 x 1 m units were opened aligned north-south creating a trench in the center of the mound. Several central units were later combined to form 2 x 2 m units: 221E 498N, composed of 221E 498N and 222E 498N; 221E 496N, composed of 221E 496N and 222E 496N; and 221E 494N, composed of 221E 494N and 222E 494N. A datum point was established at 312.220.46E 1916.496.40N at 100.3 m asl (above sea level). Surface artifacts were collected and the presence of limestone rocks, cobbles, and pebbles scattered across the surface of the mound were noted.

SC-18 consists of at least six major occupations levels (Figure 3.2; see appendix for stratum descriptions). Most of the mound was occupied from about A.D. 400-900. The southeast corner appears to have been added later as it is the only section of the mound dating to c. A.D. 900-1150. As a matter of fact, it appears that former occupants of SC-18 expanded southward in general. The majority of living surfaces consist of decomposing plaster floors, or large burned areas with smashed items, usually ceramic vessels (see Figures 3.3 and 3.4). Things were made much more complicated by the fact that there were five burials, the positions of which are noted on Figure 3.1 (briefly discussed below, and described in more detail in chapter 7).

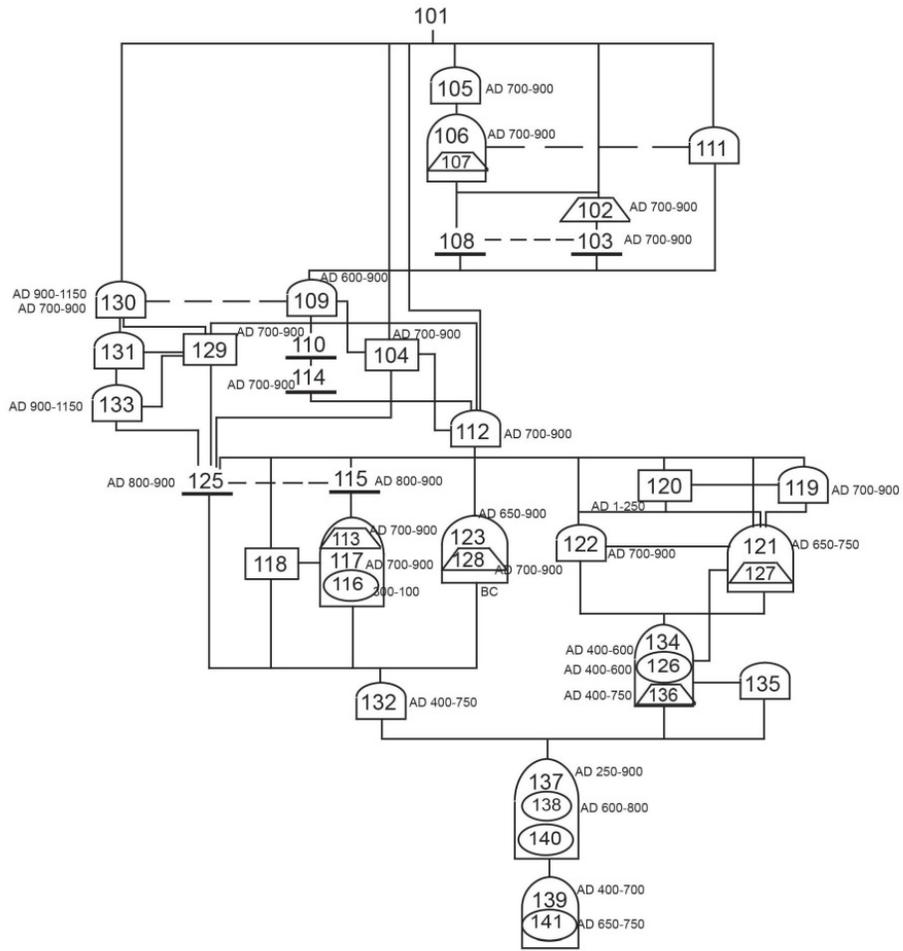


Figure 3.2 SC-18 matrix

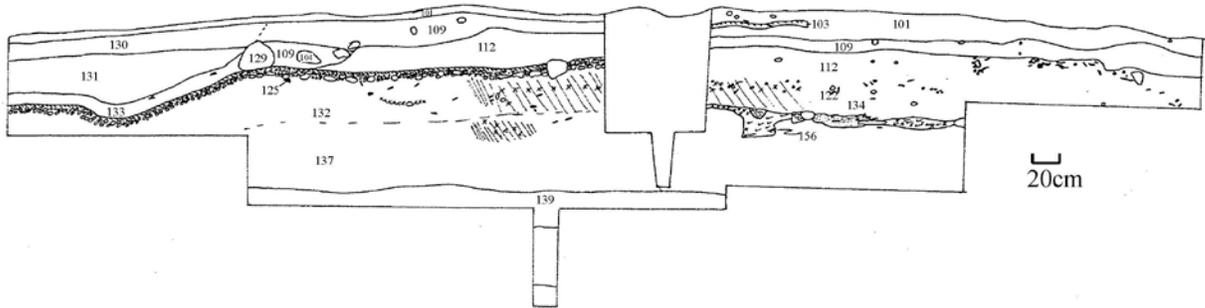


Figure 3.3 SC-18 west wall profile

The earliest identified cultural stratum is the upper most section of fill 139 (the lower portion of which is essentially sterile), which dates to c. A.D. 400. The Maya interred BU 11 (141) at about A.D. 657-750 and placed a bowl over the burial. Above fill 139 was 137, dating anywhere from c. A.D. 400 to 900. The Maya buried two individuals in 137, BU 7 (138) and BU 12 (140), the former dating to A.D. 600-800. It becomes even more complicated because it appears that the Maya began to build several contemporaneous rooms or structures (e.g., 132, 134, and 135, dating from c. A.D. 400-600/700). Within fill 134, or on top of fill 137, the Maya likely conducted a burning/termination event resulting in three layers of ash, burned soil/material, and ceramics (136) (Figure 3.5). The ceramics comprised several incomplete vessels and date to c. A.D. 400-600 and A.D. 650-750.



Figure 3.5 SC-18 deposit 136, unit 221E 498N

On top of deposit 136, the Maya constructed a cobble ballast (117) dating to c. A.D. 700-900, and into which they buried BU2 (116) at the same time, along with possible heirloom ceramics that date to c. 300-100 B.C. A hammerstone was found resting on floor 125 immediately west of the burial. Marine-shell beads (possible anklet) and flakes were found at the feet of the cross-legged seated burial. Ballast 117 is within wall/structure 118, part of which was removed to inter burial 116. The burial was capped by three overturned vessels (113), including a large platter (c. 60 cm in diameter) over the skull, an olla west of the burial, and a plate to its east. Burial 116 also cut into floor 115 (dating to c. A.D. 800-900), which is likely the same as floor 125 (also dating to A.D. 800-900). Wall 120 and fill 119 (A.D. 700-900), 122 (A.D. 700-900), and 121 (A.D. 650-750) might comprise a contemporaneous room or structure (with 120 as the foundation wall) with floors 115 and 125 (both deteriorating plaster floors with cobble ballasts). Even though early sherds dating to c. A.D. 1-250 were found under wall 120, the surrounding strata all date much later, ranging from A.D. 600 to 900. Wall 120 is a single-course boulder wall aligned north-south, that is faced on its west side only. Burned daub and charcoal flecks are also only noted on the west side of the wall. A burial (BU 5, 126) dating to c. A.D. 400-600 intrudes into 121, which is perhaps associated with another deposit of smashed, burned ceramics, marine shell, polished-, shaped-burned bone, and burned soil (127 and 128, the latter dating to c. A.D. 600-700). The apparent sequence of events went something like this:

1. the Maya dug a rectangular pit
2. they filled it in with broken pottery, flakes, and burned something
3. they placed an antler in the center
4. they put it more fill
5. they placed burial 126
6. they added more fill
7. they added more ceramics and burned something (127)
8. they placed a mano, metate, and more ceramics
9. they added more dirt
10. upon the termination of the structure (perhaps 120), the Maya burned more items and placed vessels (128) south of the skull (which faced south).
11. The final event consisted of another burning event.

The next series of construction events include the construction of another foundation wall (129). It is associated with two different series of building phases. The earlier one, dating to c. A.D. 700-900, is located above the earlier construction phases described above, and the other series is located south of wall 129 and dates to c. A.D. 900-1150. The earlier phase consists disturbed plaster floors 110, which was build immediately over 114, another deteriorating floor (both date to c. A.D. 700-900). The Maya at SC-18 clearly added to the south of the main area later than the rest of the mound. This relatively small areas consists of three fill strata; the earliest we exposed (133) dates to c. A.D. 900-1150 and rests on top of floor 125. Above fill 133 are two layers of fill, 131 and 130; 130 abuts fill 109, the former likely added to the latter, which dates to c. A.D. 600-900.

The most recent major building phase remaining (i.e., not destroyed by plowing) is found in the center of the mound, and dates to c. A.D. 700-900. It consists of two plaster floors (108 and 103), which might comprise the same floor across most of the mound. On top of the floors there are at least two special deposits. Deposit 102, on top of floor 103, likely represents a termination ritual and consists of three layers of broken and burned ceramics dating to c. A.D. 700-900. The other special deposit, 107, included an obsidian core placed within a circular concentration of burned soil and charcoal. It also appears that some of the cobble ballast (106) had been removed, then something was burned, upon which the obsidian core was placed. Immediately below the topsoil (101) was a cobble ballast (105, dating to A.D. 900). We did not note obvious evidence for a plaster floor, however.

SC-18 appeared to have been inhabited by relatively well-off farmers for perhaps as long as 800 years. We state they are relatively wealthy, especially when compared with the residents at SC-85, described in the next chapter.

Appendix

SC-18 Stratum Descriptions

Surface: jade bead, ceramic ornament, marine shell, chert flakes, tools, cores, celt, shaped green slate/serpentine. Ceramics date to A.D. 800-900.

Stratum 101 is a brownish clay loam topsoil (10YR4/2 and 10YR3/2) with 10% limestone and pebbles. It ranges from 7 to 56 cm in thickness. It is characterized by loose, dry clay and roots. Its subsurface is compact and moist. A plow zone is present throughout the entire mound. Artifacts recovered include ceramics, chert flakes, hammerstone, tools, core, flake tool, obsidian blades, bone, and marine shell. Ceramic dates range from A.D. 600-700 (Tiger Run) to A.D. 800-900 (late Spanish Lookout), but likely date to A.D. 700-900 (Spanish Lookout).

Faunal remains include 20 large mammal and 1 small mammal bones.

8 out of 24 obsidian pieces were notched.

Stratum 105 is a thin cobble ballast with 60% clay loam (10YR4/4 and 10YR 3/2). It ranges from 2 to 6 cm in thickness. This stratum is aligned east-west and is present in the northern portion of 222E 496N. It is approximately 90 cm in length (east-west) and between 10 and 20 cm in width. Artifacts include ceramics, daub, and one chert core. Ceramic dates range from A.D. 700-900 (Spanish Lookout). It is below 101 and above 106.

Stratum 106 is a 10-20 cm wide cobble ballast with 60% clay loam (10YR4/4 and 10YR 3/2). It ranges from 8 to 9 cm in thickness. Most of the stratum is in 222E 496N, but it is also present in the eastern edge of 222E 498N for an additional 70 cm. Artifacts present in this include ceramics, which date from A.D. 700-900 (Spanish Lookout). It is below 105, encompasses deposit 107, might be the same as 111, and is above floor 108 and deposit 102.

Stratum 107 is a circular area of dark, burned mottled soil (5Y3/2 and 5Y2.5/2) with charcoal flecks. It is about 5 cm thick. This deposit is located in 222E 496N under 105 and within 106. Artifacts present in this stratum consist of an obsidian core, which was found on top of this deposit. There was also a 3 cm thick charcoal deposit below the obsidian core, directly on top of floor 108.

Stratum 111 is a possible ballast with clay loam with limestone cobbles (25%). It ranges from 22 to 25 cm in thickness. This stratum lies above 109, below 101, and might be the same as 106. Only a chert core was recovered. The stratum was found in 221E 496N. A burned area abuts 111 on its east side.

Stratum 102 is a termination deposit of solid ceramics. It ranges from 1 to 4 cm in thickness. The deposit consists of at least three layers of individual, broken ceramic vessels mixed with limestone flecks. Carbon is present on the surface of the ceramic sherds. West of the pottery are three marine shells. Ceramic dates range from A.D. 600-700 (Tiger Run). Stratum 102 is found in 221E 496N, 221E 498N, 222E 496N, and 222E 498N. It is above 103, below 101 and 106, and a little part of 102 appears to go under ballast 106 (?).

Faunal remains include 2 large burned mammal bones.

2 out of 3 obsidian pieces were notched.

There were 3 distinct ceramic clusters, dating to A.D. 700-900; one with 3 plate rims and 77 body sherds, one with 2 plate rims and 105 body sherds, and one with 84 body sherds.

There was a complete broken vessel dating to A.D. 700-800.

Stratum 103 is a deteriorated plaster floor with clay loam (10YR5/4 and 10YR4/4) and many charcoal flecks. It ranges from 2 to 5 cm in thickness. Deposit 102 rested directly on top of the floor. There is an area of burned or blackened clay just south of 102 (5Y2.5/2). Artifacts consist of ceramics, 1 un-notched obsidian blade, daub, and chert. Stratum 103 is found in 221E 496N, 221E 498N, and 222E 498N. Ceramic dates range from A.D. 700-900 (Spanish Lookout). It is below 102, above 109, and might be the same as floor 108.

Stratum 108 is a deteriorated plaster floor (10YR5/4 and 10YR4/4). It is about 5 cm thick, including its ballast. It is located below 107 in 222E 496N, and is believed to be the same as floor 103 due to its similar elevation. It is above 109. No artifacts are present in this stratum.

Stratum 109 is a mottled clay loam (10YR3/2 and 10YR4/2) and sandy loam (10YR4/6 and 10YR5/6) fill with inclusions of limestone cobbles, gravel, pebbles, and flecks (5-10%). It ranges from 6 to 42 cm in thickness. The soil in this stratum is mixed, creating a swirling affect. A burned area about 30 cm in diameter was found on its surface (5Y2.5/2). It is north of wall/structure 104 (112 is to the south). Artifacts present in this stratum consist of ceramic sherds, obsidian, chert flakes, bone, marine shell, and burned daub. Stratum 109 is found in 221E 492N, 221E 494N, 221E 496N, 221E 498N, 221E 500N, 222E 494N, 222E 496N, and 222E 498N. Ceramic dates range from A.D. 700-900 (Spanish Lookout), though there is some Tiger Run (A.D. 600-700). It is below floors 103 and 108, 111, abuts 104, might be the same as 130, and is above floor 110, wall 129, and 131.

Faunal remains include 3 large mammal bones, 12 small mammal bones, and 1 rodent bone.
2 out of 7 obsidian pieces were notched.

Stratum 130 is a clay loam (10YR3/2) fill with river cobbles and limestone cobbles and pebbles (30%). It ranges from 6 to 18 cm in thickness. Artifacts include ceramics, chert flakes, 1 un-notched obsidian, and a celt. The stratum is in 221E 492N. Ceramic dates range from A.D. 800-900 (late Spanish Lookout). It is below 101, might be the same as 109, and is above 131 and wall 129.

Stratum 110 is a plaster floor with clay loam (7.5YR5/6 and 7.5YR4/6). It is about 3 cm thick. The stratum is somewhat disturbed as it undulates to some extent, likely from the extensive plowing that has taken place. Artifacts include polychrome sherds (on surface), ceramics and chert flakes. This stratum is only present in unit 222E 498N. Ceramic dates range from A.D. 700-900 (Spanish Lookout). It is below 109 and above floor 114.

Stratum 114 is a deteriorated plaster floor (10YR4/6). It is about 60 x 80 cm in size and about 2 cm thick. The floor straddles 221E 498N and 222E 498N, just below floor 110. The only artifacts present in this stratum are ceramics, dating to A.D. 700-900. It is below floor 110 and above 112

Stratum 104 is a possible collapsed wall consisting of large limestone boulders and 70% cobbles within a compact clay loam (10YR5/2 and 10YR 4/2). It ranges from 3 to 11 cm in thickness. This stratum is construction rubble aligned northwest-southeast. Artifacts include chert flakes and core, 1 out of 2 obsidian pieces notched, and ceramics. Stratum 104 is in 221E 494N and 222E 494N. Ceramic dates range from A.D. 700-900 (Spanish Lookout). It is below 101, abuts 109 and wall 112, and is above floor 125.

Stratum 112 is a sandy loam (10YR6/4 and 10YR4/6) fill with a few limestone cobbles, gravel, and pebbles (5-10%). It ranges from 22 to 40 cm in thickness. It is a fill found south of wall/structure 104 (109 is to the north). Artifacts include many ceramics, bone, a bone needle, chert flakes, tool, core, obsidian, spindle whorl, figurine fragment, daub, and shell. Stratum 112 is in 221E 492N, 221E 494N, 221E 496N, 221E 498N, 221E 500N, 222E 494N, 222E 496N, and 222E 498N. Ceramic dates range from A.D. 700-900 (Spanish Lookout). It is below 109 and 101, abuts wall/structure 104, and is above floor 125, wall 118, floor 115, 123, 122, wall 120, and 119.

Faunal remains include 2 large mammal and 1 small mammal bones, as well as 1 fish bone.
1 out of 7 obsidian pieces were notched.

Stratum 131 is a sandy loam (10YR4/6) fill ranging from 12 to 44 cm in thickness. Th fill was likely used to increase the area of the foundation. Artifacts include ceramics. It is in 221E 492N. It is below 130, barely abuts wall 129, and is above 133.

Stratum 129 is a large boulder limestone wall (25-50 cm) aligned east-west between 221E 492N and 221E 494N. It is about 40 cm high. It is the southern most wall exposed. No artifacts were present. It is below 109, abuts 131 and 133, and is above floor 125.

Stratum 133 is a dark grayish brown clay loam (10YR 3/3) fill with limestone pebbles and cobbles (20%). It ranges from 10 to 12 cm in thickness. This stratum runs at a fairly consistent level of 10-12 cm above floor 125. Artifacts include ceramics, chert flakes, and 1 notched obsidian. This stratum is in 221E 492N. Ceramics date to A.D. 900-1150. It is below 131, abuts wall 129, and is above floor 125.

Stratum 125 is an undulating deteriorating plaster floor and cobble and pebble ballast that slopes southward. It ranges from 5 to 24 cm in thickness. It begins in the southern part of 221E 496N about where 116 (BU 2) is located, and continues as part of the collapsed section of floor 115 and ballast 117

into 221E 494N where it terminates under wall 129. Artifacts include ceramics, chert flakes, hammerstone, marine shell, metate, bone needles, jade tooth inlay, a hematite disc fragment, animal bones, and obsidian flakes and blades. Stratum 125 is found in 221E 492N, 221E 494N, and 221E 496E. Ceramic dates range from A.D. 800-900 (late Spanish Lookout). It is below 112, wall 104, wall 129, and 133, might be the same as floor 115, and is above 132.

Faunal remains include 1 bird bone and 1 turtle carapace.

5 out of 20 obsidian pieces are notched.

Stratum 115 is a deteriorated plaster floor (10YR5/6 and 10YR4/6) about 6 cm thick. Pottery deposit 113 intrudes into 115. A ceramic olla from 113 rests face down in 221E 496N on it. Artifacts include ceramics chert flakes, and a hammerstone. Ceramics date to A.D. 700-900. It is below 112, might be the same as floor 125, and is above 117 (with 113 and 116).

Stratum 118 is a limestone boulder and cobble wall. It is aligned east-west in 221E 496N, divided/intruded by 116 (BU2) at the legs of the skeleton. No artifacts were present. It is below 112, abuts 117, and is above 132.

Stratum 117 is a loose limestone boulder and cobble ballast with loam (5YR4/3 and 5YR3/3) with charcoal flecks. It ranges from 6 to 10 cm in thickness. The ballast is under floor 115 and west of 116 (BU2). Artifacts include ceramics, bone, chert flakes, core and an apparent piece of burned wood that appears to be surrounded by a ring of stones (it could be natural). This stratum is found in 221E 496N. Ceramic dates range from A.D. 700-900 (Spanish Lookout). It is below floor 115, abuts wall 118, is intruded into by 113 and burial 116, and is above 132.

Faunal remains include 1 large mammal with cut or chop marks.

Stratum 113 comprises the 3 burial vessels of burial 116 (BU 2). All the vessels were complete but broken. There was a large olla face down, a plate placed face down, and one large platter face down over the skull. A hammerstone had been placed next to the olla. The olla is positioned to the west of the platter, which is located between 221E 496N and 222E 496N, with the plate to the east of the platter. Ceramic dates range from A.D. 700-900 (Spanish Lookout). It intrudes through floor 115 and wall 118 into 117.

Stratum 116 is a burial (2); artifacts include ceramics, flakes, 5 marine shell beads near the ankle. It intrudes into floor 115, wall 118, and ballast 117 (above 132). Ceramics date to 300-100 B.C.

Stratum 123 is a sandy loam (10YR4/6) fill with carbon deposits, and is similar to 112. It is about 35 cm thick. Artifacts include ceramics, bone, chert flakes, and obsidian. There is a burned (pit) area c. 10 cm in diameter with a sherd (dating to A.D. 700-900). Stratum 123 is found in 221E 496E. Ceramic dates range from A.D. 650-750 (Tiger Run). It is below 112, is intruded by deposit 128, and is above 132.

Faunal remains include 1 small mammal bone.

2 out of 4 obsidian pieces are notched.

Stratum 128 is a 2 cm thick deposit including 3 vessels intruding into 123. This deposit could be associated with 126 (BU 5), and is located in the south end of 221E 496N. Artifacts include ceramics, marine shell, and a polished shaped burned bone. It could also be a termination deposit because of the obvious presence of charcoal and burned areas that could have been a floor/surface (based on the presence of plaster). Ceramic dates range from A.D. 600-700 (Tiger Run) and A.D. 700-900 (Spanish Lookout).

There were at least three ceramic clusters:

1. 17 rims, 123 body sherds, A.D. 600-700
2. 37 body sherds
3. 66 body sherds

Stratum 132 is a sandy loam (10YR4/4) fill with limestone flecks and evidence of burning on the west side of 221E 496N. It ranges from 24 to 30 cm in thickness. It undulates and slopes south, similar to floor 125 (on top of 132). A red semi-circular burned design is present with two colors 5YR3/3 and 5YR 5/8. Under floor 115 and ballast 117, the soil is darkened from burning with a notable presence of charcoal flecks. Artifacts include ceramics, obsidian, marine shell, a ceramic disc, a drilled marine shell, a polished shaped bone, a drilled burned bone, bone, and chert flakes. Stratum 132 is in 221E 494N and

221E 496N. Ceramic dates range from A.D. 400-600 (Hermitage) and A.D. 600-700 (Tiger Run). It is below floor 125, wall 118, 117, and 123, and is above 137.

Faunal remains include 12 large mammal bones, 4 small mammal bones, 3 rodent bones, and 1 turtle carapace with cross-hatch cut marks.

8 out of 19 obsidian pieces are notched.

Stratum 119 is a limestone cobble ballast 25-40 cm wide within a clayey loam (10YR3/2). It ranges from 17 to 18 cm in thickness. The ballast is located in the north section of 221E 500N and is aligned east-west. Artifacts include ceramics and burned daub. Ceramic dates range from A.D. 700-900 (Spanish Lookout). It is below 112, abuts wall 120, and is above 121.

Stratum 120 is a north-south aligned wall constructed of eleven limestone boulders about 10-15 cm high. The wall stones are faced on the west side and unfaced on its east side. Burned daub and charcoal flecks are present on the west side. Ceramics found below wall 120 date to A.D. 1-250. This wall is in 221E 498N and 221E 500N. It is below 120, abuts 119, and is above 122 and 121.

Stratum 121 is a sandy loam (10YR4/6) fill with some gravel and charcoal flecks. This stratum is to the east of wall 120, and is similar to 112. It ranges from 10 to 17 cm in thickness. Artifacts include ceramics, groundstone, bone, and a bark beater. Stratum 121 is in 221E 498N and 221E 500N. Ceramic dates range from A.D. 650-750 (Tiger Run). It is below wall 120, 112, and 119, abuts 122 and 134, and is above 135. Burial 5 (126) and deposit 127 intrude into 121.

Faunal remains include 1 large mammal and 1 small mammal bones.

Stratum 126 is a burial (BU 5) intruding into 121 dating to A.D. 400-600. An antler was found c. 10 cm below burial. A mano and metate were placed on top of the burial. Other artifacts include ceramics, chert flakes, and 3 un-notched obsidian blades. It intrudes into 134.

Stratum 127 is a burned layer of fill that is concentrated over and adjacent to 126 (BU 5). It is about 2 cm thick. This stratum is composed of charcoal, ash, and burned soil, and is positioned over the lower left arm in a circular shape (about 72 cm in diameter, 7.5YR8/1). Artifacts include ceramics. It is in 221E 498N and 221E 500N and intrudes into 121.

Stratum 122 is a sandy loam (10YR4/6) fill with limestone gravel and flecks. It is to the east of wall 120, and is similar to 112. It ranges from 8 to 17 cm in thickness. Artifacts include ceramics, bone, chert flakes, and 1 un-notched obsidian. Stratum 122 is in 221E 498N and 221E 500N. Ceramic dates range from A.D. 700-900 (Spanish Lookout). It is below 112 and wall 120, abuts 121, and is above 134.

Faunal remains include 2 large mammal bones.

Stratum 134 is a sandy loam (10YR4/3) fill with limestone pebbles. It ranges from 23 to 28 cm in thickness. This fill is located outside of 126 (BU 5) and extends to the same depth as the grave goods beneath the remains. Artifacts include ceramics, marine shell, and chert flakes. It is in 221E 498N. Ceramic dates range from A.D. 400-600 (Hermitage). It is below 122 and 121, abuts 121 and 135, is intruded by deposit 136 and burial 126, and is above 137.

Stratum 136 is a deposit with 3 layers of ceramics (some with carbon on their surface), ash, and charcoal flecking. Ceramic sherds constitute about 95% of the deposit with the remaining 5% consisting of limestone cobbles. It ranges from 4 to 25 cm in thickness. Artifacts include ceramics and chert flakes. It appears that a rectangular-shaped organic item, perhaps a textile, was burned, between ceramic layers or beneath them. The stratum is in 221E 498N. Ceramic dates range from A.D. 400-600 (Hermitage) and A.D. 650-750. It intrudes into 134 and likely rests on 137.

Layer 1 (top): ceramics, large fine-grained chert flake tool, A.D. 400-600

Layer 2 (middle): ceramics (some burned), A.D. 650-750

Layer 3 (bottom): chert flakes (8 cm long), lots of ash, A.D. 400-600

Stratum 135 is a limestone cobble ballast located in the northeast corner of 221E 498N. It ranges from 3 to 8 cm in thickness. Artifacts consist of ceramics (including a candelario), chert flakes and bone fragments. It is below 121, abuts 134, and is above 137.

Stratum 137 is a clay loam (10YR4/6) fill. It ranges from 21 to 94 cm in thickness in 221E 494N, 221E 496N, and 221E 498N. Artifacts include ceramics, freshwater shell, bone, chert flakes, core, flake tool, and a ceramic disc. Ceramic dates range from A.D. 400-600 (Hermitage) and A.D. 700-900 (Spanish

Lookout). It is below 132, 134, and 135, above 139, and likely below deposit 136. Burials 7 (138) and 12 (140) intrude into 137.

Faunal remains include 2 large mammal, 2 large polished and sharpened bones (possible awls), 1 small mammal.

Stratum 138 is a burial (BU 7) that intrudes into 137. A complete bowl rested over its pelvic area, and dates to A.D. 600-700. Other artifacts include chert flakes, 1 notched obsidian, and 7 freshwater shell beads.

Stratum 140 is a burial (BU 12) that intrudes into 137. 2 of the 8 obsidian blades were notched.

Stratum 139 is an essentially sterile clay (10YR4/3). It was not completely excavated, although a 1 meter post hole was excavated. Burial 141 (BU 11) intrudes into 139 in 221E 494N. This stratum is also in 221E 494N, 221E 496N, and 221E 498N. Only a few ceramics were found in this stratum and date to A.D. 600-700 (Tiger Run).

Stratum 141 is a burial (BU 11) that intrudes into 139. The burial plate dates to A.D. 650-750.

Stratum 124 turned out to be the backfill of the 1999 test pit.

Chapter 4

SC-85: A Common Maya Farming Household

Lisa J. Lucero, Gaea McGahee, and Yvette Corral

Former occupants of SC-85 has less wealth than those who once lived at SC-18, a fact reflected in residence size and construction materials, the artifact assemblage, and their location in a clayey area less suitable for agriculture.

SC-85 is a solitary mound (6 x 4 m, 1.34 m high) located in an area of secondary growth just east of the plowed Mennonite fields (see Figure 1.2). It does not appear to have been plowed at any time. It is located about 280 meters west of the Belize River and southwest of the core area. The structures nearest SC-85 include SC-84, SC-5, and SC-4.

We began excavation at SC-85 by setting up an east-west trench across the approximate center of the mound with a total of nine 1 x 2 m units (Figure 4.1; burials are denoted by number). The trench was terminated at either end at the natural base of the mound slope. The 1999 test pit was located and re-excavated in the approximate center of the mound.

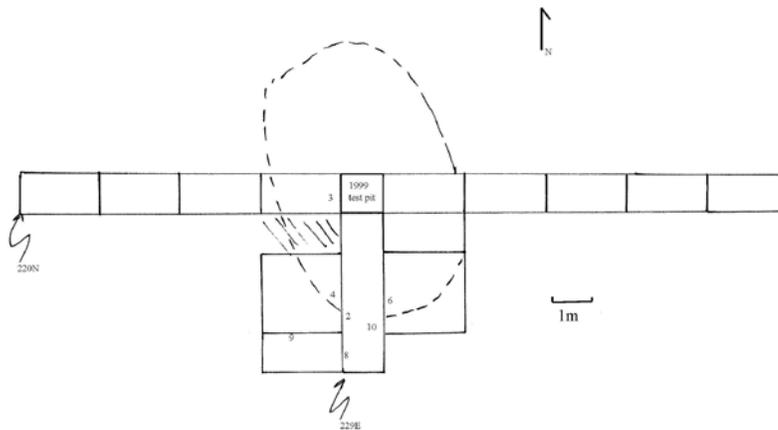


Figure 4.1. SC-85 mound planview and trench. Numbers are burial locations.

Our initial datum stake was placed in the southwest corner of the test pit area, 229E 220N at an elevation of 98.2 m asl (corrected from 100.1 m). Our elevation string was attached to the datum stake at an arbitrary 20 cm above ground level (98.6 m corrected from 100.3 m) and was used to take all elevations until a new stake had to be erected 2 meters north of the first datum at 229E 222N (February 26).

SC-85 was a small residential mound, a supposition based on size and collection of artifacts, as well as the seven burials recovered during the 2001 field season. The mound was occupied from at least A.D. 400 to 1150 (Figure 4.2; see appendix for stratum descriptions). Our excavations revealed at least

six obvious occupation levels (Figure 4.3), five of which were identified based on the presence of smashed and burned vessels rather than obvious plaster floors. The earliest exposed construction phase consisted of a possible earthen surface (125). After the first few centimeters, the dark clay loam was essentially sterile. Ceramics recovered from 125 date to c. A.D. 400-600. As with other surfaces, this one was distinguished by the presence of smashed vessels, as well as obsidian and a mano and metate (Figure 4.4). Interestingly, the wide range of types that are represented date anywhere from 300-100 B.C. to A.D. 600-700.

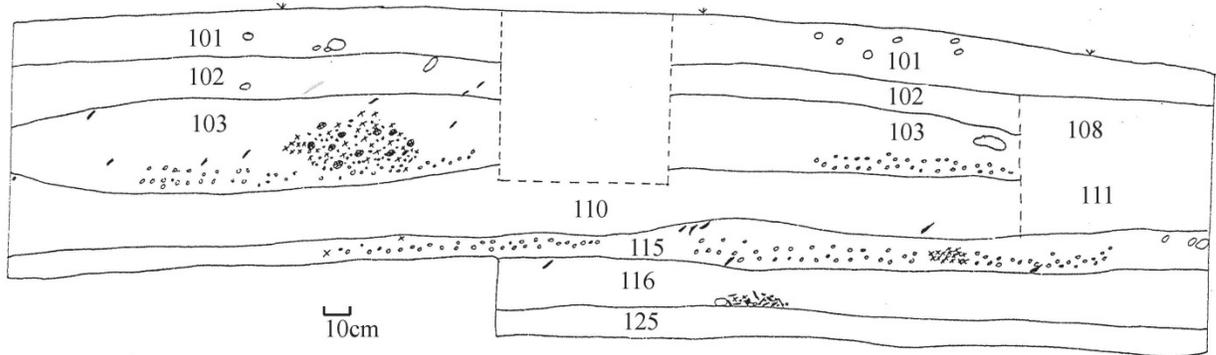


Figure 4.3 SC-85 north wall profile

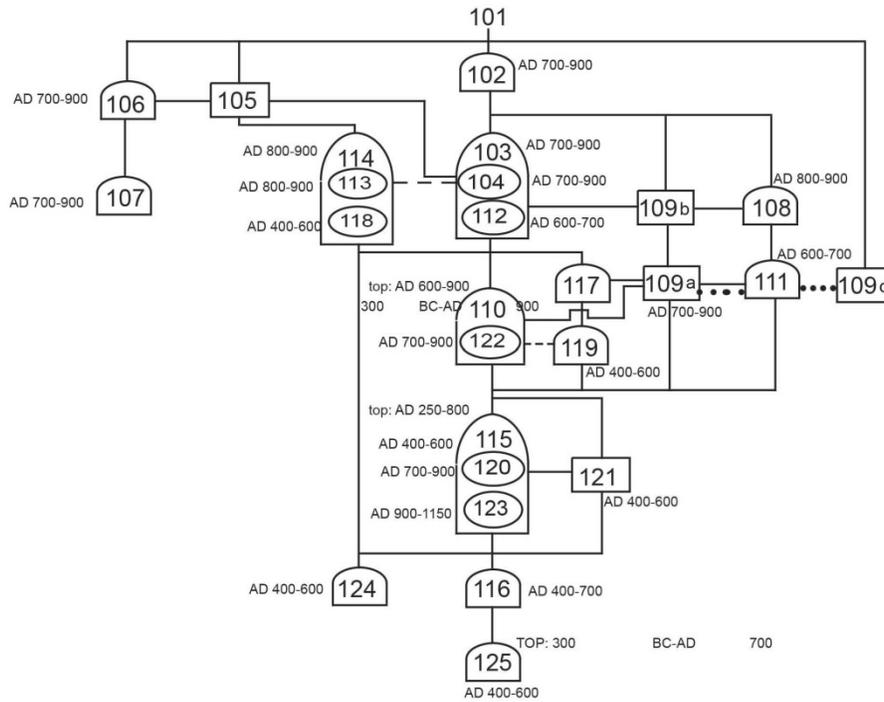


Figure 4.2 SC-85 matrix

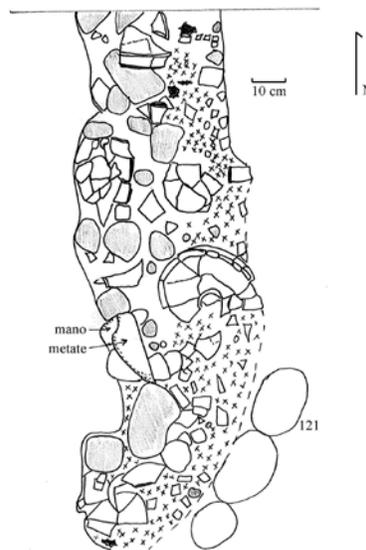


Figure 4.4 SC-85 top of 125, unit 229E 220N. Limestone rocks are shaded; unless otherwise noted, all materials are ceramics.

The next construction event dates to the same period, c. A.D. 400-600, and consists of a clay loam fill (116) and a cobble ballast (124). Even though these two strata do not abut, they likely are associated with one another, or least contemporaneous. On top of these two strata the Maya built a single-course boulder wall (121), part of which may have been removed during later construction events. Associated ceramics also date to c. A.D. 400-600. Also associated with wall 121 is fill 115, which represents

another earthen surface. Its surface was identified by the presence of smashed vessels, as well as burned daub and charcoal. The fill (115) dates to c. A.D. 400-600 while the at least 10 different ceramic clusters on its surface range from A.D. 250-800. In addition, the Maya interred two individuals in 115; BU 8 (120) dates to A.D. 700-900, and BU 10 (123) dates to A.D. 900-1150.

A similar sequence of events occurred at a later date, at about A.D. 600 (ceramic dates are mixed). Fill 110 (which might be the same as or at least abuts 119, and dates to A.D. 400-600) has a mix of ceramics types dating from 300 B.C. to A.D. 900. This stratum is found within the most substantial structure at SC-85 (109a, b, c). This most recent major construction phase consisted of an at least three-course boulder wall of un-cut stone and an outset terrace (on the south side). The Maya buried most of the remains of an individual (BU 9, 122) at c. A.D. 700-900. They might have removed a ballast (117) to bury the person. However, surface/fill 110 had another deposit of smashed vessels (dating to c. A.D. 600-900), burned daub, and charcoal.

The final two major construction events date to c. A.D. 700-900, and all likely take place within structure 109. Again things became complicated because of the several intrusive burials in the penultimate phase, consisting of fills 114 (c. A.D. 800-900) and 103 (c. A.D. 700-900). The surface of the latter is indicated by smashed ceramics (at least six clusters) that date to c. A.D. 700-900, as well as burned daub and charcoal. Fill/surface 103 and 114 likely are the same deposit; the four intrusive burials complicated the picture during excavation. The earliest burial (BU 6, 118) dates to A.D. 400-600. BU 3 (112) dates to c. A.D. 600-700. BU 1 (104) and 4 (113) are somewhat more recent, dating to A.D. 700-900 and A.D. 800-900. The outset porch (105) on the south side of structure 109 was likely the most recent addition. Within 109, the most recent deposit (102) dates to A.D. 700-900, in which we recovered lots of daub, ceramics, lithics, groundstone, marine shell, and obsidian.

Concluding Remarks

SC-85 differs from the other solitary mound, SC-18. While the outset porch is more substantial than anything we exposed at SC-18, SC-85 in general is smaller, more simply built, and has a less exotic/fancy artifact assemblage (see appendix for artifact types). While the clays more prevalent at SC-85 might explain the lack of obvious plaster floors (they deteriorate), former residents of SC-18 appeared in general to have greater access to labor and wealth as indicated by the several plaster floors and cobble ballasts, as well as a richer artifact assemblage (e.g., more polychrome ceramics). In addition, SC-85 might have consisted of one room, whereas as SC-18 likely consisted of multiple rooms or structures. The location of SC-85 in a low-lying clayey area susceptible to annual inundation (as we witnessed when it rained and the clayey soils did not absorb much water) may indicate less access to better agricultural lands. Former occupants of SC-18, in contrast, lived in a better situated area for drainage and agriculture.

Appendix

SC-85 Stratum Descriptions

Stratum 101 is very dark grayish brown clay loam (dry 10YR 3/2 -moist 10YR 2/1) with a few small, limestone cobbles, roots, some charcoal flecks, and ranges from 7 to 30 cm in thickness. It consists of a natural layer of humus material with roots and organic debris. In 234E 220N, 236E 220N, and 238E 220N corozo nuts were found throughout since they are located directly under corozo trees. The soil was quite clayey and became very sticky after rain. Artifacts recovered include ceramics, a mano, chert flakes, tool, hammerstone, daub, bone (including a human phalange), obsidian blades, and a notched sherd. Ceramics are predominately jars dating to A.D. 700-900, including ceramic clusters.

Faunal remains include 9 large mammal, 2 large mammal with gnaw marks, and 2 large burned and polished mammal bones.

13 out of 46 obsidian pieces were notched.

Stratum 102 is a dark grayish brown clay loam (dry 10YR 4/2, moist 10YR 3/2) with few limestone cobbles more frequent than in 101; roots running parallel to cobble surface. It ranges from 1 to 28 cm in thickness. The soil has been modeled by worm and root activity. We found several deposits large, densely packed sherds. This stratum terminated at a limestone cobble or floor surface/ballast (103) upon which 6 small ceramic clusters in 230E 220N and 230E 219N. Artifacts recovered include ceramics, chert flakes and tool, marine shell, metate (2), pink quartzite, bone, jade, a figurine fragment, a hematite fleck and obsidian blades. Burned limestone cobbles and plaster were also present. There was a noticeable presence of daub 1-3 cm in size, charcoal flecks, and plaster flecks, small pieces of burned wood and corozo nuts. Ceramics are predominately dishes dating to A.D. 700-900. Stratum 102 was first identified in 230E 220N. It is above 103, wall 109b, wall 109c, and 108 and below 101 in 227E 220N, 225E 220N, 230E 220N, 229E 218N, 230E 219N, 230E 217N and 227E 217N.

Faunal remains include 100 large mammal bones, 4 large burned mammal bones, 2 large mammal bones with cut marks, 2 small mammal bones, and 1 turtle carapace.

16 out of 45 obsidian pieces were notched.

Stratum 103 is a chocolate brown clay loam fill (dry 10YR 4/3, moist 10YR 4/2) with some limestone cobbles, root and worm activity, and ranges from 15 to 49 cm in thickness. It likely comprised an earthen surface based on the presence of at least six ceramic clusters. This stratum is the fill between 102 and 110, which terminates at a ceramic cluster and limestone ballast (110). This stratum comprises the area considered to be inside wall/structure 109 and 105. Artifacts include ceramics, obsidian blades, chert, mano and metate, polished stone, figurine fragment, daub (concentrated, some burned), animal bone, and marine shell. Ceramics are predominately jars dating to A.D. 700-900. It is found above 110, 117, and 124 below 102, abuts 105, wall 109b, and is intruded by BU 1 (104) and BU 3 (112). It might also be the same as 114. Stratum 103 was first identified in 230E 219N. It is also in 227E 220N, 230E 220N, 229E 218N, 229E 216N, 230E 217N and 227E 217N.

Faunal remains include 30 large mammal, 8 large burned mammal bones, a possible deer mandible, 2 small mammal bones, and one bird bone.

8 out of 22 obsidian pieces were notched.

There were at least six clusters on the surface of 103.

1. 4 plate rims, 3 body sherds, A.D. 700-900
2. 3 plate rims, 32 body/base sherds, A.D. 800-900
3. 3 jar rims, 55 body sherds, A.D. 700-900
4. 1 jar rim, 4 bowl rims, 15 body sherds, A.D. 700-900
5. 2 narrow jar rims, 21 body sherds, A.D. 700-900
6. 4 rims, 12 body sherds

Stratum 104 is a burial (BU 1) within a dark yellowish brown clay loam (dry 10YR 3/4, moist 10YR 3/3) with flecks of plaster, limestone pebbles, daub, and charcoal flecks, and ranges from 12 to 15

cm in thickness. Artifacts include ceramics, obsidian, chert flakes and a flake tool, bone, large pieces of daub, and burned daub. Ceramics are predominately jars dating to A.D. 700-900. It intrudes into 103 below 102. Stratum 104 was first identified in 229E 218N. It is also found in 229E 216N.

Faunal remains include 1 large burned mammal bone.

1 out of 5 obsidian pieces notched.

Stratum 112 is a burial (BU 3) within a very dark grayish brown clay loam (10YR 4/2, 10YR 3/2) with large amounts of daub, charcoal flecks, limestone cobbles and small boulders throughout. It ranges from 31 to 39 cm in thickness. The burial was lined partly by limestone boulders and was intrusive into 103. Artifacts recovered include ceramics, marine shell, chert flakes, obsidian, a jade inlay, and animal bone. Ceramics are predominately jars dating to A.D. 600-700. Stratum 112 is below 102, within 103, and above 110. It is in 227E 220N.

Faunal remains include 1 large mammal bone and 1 fish bone.

2 out of 4 obsidian pieces were notched.

Stratum 114 is a very dark grayish brown clay loam fill (10YR 3/2, 10YR 4/2) with limestone cobbles and medium size boulders, plaster (some burned), and roots. It ranges from 20 to 24 cm in thickness. Artifacts recovered include ceramics, chert flakes, tool, cores, marine shell, obsidian, daub (some burned), and animal bone. Ceramics are predominately dishes dating to A.D. 800-900. It is below 105 and above 110 and 124. Burials 4 (113) and 6 (118) intrude into 114; other than the burials, it might be the same as 103. It is first identified in 227E 217N and found in 229E 216N, 230E 217N, and 227E 216N.

Faunal remains include 4 large mammal bones, 3 small mammal bones, and 1 rodent bone.

2 out of 5 obsidian pieces were notched.

Stratum 113 is a burial (BU 4) within a dark grayish brown clay loam (10YR 4/3, 10YR 4/2) with many roots. It ranges from 10 to 27 cm in thickness. A boundary between stratum 113 and 114/103 is not distinguishable and the separation is arbitrary. Artifacts recovered include ceramics, a rodent tooth, obsidian (1 out of 2 notched), and chert flakes. Ceramics are predominately jars dating to A.D. 800-900. It appears that BU 4 was buried with BU 1 (104) in 229 E218N and 229E 216N directly east of 227E 217N. It is within 114. This stratum terminated at the bottom of the burial, or the top of 110.

Stratum 118 is a burial (BU 6) within an olive brown clay loam (2.5YR 4/3, 2.5YR 4/2) with a few limestone cobbles, and ranges from 10 to 21 cm in thickness. The skull extended approximately 20 cm south of 230E 217N. Artifacts recovered include a complete vessel located on top of the back of the supine burial, chert flakes, obsidian, animal bone, and ceramics. It dates to A.D. 400-600. It intrudes into 114 in 230E 217N.

Faunal remains include 2 small mammal bones.

1 out of 2 obsidian pieces were notched

Stratum 105 is a dense cobble and small boulder outset terrace wall on the south side of the mound. It ranges from 10 to 22 cm in thickness. It represents one of the last construction events. It is below 101, abuts 103 and 106, and is above 114. It was first found in 229E 216N and found in 230E 217N and 227E 217N.

Stratum 106 is a very dark brown clay loam (10YR 2/2, 10YR 3/2) with small and large limestone boulders and ranges from 1 to 23 cm in thickness. This stratum represents the soil and wall fall of wall 105. Artifacts include ceramics, bone, chert flakes, cores, hammerstone, daub, and obsidian. Ceramics are predominantly dishes dating to A.D. 700-900. It is below 101, abuts 105 and is 107. It was first identified in 229E 216N and also identified in 230E 217N and 227E 217N.

Faunal remains include 3 large mammal and 1 large burned mammal bones.

2 out of 5 obsidian pieces were notched.

Stratum 107 is a very dark grayish brown clay loam (10YR3/2, 2.5YR 3/2) with small roots and small limestone cobbles. It ranges from 3 to 14 cm in thickness. This fill lies on the south side of wall 105. Artifacts include ceramics, chert flakes, and obsidian. Ceramics date to A.D. 700-900. It

terminates at the same level as 110, found in the north half of 229E 216N. It is below 106. It is found in 229E 216N.

Stratum 108 is a very dark grayish brown clay loam (10YR 3/2, 10YR 4/2) with few limestone cobbles, large boulders and ranges from 17 to 49 cm in thickness. This is the fill to the east of structure 109. Large cobbles and small boulders in the fill may be possible wall fall from 109 and 105. Artifacts include ceramics, obsidian, 2 metates, and chert flakes. A collection of artifacts found in 230E 220N includes a broken mano, a large rim, a vessel base, large sherds and some animal bone. Ceramics are predominantly jars dating to A.D. 800-900. This stratum terminates at 111. It is below 102, abuts 109 and 103, and is above 111. This stratum is first identified in 230E 219N and also identified in 230E 220N and 230E 217N.

Faunal remains include 2 large mammal, 3 large burned mammal, and 6 small mammal bones. None of the 9 obsidian pieces were notched.

Stratum 111 is a brown clay loam (10YR 5/3, 10YR 4/3) with a few cobbles, and ranges from 4 to 36 cm in thickness. This fill is to the east (outside) of wall 109. Artifacts include a few ceramics (including a lid), shaped slate, and chert flakes. Ceramics are predominantly dishes dating to A.D. 600-700. This stratum terminates at stratum 115 based on the presence of ceramic clusters in 230E 220N, 230E 219N, and 230E 327N. It is below 108, abuts 109a and 109c, and is above 115. It is first identified in 230E 220N and found in 230E 219N and 230E 217N.

Stratum 109 is a three-course boulder structure and ranges from 21 to 49 cm in thickness. This limestone wall is aligned about 7° west of north in 230E 220N, 230E 219N, and 230E 217N. The wall seems to terminate 2/3rds of the way across 230E 220N. West of the wall is stratum 103, the fill on the inside of the structure, and east of the wall (outside) is 108. The fill is similar to that of stratum 103 except that 103 has more plaster flecks, burned daub, and charcoal flecks. Ceramics are predominantly jars dating to A.D. 600-700. It is below 102; the upper portion (109b) abuts 108, the lower portions (109a, 109c) abuts 111 (on the outside), and 109a abuts 117 and 110 on the inside. It is above 115. This stratum is first identified in 230E 219N and also in 230E 220N and 230E 217N.

Under 109 we recovered ceramics dating to A.D. 600-700 and A.D. 800-900, quartz, marine shell, chert flakes and core, and 1 notched obsidian. Under 109a were ceramics dating to A.D. 700-900 and chert flakes.

Stratum 110 is a dark yellowish brown clay loam (10YR 4/5, 10YR 4/3) with charcoal and plaster flecks. It ranges from 4 to 52 cm in thickness. It likely comprises an earthen surface inside structure 109. The top of 110 in 230E 220N and 230E 219N was covered with ceramic clusters. Stratum 110 terminated at 115, denoted by ceramic clusters in 230E 220N, 230E 219N, and 229E 218N. In 229E 218N a large concentration of daub was also found in the southwest corner. In 230E 217N BU 9 (122) intrudes into 110. Artifacts include ceramics, a ceramic disc, bone, obsidian, chert cores and blade, and daub (some burned). Ceramics are predominantly jars and dating to A.D. 400-800. It is above 115 and wall 121, and below 103/114. It also might be the same as 119. It was first identified in 227E 220N. It is found in 230E 220N, 229E 218N, 230E 219N, 230E 217N, and 227E 217N.

Faunal remains include 16 large mammal, 8 large burned mammal, and 1 small mammal bones. 3 out of 12 obsidian pieces were notched.

There were two ceramic clusters on top of 110, around which was found daub, burned daub, and charcoal flecks.

1. 24 body sherds, A.D. 700-900
2. 1 rim, 64 body sherds, A.D. 600-700

Stratum 117 is a dense limestone cobble ballast with a brown clay loam (10YR 5/3, 10YR 4/3) matrix. It ranges from 6 to 16 cm in thickness. It is coarse, thick and patchy at its south end. It extends west of wall 109 about 40-50 cm and is approximately 110-120 cm long (north-south). It is found in 230E 219N and 230E 217N beginning at wall 109a-b, and ending about 20 cm south of the last stone of

109a (foundation wall). There is a c. 20 cm diameter hole near the corner of the structure; it might be a post hole. It is above 119, abuts wall 109a, and is below 103/114.

Stratum 119 is a brown clay loam (10YR 5/3, 10YR 4/3) with a few limestone cobbles and roots, and ranges from 9 to 16 cm in thickness. Some ceramics, a few chert flakes (and a flake tool), and 1 un-notched obsidian were found. Ceramics are predominately bowls dating to A.D. 400-600. This stratum terminates at 115. It is found below stratum 117 and might be the same as 110. It was first identified in 230E 219N and in 230E 217N.

Stratum 122 is a burial (BU 9) within a dark grayish brown clay loam (10YR 4/2, 10YR 3/3) with some daub and charcoal flecks. It ranges from 6 to 18 cm in thickness. BU9 was highly disturbed due to the extreme amount of root activity. Artifacts include ceramics and chert flakes. Ceramics are predominately jars dating to A.D. 700-900. Stratum 122 intrudes into 110 and terminates at an arbitrary 5-10 cm below BU 9. It was in 227E 216N, which was a unit opened to expose the burial.

Stratum 115 is a dark yellowish brown clay loam (10YR 5/3, 10YR 3/4) with daub, charcoal, limestone pebbles, plaster flecks, and limestone cobbles and a few large boulders. It ranges from 8 to 20 cm in thickness. This stratum consists of the fill under a floor (top of stratum 115). Soil is dark due to a burning event also evidenced by burned daub, charcoal flecks and burned limestone cobbles. Artifacts include ceramics, a perforated sherd, chert flakes, tool, core, hammerstone, mano, marine shell, freshwater shell, drilled marine shell, obsidian and animal bone. Ceramic clusters were found, especially in 229E 220N. Ceramics are predominately jars dating to A.D. 400-600. A possible human tooth was found in the matrix. It is below 110/119, 109a, 109c, and 111, above 116 and 124, and abuts wall 121. Burials 8 (120) and 10 (123) intrude into 115. It is first identified in 229E 220N and found in 230E 219N, 229E 218N, and 230E 219N.

Faunal remains include 12 large mammal bones, 2 large burned mammal, 1 small mammal, and 31 unknown bones.

5 out of 10 obsidian pieces were notched.

Top of 115: colha tool, ceramic bird head figurine (lid top?), bone, 1 un-notched obsidian, and marine shell.

Top of 115 ceramic clusters:

1. 9 rims, 72 body sherds, A.D. 700-900
2. 9 rims, 1 pod, 50 body sherds with fine green shaped serpentine, chert flakes, and groundstone.
3. 3 rims, 38 body sherds, A.D. 400-600
4. 6 rims, 54 body sherds, A.D. 400-600
5. 26 body sherds, A.D. 400-600
6. 1a: 3 rims, 18 body sherds, A.D. 250-400
7. 1b: 7 rims, 1 foot, 1 base, 42 body sherds
8. 1c: 5 rims, 21 body sherds; not well fired
9. vessel 1: 2 rims, 1 base, 28 body sherds
10. vessel 2: 5 rims, 29 body sherds

Stratum 120 is a burial (BU 8) within a brown clay loam (10YR 5/3, 10YR4/3) with limestone cobbles and small boulders and roots, and ranges from 22 to 28 cm in thickness. Artifacts include a jar, a plate, mano, marine shell, polished bone, and obsidian. Ceramics are predominately jars dating to A.D. 700-900. It intrudes into 115. It is in 220E 216N.

1 out of 5 obsidian pieces were notched.

Stratum 123 is a burial (BU 10) within a a dark brown clay loam (10YR 5/3, 10YR 3/3) which was exposed, but not excavated. The underlying stratum is likely 116, which is found in the adjacent unit. Artifacts include ceramics and a complete plate over BU 10's head dating to A.D. 900-1150. It intrudes into 115. It is found in 229E 216N.

Stratum 121 is a wall of small and large limestone boulders 42 cm in height. It consists of three large limestone boulders found on the south boundary of 229E 220N, aligned 280°. Four to five small to medium boulders in 230E 219N abutting it at a 90° are considered part of this wall. This wall terminates at 116 under the base of the wall. No artifacts were found. It is found below stratum 110, above 116 and 124, and abuts 115. It is first identified in 229E 220N and also in 230E 219N.

Stratum 116 is a very dark grayish brown clay loam (10YR 3/2, 10YR 4/2) with limestone cobbles and plaster flecks. It ranges from 21 to 38 cm in thickness. This stratum contained a high concentration of ceramics and other artifacts, obsidian, chert, animal bone. It was quite dark due to the dense charcoal flecking in its matrix. Ceramics are predominately jars dating to A.D. 400-600. This stratum terminates at 125 with the appearance of ceramic clusters in 229E 220N, 230E 219N (northwest corner) and in the northeast corner of 229E 218N. Artifacts include ceramics, daub, chert flakes, shell, animal bone, and obsidian. Shell was found to be more frequent in this stratum than in any other stratum. The artifact concentration at the bottom of stratum 116 also contained a mano and metate fragments. It is above 125, and below 115 and wall 121.

Faunal remains include 11 large mammal bones, 1 large mammal with cut marks, 2 small mammal bones, and 1 bird bone.

None of the 5 obsidian pieces were notched.

A miniature jar was found on top of 116 (A.D. 600-700).

Stratum 124 is a limestone cobble ballast in the south end of 230E 217N. The mandible of BU 6 (118) was resting on one of the cobbles. The western portion of this ballast lies under BU 6 (rib and skull). In fact, when 118 was removed, as well as an arbitrary 10 cm underneath the skeletal remains, none of the cobbles was visible except one that was directly under the mandible. This ballast was not excavated. Artifacts include ceramics and daub from western edge of the ballast; here stones were arranged in a circle with the sherd concentration in its center. The ceramic concentration was found on and under the cobbles under about where BU 6 ribs had been. Ceramics are predominately jars dating to A.D. 400-600. It is below 114 (and 118), 115 and 121. It was found in 230E 217N.

Stratum 125 is a dark grayish brown clay loam (10YR 4/2, 10YR 4/3), and ranges from 6 to 28 cm in thickness. This stratum became sterile after the first few centimeters were excavated. Three post holes were excavated (c. 30-40 cm) in 229E 218N and two in 229E 220N. Artifacts from the upper stratum include ceramics (dating to c. A.D. 400-600) and obsidian. This stratum is below 116.

1 out of 2 obsidian pieces were notched

Top of 125: ceramics dating to 300-100 B.C., A.D. 250-400, A.D. 400-600, and A.D. 700-900, obsidian (none of the 6 were notched), mano, metate, and a basal flange bowl cluster (69 sherds) (see Figure 4.4).

Chapter 5

SC-78: The Eastern Platform Mound of an Elite Compound

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SC-78 is a stepped platform with several substantial domestic and specialized structures with thick plaster floors, ballasts and standing walls, as well as wattle and daub structures. Daub was noted throughout the entire mound, especially when plaster floors were not present. It was inhabited at least by 300 B.C. through A.D. 1500. SC-78 clearly required labor to construct, especially when compared to the solitary mounds, SC-85 and SC-18 (see chapters 3 and 4). While domestic artifacts were recovered from several contexts, their frequency and density is noticeably less than at SC-18 and SC-85. This might indicate fewer people having lived there, and/or that some structures served special functions (e.g., kitchen, storage, work area, shrine, sweat bath, etc.).

SC-78 is a north-south oriented platform mound located in the northern core of Saturday Creek. It sits on the east side of Plaza B north of SC-82 and south of mounds SC-42 and SC-43 (see Figure 1.2). SC-78 is approximately 95 meters west of the Belize River, situated on what is believed to be a terrace that might have been artificially flattened. The center trench revealed the platform to be at least 3.85 meters in height. It is 29.4 meters north-south and 9.5 meters east-west. We located the center of the mound and established a center trench oriented east-west. The site datum for SC-78 was set up 1.5 meters south of the center of the structure (384.3E 338N), at an elevation of 104.26 meters above sea level (asl) (corrected elevation; original is 99.8 m). All unit datums were measured from this permanent datum, and all unit datums were established in the highest corner of each individual unit. The large size of SC-78 only permitted us to bisect its width with a 2 meter wide trench and excavate several 2 x 1 m and 2 x 2 m test pits placed within structure rooms (determined using post-hole tests). This method resulted in our exposing about 20% of the mound (Figure 5.1).

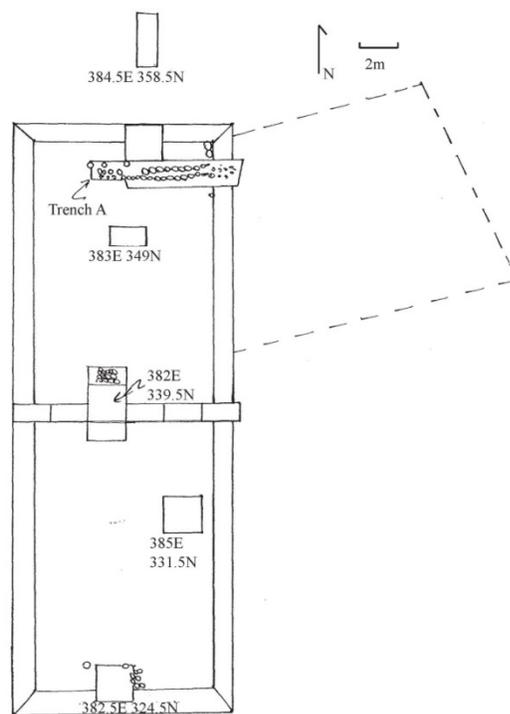


Figure 5.1 SC-78 mound planview with open units

There also appears to be a smaller mound or platform abutting the northeast corner, as seen on Figure 5.1. It has been damaged by bulldozing, especially between it and SC-42.

We describe each area excavated beginning with the north section.

North Side

Trench A (382E 352.5N and 384E 353.5N) exposed several construction phases (Figure 5.2; see appendix for stratum descriptions), the most significant consisting of a stepped platform (Figure 5.3) consisting of semi-faced stones with dense cobble fill in between the two steps (131 and 135), dating to A.D. 800-900. However, though it may have been constructed as early as A.D. 250-400 based on the ceramics from the fill between the steps, 129. Both the top and base of the platform were thickly plastered. There are at least three construction stages, the earliest (fill 169) dating to c. 300-100 B.C., and which might be of the same clay found throughout the entire mound (139, 159, 176, 191, and 206). Above this the Maya constructed a series of plaster floors (162, 130) and ballasts (162, 156), the upper one dating to c. 800-900. In floor/ballast 162 (they were not assigned separate stratum numbers), we recovered a cluster of what might be monkey hand and/or feet bones, as well as a speleothem fragment. On top of floor 130 we found a rim and base sherd with a face design dating to c. A.D. 600-700. Two other ceramic clusters (defined as within fill 128 and dating to c. A.D. 800-900) also might have been associated with floor 130. The most recent construction events appear to relate to leveling out or providing support for the platform (128, 145), both dating to A.D. 800-900. In addition, the most recent phase might have been used by the Maya through c. A.D. 1150, as sherds dating to this period are found in fill 145.

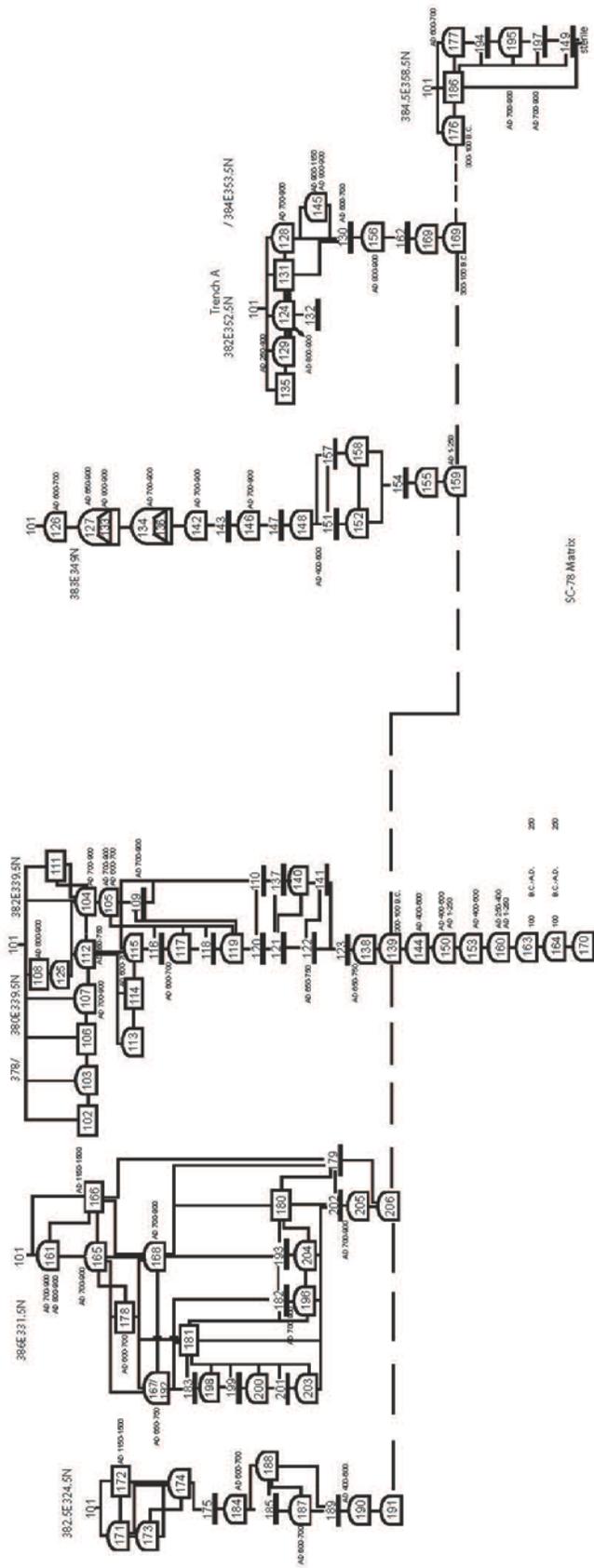


Figure 5.2 SC-78 matrix

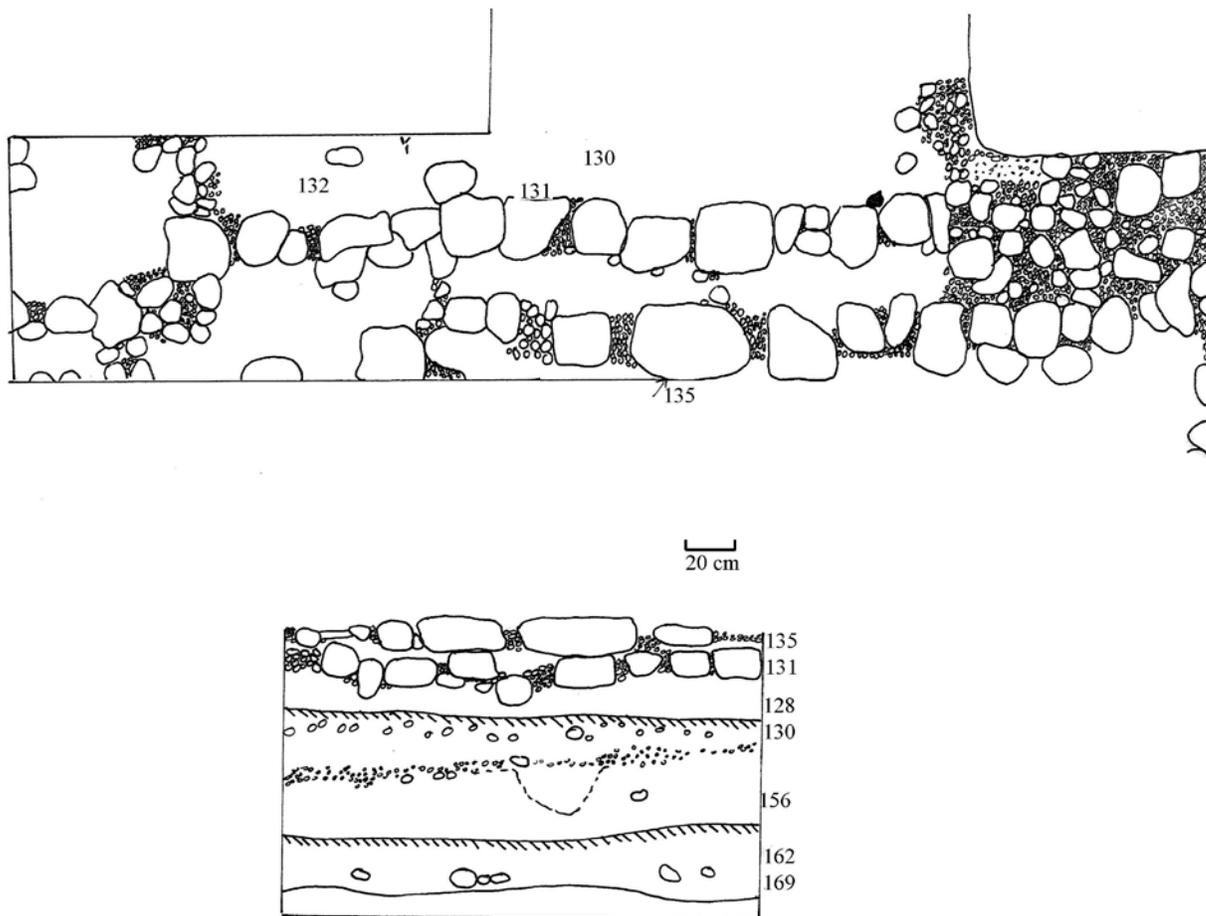


Figure 5.3 Planview and profile of trench A

To the north of Trench A, a 3 x 1 unit (384.5E 358.5N) exposed another wall and at least three plaster floors (149, 197, and 194). It appears that the two upper floors date to A.D. 600-700 and A.D. 700-900, indicating they were added to the stepped platform. It actually might consist of a stepped terrace wall as well (wall/step 186). To the south of the steps is a clay fill (176) that might be the same as that found in every excavation unit at SC-78 (169, 139, 159, 191, and 206), most of which date to c. 300-100 B.C. (however, fill 159 of 383E 349N dates to c. A.D. 1-250). Clearly the floors were added later.

We opened a 2 x 1 m unit about 2 m south of the stepped platform, 383E 349N, which exposed several occupation strata ranging from A.D. 1-250 (fill 159) through A.D. 700-900 (with possible New Town re-occupation) (Figure 5.4). The earliest occupation level consists of a thick plaster floor (154) and cobble ballast (155) (5 to 15 cm thick), upon which rested two other plaster floors (151, 157) with cobble ballasts (152, 158) that abut each other, with one (151) dating to c. A.D. 400-600. Another plaster floor (147) and cobble ballast (148) rests upon the two earlier floors. The next series of floor (143) and ballast (146) dates to c. A.D. 700-900. Upon this plaster floor rests a mixed fill (142), which could represent a disturbed floor. It too dates to A.D. 700-900. The remaining construction events do not include plaster floors, but a series of burning and caching or termination events. Deposit 136 is found within a sandy loam fill (134) dating to c. A.D. 800-900. This deposit, which itself dates to c. A.D. 700-900, intruded into fill 134, in which the Maya placed several ceramic vessels (some of an unknown type-variety). They also placed a human ulna on a plate, a miniature jar, and a drilled and carved marine shell pendant. We also noted two separate ceramic

concentrations on top of fill 134, as well as marine and freshwater shell. Next the Maya appeared to have burned a wattle and daub wall (133), which collapsed onto deposit 136 at c. A.D. 800-900. The uppermost fill (126) dates to c. A.D. 600-700, though 127, immediately below it, dates to c. A.D. 700-900. Also, there is evidence for a possible New Town re-occupation.

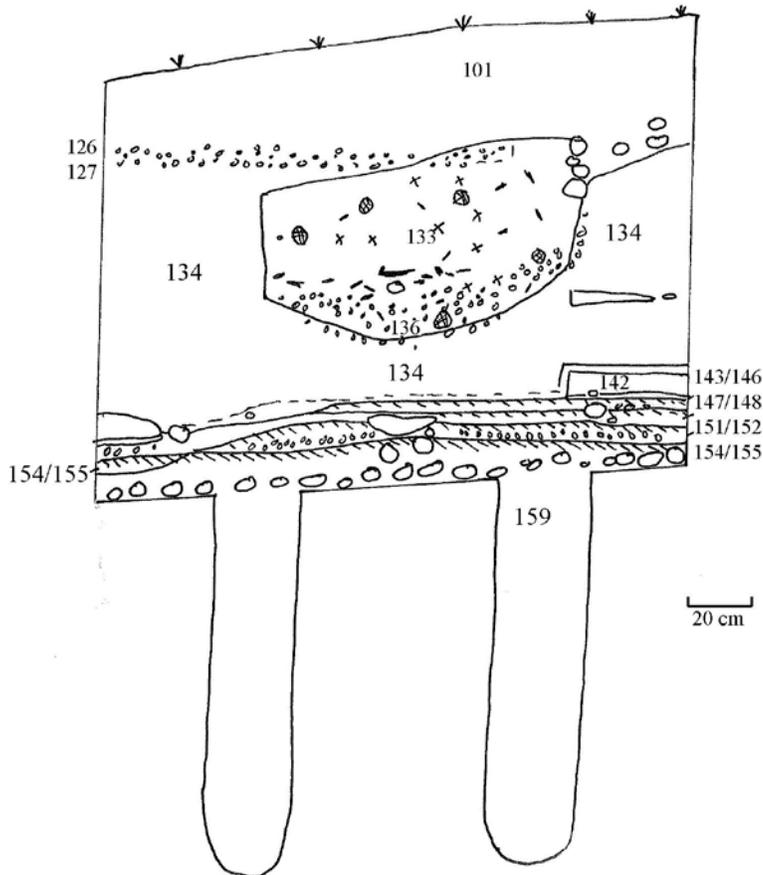


Figure 5.4 SC-78 south wall profile of 383E349N

Center

To the south of 383E 349N is the center trench, where we mostly concentrated our efforts in the 2 x 2 m center unit (382E 339.5N), which extended over 4 m in depth to reach sterile (170). We exposed 24 construction phases, or at least 21 living surfaces. There are at least six cultural strata between the clay fill (139) found throughout excavations at SC-78 (159, 169, 176, 191, and 206) and the sterile soil (170). While fill 139 dates to 300-100 B.C., the earlier cultural strata vary in ceramic dates. The earliest cultural fill, 164, a sandy clay loam with a few cobble inclusions, includes ceramics that largely date from 100 B.C. to A.D. 250. The next fill stratum (163) dates to the same time period. A possible cobble ballast and fill (160) on top of 163 dates to c. A.D. 1-250 and/or A.D. 250-400. The next cultural fill, 150, dates to A.D. 1-250 and A.D. 400-600. The first cultural fill below 139 is 144, dating to A.D. 400-600. Immediately above fill 139 is a plaster floor (123) and cobble ballast (138) that dates to c. A.D. 650-750. The next series of construction events consisted of re-plasterings and/or additions. Floor 141 might reflect a replastering of 123, as is floor 122 (which abuts 141 and dates to A.D. 650-750). As Figure 5.5 illustrates, not only are there several instances of replastering, but also additions on the east side. And in some cases (e.g., ballast 140), the Maya leveled out the additions by adding a ballast. Figure 5.2 also illustrates the sequence of events. Floor 120 represents a replastering of floor 121, which is a replastering of floor 123. Floor 141 not

only reflects a replastering of 123, but also an addition. Floor 137 (which abuts floor 121) and ballast 140 (which abuts 121) was replastered as well (floor 110, which abuts floor 120). There are at least two other series of cobble ballasts and floors, the upper one dating to A.D. 600-700. Other series of plaster floors continued to be built through A.D. 700-900 (110, 109).

The remaining Late Classic construction events consist of single-course unfaced boulder foundation or retaining walls with clay and cobble fill (e.g., 108, dating to A.D. 800-900). One of the walls (114), of which we only exposed 1 m, appeared to be circular in shape; it also likely lies on top of the plaster floors just described (the wall was not removed). Daub was noted throughout, especially when plaster floors were not encountered.

South

A 2 x 2 m unit (386E 331.5N) was opened about 4 m to the southeast of the center unit, 382E 339.5N. It quickly revealed a series of at least four major construction events capped by a Postclassic retaining wall (166) added to the east side (of the mound) (Figure 5.6). The earliest exposed cultural stratum consisted of the same fill found throughout the mound (206, the same as 139, 159, 169, 176, and 191). It did not have any datable ceramics, however. On top of this, the Maya added a cobble ballast (205) and plaster floor (202) dating to c. A.D. 700-800. The Maya extended this floor east (179).

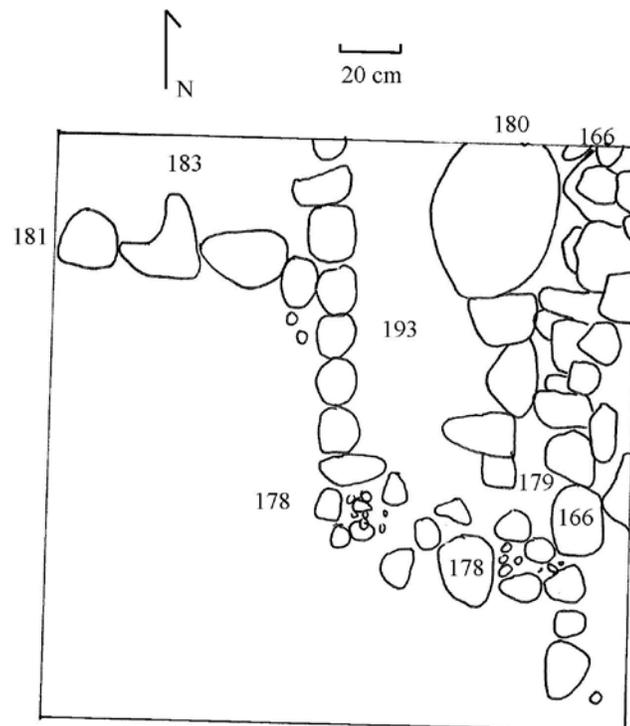


Figure 5.5 SC-78 planview of 336E331.5N

The earliest substantial architecture consists of a single-course boulder foundation wall (181) within which three series of plaster floors and cobble ballasts were constructed (201/203, 199/200, and 183/198). While there are no ceramic dates, this sequence likely dates to the Late Classic. The next major building project involved building another room/wall east and higher than structure 181, dating to c. A.D. 700-900. Associated with it are two plaster floors and cobble ballasts that abut one another (182/196 and 193/204, the latter which abuts 180), or which might comprise the same floor. The penultimate construction phase consisted of expanding the structural wall again to the west; wall 178 was built over wall 181 higher than

wall 180, and dates to c. A.D. 600-700. Neither this nor the last construction phase is associated with obvious plaster floors; instead, they are associated with clay loam fill comprising of two possible decomposing plaster floors (161, 165), both dating to c. A.D. 700-900. Ceramic clusters of vase bases (no rims) were found on both surfaces. The last building activity consisted of adding a cobble and small boulder rubble surface/wall to the east dating to c. A.D. 1100-1500.

The final 2 x 2 m test unit is located on the south-central edge of SC-78 (382.5E 324.5N). It revealed four construction phases, dating from at least c. A.D. 400 to 1150-1500. The earliest fill strata we exposed (191) appears to be the same as 139, 159, 169, 176, and 206, but did not yield ceramics. The three series of plaster floors and ballasts (189/190, 185/187, and 175/184) likely are associated with those exposed in 386E 331.5N. The remainder consists of fill and a boulder wall (172) dating to A.D. 1150-1500.

Concluding Remarks

The Maya lived at SC-78 for 1800 years. While it is not possible at present to determine if it was occupied the entire time, it was at least occupied consistently. The terraced platform apparently supported several kinds of structures, from ones with thick plaster floors and boulder walls to thin plaster floors and wattle and daub buildings. Former occupants of the varied structures clearly had some wealth, not only based on construction labor costs, but also because of the kinds of artifacts recovered including carved and drilled marine shell, speleothems, coral (from a posthole test on the south side of SC-78), decorated ceramics, complete obsidian blades, and so on. Its location in the core area on a (perhaps artificially flattened) terrace overlooking the surrounding settlement distinguished its inhabitants. These elite Maya likely were involved in organizing public works and sponsoring community events such as feasts, ceremonies, and ball games. They perhaps attained their wealth through owning/controlling a larger share of the rich alluvium.

The earlier construction phases, especially in the Late Preclassic and Early Classic, did not incorporate plaster floors, and were found only at or near the center of the platform. This pattern likely indicates that SC-78 began in the center with less substantial structures, perhaps similar to the earthen surfaces (or thin plaster floors) found at SC-85. This would indicate that Late Preclassic, and perhaps the early part of the Early Classic, inhabitants of SC-78 were part of a society with more egalitarian principles. Later occupants somehow acquired the wealth necessary to build more labor intensive residences and specialized structures than the surrounding farming households, as well as to acquire diverse exotic goods.

Appendix

SC-78 Stratum Descriptions

Stratum 101 is topsoil consisting of clay loam (10YR5/6, 10YR3/2, 10YR5/4) with 5% limestone flecks and cobbles. It ranges from 1 to 82 cm in thickness. Stratum 101 consists of rodent disturbance throughout the first 12-20 cm with two separate brown colored clay loams. Limestone flecks and cobbles are irregularly mixed throughout the stratum except at the bottom. Artifacts recovered include ceramics, obsidian, burnt plaster, daub, chert flakes, tools, cores, and blades, metate, quartz, and a ceramic figurine fragment.

2 out of 7 obsidian pieces were notched.

Faunal remains include 1 large mammal with cut marks, 11 large mammal bones, 2 small mammal bones, one small mammal bone with gnaw marks, and one turtle carapace.

The following lists the ceramics collected from stratum 101 in the main units situated on key sections of the mound.

382E 339.5N- Predominate type: jars; date range: A.D. 700-900

Type Varieties: Five different types including Dolphin Head, Red and Mangrove Brown Black

382.5E 324.5N-Predominate types: bowls and dishes; date range: A.D. 600-900

Type Varieties: Martins Incised, Belize Red, Meditation Black, Mountain Pine Red

383E 349N-Predominate type: dishes; date range: A.D. 600-900

Type Varieties: Yaha Creek Cream, Roaring Creek Red, Mountain Pine Red, Belize Red, Mound

Maloney Black

384E 353.5N- Predominate type: dishes

Date range: A.D. 800-900

Type Varieties: Thirteen different types including Roaring Creek Red, Dolphin Head. Red, Humes Bank Unslipped, and Yalbac Brown Smudged.

384.5E 358.5N-Predominate type: dishes

Date range: A.D. 1150-1500

Type Varieties: Seventeen different types including Cayo Unslipped, Garbutt Creek Red, Macal Orange Red, and Tinanha Red

386E 331.5N- Predominate types: bowls

Date range: A.D. 800-900

Type Varieties: Eight different types including Roaring Creek Red, Balanza Black, Vaca Falls Red, and Orange Walk Incised (Banana Bank).

382.5E 324.5N

Stratum 171 is clay loam (2.5Y6/5) with small limestone cobbles and pebbles. Its thickness ranges from 13 to 34 cm. It was hard to dig due to dry conditions. Artifacts recovered include ceramics, bone, 1 un-notched obsidian blade, a polychrome chert polished worked flake, and chert flakes, blade, and flake tool. The ceramics mostly consist of jar sherds dating to A.D. 1150-1500 and had 7 different type varieties including Daylight Orange, Maskall Unslipped, and Augustine Red. Stratum 171 is below 101, abutting wall 172, and above 173 in 382.5E 324.5N.

Faunal remains include 1 large mammal.

Stratum 172 is a possible limestone boulder wall (10YR8/1) (each about 20 to 25 cm in length). Its thickness ranges from 13 to 34 cm. The limestone boulders appear within fill 171, and both were excavated together. The stone wall does not completely extend across the north section of the unit. Artifacts recovered include ceramics and chert (see above stratum for ceramic information). The level dates to A.D. 1150-1500. Stratum 172 is below stratum 101, abuts 171, and is above 174 in 382.5E 324.5N.

Stratum 173 is a clay fill (10YR3/3 mottled with 5YR5/6) with small limestone pebbles. Its

thickness ranges from 11 to 45 cm. It was hard to dig due to its dry and compact condition. There were a few ceramic artifacts, but all were too small to collect. Stratum 173 is below 171, and above and abutting 174 in 382.5E 384.5N.

Stratum 174 is an orange clay fill (10YR5/6). Its thickness ranges from 11 to 22 cm. The soil is thick compact clay without artifacts. The stratum only occupied the western half of the unit. Stratum 174 is below 171, 172, and 173, abutting 173, and above floor 175 in 302.5E 324.5N.

Stratum 175 is a plaster floor (10YR8/1 with 10YR8/2) with limestone pebbles. Its thickness ranges from 2 to 8 cm. More pebbles were present towards the southern section of the unit. Chert flakes were the only artifacts recovered. Stratum 175 is below 174 and above 184 in 382.5E 324.5N.

Stratum 184 is a limestone cobble and boulder ballast (10YR7/1). Its thickness ranges from 5 to 8 cm. Ceramics were the only artifacts recovered, all of them being dish sherds (Mountain Pine Red variety) dating to A.D. 600-700. Stratum 184 is below floor 175 and above floor 185 and 188 in 382.5E 324.5N.

Stratum 185 is a plaster floor (10YR8/2). Its thickness ranges from 1 to 4 cm. Limestone boulders are present, but it is doubtful to whether they are related to the stratum; they were given a separate stratum number of 188. Artifacts recovered include chert and ceramics. None of the ceramics were of an identifiable type. Stratum 185 is below 184, abuts 188, and above 187 in 382.5E 324.5N.

Stratum 187 is a limestone cobble ballast (10YR7/1). Its thickness ranges from 1 to 4 cm. Boulders (188) are present. The west section of this stratum is slightly higher than the rest of the stratum. Artifacts recovered include ceramics that date to A.D. 600-700. All of the ceramics collected were dish sherds, Mountain Pine Red type variety. Stratum 187 is below floor 185, abuts 188, and is above floor 189 in 382.5E 324.5N.

Stratum 188 is limestone boulder fill/wall (10YR8/1). Its thickness ranges from 10 to 13 cm. The stratum may be remnant of some structure. No artifacts were recovered. Stratum 188 is below 184, abuts floor 185 and 187, and is above floor 189 in 382.5E 324.5N.

Stratum 189 is a plaster floor (10YR7/2) 2 cm to 13 cm thick. It was excavated with ballast 190. The floor was thick in the eastern section of the unit. Artifacts recovered include ceramics, mostly dish sherds dating to A.D. 400-600. The two type varieties are Minanha Red and Stumped Creek Striated. Stratum 189 is located below 188 and 187, and above 190 in unit 382.5E 329.5N.

Stratum 190 is a limestone cobble ballast (10YR8/1) 2 to 13 cm thick. The limestone ballast was excavated with floor 189. The ballast was thick, especially in the eastern section of the unit. The stratum is on top a clay fill (191). Artifacts recovered include chert, ceramics, ground stone, and a speleothem. Most of the ceramics were bowl sherds dating to A.D. 400-600, type varieties of Minanha Red and Stumped Creek Striated. Stratum 190 is below floor 189, and above 191 in 382.5E 329.5N.

Stratum 191 is a clay loam (10YR5/6 with 2.5Y5/6). It is the termination level in the unit and only the surface layer was exposed. A 1 meter post hole test was placed in the middle of the unit and it was determined that it is the same fill as 139, 159, 169, 176, and 206. No artifacts were recovered. Stratum 191 is found below stratum 190 in 382.5E 329.5N.

386E 331.5N

Stratum 161 is a sandy loam soil (10YR4/4) with a few limestone flecks and cobbles. Its thickness ranges from 7 to 19 cm. Stratum 161 is the first level below the topsoil. It contains a ceramic cluster that might be on top of a possible floor because the cluster does not extend into the bottom level of the fill. Artifacts recovered include ceramics (including clusters), marine shell, bone, one notched obsidian blade, daub, and chert flakes and a core. Of these, the overwhelming majority are vase sherds dating to A.D. 700-900 with 12 type varieties including Achote Black, Belize Red, Gloria Impressed, and Benque Viejo Polychrome. Stratum 161 is found below stratum 101, abuts 166, and is above 165 in 386E 833.5N.

Posthole #15 revealed a vase cluster with 2 bases (from 2 vessels) and 33 body sherds; one dated to A.D. 400-600, and the other A.D. 800-900.

Within 161, perhaps near or on top of 165, was a vase cluster consisting of three vases, one stacked into the other. No rims were present. The bottom vase is possibly a Sotero/Balanza; the middle vase is a possible Belize Red ring base vase; the top vase is a Balanza. They date to A.D. 700-900 and A.D. 800-900.

Faunal remains include 9 large mammal, 1 large mammal with cut marks, and 5 small mammal bones.

Stratum 165 is a sandy loam fill (10YR4/4) with limestone flecks and cobbles. Its thickness ranges from 2 to 50 cm. This stratum may comprise a decomposed surface (with a clay loam ballast). The stratum begins under ceramic cluster #1 found in 161, and rests on top of 167. Artifacts recovered include ceramics, chert blade, obsidian flakes, blades (2 complete), marine shell, metate, and bone. The ceramics date to A.D. 700-900. The majority are bowl sherds with 20 type varieties, some of which are Orange Walk Incised, Belize Red, Vaca Falls Red, Socotz Striated, and Teakettle Bank Black. Stratum 165 is below 161, abuts 166 and 178, and is above 167, 178 and 168 in 386E 331.5N.

1 out of 8 obsidian pieces are notched.

Faunal remains include 1 large mammal bone.

Stratum 166 is limestone boulder wall (2.5Y8/2) that range from 5 to 25 cm in width. Its thickness ranges from 77 to 96 cm, and is found in the eastern wall of the unit. Artifacts recovered include ceramics and a chert flake. Ceramics mostly consist of dish and plate sherds dating to A.D. 1100-1500. There are 11 different type varieties in this level including Dolphin Head Red, Tinanha Red, Daylight Orange, and Yalbac Smudged Brown. Stratum 166 is below 101, abuts 165, and is above 168 and floor 179 in 386E 331.5N

Stratum 178 is cobble and boulder limestone wall (5.5Y8/2) with a thickness ranging from 14 to 43 cm. It starts in the center of the northern edge of the unit and runs in a north-south line until it reaches approximately three-fourths of the way into the unit (this section lies over wall 180); it then makes a 90 degree turn to the east. Daub and burned limestone was noted. Artifacts include ceramics, quartz metate, 2 notched obsidian blades, and chert flakes. There was a even about of dish and bowl sherds. The ceramics, with six type varieties including Dos Hermanos Red and Saxche Orange Polychrome, date to A.D. 600-700. Stratum 178 is below and abutting 165 and above 167/192, wall 181, and 168 in 386E 331.5N.

Stratum 167(192) is largely orangey clay (10YR4/8) with limestone cobbles. Its thickness ranges from 17 to 27 cm. This fill is found west of wall 178. Artifacts recovered include ceramics, chert flakes, bone, and charcoal. Most ceramics are bowl sherds dating to A.D. 650-750 with type varieties of Minanha Red, Dos Hermanos Red, and Orange Walk Incised. Stratum 167 is located below 165, below and next to 178 and above floor 182, floor 183, and wall 181 in 386E 31.5N. Some of it was excavated with 192.

Faunal remains include 1 large mammal bone.

Stratum 192 (167) is a compact yellowish clay (10YR4/4) with limestone flecks. Its thickness ranges from 5 to 58 cm. It was excavated with 167. The clay loam fill was found west of wall 178. Artifacts recovered include bone and chert flakes. Stratum 192 is below 165 and wall 178, abuts 168, and above floor 183 and wall 181 in 386E 331N.

Stratum 168 is a sandy loam (10YR4/4) with limestone flecks and cobbles, and sand scattered throughout. Its thickness ranges from 25 to 49 cm. Stratum 168 is a fill found within the limestone structure/walls 178 and 166 in the eastern half of the unit. Artifacts include ceramics, a mano and chert flakes, tool and core. The ceramics are mostly plate and bowl sherds dating to A.D. 600-900. Nine type varieties were noted, some of which are Mountain Pine Red, Belize Red, Dolphin Head Red and Garbutt Creek Red. Stratum 168 is below 165 and walls 178 and 166, abuts 167, and is above floor 193, wall 180, and floor 179 in 386E 331.5N

Stratum 182 is a plaster floor (10YR8/2) varying from 2 to 14 cm in thickness. It was excavated with its cobble ballast (196) because of their compactness. Artifacts recovered include ceramics and one chert flake. The ceramics date to A.D. 700-900, with the majority being bowl sherds. Type varieties include Garbutt Creek Red, Mountain Pine Red, and Teakettle Bank Black. Stratum 182 is below 167, abutting wall 181, might be the same as floor/ballast 193/204, and above 196 in 386E 331.5N.

Stratum 196 is a limestone cobble ballast (10YR8/1). Its thickness ranges from 2 to 14 cm and includes floor 182 since they were excavated together (see stratum summary 182 for ceramic information). This level dates to A.D. 700-900. Stratum 196 is below floor 182, abuts wall 181, and is above floor 202 in 386E 331.5N.

Stratum 193 is plaster floor (10YR8/2) and ranges from 1 to 6 cm in thickness. It was excavated with its ballast (204). No artifacts were collected. Stratum 193 is below 168, abutting wall 180, and above 204 in 386E 331.5N. It might be the same as floor 182.

Stratum 204 is a limestone cobble ballast (10YR8/1) with limestone flecks and sand. Its thickness

ranges from 1 to 6 cm including floor 193. No artifacts were recovered. Stratum 204 is below floor 193, above floor 202, and abuts wall 181 and floor 182 in 386E 331.5N.

Stratum 180 is a limestone wall (2.5Y8/2) with cobbles. Its thickness ranges from 20 to 28 cm and consists of five rocks aligned north-south. They range in size from 50 cm in diameter to 12 cm in diameter. No artifacts were recovered. Stratum 180 is below 168, abuts floor 179, floor 193, 204, and is floor 202 in 386E 331.5N.

Stratum 181 is a limestone boulder wall (10YR8/1). Its thickness ranges from 19 to 20 cm. Stratum 181 is a T-shaped limestone cobble wall found in the northwest corner part of 178 is later built on top of it). No artifacts were recovered. Stratum 181 is below wall 178 and 167/192, abuts floor/ballast 183/198, floor/ballast 199/200, floor/ballast 201/203, and floor/ballast 182/196, and above 202 in 386E 321.5N.

Stratum 183 is a plaster floor (10YR8/2). Its thickness ranges from 2 to 4 cm. It was excavated with its cobble ballast (198). It is confined to the northwest corner of the unit. No artifacts were recovered. Stratum 183 is below 192, within/abutting wall 181, and is above 198 in 386E 331.5N.

Stratum 198 is a limestone cobble ballast (10YR8/1). The stratum was excavated with floor 183, and the combined thickness ranges from 2 to 4 cm. The stratum is confined to the northwest corner. No artifacts were recovered. Stratum 198 is below floor 183, abuts wall 181, and is above floor 199 in 386E 331.5N.

Stratum 199 is a plaster floor (10YR8/2) within wall/structure 181. Its thickness ranges from 3 to 4 cm. It was removed with its ballast (200). It is confined to the northwest corner of the unit. No artifacts were recovered. Stratum 199 is below floor 198, abuts 181, and is above 200 in 386E 331.5N.

Stratum 200 is a limestone cobble ballast (10YR8/1). It was excavated with floor 199. No artifacts were recovered. Stratum 200 is below floor 199, abuts 181, and is above floor 201 in 386E 331.5N.

Stratum 201 is a plaster floor (10YR8/2) with a thickness ranging from 3 to 7 cm. It was excavated with 203 (ballast). The floor and ballast were confined to the northwest corner of the unit within wall/structure 181. No artifacts were recovered from this unit. Stratum 201 is below floor 200, surrounded by wall 181, and is above 203 in 386E 331.5N.

Stratum 203 is a limestone cobble ballast (10YR8/1) with limestone flecks and sand. Its thickness ranges from 3 to 7 cm including its floor (201). This stratum is confined to the northwest corner of the unit. No artifacts were recovered. Stratum 203 is below floor 201, abuts wall 181, and is above floor 202 in 386E 331.5N.

Stratum 179 is a thick plaster floor (10YR8/1). Its thickness ranges from 20 to 24 cm. It is found only in the southeast section of the unit (c. 90 cm from the south wall, and c. 20 cm from the east wall). It is a hard and compact floor without a ballast. No artifacts were recovered. Stratum 179 is below wall 166 and 168, abuts floor 202 and wall 180, and is above 206 in 386E 331.5N.

Stratum 202 is a plaster floor (10YR8/2) that ranges from 2 to 19 cm in thickness. Floor 202 was excavated simultaneously with its ballast (205) due to their compactness. Stratum 202 covers most of the unit in varying degrees. Artifacts recovered include ceramics, chert flakes, slate, and obsidian. The ceramics were all dish and bowl sherds dating to A.D. 700-800. Type varieties are Dolphin Head Red and Mountain Pine Red (Old Jim). Stratum 202 might be the same as 179 (or at least abuts it), is below 203, 196, 204, wall 180, and is above 205 in 386E 331.5N.

Stratum 205 is a limestone cobble and boulder ballast (10YR8/1) with limestone flecks and sand. This stratum was excavated with floor 202. Stratum 205 is a compact cobble ballast that covers most of the unit in varying degrees. Artifacts recovered include ceramics, chert, and obsidian (see stratum summary 202 for ceramic information.) This level dates to A.D. 700-800. Stratum 205 is below floor 202 and is above 206 in 386E 331.5N.

Stratum 206 is a clay loam (10YR4/4). This stratum is the termination level for the unit and only the surface layer was exposed. Stratum 206 is a clay fill that coincides with 139, 159, 169, 176, and 191 throughout the mound. No artifacts were recovered. Stratum 206 is below 205 and floor 179 in 386E 331.5N.

378/380E 339.5N—382E 339.5N

Stratum 108 is a wall (10YR8/1) with limestone cobbles, a few boulders, and a few pebbles. It ranges from 7 to 29 cm in thickness. It is aligned north-south and is approximately 42 to 63 cm wide. The

wall begins and ends at the eastern edge of the unit and curves out at its mid-point 23 cm from the eastern edge. Artifacts include ceramics and chert flakes and tools. Stratum 108 is below 101 and above 125. This stratum is found in 380E 339.5N, 382E 339.5N, 382E 340N, 382E 341.5N, and 382E 338.5N.

Stratum 125 is a clay loam (10YR5/4) with smooth limestone boulders. Its thickness ranges from 12 to 32 cm. The fill stratum is under a stone wall (108). Artifacts recovered include an notched obsidian blade. Stratum 125 is found below wall 108 and above 104/112 in 382E 339.5N.

Stratum 111 is a wall of small limestone boulders (10YR8/2). It was the termination level of the unit, and only the surface layer was exposed. It is located in the eastern half of unit 380E 339.5N and throughout unit 388E 339.5N. The boulders are all greater than 15 cm in diameter. No artifacts were recovered. Stratum 111 is below 101, abuts 104, and is above 104. It is also identified in 386E 339.5N.

Stratum 102 is a limestone boulder wall (10YR8/1) with a few ceramics sherds in-bedded between the boulders. Its thickness ranges from 11 to 35 cm and consists of seven limestone boulders with many limestone cobbles and pebbles within and between the boulders. Thick clay appears to have been used as a mortar. The wall is approximately 109 cm in width from the eastern-most boulder to the boulder line on the west side. The top most point of the wall rests approximately 68.5 cm below the site datum elevation. No artifacts were collected. Stratum 102 is below 101 and is found in 378E 339.5N and 378E 340.5N.

Stratum 103 is a dark brown sandy clay loam (10YR3/3) with limestone cobbles, several tree roots, and a tree stump about 6 cm in diameter. Its thickness ranges from 3 to 29 cm. Tree roots cover the entire stratum. A pebbly surface started to appear at the bottom of this level. Artifacts recovered include several ceramic sherds, daub, chert flakes, and obsidian flakes. Of the ceramics recovered, none were datable. Stratum 103 is below 101 and abuts 102 in 378E 339.5N and 378E 340.5N, and was not excavated further.

The one obsidian was not notched.

Stratum 106 is a limestone wall (10YR8/2) with limestone cobbles, small boulders, and pebbles. It ranges from 5 to 7 cm in thickness. It is approximately 69 cm in length starting from the western edge running north-south. There is a possibility, however, that it might be a step rather than a wall. No artifacts were recovered. Stratum 106 is below 101 and abuts 103 in 382E 339.5N. It was not excavated further.

Stratum 107 is a sandy dark brown clay loam (10YR4/4) with limestone pebbles and several tree roots. This stratum is the termination level in the units, and only the surface layer was exposed. It begins at the western edge of the unit next to wall 106, and continues to the eastern edge. Artifacts include ceramics, daub, and chert flakes. Most artifacts were found closer to stratum 112. The ceramics are predominately bowls and jars dating to A.D. 700-900 with 9 different type varieties including Cayo Unslipped (Mottled brown smudge), Chunnuitz Orange, Dos Hermanos Red, and Dolphin Head Red. Stratum 107 is below 101, abuts wall 106, and is above 112 in 380E 339.5N and 380E 340.5N.

Stratum 104 is a dark brown clay (10YR3/2, 10YR5/8 mottled with 2.5YR7/2) with limestone cobbles and flecks. Its thickness ranges from 20 to 55 cm. Roots and rodent disturbance was noted. Artifacts recovered include ceramics, daub, burnt plaster, obsidian, groundstone, and chert flakes, a core, and blade. Stratum 104 is below 101 and 125, abuts 111, and is above 105, and might be the same as 112. 104/105 artifacts include marine shell, ceramics, and chert flakes and cores (dating to A.D. 700-900).

None of the three obsidian pieces are notched.

The following lists the ceramics:

382E 339.5 N- Predominate type: jars and lids; date range: A.D. 700-900

Type Varieties: Belize Red, Augustine Red, Garbutt Creek Red, and Alexander Unslipped (Beaverdam)

384E 339.5 N- Predominate type: unknown; date range: A.D. 700-900

Type Variety: Garbutt Creek Red

Stratum 112 is a thick orange clay (10YR5/8) and ranges from 1 to 35 cm in thickness. This stratum is likely the same as 104. Artifacts recovered included a few chert flakes and core, ceramic sherds that are predominately dishes and bowls dating to A.D. 650-750, with 6 type varieties including Mt. Pine Ridge, Aguacate Orange, and Boletto Black on Orange. Stratum 112 is below 125, abuts 107, and is above 113, 114, and 115 in 380E 340.5N.

Stratum 105 is a dark brown clay loam fill (10YR5/3) with limestone cobbles, flecks, rodent and root disturbance, and burnt plaster. It ranges from 1 to 35 cm in thickness. Artifacts recovered include ceramics, obsidian, quartz flake, daub, chert flakes, and a tooth. Most ceramics are dishes and vases dating from A.D.

600-700 and A.D. 700-900 with type varieties of Belize Red, TuTu Camp (Beaverdam), Mt. Pine Red, and Santa Teresa Incised (ST Var.) represented. Stratum 105 is below 104 and is above floor 109 in 384E 339.5N and 382E 339.5N.

None of the 4 obsidian pieces were notched

Fauna remains include 1 large mammal.

Stratum 109 is a plaster floor (10YR5/4) with small limestone boulders on its surface, and limestone cobbles. Its thickness ranges from 1 to 12 cm. Evidence for rodent disturbance was also present. Artifacts recovered include ceramics, chert, bone, quartz flake, obsidian blade, burnt plaster, and daub. Most ceramics were dishes dating to A.D. 700-900 with type varieties of Belize Red and Mt. Pine Red. Stratum 109 is below 105, abuts 119, and above floor 110 in 384E 339.5N and 382E 339.5N.

The 1 obsidian blade was notched.

Stratum 113 is a very loose and grayish-white sandy clay (2.5Y8/2) with limestone pebbles. Its thickness ranges from 27 to 30 cm. Two sherds were noted, but no artifacts were collected. Stratum 113 is located below 112 (104) and abuts wall 114 in 380E 340.5N. It was not excavated further.

Stratum 114 is a large limestone boulder semi-circular wall (10YR8/1). Four large stones and four smaller stones aligned north-south in the eastern center half of the unit (1 m wide unit). No artifacts were recovered. This stratum is below 112 (104), and abuts 115 and 113 in unit 380E 340.5N. It was not excavated further, but is likely above floor 116.

Stratum 115 is a red-brown sandy clay (2.5YR8/2) with limestone pebbles and flecks scattered evenly throughout. It ranges from 7 to 14 cm in thickness. Several sequences of ballast and floor (that will be labeled strata 116-123) extending across the unit were accidentally excavated together. Artifacts recovered included a metate fragment and a few ceramic jar sherds dating to A.D. 600-700 (Jones Camp Striated). Stratum 115 is below 112 (104) and 105, abuts 114, and is above floor 116 in 380E 340.5N and 382E 339.5N.

Stratum 116 is a compact plaster floor (10YR7/2). Its thickness ranges from 2 to 8.5 cm. On top of 116 was a thin layer of crushed marl. Artifacts recovered include ceramics with indeterminable types dating to A.D. 600-700 (Zibal Unslipped). Stratum 117 is below 115, above ballast 116, and abuts 105 on its east side in 380E 340.5N and 382E 339.5 N.

Stratum 117 is a limestone cobble ballast (10YR8/2 with 10YR7/2) with pebbles, and was excavated with floor 116. Their thickness ranges from 2 cm to 8.5 cm. Stratum 116 is below floor 117, abuts 105, and is above floor 118 in 380E 340.5N and 382E 339.5 N.

Stratum 118 is a plaster floor (10YR8/2 with 10YR7/2) with small limestone pebbles. Its thickness is about 1 cm. No artifacts were found in this level. Stratum 118 is below 117, abuts 105, and is above ballast 119 in 380E 340.5N and 382E 339.5N.

Stratum 119 is a limestone cobble ballast (10YR8/2). It ranges from 1 to 4 cm in thickness. Artifacts recovered include chert flakes. Stratum 119 is below floor 118, abuts 105 and floor 109, and is above stratum 120 in 380E 340.5N and 382E 339.5N.

Stratum 120 is a plaster floor (10YR7/2) with small limestone pebbles. Its thickness is about 1 cm. It is on top of another floor (121). No artifacts were recovered. Stratum 120 is below 119, above 121, and abuts 110. Stratum 120 is in 380 E 340.5N and 382E 339.5N.

Stratum 110 is a plaster floor (10YR8/2, 10YR8/1). Its thickness ranges from 1 to 3 cm. One large mammal bone was the only artifact recovered from this stratum. It is below floor 109, abuts floor 120 (they appear to have been constructed at different times), and is above floor 137 in 384E 339.5N and 382E 339.5N.

Stratum 121 is plaster floor (10YR7/2) with small limestone pebbles and a thickness ranging from 1 to 3 cm with a series of re-plastering. No artifacts were found. This stratum is below floor 120, above floor 122, and abuts 137 in 380E 340.5N and 382E 339.5N.

Stratum 137 is a compact plaster floor (10YR7/2 with 10YR5/2) with small limestone pebbles. Its thickness ranges from 1 to 3 cm. No artifacts were found. Stratum 137 is below floor 110, above ballast 140, and abuts floor 121 in 382E 339.5N.

Stratum 140 is a limestone cobble ballast (10YR8/2 with 10YR7/2) with pebbles. Its thickness ranges from 1 to 6 cm. Larger pebbles and cobbles are present in the south end of the stratum. No artifacts

were recovered. Stratum 140 is below floor 137 and above floor 141 in 382E 339.5N.

Stratum 122 is a plaster floor (10YR7/2 with 10YR8/2) with small limestone pebbles. Its thickness ranges from 2 to 5 cm. It may reflect re-plastering of floor 123. Artifacts from its surface include small ceramics drum sherds dating to A.D. 650-750, Macal Orange-Red. Stratum 122 is above floor 123, below floor 121, and abuts floor 141. The stratum is found in 380E 340.5N and 382E 339.5N.

Stratum 141 is a plaster floor (10YR7/2) with small cobbles and small pebbles. Its thickness ranges from 2 to 3 cm. The stones are in the north section of the stratum. No artifacts were recovered. It is located in unit 382E 339.5N below 140, abuts floor 122, and is above floor 123.

Stratum 123 is a plaster floor (10YR7/2 with 10YR 8/2) with small to large limestone cobbles. Its thickness ranges from 2 to 5 cm. It was removed with its ballast, 138. Artifacts include chert flakes and ceramics. Most ceramics were jar and dish sherds dating to A.D. 650-750 with 6 different variety types including Aguila Orange and Socote Striated. Stratum 123 is above 138, and below 122 and floor 141 in 380E 340.5N and 382E 339.5N.

Stratum 138 is a limestone cobble ballast (10YR8/2) with limestone pebbles. Stratum 138 was excavated with floor 123 because of their compactness. Their thickness ranges from 0 to 9 cm. The ballast is much thicker with larger stones in the north section of the unit, probably to compensate for the gradual slope that dips from south to north. No artifacts were found. Stratum 138 is below floor 123 and above 139 in 382E 339.5N.

Stratum 139 is a mottled clay loam with sand pockets in the southeast corner (10YR5/6) with small limestone cobbles and pebbles and river cobbles. Its thickness ranges from 146 to 158 cm. It likely is the same as strata 159, 169, 176, 191, and 206. Artifacts recovered include ceramics, daub, bone, marine and freshwater shell, obsidian, and chert biface thinning flakes, flakes, cores, flake tool, blade, and hammerstone. The ceramics include mostly dish, bowl, jar, as well as tecomate sherds, that date from 300-100 B.C. and were composed of 10 type varieties including Sierra Red (Var. Uns.), Flor Cream, Altamira Fluted, and Happy Home Orange. Stratum 139 is below 138 and above 144 in 382E 339.5N.

Two of the 3 obsidian pieces were notched.

Faunal remains include 3 large mammal, 5 burned large mammal, 1 large mammal with cut marks, 1 cut/burned/polished large mammal, and 1 small mammal bones.

Stratum 144 is a clay loam (10YR5/2 with 10YR4/1) with charcoal flecks and limestone pebbles. Its thickness ranges from 0 to 31 cm. The top of the stratum consists mostly of limestone pebbles, which might have served as a living surface 3-5 cm thick. However, there are intermittent pockets of the same clay loam throughout the level. Charcoal flecks are present throughout, but no samples were large enough to collect. Artifacts include ceramics, bone, chert flakes, and obsidian blades and core. The ceramics are predominantly dish, bowl, and jar sherds dating to A.D. 400-600. There are 20 type varieties present including Vaquero Creek Red, Pucte Brown, Balanza Black, San Antonio Golden Brown, Gavilan Black on Orange, and Lucha Incised. Stratum 144 is below 139 and above 150 in 382E 339.5N.

1 out of 2 obsidian blades were notched.

Faunal remains include 4 large mammal and 1 large burned mammal bone.

Stratum 150 is a clayey soil (2.5Y5/4 mixed with 2.5Y3/2 and charcoal) with charcoal flecks. Its thickness ranges from 14 to 20 cm. A metate fragment was found on top of 150. Artifacts recovered include ceramics (some burned), chert flakes, tool and blade, one un-notched obsidian blade, ground stone, and charcoal. Most of the ceramics are dish sherds dating to A.D. 1-250 and A.D. 400-600. There are 29 type varieties found, including Baquero Creek Red, Bullet Tree Red Brown, Guacamallo Red on Orange, Flor Cream and Savana Orange. Stratum 150 is below 144 and above 153 in 382E 339.5N.

Stratum 153 is a clay loam (2.5Y5/4) with limestone pebbles and flecks. Its thickness ranges from 8 to 15 cm. Artifacts recovered include chert flakes and a hammerstone, a chalcedony core, obsidian core, ceramics, and shell. Most ceramics are dish sherds dating to A.D. 400-600. Type varieties include Fowler Orange Red, Ixacio Polychrome, Dos Arroyos, Monkey Falls Red, Gavilian Black on Orange as well as 8 other types. Stratum 153 is above 160 and below 150 in 382E 339.5N.

Stratum 160 is a fill or possible ballast consisting of clay loam (2.5Y4/3) with limestone flecks, cobbles and small boulders, and river cobbles, as well as burned limestone cobbles and charcoal flecks. Its thickness ranges from 24 to 37 cm. Artifacts include chert flakes, a tool and core, bone (including 1 large

mammal), quartz, marine shell, and ceramics. Most ceramics are bowl and jar sherds dating to A.D. 1-250 and A.D. 250-400. There are 21 different type varieties, some of which are San Antonio Golden Brown, Sierra Red, Happy Home Orange, Hillbank Red Joventud Red, and Old River Unslipped. Stratum 160 is below 153 and above 163 in unit 382E 339.5N.

Stratum 163 is a clay loam (2.5Y4/3) with limestone pebbles and flecks, river pebbles and charcoal flecks. Its thickness ranges from 12 to 14 cm. Artifacts recovered include ceramics, shell, bone, and chert flakes. Most of the ceramics are bowl sherds dating to 100 B.C.- A.D. 250. Eight type varieties are represented, including San Felipe Brown, Sierra Red, Sasmpopeno Red, and Hillbank Red. Stratum 163 is in 382E 339.5N below 160 and above 164.

Faunal remains include 3 large mammal bones.

Stratum 164 is a sandy clay loam fill (10YR4/3) with a few limestone cobbles and one small limestone boulder. It comprises the first cultural strata at SC-78 (it lies on top of sterile, natural clay loam). Its thickness ranges from 16 to 18 cm. The consistency of the soil was awkward to dig through, and is obviously a different type of clay loam than the previous strata. Artifacts include ceramics, chert flakes, chalcedony, and charcoal. The ceramics consists of a majority of dish and bowl sherds dating from 100 B.C. to A.D. 250. Type varieties include Quacco Creek Red, Bullet Tree Red-Brown, Vaquero Creek Red, and Stumped Creek Striated. Stratum 164 is below 163 and above 170 in 382.5E 339.5N.

Stratum 170 is a sterile sandy clay loam (10YR5/3). The stratum was the termination level for the unit, and only the surface layer was exposed. Two 1 meter post hole tests were placed in the unit to make sure it was sterile. No artifacts were recovered. Stratum 170 is below 164 in 382E 339.5N.

383E 349N

Stratum 126 is a clay loam fill (10YR5/4) with limestone flecks and small cobbles. Its thickness ranges from 12 to 18 cm. It lies atop a burnt collapsed daub feature/wall (133) and another fill stratum (127). Artifacts recovered include daub, chert flakes, ceramics, and bone. Of the ceramics, jar, bowl, and dish sherd numbers are basically equal and date to A.D. 600-700 with 7 type varieties including Minanha Red, White Cliff Striated, and Balanza Black. This stratum is above 127 and 133, and below 101 in 383E 349N.

Faunal remains include 2 large mammal, 1 large mammal bone with gnaw marks, and 1 with cut marks.

Stratum 127 is a clay loam (10YR5/8 mottled with 10YR5/4) with limestone cobbles, flecks, and river cobbles. It ranges from 13 to 18 cm in thickness. Stratum 127 terminates at the bottom of a ceramic cluster (136) and surrounds 133. Artifacts recovered include chert flakes, cores and ceramics. The ceramics are predominately jars dating to A.D. 650-750 and A.D. 700-900. There are 16 different variety types, some of which are Gavilian Black on Orange, Aguila Orange, Dos Hermanos Red, Mopan Striated, and Chorro Fluted. Stratum 127 is found below 126, encompasses 133, and is above 134 and 136 in 383E 349N.

Stratum 133 consists of burned clay and daub (2.5YR2.5/4). Its thickness ranges from 19 to 21 cm. It is a burnt deposit of daub, clay, and other material. It could possibly be a collapsed wall that fell on a perhaps special deposit (136). Artifacts recovered include ceramics that are predominately jar sherds dating from A.D. 800-900, with 8 type varieties including Sotero Red-Brown, Belize Red, and Monkey Falls Striated. Stratum 133 is below 126, above 136, and intrudes into 127 in 383E 349N.

Stratum 134 is a sandy loam with clay (10YR4/8, 10YR3/3). Its thickness ranges from 37 to 84 cm. Artifacts recovered include ceramics, chert flake, flake tool, tool, obsidian, a large canine tooth, and marine shell. The ceramics are predominantly bowls dating to A.D. 800-900. There are 12 different type varieties found, including Yalbac Smudged Brown, Tea Kettle Bank Black, Macal Orange Red, and Yuhactal Black on Red. On top of 134 were 2 ceramic clusters, one with 6 bowl rims and 4 body sherds, and the other with 6 plate rims and 7 body sherds; also found on its surface was marine and freshwater shell. Stratum 134 encompasses deposit 136, is above 142, and below 127 in 383E 349N.

Stratum 136 is a special deposit of sandy loam (10YR4/4) with limestone cobbles and flecks. Its thickness ranges from 24 to 27 cm. Within this deposit were burned daub and ceramic clusters. A human ulna had been placed on a plate. Artifacts recovered include chert flakes, a drilled and carved marine shell pendant, ceramics, and human bone fragments. The ceramics are predominantly jars and bowls dating to

A.D. 700-900 and A.D. 800-900. Twenty-eight different type varieties were represented including Cayo Unslipped Red, Roaring Creek Red, Cubeta Incised, Iguana Creek Impressed, Limon Black-Cream, and Palizada Black on Orange. Stratum 136 is below 127 and 133, and within 134 in 383E 349N.

Ceramic cluster A; 3 plate rims, 12 body, A.D. 800-900

Ceramic cluster B; 2 bowl rims, 1 plate rim, 1 miniature jar, 8 body

Ceramic cluster C; 41 body sherds

Stratum 142 is a sandy loam fill (10YR5/3) with limestone flecks and cobbles. Its thickness ranges from 12 to 22 cm. It could possibly be a disturbed floor. Artifacts recovered include ceramics, chert flakes, one un-notched obsidian, and bone. The ceramics are predominately dish sherds that date to A.D. 700-900. There are 6 different type varieties discovered including Yaha Creek Cream, Macal Orange Red, and Aguacate Orange. Stratum 142 is found below 134 (only in western section of unit) and above 143 in 383E 349N.

Faunal remains include 3 large mammal bones.

Stratum 143 is a plaster floor (10YR8/4). Its thickness ranges from 1 to 7 cm, including its ballast, 146, with which it was excavated. Artifacts recovered include one ceramic sherd and a few chert flakes. One ceramic is of an unknown type variety. Others date to A.D. 700-900. Stratum 143 is below 142 and above 146 in 383E 349N.

Stratum 146 is a limestone cobble ballast (10YR8/1). Stratum 146 was excavated with floor 143; the thickness for both ranges from 1 to 7 cm. They were excavated together because of their compactness. Artifacts recovered include one ceramic sherd (not datable) and a few chert flakes. Stratum 146 is below 143 and above floor 147 in 383E 349N.

Stratum 147 is a plaster floor (10YR8/4). Its thickness ranges from 2 to 9 cm, including its ballast (148). Both were excavated together due to their compactness. No artifacts were recovered. Stratum 147 is below 146 and above 148 in 383E 349N.

Stratum 148 is a limestone cobble ballast (10YR8/1) excavated with floor 147. Their thickness ranges from 2 to 9 cm. No artifacts were recovered. Stratum 148 is below floor 147 and above floors 151 and 157 in 383E 349N.

Stratum 151 is a plaster floor (10YR8/4) 2 to 3 cm thick. It was excavated with its ballast (152). Artifacts recovered include two dish sherds that date to A.D. 400-600. The only type variety is Boletto Black on Orange. Stratum 151 is below 148, abuts floor 157, and is above 152 in 383E 349N.

Stratum 152 is a limestone cobble ballast (10YR8/1). It was excavated with floor 151. Stratum 152 is below floor 151, abuts 158, and is above 154 in 383E 349N.

Stratum 157 is a plaster floor (10YR8/4). The floor was excavated with its ballast (158), and their thickness ranges from 3 to 8 cm. No artifacts were recovered. Stratum 157 is located in 383E 349N above 158, abuts floor 151, and is below 148.

Stratum 158 is a limestone cobble ballast (10YR8/1). It was excavated with floor 157. The ballast is found only in the eastern half of the unit. Stratum 158 is below 157, abuts 152, and is above floor 154 in 383E 349N.

Stratum 154 is a plaster floor (10YR8/4). It was excavated with its ballast (155) since they were so compact. Their thickness ranges from 5 to 15 cm. Chert flakes were the only artifacts recovered. Stratum 154 is below 152 and 158, and above 155 in 383E 349N.

Stratum 155 is a limestone cobble ballast (10YR8/1) that was excavated with floor 155. Stratum 155 is below 154 and above 159 in 383E 349N.

Stratum 159 is a clay fill (10YR5/4). Only the top layer of 159 was exposed, and a post hole test 1.3 m in depth revealed it to be virtually sterile. Stratum 159 is likely the same fill as 139, 169, 176, 191, and 206. Artifacts recovered include ceramics and chert flakes and a core. Most ceramics are jar sherds dating to A.D. 1-250 with type varieties of Aguacate Orange, Monkey Falls Striated, and Aguacate Orange. Stratum 159 is below 155 and is the terminating level in 383E 349N.

382E 352.5N/384E 353.5N

Trench A (131/135):

Artifacts recovered include ceramics, bone, freshwater shell, obsidian, and chert flakes, core, and tool.

Ceramics date to c. A.D. 800-900. Neither of the two obsidian pieces were notched. Faunal remains include 2 large mammal bones and 2 turtle carapaces.

Stratum 135 is a step constructed with limestone boulders about 30 cm in length (10YR8/2). Its thickness ranges from 8 to 32 cm. It is the higher of the two steps (the other being 131 to the north). No artifacts were recovered. Stratum 135 is below 101 and abuts 129 in 382E 352.5N.

Stratum 129 consists of a sandy loam (5YR4/3) and dense limestone cobble fill. Its thickness ranges from 17 to 32 cm. Stratum 129 is the fill between two steps (131, 135). Large rocks were found at bottom, as well as in the eastern corner and west-central section. Artifacts recovered include chert flakes and core, ceramic bowl and jar sherds dating to A.D. 250-400 with type varieties of Dos Hermanis Red and Stumped Creek Striated. Stratum 129 is below 101 and abuts step 131, and 129 in 382E 352.5N.

Stratum 124 is a dark brown clay loam (10YR4/4) with limestone pebbles and flecks, and roots on the north wall. It ranges from 20 to 26 cm in thickness. The soil is surrounded by limestone steps to the south and east (131, 135). Artifacts recovered included chert flakes, bone fragments, a ceramic disc, a perforated sherd, and ceramic sherds (including 5 plate sherds). Most ceramics are bowl and dish sherds, along with an abundance of jar sherds. The ceramics date from A.D. 700-900 and A.D. 800-900 with 20 different type varieties including Belize Red, Chunhuitz Orange, Yaha Creek Cream, Daylight Orange (Daylight Var.), and Yuhactal Black-on-Red. Stratum 124 is located below 101, above floor 132, and abuts 129 and wall/step 131 in 382E 352.5N.

Stratum 132 is a plaster floor (10YR7/2), of which only the top was exposed. The east and south abut 131. The limestone is thicker in the center of the floor with several chunks of rock situated slightly higher than the surrounding floor. The limestone at the southern end is less compact and more crumbled than the rest of the floor. No artifacts were found in this stratum, which is below 124 and abuts step 131 in 382E 352.5N.

Stratum 131 is a one course limestone boulder (20 cm on average) wall that comprises the lower step of a terraced platform (10YR8/2). Its thickness ranges from 14 and 40 cm. It bisects the unit east-west. Cobbles branch off the main wall to the northern edge of the unit. Another smaller wall also branches off it. Directly east of this wall branch a circular deposit of stone extends from the main wall, measuring approximately 35 cm in diameter. No artifacts were recovered. Stratum 131 is below 101, between 124, 128, floor 132 and 129, and above floor 130 in 382E 352.5N/Trench A.

Stratum 128 is a dark sandy loam (7.5YR3/3) with limestone flecks, daub chunks, burned plaster, and charcoal deposits (including one with bone). Its thickness ranges from 17 to 45 cm. Stratum 128 is surrounded by a limestone wall to the south, east, and west (131). Artifacts include bone fragments, chert flakes, cores and blades, a mano, metate fragment, obsidian, quartz flake, a ceramic bead, a ceramic figurine fragment, and ceramic sherds. Jar, dish, and bowl sherds are equally represented. The ceramics date to A.D. 800-900 with 23 different type varieties including Mt. Pine Red, Balanza Black, Garbutt Creek (brown interior), Jones Camp Striated (brown), Rubber Camp Brown, and White Cliff Striated (dark brown). Stratum 128 is below 101, above floor 130 and fill 145, and abuts step 131 in 382E 352.5N and 384E 353.5N.

5 out of the 9 obsidian pieces were notched.

There were 2 ceramic clusters near step 131, and that might be associated with floor 130; one with 2 jar rims and 7 body dating to A.D. 700-900, and one (#1) with 177 sherds including 13 rims (representing 9 different vessels) and 5 bases (representing 3 different vessels).

Faunal remains include 16 large mammal, 3 large mammal bones with tooth punctures, 3 small mammal, 3 turtle carapaces, 2 fish bones, and 1 fish bone with tooth marks.

Stratum 145 is composed of light brown sandy loam (10YR7/1) with decomposed plaster chunks, limestone flecks and pebbles. Its thickness ranges from 1 to 20 cm. It might comprise a support/leveling ballast for the platform. Artifacts were dense and include ceramics, small bone fragments, chert flakes, and one small piece of jade. Ceramics are predominately jars dating to A.D. 800-900 and A.D. 900-1150. There are 7 different type varieties including Belize Red, TuTu Camp (Tzimin), Yaha Creek Cream and Garbutt Creek Red. Stratum 145 is below 128 and above floor 130 in the northern section of 384E 353.5N.

Faunal remains include 4 large and 2 small mammal bones.

Stratum 130 is a plaster floor (10YR7/2) with a thickness ranging from 4 to 10 cm. The floor seems

to extend under the western step 131. Large burned areas were noted in the northern section. The limestone floor seems to be solid, although a bit flaky on the exposed surface. Artifacts recovered include one notched obsidian blade, and a ceramic sherd with a face design on its surface against step 131 (rim and base, A.D. 600-700). Stratum 130 is below 128, 131 and 145, and above 156 in 382E 352.5N.

Stratum 156 is a thick clay mostly of dark yellowish or orange-brown color, but strains of gray and dark brown clay are also found in the fill (7.5YR5/8 and 10YR4/4). A few surface limestone cobbles and pebbles were noted. Below the first few centimeters, however, no inclusions were noted. Its thickness ranges from 22 to 32 cm. It appeared to have served as a ballast. Artifacts recovered include ceramics, one un-notched obsidian blade, and chert flakes and a core. The majority of ceramics are dish sherds dating to A.D. 800-900 (Vaca Falls Red, Jones Camp Striated, and Tutu Camp [Tzimin]). Stratum 156 is below floor 130 and above floor 162 in 384E 353.5N.

Stratum 162 is a decomposing plaster floor (10YR6/3) intermixed with clay. It was excavated with its cobble ballast (not assigned a different stratum number). Their thickness ranges from 7 to 12.5 cm. The floor is fairly thick in the south and east portions of the unit, but thins out as it extends northwest. There was burned plaster in the northern area. Artifacts recovered include a foot sherd (not datable), chert flakes, a mano fragment, a bone cluster (likely monkey feet and/or hand bones), and one speleothem (which was found just beneath the plaster floor in the ballast). Stratum 162 is below 156 and above 169 in 384E 353.5N.

Faunal remains include 3 large and 8 small mammal bones, the latter which might come from a monkey.

Stratum 169 is a dark brown clay (10YR4/4) fill. Its thickness ranges from 11 to 17 cm. Stratum 169 is likely the same as 139, 159, 176, 191, and 206. It was excavated about 14 cm, after which a post hole was dug 90 cm. Artifacts recovered include chert flakes and ceramics. The ceramics are predominately dish and jar sherds dating to 300-100 B.C. Stratum 169 is in 384E 353.5N below 162.

384.5E 358.5N

Stratum 176 is a brown clay fill (10YR4/2). Its thickness ranges from 44 to 58 cm. Stratum 176 is situated in the southern section of the unit, but most likely is the same fill that is found beneath the entire mound (139 159, 169, 191, and 206). Artifacts recovered include ceramics, one bone fragment, one un-notched obsidian blade, and chert flakes. The majority of ceramics were dish sherds that date from 300-100 B.C. The type varieties are Accordian Incised, Sampoperno Red, and Polvero Black. Stratum 176 is below 101 and abuts wall 186 to the south in 384.5E 358.5N.

Faunal remains include 1 large mammal bone.

Stratum 186 is a two-course limestone boulder wall (5YR7/1) with a thickness ranging from 50 to 75 cm. The northern section is slightly lower than the southern portion, resulting in a step-like appearance—it might comprise the farthest north platform steps. No artifacts were recovered. Stratum 186 is below 101, abuts 176 and 177, and is above sterile soil in 384.5E 358.5N.

Stratum 177 is a light brown loam (2.5Y5/3) with a 20% limestone pebbles. Its thickness ranges from 6 to 58 cm. Ceramics were the only artifacts recovered, mostly dish and bowl sherds that date to A.D. 600-700 (Bullet Tree Brown, Mopan Striated, and Aguila Orange as well as 7 other types). Stratum 177 is located below 101, abuts 186 to the north, and above 194 in the northern half of unit 384.5E 358.5N.

Stratum 194 is a plaster floor (10YR7/2) with 50% soil and limestone flecks. Its thickness ranges from 1 to 2 cm across northern half of the unit. Rubble fall from the limestone rock wall (186) resulted in the floor disintegrating in some sections. No stone ballast was found. Ceramics were collected from this stratum, but all were unidentifiable. Stratum 194 is below 177, abuts wall 186, and is above 195 in unit 384.5E 358.5N.

Stratum 195 is a tan-brown sandy loam fill (10YR5/3) with 30% limestone pebbles and cobbles. Its thickness ranges from 10 to 40 cm. Deposits of daub and charcoal flecks were also noted. The stratum is situated between two plaster floors (194, 197). A limestone wall (stratum 186) is at its southern boundary. Artifacts recovered include ceramics with an even amount of dish, bowl, and jar sherds. The ceramics date to A.D. 700-900 with type varieties of Cayo Unslipped, Mountain Pine Red, and Macal Orange Red. Stratum 195 is below floor 194, abuts wall/step 186, and is above floor 197 in 384.5E 358.5N.

Stratum 197 is a plaster floor (10YR7/2). Its thickness ranges from 2 to 9 cm. Stratum 197 is located

north of the limestone wall 186. It covers the unit floor except in a small pit on the west end next to the limestone steps (131, 135). It has charcoal flecks on its east side. Artifacts recovered include ceramics that are predominately dish sherds dating to A.D. 700-900. There are 8 different type varieties including Meditation Black, Roaring Creek Red, and Vaca Falls Red. Stratum 197 is below 195, abutting wall 186, and above floor 149 in 384.5E 358.5N.

Stratum 149 is a plaster floor (10YR8/2). A post hole test in the center of the floor exposed about an 30 cm thick floor and ballast deposit. Due to lack of time the unit was terminated without excavating stratum 149. No artifacts were recovered. Stratum 149 is found below stratum 197 and abuts 186 in the north section of 384.5E 358.5N.

Chapter 6

SC-3: A Minor Center Temple Ball Court

Julie Jeakle, Lisa J. Lucero, and Sarah Field

Ball courts have the potential to provide a wealth of information regarding ancient Maya social integration. While interaction between elites and commoners at Maya centers has been studied extensively at major sites, the nature and scale of interaction at minor Maya centers has not been widely addressed. Public events are often used as a form of social integration and ball courts provide an ideal forum. As one of the first studies of a ball court at a minor center, this report will contribute to ball court studies from throughout the Maya lowlands and will also provide insight as to how they were used as a tool to integrate members of society.

SC-3 is a temple ball court consisting of a series of re-built platforms that was used from at least 300 B.C. through perhaps as late as A.D. 1150-1500. It is located about 80 meters from the Belize River in the center core of Saturday Creek (see Figure 1.2) and lies at the eastern portion of the core in an area with three distinct plazas. It is east of temple SC-4 and northeast of temple SC-1. It consists of a small temple structure (5 x 5 m) on top of a large platform (48 x 24 m) oriented 10° west of north, the lower portion of which serves as the eastern of a ball court (SC-2 serves as the western structure of the ball court) (Figure 6.1). Its total height is 5.44 m; the platform is 3.04 m in height, the temple structure 2.4 m in height. A large looters trench runs from the far northern edge of the temple down to the southern edge of the platform, extending about 10 m north-south. It is about 1.5 m in width at the southern end and expand to 3.5 m on the north side. The depth of the looters trench varies, from 1 to 2.5 m deep.

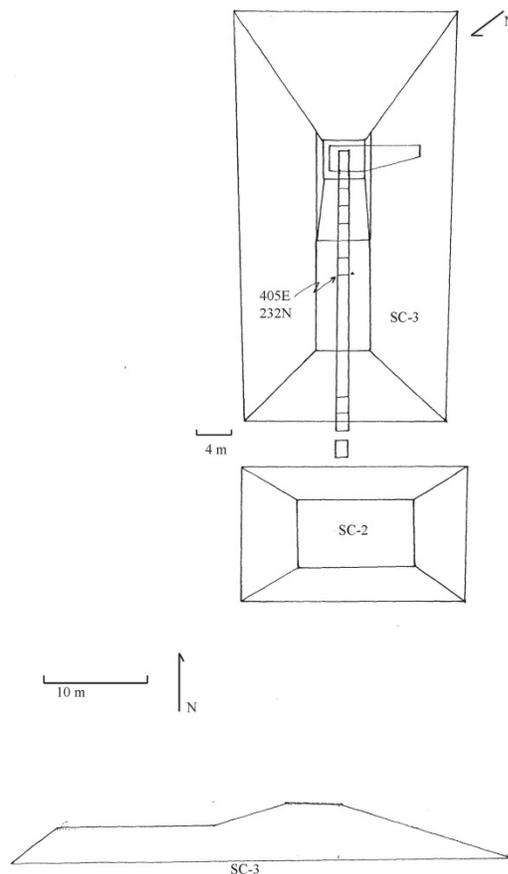


Figure 6.1 Planview and profile of SC-3 (and planview of SC-2)

We excavated a 1-m wide center trench 10° west of north beginning at the base of the temple (407E 232N). The site datum was set up at 402.03E 231.8N at 105.68 m asl. Eventually the trench exposed an area from the looters trench (417E) to the platform (405E) and the ball court and alley (382E, 385E, 387E) largely with 2 x 1 m units. Construction consists of a series of clay-fill platforms and structures with unfaced cobble and boulder façades with relatively few artifacts (compared to other excavated mounds at Saturday Creek).

SC-3 was divided into three distinct areas--the ball court, platform, and temple. Excavation began at the foot of the temple with a series of contiguous 2 x 1 m units that formed a trench aligned 260° (10° south of west). Excavation began on the platform in 407E 232N that had its western most wall abutting the upper slope of the temple. After the platform units were opened, including 409E 232N and 411E 232N, excavation began on the ball court and temple. Two 2 x 1 m units (387E 232N and 385E 232N) were opened on the alley slope, while one 2 x 1 m unit (382E 232N) was opened in the center of the ball court alley. Two 2 x 1 m units (413E 232N and 415E 232N) were opened on the slope of the temple. The looter's trench on the top of the temple, which ran north/south was explored and a unit (LT) was opened. This unit was excavated approximately 1.5 m before a distinct 2 x 1 m measurement was reached (417E 232N). This was due to the uneven and gouged surface of the looter's trench.

Temple

We exposed at least eleven different strata spanning 3.5 m in depth (sterile soil was not reached due to time constraints) (Figure 6.2; see appendix for stratum descriptions). We began excavating the temple base and gradually extended excavations to the temple top at the looter's trench. The side walls of the looter's trench were cleaned up and revealed a burned layer of corozo nuts, as well as what was left of a stacked stone wall that was aligned 10° west of north. Excavation at the top of the temple began at the far western edge of the looter's trench and moved westward to the edge of the upper slope.

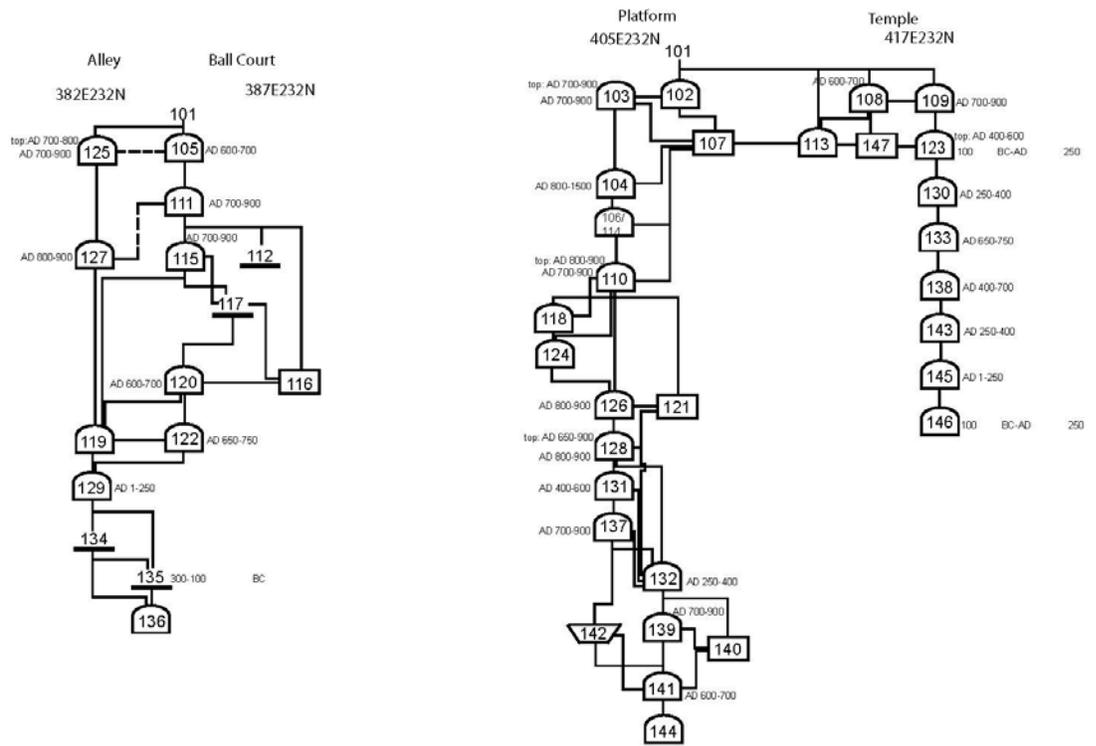


Figure 6.2 SC-3 matrix

Excavation revealed six distinct construction phases, spanning a 1500 year time span (Figure 6.3).

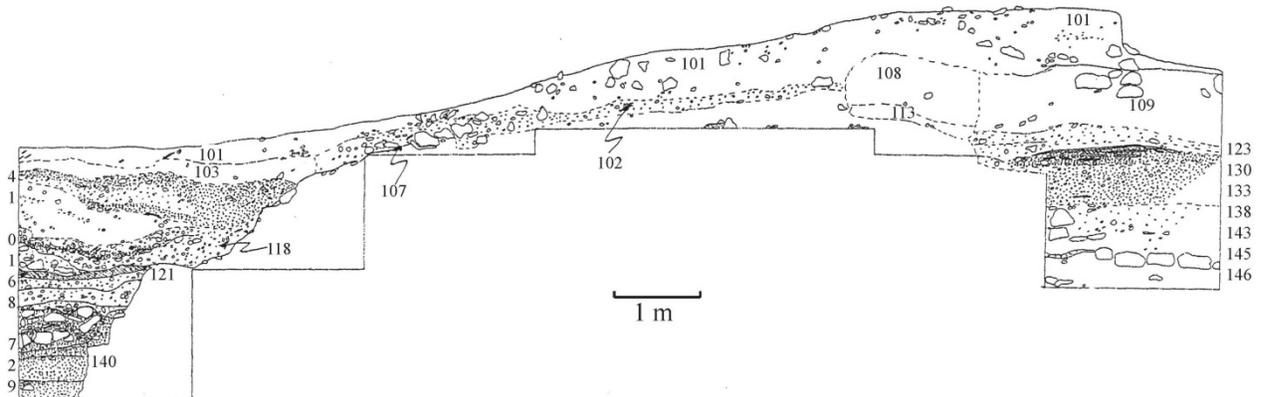


Figure 6.3 SC-3 north wall profile, temple and platform

The earliest exposed construction phase generated a probable date range of 100 B.C.- A.D. 250. It consists of thick clay loam with limestone fleck inclusions (146). A single-course limestone boulder wall rested on the top of this stratum oriented 20° west of north, indicating that it could have been a building surface. Seventeen ceramic sherds were also found on top of this stratum also dating to 100 B.C.-A.D.

250. The second construction phase generated a probable date range of A.D. 1-250 and consists of a limestone boulder wall that is surrounded by clay loam, with several limestone cobble and fleck inclusions (145). The artifact assemblage consisted of serving and cooking/storage vessels as well as one animal bone, shell fragments, two un-notched pieces of obsidian, and chert flakes. The third construction phase generated a probable date range of A.D. 250-400. This stratum consists of clay loam with several limestone flecks throughout (143). The artifact assemblage appears to be domestic in nature since cooking, serving, and storage ceramic vessels were all represented. One large mammal bone was also located, as well as some chert flakes and two un-notched pieces of obsidian. The fourth construction phase generated a probable date range of A.D. 650-750. This stratum consists of solid limestone flecks and pebbles (133), and it is most likely the remains of a plaster floor. It follows a downward sloping pattern from west to east, following the surface of the mound. A few chert flakes and ceramics were collected. The fifth construction phase (123) generated a probable date range of 100 B.C.-A.D. 250. The probable date range is out of sequence and this could be the result of the intermixing of ceramics from two different time periods due to the presence of a new natural stratum that was not recognized during excavation. This stratum consists of solid limestone flecks and pebbles (123) and is also possibly the remains of a plaster floor. Two ceramic rims of a bowl and two pieces of obsidian were recovered. The two rims were collected from the top of this construction phase, dating to A.D. 400-600. Two un-notched pieces of obsidian, chert flakes, and a core were also found. The final construction phase (108, 109 mixed with topsoil, 101) generated a probable date range of A.D. 700-900. It consists of clay fill with a limestone boulder wall present within this stratum (147), aligned east-west. Three faunal remains were located, as well as a few ceramics.

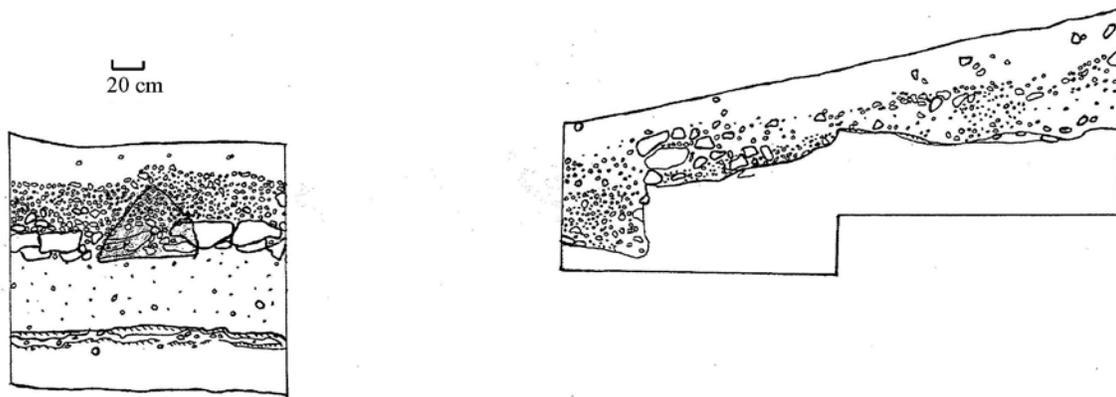


Figure 6.4 SC-3 north wall profile, ball court side wall and alley

Platform

We exposed 17 strata extending approximately 3.5 m in depth (sterile soil was not reached due to time constraints). Excavation began at the far eastern edge of the platform, where it abuts the stone façade of the temple (107). The stone façade was located approximately 0.5 m below the surface. The stone façade was followed out west, uncovering a stepped façade of non-cut stone. The platform appears

to have been re-built several times, indicated by the presence of several floors and signs of termination rituals. The stepped stone façade appears to have been built earlier than the upper platforms given that all of the platforms abut the stone façade.

The platform had at least eight distinct construction phases, largely consisting of re-built platform surfaces, spanning a 900 year occupation period. The earliest exposed construction phase consists of clay loam with solid limestone flecks and pebble inclusions (144). It was most likely the remains of a deteriorating plaster floor. This stratum was not excavated due to time constraints, and a date range is not available. The second construction phase generated a probable date of A.D. 600-700 and consists of clay loam with some limestone inclusions (141). Several serving vessels were located within this stratum that date to A.D. 600-700, as well as several chert flakes. The third construction phase generated a probable date range of A.D. 700-900 and consisted of dense limestone boulders that were surrounded by a thick clay loam (137). On the surface we revealed a layer of burned daub and fire-cracked rocks, perhaps denoting a termination ritual. Several small ceramic sherds and chert flakes were found as well as a metate fragment in the burned area. It abuts 132, a sandy loam fill dating to A.D. 250-400. The fourth construction phase generated a probable date range of A.D. 700-900. It consists of a clay loam with solid limestone flecks and pebbles (128), and could be the remains of a deteriorating plaster floor. Several ceramics were collected from this stratum as well as bone and a burned bone flake. Three ceramic clusters were located on top of a burned surface. The fifth construction phase generated a probable date range of A.D. 800-900 and consists of granite and limestone boulders (124) that are surrounded by clay loam with limestone fleck and pebble inclusions (126). There is a layer of burning both on top of and beneath this stratum with several serving vessels present, as well as a piece of obsidian and chert flakes. These layers of burning could be the result of a termination ritual. The sixth construction phase generated

a probable date range of A.D. 700-900 and consists of a limestone cobble surface with some small areas of burning (110/118). A ceramic cluster was found on the top of this stratum within a circular burned area, including a plate that had been placed upside down. A large animal bone and antler were also found within this cluster. It was located at the foot of the stone façade, and could be the remains of a termination ritual. Two large mammal bones were collected as well as chert flakes, a blade, marine shell, groundstone, and 10 pieces of obsidian. The penultimate construction phase generated a probable date range of A.D. 700-900 and consisted of a limestone cobble surface with limestone flecks throughout (104). We exposed what we think to be a post hole that went through stratum 101 (topsoil), and rested just below the surface of the cobble surface. Within this stratum 24 ceramic pieces were collected, the majority of which were for serving purposes. A ceramic drum was also collected as well as marine shell, a piece of obsidian, and chert flakes and cores. Finally, clay fills 102 and 103, both dating to c. A.D. 700-900, were added as the final construction event of the platform.

Interestingly, the higher the Maya build the platform, the shorter the temple structure became (see Figure 6.3). This also meant decreasing visibility from below the platform, which might account for why the Maya added on a ball court (SC-2) by c. A.D. 700-900, a more public and open architectural feature.

Ball Court

Excavation of the ball court was conducted in two different areas, the side wall (387/385E 232N) and alley (382E 232N). Excavation began at the eastern side wall of the ball court and continued west to the ball court alley. The side wall consists of five distinct construction phases that span a 200 year period. The earliest exposed construction phase is a plaster and limestone cobble surface (117) that rests approximately one meter below the surface that includes the plastered, stepped ball court side wall (116). The latter (116) abuts fill 120, which dates to c. A.D. 600-700. Neither 117 nor 116 was excavated, however. The second construction phase generated a probable date range of A.D. 700-900 and consists of a densely packed limestone cobble and pebble surface with chunks of pebble-sized plaster in some areas (115). A few small ceramics were collected from this stratum. The third construction phase is a hard, smooth, plaster floor that has a few limestone boulder and cobble inclusions (112). It was not excavated, therefore no datable artifacts were recovered. The fourth construction phase generated a probable date range of A.D. 700-900 and consists of a clay loam with solid limestone flecks and pebbles, indicating that it is the remains of a plaster floor (111). A few ceramic sherds were collected, as well as chert flakes and a core. The final construction phase generated a probable date range of A.D. 600-700, and was a compact fill consisting of limestone boulders, pebbles and flecks (105). Very few ceramics were collected. Resting on this surface, however, we found 74 large mammal bones, 2 small mammal bones, 4 fish bones, and 10 turtle carapaces. Also, several sherds of serving and cooking/storage vessels were found, perhaps indicating feasting activities.

The ball court alley consisted of six distinct construction phases, that reached approximately 2 meters in depth until sterile soil, and represented over a 1200 year occupation period. The earliest exposed construction phase generated a probable date range of 300-100 B.C. This phase was a thin plaster floor that contained some small flecks of charcoal (135) and overlaid a fill (136) that was not excavated. A few ceramics were collected from this stratum, all of which were serving vessels. The second construction phase was also another plaster floor (134). This floor was thick and contained small chunks of charcoal; however, no artifacts were recovered. The third and fourth construction events consist of two fill levels of sandy loam (129 and 119), the lower which dates to A.D. 1-250. It appears that there may have been a burning event when 119 was added. In the center of the unit 382E 232N, which is also the center of the alley, there was a concentrated area (c 80 cm wide, and c. 60-70 cm thick) of burned material, of which we were unable to identify. The fifth construction phase generated a probable date range of A.D. 800-900. It consists of a sandy loam with dense limestone flecks and pebbles, with some cobbles (127). It may be the remains of a plaster floor. Once again, only a few ceramics were located within this stratum, as well as chert flakes, a core, a blade, and white mica. The final construction phase generated a probable date range of A.D. 700-900 and consists of a densely flecked clay loam (125), most likely a deteriorating plaster floor. Several ceramics were resting on top of

this stratum as well as within it. Daub, chert flakes, and turtle carapaces were also collected. The topsoil (101) of the alley unit yielded ceramics that date to c. A.D. 1150-1500.

Concluding Remarks

At minor centers, social integration plays a key role socially. Elites used feasts, ceremonies, and ball games to recruit surrounding farmers to aid in the construction of small temples and ball courts. Ball courts played a major role by bringing people together through games, rituals, and feasting. The presence of SC-3 at Saturday Creek is important because other minor centers, such as Barton Ramie, do not have a ball court. Its placement within the center core is indicative of its importance. This temple ball court forms a border at three different plazas, to the west, north, and south, indicating that it is highly probable that it held a special function for the community.

The multiple construction periods over the entire temple ball court and the date ranges from the ceramic analysis suggests that this temple ball court was used over an extensive period of time. This enduring structure in the life history of Saturday Creek has yielded valuable information regarding ball courts and will continue to produce information regarding not only ball courts, but the social organization of minor centers.

Appendix
SC-3 Stratum Descriptions

Stratum: 101

Soil Texture: clay loam

Dry Color: SYR 3/1

Moist Color: 10YR 4/2

Inclusions: numerous tree roots; some surface limestone boulders

Description: This stratum is made up of grayish brown sandy clay (topsoil) and contains several large limestone boulders and cobbles located throughout the stratum, though it lacks any limestone flecks or pebbles.

Thickness: 9-164 cm

Artifact inclusions: ceramics, daub, bone, teeth, obsidian, hematite (?), groundstone, marine shell, quartz, chert flakes, tools, cores, and blades.

Location: Stratum 101 is located above levels 102, 103, 105, 108, 109, 113, 125

First identified in: 407E 232N

Also identified in: 409E 232N, 411E 232N, 413E 232N, 415E 232N, 387E 232N, 405E 232N, 385E 232N

Probable Dates: A.D. 800–900 (SLL)

A.D. 700–900 (SLA)

A.D. 1150–1500 (NTL)

5 out of 19 obsidian pieces notched.

Temple faunal remains include 7 large mammal, 1 large mammal tooth, and 1 small mammal bone.

Ball court and alley faunal remains include 5 long-bone large mammal bones, 2 burned long-bone large mammal, 31 large mammal bones, 1 large mamam with tooth puncture, 1 large mammal with gnaw marks, one large mammal with cut marks, 1 large mammal bone burned and polished, 2 small mammal, 4 fish bones, 25 turtle carapaces, and 61 unknown bones.

Temple (417E 232N)

Stratum: 108

Soil Texture: clay loam

Dry color: 10YR 3/2

Moist color: 10YR 3/2

Inclusions: 5% limestone flecks, few limestone cobbles, some tree roots

Description: The stratum is an orange-brown sandy clay with a few limestone flecks scattered throughout. It could be a surface.

Thickness: 19-128 (w/ wall 109) cm

Artifact inclusions: few ceramics, chert core, flakes, 1 un-notched obsidian flake

Location: Stratum 108 is below 101, abuts 109, and is above 113 and wall 147.

First identified in: 415E 232N

Ceramics: Phases represented: MH, FP, HE, HA, TRA

Probable dates: A.D. 600–700 (SLA)

Stratum: 109

Soil Texture: clay loam

Dry color: 10YR 3/2

Moist color: 10YR 3/2

Inclusions: 5% limestone flecks, limestone cobbles, tree roots

Description: The stratum is an orange-brown sandy clay. There is a burned soil area that covers approximately 20 cm of the stratum that is the result of a tree burning. There are also some limestone cobbles scattered throughout.

Thickness: 50-141 cm
Artifact inclusions: ceramics, chert flakes
Location: Stratum 109 is below 101, abuts 108, and is above 123.
First identified in: 415E 232N
Also identified in: Looter's trench
Ceramics: Phases represented: HA, SLE, SLA, SLL
Probable dates: A.D. 700–900 (SLA)

Stratum: 113

Soil Texture: cobble surface
Dry color: 10YR 4/4
Moist color: 10YR 3/4
Inclusions: limestone cobbles
Description: The stratum is a white limestone cobble surface within light brown sandy loam. The cobbles are evenly dispersed and do not overlap each other.
Thickness: 2-3 cm
Artifact inclusions: none
Location: Stratum 113 is below 101 and 108, and abuts wall 147.
First identified in: 413E 232N

Stratum: 147

Soil Texture: NA
Dry color: NA
Moist color: NA
Inclusions: limestone boulders
Description: corner of a three-course (probably more) boulder structure oriented north-south, east-west. It comes out of the south wall in the middle of the unit about 60 cm, then turns east for about 1 meter before it peters out.
Thickness: c. 40 cm
Artifact inclusions: NA; it was not excavated
First identified in: 415E 232N

Stratum: 123

Soil Texture: sandy loam
Dry color: 10YR 5/6
Moist color: 10YR 4/6
Inclusions: 75% limestone flecks
Description: The stratum is an orange/brown sandy loam with limestone flecks throughout it.
Thickness: 4-12 cm
Artifact inclusions: ceramics, chert flakes, core, two un-notched obsidian blades
Location: Stratum 123 is below 109, within 147, and is above 130.
First identified in: 415E 232N
Ceramics: Phases represented: BC, MH
Probable dates: 100 B.C.–A.D. 250 (MH)
Two rims were found on top of 123 (A.D. 400-600)

Stratum: 130

Soil Texture: clay loam
Dry color: 10 YR 5/6
Moist color: 10 YR 4/4
Inclusions: tree roots, few limestone pebbles, 10% limestone flecks

Description: The stratum is an orange sandy loam with a few limestone pebbles and some limestone and charcoal flecks.

Thickness: 7-52 cm

Artifact inclusions: ceramics, chert flakes, obsidian (1 of 2 notched), river-worn pebble, river-worn obsidian chunk/core

First identified in: Unit 415E 232N

Also identified in: Looter's Trench

Ceramics: Phases represented: MH, FP, HE

Probable dates: A.D. 250–400 (HE)

Stratum: 133

Soil Texture: clay loam

Dry color: 10 YR 6/3

Moist color: 10 YR 5/4

Inclusions: 90% limestone pebbles and flecks

Description: The stratum is an orange sandy loam with limestone pebbles and flecks throughout. It curves downward to the south portion of the slope (surface of mound). It is a possible decomposing limestone surface.

Thickness: 6-35 cm

Artifact inclusions: ceramics, chert flakes

Location: Stratum 133 is below 130 and above 138.

First identified in: 415E 232N

Also identified in: Looter's Trench

Ceramics: Phases represented: HE, TRA, TRL

Probable dates: A.D. 650–750 (TRL)

Stratum: 138

Soil Texture: sandy loam

Dry color: 10 YR 5/4

Moist color: 10YR 4/3

Inclusions: 75% limestone flecks throughout, some limestone pebbles

Description: The stratum is a sandy, light brown loam with limestone flecks throughout it. The soil is not very dense, and has some limestone pebbles dispersed throughout it.

Thickness: 42-57 cm

Artifact inclusions: ceramics, chert flakes and core, obsidian (2 of 4 notched), stone balls, ceramic cluster, quartz.

Location: The stratum is located below stratum 133 and above stratum 143.

First identified in: 415E 232N

Ceramics: Phases represented: HE, HA

Probable dates: A.D. 400–600 (HA)

Stratum: 143

Soil Texture: clay loam

Dry color: 10 YR 4/3

Moist color: 10 YR 3/4

Inclusions: 50% limestone flecks

Description: The stratum is a brown clay loam with limestone flecks throughout it.

Thickness: 16-37 cm

Artifact inclusions: ceramics, chert flakes, bone, 2 un-notched obsidian

Location: Stratum 143 is located below stratum 138.

First identified in: Looter's Trench

Stratum: 145

Soil Texture: clay loam

Dry color: 10 YR 4/3

Moist color: 10 YR 3/3

Inclusions: 60% limestone flecks, pebbles, boulders

Description: The stratum is a brown clay loam with limestone flecks throughout it. Some limestone pebbles and cobbles were removed.

Thickness: 21-37 cm

Artifact inclusions: ceramics, chert flakes, 2 un-notched obsidian, bone, freshwater shell.

Location: Stratum 145 is located below stratum 143 and above stratum 146.

First identified in: Looter's Trench

Probable date: A.D. 1-250

Stratum: 146

Soil Texture: clay loam

Dry color: 10 YR 4/3

Moist color: 10 YR 3/4

Inclusions: limestone boulders, 40% flecks.

Description: The stratum is a thick orange brown clay loam with 4 limestone boulders (single-course) on the surface oriented 20° west of north.

Thickness: 23-41 cm

Artifact inclusions: ceramics, chert flakes

Location: Stratum 146 is below 145.

First identified in: Looter's Trench

Probable date: 100 B.C.-A.D. 250

Several sherds were found on top of 146; 17 sherds dating to 100 B.C.-A.D. 200/250.

Platform (405E 232N)**Stratum: 102**

Soil Texture: clay

Dry color: 10YR 4/3

Moist color: 10YR 4/2

Inclusions: 40% limestone flecks throughout, several tree roots, limestone boulders and cobbles

Description: The stratum consists of thick, orange-brown clay that is flecked throughout with limestone. It also contains many small limestone pebbles, and comprises the topmost façade of the platform

Artifact inclusions: ceramics and chert flakes

Thickness: 16-27 cm

Location: Stratum 102 is below 101, above wall 107, and abuts 103.

First identified in: 407E 232N

Stratum: 103

Soil Texture: Clay

Dry color: 10YR 4/4

Moist color: 10YR 5/6

Inclusions: tree roots, limestone boulders and cobbles

Description: The stratum consists of very thick orange/yellowish brown clay with no limestone flecks.

Thickness: 7-23 cm

Artifact inclusions: few ceramics, chert flakes

Location: Stratum 103 is below 101, above 104, and abuts 102 and wall 107.

First identified in: 407E 232N

Also identified in: 405E 232N

Ceramics: Phase represented: SLA

Probable dates: A.D. 700–900

A ceramic cluster was found on the top of 103 in the northwest corner of the north wall with 4 rims, 1 pod, and 25 body sherds, dating to A.D. 700-900.

Stratum: 107

Soil Texture: limestone wall

Dry color: N/A

Moist color: N/A

Inclusions: limestone boulders, cobbles, pebbles, flecks

Description: The stratum is a wall made of limestone boulders and cobbles tightly packed with limestone-flecked soil. It comprises the temple façade.

Thickness: stone façade, not excavated.

Artifact inclusions: none

Location: Stratum 107 is below 102 and abuts 110, 103, and 104, and 106/114.

First identified in: 407E 232N

Also identified in: 407E 232N, 407E 232N, Unit 407E 232N

Stratum: 104

Soil Texture: Clay loam—fine texture

Dry color: 10YR 3/2

Moist color: 10YR 4/2

Inclusions: limestone cobbles, pebbles, 80% flecks

Description: The stratum is a brownish gray clay loam containing limestone pebbles and small cobbles.

Thickness: 23-68 cm

Artifact inclusions: ceramics, chert flakes and cores, marine shell, 1 notched obsidian, bone, shell

Location: Stratum 104 is below 103, above 106/114 and 110 and abuts wall 107.

First identified in: 407E 232N

Also identified in: 405E 232N

Ceramics: Phases represented: TRA, TRL, SLE, SLA, SLL, NTE, NTL, HA

Probable dates: A.D. 700–900 (SLA, SLL, NT)

Stratum: 106

Soil Texture: clay loam

Dry color: 10YR 5/4

Moist color: 10YR 5/6

Inclusions: clay loam throughout

Description: The fill is yellow-brown when moist. The clay is very sticky and plastic and thin (c. 3 cm).

It was excavated with 114.

Thickness: 3-16 cm

Artifact inclusions: none

Location: Stratum 106 is below 104, above 110, and abuts 107.

First identified in: 407E 232N

Also identified in: 407E 232N

Stratum: 114

Soil Texture: clay loam

Dry color: 10YR 5/4

Moist color: 10YR 5/6

Inclusions: mainly clay loam with a small amount of limestone cobbles and pebbles.

Description: This stratum is a yellow-brown clay loam that is very sticky and plastic when moist. It contains small limestone cobbles and a few pebbles and is also mottled with small patches of very dark brown to black clay. It was excavated with 106.

Thickness: 3-61 cm

Artifact inclusions: ceramics, chert flakes and core, and marine shell

Location: Stratum 114 is below 104, above 110, and abuts wall 107.

First identified in: 405E 232N

Stratum: 110

Soil Texture: clay loam

Dry color: 10YR 3/2

Moist color: 10YR 4/2

Inclusions: 75% limestone cobbles, pebbles

Description: The stratum is a gray-brown clay loam with limestone flecks and pebbles throughout, with a few cobbles. There are burned soil deposits throughout (e.g., between 110 and 118, and under 118/110). There is a circular burned area in the same spot as the ceramic cluster (described below), but about 40 cm lower, with a large bone and antler. It terminated at a burned area.

Thickness: 7-58 cm

Artifact inclusions: ceramics, chert flakes, blade, marine shell, bone, groundstone, and obsidian (1 of 10 blades notched).

Location: Stratum 110 is 106/114, abuts wall 107 and 118 (in western half of unit), and is above 118, 124, 126, and wall 121.

First identified in: 407E 232N

Also identified in: 405E 232N

Ceramics: Phases represented: HA, SLA, SLL

Probable dates: A.D. 800–900 (SLL)

A ceramic cluster was found on top of 110, an upside down plate c. 1.10 cm below datum consisting of 8 bases and 12 body sherds dating to c. A.D. 800-900. It was located at the foot of the temple façade (107).

Stratum: 118

Soil Texture: cobble surface

Dry color: N/A

Moist color: N/A

Inclusions: limestone cobbles

Description: The stratum is a cobble surface that extends 80 cm from the east wall due west at both corners of unit 405E 232N. Some of the cobbles from the north portion of the wall were removed to verify that the cobbles form a wall. Part of its surface is burned

Thickness: 11-17 cm

Artifact inclusions: none

Location: Stratum 118 is below and abuts 110, and is above 124.

First identified in: 405E 232N

Stratum: 124

Soil Texture: limestone boulders

Dry color: N/A

Moist color: N/A

Inclusions: granite and limestone boulders—medium and large in size

Description: This stratum is a single layer of medium and large rocks below stratums 118 and 110. There was a burned surface both above and below stratum 124.

Thickness: 3-18 cm

Artifact inclusions: none

Location: Stratum 124 is below 110 and 118 and is above 126.
First identified in: 405E 232N

Stratum: 126

Soil Texture: clay loam

Dry color: 10 YR 4/3

Moist color: 10 YR 4/4

Inclusions: 75% limestone pebbles and flecks, some cobbles

Description: The stratum is a medium brown clay loam with limestone pebbles and a few cobbles dispersed throughout it. It lies beneath a burned surface and is flanked by stratum 121 (rock fill) in the east.

Thickness: 42-64 cm

Artifact inclusions: ceramics, chert flakes, 1 un-notched obsidian.

Location: Stratum 126 is below 110 and 124, abuts 121, and is above 128.

First identified in: 405E 232N

Ceramics: Phases represented: TRA, SLE, SLL, TRL

Probable dates: A.D. 800–900 (SLL)

Stratum: 121

Soil Texture: dense cobbles

Dry color: N/A

Moist color: N/A

Inclusions: limestone cobbles, pebbles, flecks

Description: The stratum is densely packed limestone cobbles and pebbles that are decomposing into powder. It comprises a stepped façade, clearly part of the temple.

Artifact inclusions: none; it was not excavated

Location: Stratum 121 is below 110 and abuts 126, 128, and 132.

First identified in: 407E 232N

Also identified in: 405E 232N

Stratum: 128

Soil Texture: clay loam

Dry color: 10 YR 5/3

Moist color: 10 YR 4/3

Inclusions: limestone cobbles and 80% pebbles and flecks.

Description: The stratum is a yellowish medium brown clay loam that is somewhat silty, can coers the same area as 126. It contains limestone pebbles and cobbles and is a fairly loose fill material.

Thickness: 24-30 cm

Artifact inclusions: ceramics, chert flakes, bone, burned bone flake,

First identified in: 405E 232N

Location: Stratum 128 is below 126, abuts 121, and is above 131 and 132.

Ceramics: Phases represented: TRA, TRL, SLA, SLL

Probable dates: Stratum 128: A.D. 800–900 (SLL)

There were three ceramic clusters on top of 128, on top of a burned surface (at the base of façade 121):

1. 48 body sherds dating to A.D. 700–900 (SLA)
2. 45 body sherds dating to A.D. 650–750 (TRL)
3. 5 rims, 1 base, and 20 body sherds (charcoal on sherds)

Stratum: 131

Soil Texture: limestone cobbles

Dry color: 10 YR 6/4

Moist color: 10 YR 5/4

Inclusions: approximately 90% of the stratum is small and medium sized limestone cobbles; 10 % is soil

Description: The stratum is made up of small and medium cobbles mixed with a silty yellow brown clay loam. Some larger stones were also present in part of the stratum.

Thickness: 11-37 cm

Artifact inclusions: ceramics, chert flakes, human bone (hand and feet bones), metate fragment

Location: Stratum 131 is below 128, abuts 132, and is above 137.

First identified in: 405E 232N

Ceramics: Phases represented: MH, HA

Probable dates: A.D. 400–600 (HA)

Stratum: 137

Soil Texture: clay loam

Dry color: 10 YR 6/5

Moist color: 10 YR 6/4

Inclusions: 90% dense limestone boulders (in western part of unit, maybe part of façade 140) cobbles and pebbles; some flecks

Description: The stratum is an orange clay loam with a heavy distribution of limestone cobbles, pebbles, and flecks throughout it. Burned daub and fire-cracked rocks were also noted, as well as a burned area on top of 137 about 20 cm west of façade 140.

Thickness: 20-63 cm

Artifact inclusions: ceramics, chert flakes, metate fragment

Location: The stratum is below 131, abuts 132, and is above 132 and 142 (possible cist).

First identified in: 405E 232N

Ceramics: Phases represented: TRL, SLE, SLA

Probable dates: A.D. 700–900 (SLA)

Stratum: 132

Soil Texture: sandy loam

Dry color: 10 YR 4/4

Moist color: 10 YR 4/3

Inclusions: limestone cobbles and pebbles, 40% flecks

Description: The stratum is a medium to dark brown clay loam with limestone pebbles and small cobbles.

Thickness: 62-75 cm

Artifact inclusions: ceramics, chert flakes

Location: Stratum 132 is below 128 and 137, wall 121, 131, and 137, and is above 139 and wall 140.

First identified in: 405E 232N

Ceramics: Phases represented: HE

Probable dates: A.D. 250–400

Stratum: 139

Soil Texture: clay loam

Dry color: 10 YR 6/3

Moist color: 10 YR 6/4

Inclusions: 60% clay loam with 40% limestone cobbles and pebbles

Description: The stratum is a brown clay loam fill with abundant limestone pebbles and some cobbles.

There is a thin plaster surface west of façade wall (140).

Thickness: 16-31 cm

Artifact inclusions: ceramics, chert flakes (very few)

Location: Stratum 139 is below 132, abuts façade 140, and is above 141.

First identified in: 405E 232N

Ceramics: Phases represented: HA, TRA, TRL, SLA
Probable dates: A.D. 700–900 (SLA)

Stratum: 140

Soil Texture: N/A

Dry color: N/A

Moist color: N/A

Inclusions: stacked rocks with no visible mortar. Rocks vary in size from 10 to 20 cm in length and width.

Description: Stratum 140 is the lowest temple façade that we were able to expose; it extends across the 1 meter-wide unit about 80 cm from the west wall.

Artifact inclusions: none; it was not removed.

Location: Stratum 140 is below 132, abuts 139 and 141.

First identified in: 405E 232N

Stratum: 142

Soil Texture: cobbles/marl fill

Dry color: 10 YR 7/2

Moist color: 10 YR 8/2

Inclusions: large limestone boulders, mortar, cobbles, and marl

Description: The stratum is in the west wall of 405E 232N and extends into 403E 232N. It is made up of large boulders that appear to form a wall for a possible cist. Behind the boulders is some cobble and very light colored powdery material that resembles mortar. The boulders also have mortar between them.

Artifact inclusions: carbon sample; it was not excavated.

Location: Stratum 142 is below 137 and appears to be within (above and abutting) 141.

First identified in: 405E 232N

Stratum: 141

Soil Texture: clay loam

Dry color: 10 YR 5/4

Moist color: 10 YR 5/3

Inclusions: limestone pebbles and cobbles, and 45% flecks

Description: The stratum is a medium brown clay loam with a heavy mix of limestone pebbles and some small cobbles.

Thickness: 22-31 cm

Artifact inclusions: ceramics and chert flakes

Location: Stratum 141 is below 139 (and 142), abuts 142 and 140, and is above 144.

First identified in: 405E 232N

Probable date: A.D. 600-700

Stratum: 144

Soil Texture: clay loam

Dry color: 10 YR 6/4

Moist color: 10 YR 4/4

Inclusions: 90% limestone cobble with 10% soil mixed with limestone pebbles

Description: The stratum is a brown clay loam with limestone pebbles. The entire surface extends approximately 77 cm from the west wall of 405E 232N and is made up of tightly packed limestone cobbles.

Artifact inclusions: N/A; it was not excavated

Location: Stratum 144 is located below stratum 141 and next to stratum 140.

First identified in: 405E 232N

Ball Court (385/387E 232 N) and Alley (382E 232N)

Stratum: 105

Soil Texture: Sandy loam

Dry color: 10YR3/3

Moist color: 10YR 3/6

Inclusions: limestone flecks, 95% cobbles and pebbles and boulders (compact fill)

Description: The stratum consists of a sandy limestone fill that is firmly packed and medium brown in color. It is heavily speckled with limestone flecks and has numerous limestone pebbles and cobbles packed throughout it.

Thickness: 5-36 cm

Artifact inclusions: chert chunks, flakes, quartz, and ceramics

Location: Stratum 105 is below 101, above 111, and may be the same as 125.

First identified in: 387E 232N

Also identified in: 385E 232N

Ceramics: Phases represented: TRA

Probable dates: A.D. 600–700 (TRA)

Stratum: 125

Soil Texture: clay loam

Dry color: 7.5YR 3/1

Moist color: 10YR 3/2

Inclusions: 95% limestone pebbles, some cobbles, lots of tree roots

Description: This fill stratum is a moist clay loam that is dark olive brown in color. It has a lot of tree roots running throughout it and contains a lot of limestone pebbles and a few cobbles. The ceramics in this stratum were very moist and porous and very fragile and decomposed.

Thickness: 3-30 cm

Artifact inclusions: daub, ceramics, chert flakes, bone

Location: Stratum 125 is below 101, above 127, and may be the same as stratum 105.

First identified in: 382E 232N

Ceramics: Phases represented: Top 125: TRA, TRL, SLE 125: TRL, SLA

Probable dates: Top 125: A.D. 700-800 (SLE) 125: A.D. 700-900 (SLA)

Several sherds were found on top of 125 (A.D. 700-900)

Stratum: 111

Soil Texture: sandy loam

Dry color: 10YR 5/6

Moist color: 10YR 3/4

Inclusions: 75% limestone flecks throughout, pebbles and a few cobbles in some places, tree roots throughout, and 5+ boulders; the last 5 cm has plaster chunks

Description: This stratum is a light brown moist sandy loam. The entire stratum is flecked with limestone and there are a few pockets of limestone pebbles and cobbles—a type of thin fill.

Thickness: 7-46 cm

Artifact inclusions: few ceramics, chert flakes and core

Location: Stratum 111 is below 105 and above floor 112, 115, and 116. It might be the same as 127.

First identified in: 387E 232N

Also identified in: 385E 232N

Ceramics: Phases represented: TRL, TRA, SLA

Probable dates: A.D. 700–900 (SLA)

Stratum: 127

Soil Texture: sandy loam
Dry color: 7.5YR 4/2
Moist color: 10YR 3/4
Inclusions: 75% limestone flecks, pebbles, some cobbles
Description: This stratum is a moist sandy loam flecked throughout with limestone. It contains limestone pebbles, a few cobbles, and a lot of tree roots. It might comprise a limestone surface, as evidenced in the southwest corner.
Thickness: 30-58 cm
Artifact inclusions: ceramics, chert flakes, core, blade, white mica.
Location: Stratum 127 is below 125, above 119, and may be the same as 111.
First identified in: 382E 232N
Ceramics: Phases represented: TRA, SLL
Probable dates: A.D. 800–900 (SLL)

Stratum: 115

Soil Texture: sandy loam
Dry color: 10YR 6/3
Moist color: 10YR 5/4
Inclusions: 75% limestone flecks, cobbles and pebbles densely packed throughout, chunks of plaster (pebble sized) in some places
Description: This stratum is a medium brown sandy loam fill that is flecked with limestone and has limestone cobbles packed throughout it.
Thickness: 2-45 cm
Artifact inclusions: few ceramics
Location: Stratum 115 is below 111, above and abuts floor 117, and is above 119..
First identified in: 385E 232N
Ceramics: Phases represented: SLA
Probable dates: A.D. 700–900 (SLA)

Stratum: 112

Soil Texture: plaster floor
Dry color: 10YR 8/2
Moist color: 10YR 8/4
Inclusions: limestone boulders, cobbles
Description: The stratum is a hard white plaster floor. The surface is smooth and approximately 3 cm thick.
Artifact inclusions: none; it was not excavated
Location: Stratum 112 is located below stratum 111.
First identified in: 387E 232N
Also identified in: 385E 232N

Stratum: 117

Soil Texture: plaster and cobble surface
Dry color: 10YR 8/1
Moist color: 2.5Y 5/4
Inclusions: plaster floor with some limestone cobbles
Description: The stratum is a flat plaster floor that is partially decayed or destroyed. The plaster is mixed and partially covering limestone cobbles.
Artifact inclusions: none; it was not excavated
Location: Stratum 117 is below 115, above 120, and abuts 115 and wall 116.
First identified in: 385E 232N

Stratum: 116

Soil Texture: cobbles and thin plaster

Dry color: 10YR 8/2

Moist color: 2.5Y 8/3

Inclusions: limestone cobbles packed with plaster, some limestone boulders

Description: The stratum is a sloping plaster and limestone cobble surface—the alley step. It is possibly the remains of a plaster floor and step. The stratum ends in a limestone boulder faced step.

Artifact inclusions: none; it was not excavated

Location: Stratum 116 is below 111 and abuts floor 117 and 120.

First identified in: 385E 232N

Stratum: 120

Soil Texture: sandy loam

Dry color: 10YR 6/4

Moist color: 10YR 5/4

Inclusions: 90% limestone cobbles, pebbles, and flecks

Description: The stratum is a densely packed limestone cobble and pebble fill. The soil is a moist medium brown sandy loam with limestone flecks.

Thickness: 12-36 cm

Artifact inclusions: ceramics, chert flakes, obsidian core

Location: Stratum 120 is below floor 117, above 119 and 12.

First identified in: 385E 232N

Ceramics: Phases represented: TRA

Probable dates: A.D. 600–700 (TRA)

Stratum: 119

Soil Texture: boulders

Dry color: 10YR 7/4

Moist color: 10YR 4/4

Inclusions: limestone boulders, cobbles, and pebbles

Description: The stratum consists of a moist medium brown sandy fill that is flecked with limestone and packed densely with limestone boulders, cobbles, and pebbles. There is a burned area in the center of the unit (i.e., center of the alley), which likely was dug into 119; it is c. 80 cm wide (east-west) going into the north and south walls, and was about 60-70 cm thick. We opened a test unit north of 385E 232N to follow out the burned deposit, and it did not extend much further; clearly the burning event was concentrated in the center of the alley.

Thickness: 19-34 cm

Artifact inclusions: chert flakes

Location: Stratum 119 is below 115, 120, and 127, abuts 122, and is above 129.

First identified in: 382E 232N

Stratum: 122

Soil Texture: sandy loam

Dry color: 10YR 6/3

Moist color: 10YR 5/6

Inclusions: small chunks of plaster, a few limestone cobbles, and 65% limestone pebbles and flecks.

Description: This stratum is a light brown, moist sandy loam. It has tightly packed limestone pebbles throughout it and a fair amount of decomposing chunks of plaster.

Thickness: 3-9 cm

Artifact inclusions: few ceramics

Location: Stratum 122 is below 120, and abuts 119, and is above 129 (?).
First identified in: 385E 232N
Probable date: A.D. 650-750 (TRL)

Stratum: 129

Soil Texture: sandy loam
Dry color: 10YR 5/4
Moist color: 10YR 4/6
Inclusions: 40% limestone flecks, a few pebbles, a few small chunks of white plaster
Description: The fill stratum is a medium brown sandy loam that is very moist and lightly flecked throughout with limestone. It contains a few limestone pebbles and a few small chunks of white plaster.
Thickness: 38-57 cm
Artifact inclusions: ceramics, chert flakes and core, obsidian (1 of 2 notched), burned bone, one piece of jade (mosaic)
Location: Stratum 129 is below 119 and 122 (?), and above floors 134 and 135.
First identified in: 382E 232N
Ceramics: Phases represented: BC, MH, FP
Probable dates: A.D. 1-250 (FP)

Stratum: 134

Soil Texture: plaster floor
Dry color: 10 YR 7/2
Moist color: 10 YR 7/2
Inclusions: a few small chunks of charcoal
Description: A thick (4 to 6 cm) plaster floor with an uneven edge.
Thickness: 7-11 cm
Artifact inclusions: none;
Location: The stratum 134 is below 129 and above floor 135 and 136.
First identified in: 382E 232N

Stratum: 135

Soil Texture: plaster floor
Dry color: 10 YR 7/2
Moist color: 10 YR 7/2
Inclusions: some small flecks of charcoal
Description: The stratum is a thin, discontinuous, decomposed white plaster floor.
Thickness: 2-5 cm
Artifact inclusions: few ceramics
Location: The stratum is below 129 and floor 134, and is above 136.
First identified in: 382E 232N
Ceramics: Phases represented: BC
Probable dates: 300-100 B.C.

Stratum: 136

Soil Texture: clay loam
Dry color: 10 YR 5/6
Moist color: 10 YR 5/6
Inclusions: none
Description: The stratum is a light brown and red clay loam. It has no flecks, pebbles, or other inclusions and is fairly sticky and plastic in texture. It is the termination level of unit 382E 232N and is the first layer of sterile soil.

Thickness: 26-32 cm

Artifact inclusions: one ceramic, one piece of bone, essentially sterile (artifacts found in first cm of level). A post hole test was excavated c. 1.58 m deep to make sure it was sterile; there was a brown sandy loam underneath, as well, which would indicate that 136 is likely the first construction level.

Location: Stratum 136 is below floors 134 and 135.

First identified in: 382E 232N

Ceramics: Phases represented: UK

Probable dates: UK

Chapter 7

A Summary and Preliminary Analysis of Saturday Creek Burials

Gabriela Sanchez and Nick Chamberlain

A total of twelve burials were excavated from two small ancient Maya house mounds (SC-85, SCin the course of the VOPA 2001 season at Saturday Creek (Table 7.1). Although it was a relatively small sample, there was a surprising amount of diversity in regard to age, sex, and status among the skeletal remains (as indicated by degree to which burial goods were present). The following is a summary of data collected for each burial, as well an inventory and preliminary analysis for each skeleton. Because this analysis took place in the field, time was limited and a more in-depth analysis was not possible. The amount and quality of the data in the analyses provided are directly proportionate to both the nature of the skeletal material (much of which is heavily eroded). More expert and in-depth analysis is warranted for this collection. The skeletal remains are in the process of being analyzed by Jennifer Piehl, a Maya archaeologist with extensive osteological training, who provided advice and guidance to the authors, for which we are grateful. The burials are numbered according to the order in which they were discovered.

SC-85 Burials

Burial #1: Stratum 104

Burial #1 (BU 1) was the first burial uncovered at Saturday Creek, and was found between 64 and 79 cm below site datum (100.3 m asl) at the south end of the mound. The feet, tibiae, and fibulae of the skeleton were the first bones to be uncovered in 229E 218N. Subsequent excavation of 229E 216N exposed the remainder of the skeleton. The skeleton was exposed with the use of dental tools and wooden utensils (bamboo) so as to avoid scratching or damaging the bones. In order to prevent fragmenting of the bones during removal, polyveage acetate (PVA) was applied to the skeleton. The chemical was successful in bonding bone fragments together so that individual bones could be removed intact. Use of PVA was later discontinued because of potential problems it may cause during chemical analysis of skeletal material.

BU 1 was extended and prone, with the head turned to face east (Figure 7.1). The arms were placed to the sides, and the hands were placed underneath the innominates with the palms up. No burial goods were recovered. However, ceramics were present in the matrix of the burial, and analyses of these ceramics suggest that BU 1 dates to the Late Classic period, about A.D. 700-900. The skeleton itself was in relatively good shape and was the most complete burial found at Saturday Creek.

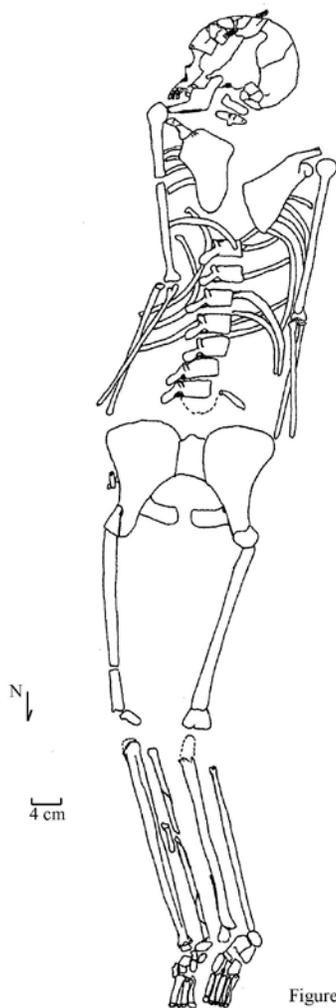


Figure 7.1 SC-85 burial 1 (104)

Analysis of BU 1

After the skeletal material was mapped, removed and bagged, it was transported to the VOPA field laboratory, where the bones were examined. Each of the bones, the long bones in particular, was examined for any signs of infection. No signs of infection were evident on the long bones, but the parietal and frontal bones of the cranium showed evidence of porotic hyperstosis, a pattern of small pin sized holes on the cranial vault that “is thought by many to represent an anemic response” and can be “the result of nutritional deficiencies, infectious disease, and/or parasitism” (Haas et al. 1994:120). Enamel hypoplasias were also evident on the upper left canine, an upper left premolar, and a right central incisor. These appear as horizontal rings around the teeth where interruption of the development of the enamel has taken place. Haas et al. (1994:56) state that “form and frequencies of developmental disturbances such as enamel hypoplasias . . . reflect health status and diet quality.” The presence of enamel hypoplasias is generally a result of changes in diet during the process of weening. Beyond the presence of porotic hyperstosis and enamel hypoplasia, no other pathologies were noted in the analysis.

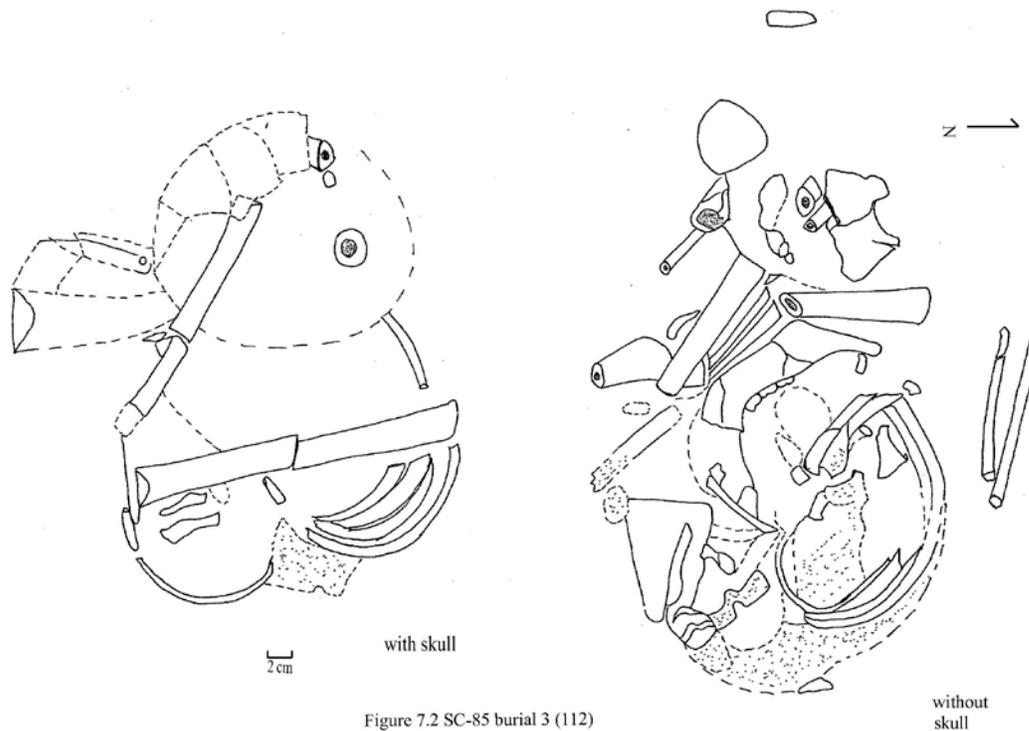
Because of the fragmented and eroded nature of the innominates, sexing techniques could only be carried out on the skull, which was crushed but intact enough to provide a good indication of the individual’s sex, which was most likely female. The skull has a slight projection of the nuchal crest and a little protrusion of the supra-orbital ridges. The supra-orbital margins of the skull are relatively sharp, the

mastoid process is small, and there appears to be little projection of the mental eminence. All of these factors suggest that the individual was female.

In the attempt to establish an age of death for this individual, again the innominates offered no conclusive help. Aging techniques using the sternal ends of ribs (two of which were retrieved with the skeleton) suggest that the individual was a young adult, probably no older than mid-30s (Burns 1999:57). The absence of any sign of osteoarthritis on the vertebrae or anywhere else on the skeleton also indicates an age no more than 35 years. It must be noted, however, that arthritic lipping of the vertebrae generally begins in the lower lumbar, and the bulk of the lumbar vertebrae were missing. The eruption of the third upper left molar (the wisdom tooth) provides a clear indication that this individual was older than 21, and most likely at least a few years older, considering that there is a degree of wear on this tooth. All of the evidence above supports an age range for this individual from mid-20s to mid-30s.

Burial #3: Stratum 112

Burial #3 (BU 3) was discovered approximately 38 (skull) to 65 cm (feet) below datum near the center of the mound in 227E 220N. The skeleton was excavated with the use of dental tools and wooden utensils. BU 3 was that of a sub-adult. The burial was disturbed by intruders before excavation was complete (at the same time that BU 2 at SC-18 was disturbed). Damage was minimal, but disturbance of the skull resulted in the breaking of the shaft of the femur which had been embedded in the skull. Because the skull was disturbed, it was boxed and taken to the lab. For this reason, it does not appear on Figure 7.2.



The skeleton appeared to be situated in a fetal position, sitting up with the knees tucked under the chin, and was facing to the west, or a bundle burial. The position in which the skeleton was placed resulted in the different bones of the skeleton being collapsed on top of one another, making the identification of some bones difficult. BU 3 did not include any burial goods, but enough ceramics were available in the matrix (stratum 112) to date the skeletal material to the Late Classic Period, approximately A.D. 600-700. After excavation and mapping of the skeleton, BU 3 was transported to the lab where it was cleaned, bagged, and analyzed.

Analysis of BU 3

The age of the individual at death was assessed using the Ubelaker chart of dental development found in *Human Osteology: A Laboratory and Field Manual* (Bass 1995:303). On the maxilla, four permanent incisors, two first premolars, and two first permanent molars were fully erupted. The two canines of the maxilla were almost fully erupted, and the two second premolars had not yet erupted (both second deciduous molars were still present). On the mandible, all four permanent incisors, two first premolars, and the two first permanent molars were fully erupted. The two canines were almost fully erupted. The two second deciduous molars were still present; the two second premolars had not yet erupted. All four second permanent molars were still forming roots and were not yet erupted to any degree. This stage of dental development indicates an approximate age range of about 10 to 12 years at death. Pathologies noted on the teeth included a cavity on the first right permanent molar of the maxilla and calculus on the four permanent incisors of the mandible. Further examination of the BU 3 cranial and postcranial skeletal material revealed no indications of pathologies. Because this skeleton was that of a young child, no sex could be established.

Burial #4: Stratum 113

Burial #4 (BU 4) was uncovered at approximately 63 cm below datum in 227E 217N. The skeleton was situated about 5 cm directly west of BU 1 at approximately the same elevation, and might have been buried at the same time. BU 4 was a small child. The entire left foot, leg, and innominate were missing, as well as the right foot and lower right leg (Figure 7.3). While erosion of bones takes place in all of the burials excavated at Saturday Creek, often to the degree that they disappear almost completely, the shafts of long bones tend to be the most resistant to erosion. The fact that there is no evidence of either tibia or the right femur among remains suggests that the long bones were purposefully removed.

The child was extended in a prone position with the lower portion of its body to the north and its head to the south, face down. The skeleton was uncovered with the use of dental tools and wooden utensils. After being fully uncovered, the skeleton was mapped and transported to the lab for analysis. No burial goods were present. The analysis of ceramics in the matrix suggests a date for this burial at c. A.D. 800-900.

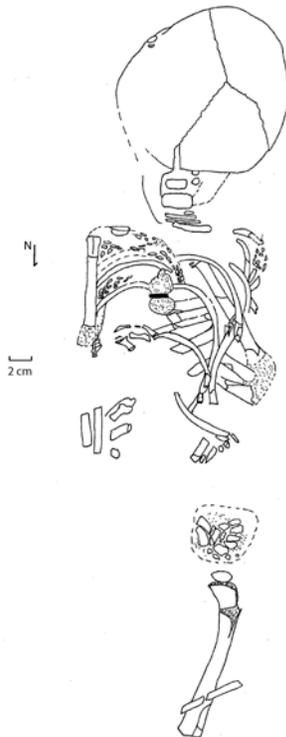


Figure 7.3 SC-85 burial 4 (113)

Analysis of BU 4

The age of the individual at death was assessed using the Ubelaker chart of dental development (Bass 1995:303). All deciduous dentition was present in both the mandible and maxillae, except for the left central deciduous incisor. The degree of development of the unerupted permanent teeth inside the mandible and maxillae indicate an estimated age of death at about 4 to 6 years.

Examination of dentition showed signs of enamel hypoplasia on the developing permanent teeth, including the two permanent central incisors, the right lateral permanent incisor, the right canine and the right first molar of the mandible. The left lateral deciduous incisor of the mandible also displays signs of hypocalcification (white spots on the tooth as a result of a lack of calcium in the diet). On the maxillae, the unerupted left and right first permanent molars, both permanent canines, both permanent lateral incisors, and both permanent central incisors also show signs of enamel hypoplasia. Examination of the postcranial skeleton revealed no further obvious pathologies.

Burial #6: Stratum 118

Burial #6 (BU 6) was located at 84 to 91 cm below datum on the south end of the mound in 230E 217N. The lower legs and feet were the first exposed. The skeleton was extended and prone, with feet oriented north and the head to the south, and the palms of the hands facing up (Figure 7.4). The skull was crushed to the degree that it was not certain whether the head was facing to the east or face down.

BU 6 was the first skeleton discovered at SC-85 to possess any grave goods. A brittle ceramic plate was inverted over the upper vertebrae of the individual. The plate had been reduced almost to the consistency of sand and might have been made solely for depositing as a burial offering. It has little temper, and did not appear to have been fired at a high enough temperature to harden it. Ceramic dates place the period of the burial in the Early Classic phase, about A.D. 400-600.

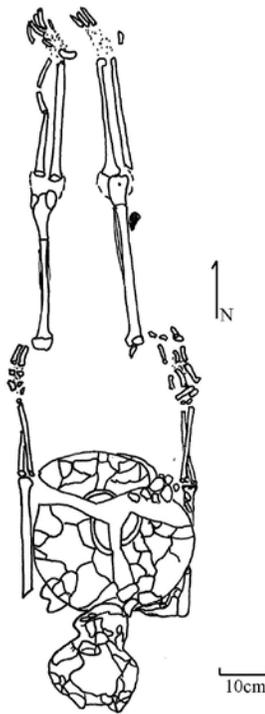


Figure 7.4 SC-85 burial 6 (118)

Analysis of BU 6

Analysis of the BU 6 skeletal material reveals dark discolorations of unknown origin on the cranial vault and on the shaft of the left radius, as well as a rough, grainy patch of bone on the cortex of the right femur the cause of which is also presently unknown. Evidence of a possible periosteal reaction exists on the distal ends of the shafts of both ulnae. One sesamoid bone is among the bones of the right foot. Examination of dentition of BU 6 shows dental caries on one lower canine and on the lower premolars, as well as calculus on the incisors.

Because no innominates were available for sexing, the skull sexing methods outlined in Haas et al. (1994:20) were used to establish sex for BU 6. The relative largeness of the mastoid process, the blunt supra-orbital margins, and pronounced supra-orbital ridges suggest that the BU 6 skeleton is likely that of a male individual. The individual was an adult, but no reliable age range could be established.

Burial #8: Stratum 120

Burial #8 (BU 8) was found between 115 and 128 cm below datum in 229E 216N on the southern end of the mound. This was an extended, supine burial with the feet of the skeleton approximately to the north and the head approximately to the south (Figure 7.5). Whereas all other extended burials were aligned magnetic north, BU 8 was oriented about 20° off magnetic north. The skull of BU 8 was facing east.

BU 8 had the most grave goods at SC-85, including one ceramic dish directly east of the skull, a jar over top of the right portion of the thorax and right humerus, two heavily eroded untempered vessels, a mano, and a shell. Also associated with the burial was what appeared to be a piece of polished bone near the mandible, and a portion of an obsidian blade near the sacrum, which may have simply been included in the fill. Ceramic dates of the dish and the jar suggest the period of burial to be Late Classic, approximately c. A.D. 700-900.

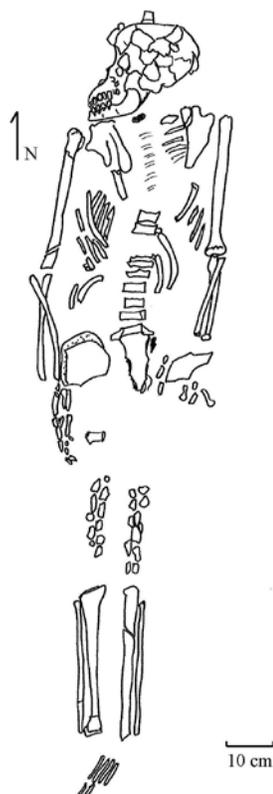


Figure 7.5 SC-85 burial 8 (120)

Analysis of BU 8

Examination of dentition shows calculus on the upper left 1st and 2nd premolars, and on the upper left second molar. Hypocalcification is evident on one of the lower left premolars. In regard to the post-cranial skeleton, the beginning of osteoarthritis is apparent on the fifth lumbar vertebra. Such arthritic lipping of the vertebra is generally accepted to begin around the age of 35 years, which may or may not hold true for Maya populations, but provides some general estimate of age. No other indicators of age were present for BU 8. Diagnostic traits on the the skull strongly indicate that the BU 8 skeleton was a male. Signs of heavy muscle development on the long bones and overall robusticity of the skeleton further indicate a male.

Burial #9: Stratum 122

Burial #9 (BU 9) is 85 cm below datum in 227E 216N at the south end of the mound. This burial was discovered in the process of digging down to uncover BU 8, over top of which BU 9 partially extended. Much of the upper portion of BU 9 was missing, including the entire left arm and innominate, the upper right arm, most of the ribs, the scapulae, and the skull (Figure 7.6). The skeleton was extended and supine, but was curiously not laid along the usual north/south axis. Instead, it was arranged about 20° off of the east-west axis, with the feet oriented more or less in an easterly direction and the upper portion of the body oriented toward the west. No grave goods were associated with the skeleton, but ceramics included in the matrix suggest a date of c. A.D. 700-900.

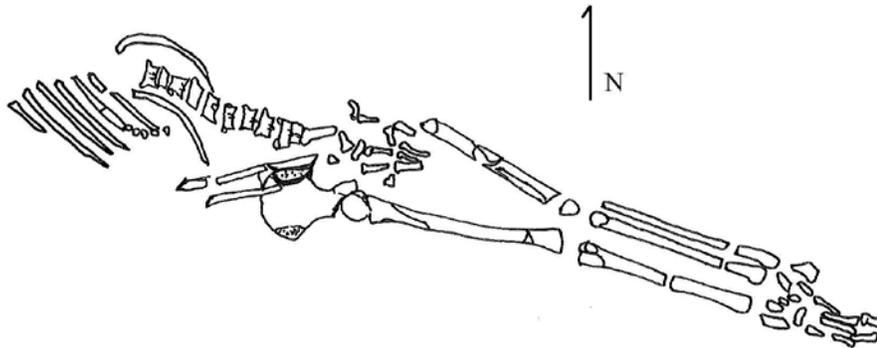


Figure 7.6 SC-85 burial 9 (122)

Analysis of BU 9

Examination of BU 9 revealed what appeared to be a broken right rib that was in the process of fusing, but had not yet fused. Some porosity was also noted on the ilium of the right innominate. No skull was available for sexing but, surprisingly, a portion of the right innominate of BU 9 was in good enough condition to provide both an age and sex estimation. The wide sciatic notch and irregular auricular surface of the right innominate suggests that the BU 9 skeleton was likely female. Further, aging of the auricular surface of the innominate as discussed and illustrated in Haas et al. (1994:25-32), reveal it to be most likely in the phase 2 or phase 3 stage of development, indicating an approximate age of 25 to 34 years at death.

SC-18 Burials

Burial #2: Stratum 116

Burial #2 (BU 2) was discovered between 62 and 70 cm below datum near the middle of the mound in 221E 496N. The associated ceramic burial goods were first exposed (113), followed by subsequent discovery of leg bones extending from beneath a large inverted ceramic dish (approximately 60 cm in diameter) (Figure 7.7). Further excavation revealed the upper body of the skeleton beneath the ceramic dish. The skeleton was sitting upright with legs crossed, facing south (Figure 7.8). Likely due to the skeleton's close proximity to the surface, and the fact that SC-18 is located in a plow zone, the upper body of the skeleton located beneath the dish had undergone a large degree of crushing. Therefore, although BU 2 was a relatively complete skeleton, it was more fragmented than any of the other skeletons unearthed at Saturday Creek. BU 2 was also one of the wealthiest burials excavated; in addition to the large dish placed over the head, burial goods included an inverted olla placed over the right knee, a hammer stone near the olla, an inverted plate over the left knee, and five shell beads near the right ankle. Analysis of the three burial vessels indicate a date of approximately A.D. 800-900 (though the stratum into which the burial was placed dates to 300-100 B.C.).

Figure 7.7 SC-18 burial offering (113) for burial 2 (116)

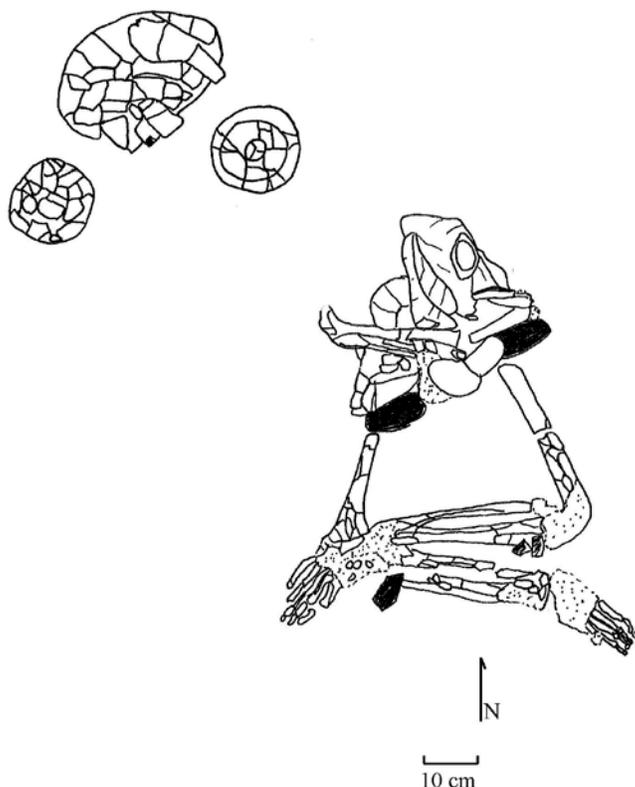


Figure 7.8 SC-18 burial 2 (116)

In the course of excavation, PVA was applied to the leg bones and a portion of the skull. This was the only other skeleton on which PVA was applied. As stated, the use of PVA was discontinued and the substance was not applied to burials 3-12. After BU 2 was mapped and photographed, the leg bones were collected and the upper portion of the skeleton was removed with its matrix and transported to the lab, where the remaining remains were extracted. Before BU 2 was removed, the skeleton was disturbed by unknown intruders. Whatever the purpose of the disturbance was (quite possibly an attempt at looting), damage to the skeleton was minimal, amounting to the removal of a portion of the ceramic dish over the head, and minor damage to the skull. Digital photos were used to re-position moved objects, and nothing was found to be missing.

Analysis of BU 2

There is evidence for periosteal reactions on the shafts of both fibulae. These reactions appear as elevated mound-shaped areas on the bone where the cortex of the bone has been affected by some non-specific infection. No other evidence of periosteal reactions was noted on any of the other BU 2 skeletal material. Both feet of BU 2 possessed sesamoid bones between the metatarsals and proximal phalanges, perhaps suggesting long term occupational stress. The presence of calculus, or calcified plaque, on the incisors was the only pathology noted on the teeth.

Because of the heavily fragmented condition of this skeleton, the sex of the skeleton could not be determined. The innominates and the skull were not present to a degree that would allow such analysis.

Likewise, indicators of age were also elusive. Fragments of the skull in which sutures (possibly the lambdoid suture) were visible revealed significant closure as illustrated in Haas et al. (1994:35). While this information does not allow for an age range to be established, it does suggest that the individual survived well into adulthood. The significant degree of wear on the teeth also is indicative of adulthood.

Burial #5: Stratum 126

Burial #5 (BU 5) was approximately 85 cm below datum on the north end of the mound in 221E 498N. This burial was extended, supine, and oriented with feet to the north and head to the south, facing west. The hands were placed on top of the innominates, right palm up and left palm down (Figure 7.9). Although all long bones of the arms and legs were present, the skeletal material had eroded to the degree that the thorax, pelvic girdle, vertebral column were only indicated by a dark soil stain.

Burial goods associated with BU 5 included a metate placed over the right knee, and a mano placed directly to the east of it. An antler was also discovered approximately 20 cm below where the pelvis would have been. No ceramic burial goods were present, but ceramics in the associated matrix suggest that this burial dated to the Early Classic period, about A.D. 400-600.

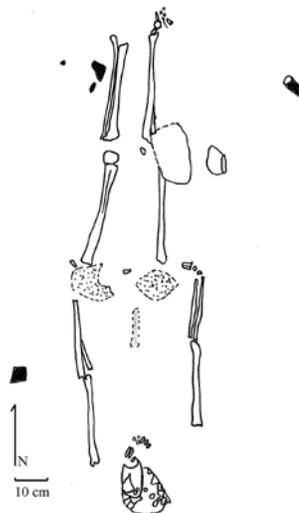


Figure 7.9 SC-18 burial 5 (126)

Analysis of BU 5

The bones of the right foot of BU 5 include one sesamoid bone. Dental caries are present on all teeth, which are very worn. Enamel hypoplasia appears on one of the upper molars (unsided). The upper central incisors of BU 5 are filed, the only filed teeth found at Saturday Creek. These modified teeth closely resemble modification II, 4 as illustrated in Haas et al. (1994:59). The absence of the innominates and the very fragmented nature of the skull did not allow for any estimation of the sex of this individual. Likewise, there was very little to indicate age of this skeleton, save the very decayed and worn nature of the teeth, which is suggestive of later adult years, but insufficient to produce any reliable age range.

Burial #7: Stratum 138

Burial #7 (BU 7) was at an elevation of between 154 and 159 cm below datum in 221E 494N at the south end of the mound. Excavation of the skeleton beginning with the feet eventually revealed that the entire upper body above the pelvis was missing (Figure 7.10). Only the pelvic girdle, the leg bones, the feet, and the hands on each side of the innominate bones remained. Of the upper body, only one skull fragment,

a possible scapula fragment, and a 3rd molar remained. Deeper excavation revealed a second burial, BU 11 (141), below where the upper body should have been, suggesting that BU 7 was disturbed in the process of burying BU 11. The secondary or re-deposited arm bones of BU 7 were eventually found stacked in a pile about 10 cm to the south of the pelvis, and about 33 cm below BU 7. No skull or other portions of the upper body of BU 7 were recovered.

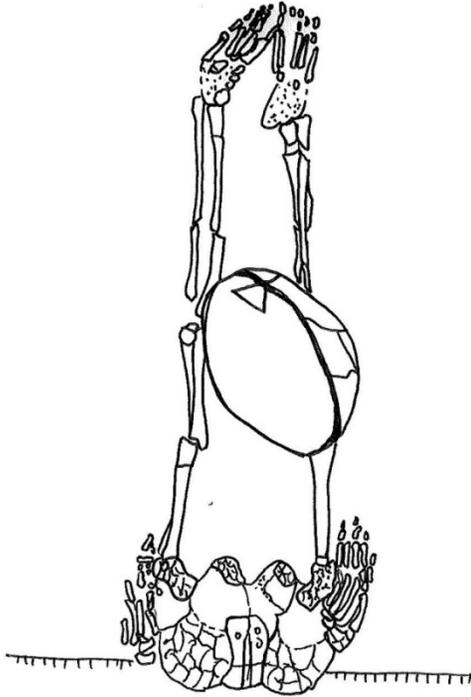


Figure 7.10 SC-18 burial 7(138)

What remained of BU 7 suggested that the skeleton was originally extended and prone with the feet pointing north and the head to the south. Grave goods consisted of one ceramic bowl placed between the knees of the skeleton, and one small ceramic olla 35 cm to the west of the right knee which may or may not have been associated with the burial. The ceramic bowl was dated to about c. A.D. 700-800.

Analysis of BU 7

Analysis of the BU 7 skeletal material revealed a sesamoid bone from the left foot and an apparent deformed metacarpal of the left hand which may indicate that the bone had been broken and subsequently healed. The innominates were fragmented to such a degree as to make reliable sex estimation difficult. The only indicator of age available for this skeleton was the one slightly worn upper 3rd molar, which places the age of death over 21 years.

Unexcavated Burials:
Burials #10: SC-85 Stratum 123, #11: SC-18 Stratum 141, and #12: SC-18 Stratum 140

The final three burials uncovered during the 2001 VOPA season at Saturday Creek were not removed due to time constraints. Because the burials remain unexcavated, no analyses or inventory information are available.

BU 10 was at an approximate elevation of 131 cm (top of skull) in 229E 216N at SC-85. It was about 25 cm east of the right tibia of BU 8 (126). Only the upper portion of the skull and humeri were exposed. It appeared to be an adult skeleton placed in a sitting position with a large ceramic plate over the head, probably facing south (Figure 7.11). The dish above the head was the only grave good uncovered associated with the burial and dated to the Postclassic period, c. A.D. 900-1150. This date suggests that BU 10 is the most recent burial at SC-85, and would have been difficult to place without disturbing BU 1 (104).

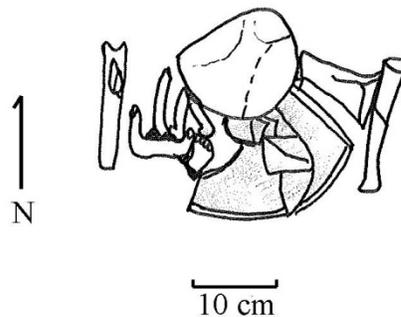


Figure 7.11 SC-85 burial 10 (123), unexcavated

This problem is also encountered with BU 11 (141). BU 11 was an adult skeleton uncovered at between 179 (top of skull) and 207 cm (legs and feet) below datum in 221E 494N at SC-18. This was another sitting burial – legs crossed, facing south, with the arms crossed over the chest (Figure 7.12). A large ceramic dish had been placed over the head. This dish was dated to c. A.D. 600-700. BU 11 was situated beneath where the upper torso of BU 7 (138) once had been before it was disturbed in the process of burying BU 11, indicating that BU 11 was a more recent burial than BU 7. However, ceramic analysis for BU 7 suggests a date of c. A.D. 700-800 for that burial, or that the dish was placed after BU 11 rather than over BU 7.

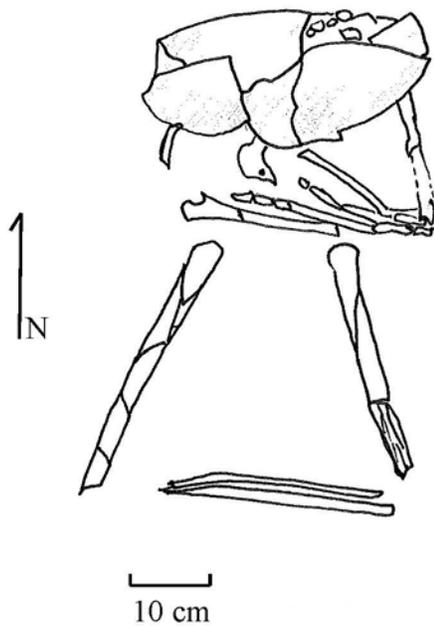


Figure 7.12 SC-18 burial 11 (141), unexcavated

The final burial exposed at Saturday Creek, BU 12 (140), was uncovered between 149 and 155 cm below datum in 221E 494N at the south end of SC-18. The skeleton extended into the eastern sidewall of the unit, and only the feet, tibiae, fibulae, and left hand were exposed. BU 12 appeared to be another extended supine burial, with the feet oriented roughly to the north (Figure 7.13). The remainder of the skeleton was not uncovered. The only grave goods associated with the burial were 5 obsidian blades stacked near the left foot. No ceramic dates were available for this burial.

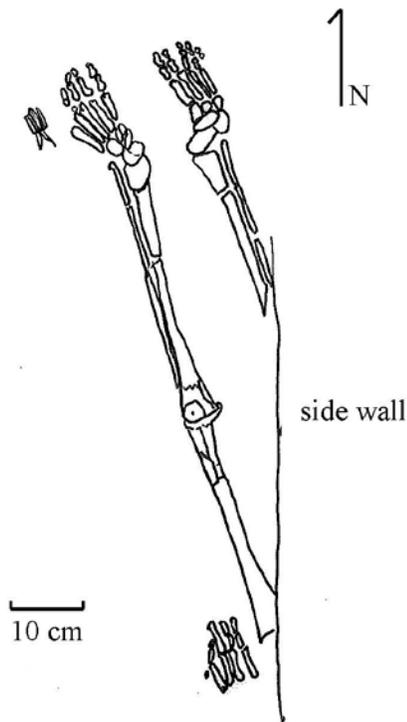


Figure 7.13 SC-18 burial 12 (140), unexcavated

General Summary

At Saturday Creek, there appears to be at least two female burials (BU 1 and BU 9), both without grave goods and sub-adult child burials (BU 3 and BU 4), also without grave goods (see Table 7.1). Of the two burials identified as male (BU 6 and BU 8), both contained burial offerings, as did the remaining six adult skeletons whose sexes were undetermined. Overall, BU 2 and BU 8 had the largest quantities of graves goods, perhaps indicating differential social status.

Orientations of the skeletons closely resembled those previously recorded at the nearby minor center of Barton Ramie (Willey et al. 1965). Overall, seven of the skeletons were extended and oriented with feet to the north and head to the south, as were the majority of burials at Barton Ramie. Three of the skeletons were placed in a sitting position with ceramic dishes over the heads, facing south. One, BU 3, a sub-adult, sits facing west. Many burials similar to these were recorded at Barton Ramie as well. BU 9 was aligned east-west rather than a north-south.

Site	Burial #	Date	Sex	Age	Infection	Caries	LEH	Grave Goods	Position
SC-18	2	AD800-900	N/A	14-20 years	chronic, legs	N/A	N/A	large dish, olla, hammerstone, shell anklet	seated, facing south
SC-18	5	AD400-600	N/A	40-50 years	slight, legs	100%	64%	mano and metate, antler	extended, supine, head south
SC-18	7	AD700-800	female	20-30 years	none	60%	N/A	bowl, olla	extended, prone, head south
SC-18*	11	AD600-700	N/A	N/A	N/A	N/A	N/A	plate	seated, facing south
SC-18*	12	N/A	N/A	N/A	N/A	N/A	N/A	5 obsidian blades	extended, supine, head south
SC-85	1	AD700-900	female	24-30 years	slight, legs	100%	30%	none	extended, prone, head south
SC-85	3	AD600-700	N/A	10 + 2.5 years	none	<1%	42%	none	bundled
SC-85	4	AD800-900	N/A	4 + 1 year	slight, arm	14%	30%	none	extended, prone, head south
SC-85	6	AD400-600	male	18-25 years	slight, legs	33%	11%	plate	extended, prone, head south
SC-85	8	AD700-900	male	24-30 years	arms and legs	none	none	dish, olla, polished bone	extended, supine, head south
SC-85	9	AD700-900	female	30-34 years	slight, arms and legs	N/A	N/A	none	extended, supine, head west
SC-85*	10	AD900-1150	N/A	N/A	N/A	N/A	N/A	plate	seated, facing south

* Unexcavated

Table 7.1. Saturday Creek burials

Dates established for the burials ranged from Early Classic (c. A.D. 400-600) to Postclassic (A.D. 900-1150). Further excavation of the SC-18 and SC-85 mounds, as well as other small house mounds at Saturday Creek will undoubtedly yield a great many other burials, including earlier ones. Although the 12 burials excavated in the VOPA 2001 season may not be sufficient to represent the overall population at Saturday Creek, pathologies witnessed in the skeletal remains tended to reflect nutritional deficiencies (enamel hypoplasia, hypocalcification, porotic hyperstosis) or signs of nonspecific infections (periosteal reactions on the long bones). Samples of the skeletal material for each burial will be undergoing chemical analysis in the future and will no doubt provide further information about the inhabitants of the Saturday Creek site.

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Chapter 8

Ancient Maya Royal Courts: Yalbac, Central Belize

Sean M. Graebner

For each complex society, there existed a social hierarchy unique to its location, economy, and social interaction. Though unique in structure, this hierarchy has certain common attributes. One constant was the existence of a ruling elite or group of elites, the royal court. The royal court established and reinforced social, economic, and religious order, solely responsible for the administration of social functions. Though the royal court often did not remain in control forever, material remains provide clues as to political scale and extent. The nature of a royal court at Yalbac is explored through a discussion of spatial layout of Yalbac's core structures.

Ancient Maya Royal Architecture and Hinterland Settlement

The Classic Maya thrived for over 700 years (A.D. 250–950) in the tropical jungles of Central America, reaching its cultural and population pinnacle in the Late Classic period (c. A.D. 550-850) (Coe 1999:10; Sharer 1994:46-47). Their ruins are scattered throughout the landscape in diverse settings. The lowland Maya lived in the western and southwestern region of the larger area known as Mesoamerica, including the modern countries of Mexico, Belize, Guatemala, Honduras, and El Salvador.

Largely subsisting on maize agriculture, the lowland Maya initially lived in farmsteads near perennial water sources, eventually moving into other areas with less secure water sources as populations grew and control over land and environment increased (Fedick and Ford 1990). Populations began to aggregate at particular locations throughout the Maya area that served as religious, social, political, and economic centers from where kings ruled. These centers had restricted and unrestricted or public monumental architecture constructed under the auspices of members of the royal court.

The royal court was a faction of elite persons including the ruler and members associated with and contributing to the decisions of that specific ruler. These people advised the ruler and ultimately affected the lives of the masses, yet only represented a fraction of the population. Inomata and Houston (2001:6-7) best describe the royal court and its members:

In our judgment, the pivotal feature of the royal court is that it incorporates an organization centered around the sovereign, be this person a king, ruler, emperor, or monarch. The people who surround the ruler may include his or her family members, advisors, relatives, guards, artisans, craftspeople, and servants. These court members are bound by mutual understandings and obligations; their interactions generally take place in culturally ordered spatial settings.

Generally speaking, the court was comprised of several individuals that together governed. Therefore, similar to the senate and congress of the United States, the royal court required a spatial environment conducive to conducting business. Since no written evidence of the royal court exists archaeologically, we must rely upon the best tangible evidence of these governing bodies, monumental architecture, especially royal palaces. However, there was more to Maya settlement than central monumental architecture. Relevant to this study is where farmers lived in relation to the civic-ceremonial centers—after all, it was they who provided the labor to build palaces, temples, and ball courts.

Through surveying the hinterland of civic-ceremonial centers, archaeologists have found dense settlement. Residences were found of various sizes and organizational patterns, from solitary mounds to groups of mounds. Through a comparison of artifact data between hinterland and core settlement, archaeologists have revealed a significant difference in the quantity and quality of items. Solitary mounds and plazuela groups were associated with similar ceramic assemblage, stone tools, and ground stones.

However, the artifacts found in the monumental architecture of the core settlement were more exotic, valuable, and elaborate (e.g., jade beads, obsidian figurines, flint eccentrics) than those found in the hinterland architecture (e.g., ceramic beads, obsidian blades, greater abundance of ground stone) (Abrams 1994; Ashmore 1981; Sharer 1994; Trigger 1990; Willey 1987). Further, the architecture itself was significantly different. The structures of the core were larger, made of cut-stone, plastered walls, and with multiple rooms with corbel arches, representing many hours of labor.

Hinterland, non-elite architecture is distinguished by two basic types: the “minimal residential unit” and the “group residential unit”, or “patio group” (Ashmore 1981). The minimal residential “refers to the single, small, structurally isolated building” (Willey 1987:110). Though sometimes constructed of stone, the minimal residential unit was more commonly located on an earthen or stone platform and built with perishable material such as wood, dirt, thatch, and palm fronds. The typical minimal residential unit was a one-room structure that housed a single family and totaled an estimated 20 square meters in area (Abrams 1994; Willey 1987:110). If isolated, the family living in the minimal residential unit would have been self-sufficient, responsible for farming, food processing, hunting, and craftsmanship (e.g., ceramics and stone tool manufacture). The head of household would have conducted rituals. According to Willey (Willey 1987:111), minimal residential units existed from the Preclassic to the Postclassic (c. 1000 B.C.-A.D. 1000).

On a slightly larger scale, the group residential unit would have consisted of similar characteristics. “It is, in effect, composed of two or more minimal residential units. From 2-6 buildings would be an average range for such groups. The functional implications of the group residential unit are those of an extended family household...” (Willey 1987:111). Specialization in certain tasks would be common and, although self-sufficient as a group, the members of a group residential unit would have been dependent upon each other for individuals to farm, cook, and manufacture pottery. The head of the lineage members would have conducted rituals within the group residential unit with the possibility of a group temple or shrine on an earthen structure (Willey 1987:112).

In contrast, upper elites and royal members lived in the civic-ceremonial center with a plethora of monumental buildings including ball courts, temples, plazas, and royal acropoli (Willey 1987:113). The architecture itself would have been laboriously constructed of cut-stone, often having multiple rooms, and spatially arranged to delineate residential areas from political and ritual ones. Foodstuffs and ceramics would have come from non-elite farmers. Rituals within the royal complex and in public would have been directed by a royal shaman and/or king, since it was he who claimed divine authority. “Ceremonial centers were in essence comparable to the small domestic house complex in their structural components—i.e., they had residential structures of varying size and function, grouped around a plaza along with what we have always referred to in the Maya area as a temple pyramid” (Sanders 1981:359). Also, similar to Mesopotamia and Egypt, Maya centers and monumental architecture served as public venues for economic exchange and social organization, facilitated by open plazas ideal for ritual and political observances. The center was the nucleus of the Maya community, and the center was where the royal court resided.

Through spatial analysis of core settlements, the social complexity and residential area of the royal court can be determined. For example, Tikal, in the Peten of Guatemala, boasts the most substantial monumental architecture in volume and extent of all Maya centers. The site consists of over 3,000 core and nearby structures (Coe 1967). Within the core, there are at least six substantial temples, three different acropoli (palace complexes), five causeways, and several plaza areas enclosed by other monumental structures. However, there is one particular complex that displays elements of complexity that articulate both private and public areas. The Central Acropolis is “...the largest well-known royal palace compound ..” (Webster 2001:148), and consists of multitude of courtyards enclosed by structures with multiple rooms. The very nature of its spatial arrangement and its courtyards are a noticeable contrast to the layout of the neighboring Great Plaza. Both contain monumental architecture; the Great Plaza has a large open, unrestricted area that allowed for public congregation, while the Central Acropolis is enclosed or restricted. This undoubtedly implies that the Central Acropolis was intended for only certain elite and royal persons, limiting access. “This area surely housed Tikal's ruling dynasty and their

retainers...” (Sharer 1994:164).

Similar structural complexity has been found throughout the Maya lowlands including, for example, Ca’ana at Caracol (Chase and Chase 2001) and the Palace at Palenque. However, restricted and unrestricted architecture is not solely applicable to large major Maya centers. For example, Cahal Pech, located in western Belize, is considered a “medium-sized Maya” major center (Awe, Campbell, and Conlon 1991) and consists of 34 core structures, which is minute in comparison to Tikal. Yet Cahal Pech also offers insight into the spatial expression of royal court authority. The spatial representation of the court is portrayed in what Awe, Campbell, and Conlon label as “semi-restricted and restricted access plazas.” Semi-restricted plazas have limited access and “...and are bounded, but not enclosed...”, and restricted plazas “...are entirely bounded on all sides by mounds” (Awe, Campbell, and Conlon 1991:27). Within Cahal Pech, the complex architecture that encloses and is associated with the restricted plazas is comprised of a maze of rooms, corridors, and former doorways that divert residents from plaza to plaza.

Awe and others argue that plazas which are partially restricted are representative of public and non-elite, or lesser elite, activities, and that the exclusively restricted plazas were not open to public viewing, but only to royals. “If we were to reconstruct the socio-political, hierarchical system of the site based on settlement configuration, the size and complexity of structures in Plaza A, and the restrictive nature of that courtyard, would then suggest that the highest ranking elite were based in this plaza” (Awe, Campbell, and Conlon 1991:28). The structural and social complexity of this “medium-sized” site demonstrates that the royal court extended well beyond the major centers of the lowlands.

How could the royal court organize labor to build monumental architecture? Who constructed monumental architecture? The ancient Maya rulers had to have possessed something that was not available to the ordinary Maya citizen. And the possession of this item, whether it is tangible or intangible, had to offer something in return to be able to exact tribute from subjects in the form of labor. Early leaders controlled access to large amounts of water and fertile soils that attracted farmers and offered a promise of a better life. The elite landowners then became the foci of the community, with surrounding non-elite residences dispersing outwards across the landscape (Willey 1987). Through the possession of these valuable resources, the landowners could declare divine authority, claiming that their ownership was due to their relationship with Maya gods. Establishing this claim would have placed them in a position of power to grant permission to farmers to live on their land in exchange for surplus goods and labor. Through the ownership and control of resources, power over others was attained (e.g., Earle 1997). Thus, the religious and political foundations of political power were established and maintained, ultimately leading to the establishment of the royal court and the construction of monumental architecture. The status of this ruling class implied that they “...were the carriers of exclusive and expensive cultural meanings that require such exactions for the maintenance and development. Elites, as the principal human protagonists and prime communicators to the deities, who are the supreme members of the total society, required the highest products of culture” (Baines and Yoffee 1998:234-235).

As hinterland population increased, specialization of labor developed with certain individuals and/or groups of individuals manufacturing goods in exchange for other required goods (e.g., ceramics and stone tools). Furthermore, each farming household continued to farm, producing crops for both themselves and for the elites, which also served as form of tribute. However, the most distinguishing factor that expressed elite social status was monumental architecture (Abrams 1994; Carmean 1991).

Yalbac

From February to May of 2001, the Valley of Peace Archaeological (VOPA) project, under the directorship of Dr. Lisa J. Lucero, began field research at the previously unstudied Maya center of Yalbac in central Belize. Preliminary data was collected over the course of 15 days, spanning three months, by 20-25 VOPA crewmembers that worked once to twice a week at this site (National Science Foundation funding was to excavate at Saturday Creek, a minor river center 19 km southeast of Yalbac). Although only a limited number of days were spent at Yalbac, enough information was collected to generate an

initial map of the site, as well as to determine site chronology. We also conducted a preliminary survey of Yalbac's hinterlands.

Yalbac is situated south of the Yalbac Hills at an approximate elevation of 95 meters above sea level, and is slightly north of a perennial stream, Yalbac Creek (see Figure 1.2). The land occupied by the site of Yalbac is a prosperous, privately owned cattle ranch and logging company (Yalbac Cattle and Ranch Company) that neighbors the small agricultural village of Yalbac. Yalbac, based on its size, is considered a medium-sized center (Adams and Jones 1981).

The size and number of structures, and the presence of thick vegetation required us to use a closed traverse by means of a theodolite, as well as compass and tape (see Brinker and Wolf 1977:144) (Figure 8.1). The traverse was closed within 2' 15". "The sum of the interior angles of a closed polygon is equal to $(n-2)180^\circ$ where n is the number of sides, or angles" (Brinker and Wolf 1977:216). Sixteen stations (counterclockwise: YA to YP) were used. YA was set up using magnetic north (a north stake was placed about 10 m north of YA); YB was set up by back-sighting to YA; YC was set up back-sighting to YB, and so on. The theodolite was set to 0° each time we back-sighted. Each station was marked for future purposes (Figure 8.2). At each station location a hole was dug and filled with cement. In the center of each station a piece of rebar protrudes from the cement and which was spray painted with fluorescent orange paint, and the cement was engraved with the station (e.g., YA). Though the paint may not endure weathering, the cement, engraved station, and rebar should.

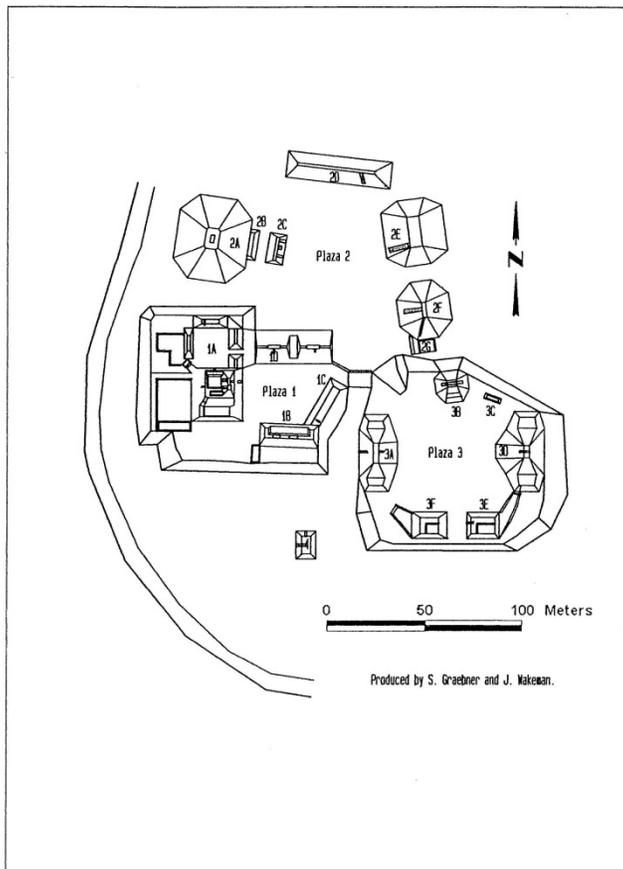


Figure 8.1. Yalbac

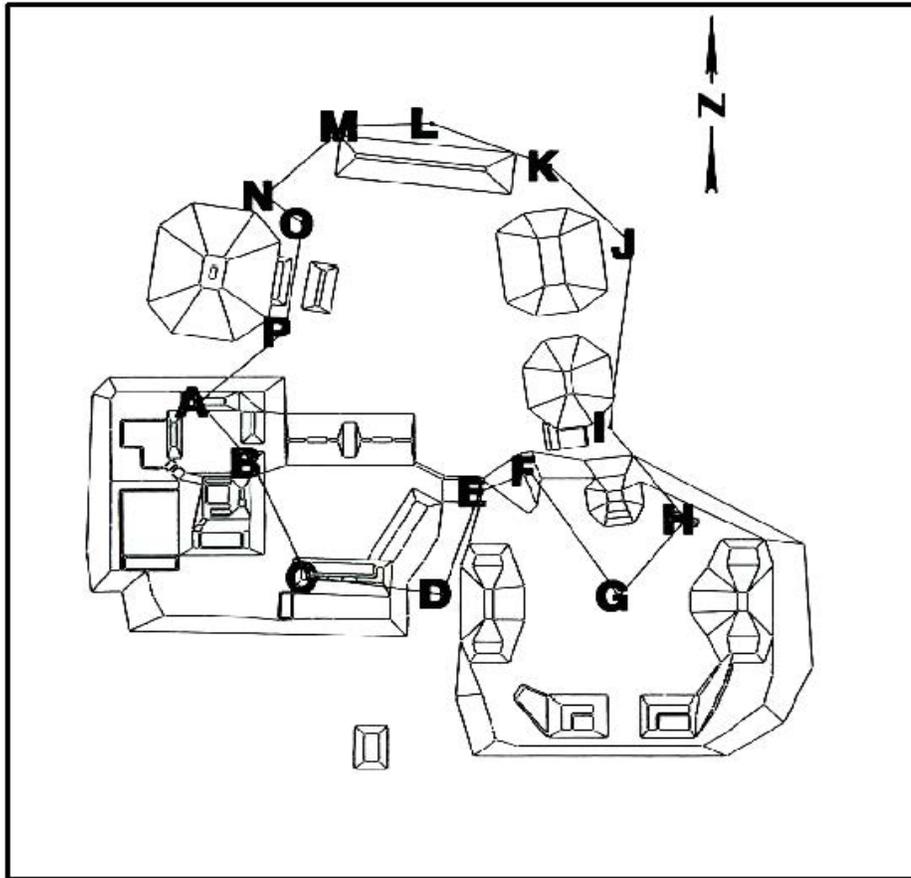


Figure 8.2 Yalbac with traverse points

We collected 250 points to generate a preliminary map of the 36 monumental core structures and 25 looters trenches (see appendix for a description of each looters trench) (Table 8.1). The collected points were recorded using the theodolite and stadia rod. At each station, points of nearest architecture were recorded. This strategy allowed for all architecture to be mapped in with the theodolite from at least one station, though not all stations were necessarily used. The dimensions of the architecture were then recorded by hand. A crew of four people walked the entire core and measured each structure at its base, top, looter's trench, and any other relevant features. The measurements were recorded using 50-meter tapes and compass. These hand-recorded dimensions came in useful when creating the map for Yalbac. Since there are both human and instrument error in using a theodolite and stadia rod regarding the relative location and dimensions of each temple, the hand-recorded dimensions increased accuracy and served as a more reliable source for physical dimensions.

Table 8.1. Core structure dimensions

Structure	Size (meters)	Height (meters)
1A	45 X 55	20
1B	30 X 10	7
1C	35 X 9	2
1D	35 X 15	8
2A	45 X 38	16
2B	18 X 8	2.5
2C	18 X 8	2.5
2D	60 X 10	4

2E	40 X 36	8
2F	30 X 30	10
2G	15 X 15	2.5
3A	45 X 25	11
3B	20 X 20	5.5
3C	7 X 3	1
3D	45 X 25	8
3E	20 X 15	2.5
3F	20 X 15	2.5
4	15 X 10	3

To the south of Yalbac are two large terraces that are approximately 20 to 25 m in height, which are separated by a gradual inclining path (about 65 meters in length) with a slope of about 12 to 15 degrees. This causeway serves as the only entrance to the site core, where there are three major plazas. Plazas 1 and 3 appear to be more restricted given the smaller entrances to each one respectively, with Plaza 1 being the more restricted of the two, and Plaza 2 being the largest and most accessible of all three plazas.

Plaza 2 is c. 50 x 60 m in size. There are seven monumental structures that surround the plaza, two of which comprise a ball court (Structures 2B and 2C), and range from 30 x 30 m to 55 x 15 m in size and 4 to 16 m in height. By exiting Plaza 2 one enters Plaza 3 on the northwest corner on a slightly inclined ramp (perhaps a sacbe). Plaza 3 is an estimated 45 x 56 m in size. This plaza consists of six structures ranging from 9 x 2.5 m to 45 x 17 m and 1 to 11 m in height. The southern and eastern portions of this plaza form the boundary of the southern terrace previously noted.

We also excavated 1 x 2 m test pits in the centers of Plazas 2 and 3 to collect chronological information. They both had 13 natural levels, or at least six construction phases consisting of plaster floors and cobble ballasts. Ceramics date from c. 300 B.C. to A.D. 900. Test pit 1 in Plaza 2 was terminated at 1.47 m below unit datum due to the presence of a sterile, clay subsoil. Ceramics and a few lithics were found throughout the levels of fill. The remaining levels were limestone plaster floors, cobble ballasts, and a level of limestone boulders that likely served as the initial fill for the plaza construction, which consisted of at least four building phases. This test pit offered valuable insight to the phases and processes of construction. The dates supplied by the ceramic analysis range from 300 B.C.-A.D. 400 (see chapter 2).

Test pit 1 in Plaza 3, located in the middle of the plaza, was the most rewarding of the two. This test pit also consisted of 13 natural levels and was terminated at the depth of 2.20 m below unit datum due to the presence of hard, limestone marl bedrock and dates to c. A.D. 1-250 to A.D. 700-900. The first level contained a concentration of lithic debitage that is related to a lithic concentration found at the base of Str. 3D (at the base of a tree, which likely was originally near the top of the temple). Only three of the 13 levels in this test pit had artifacts present, which consisted of chert and obsidian lithics and ceramic sherds. The remaining levels were a continuous sequence of five plaster floors and cobble ballasts. Level 13 at first appeared to be wholly limestone marl. Continued excavation revealed three intact Balanza Black ceramic, narrow-necked jars situated along the eastern wall of the test pit, all of which were capped with shaped sherds. Of the three sherds used to cap the jars, two were Socotz Striated type and one was Monkey Falls Striated type dating to c. A.D. 1-250 and A.D. 400-600. All three jars abutted one another. It was not until the vessels were processed and analyzed in the lab that a kill hole was found on the bottom of one of the jars. Unfortunately, the vessels did not contain any obvious offerings.

Plaza 1, directly west of Plaza 3, is the smallest in size, yet contains the most complex architecture. This plaza is surrounded by five structures and is an estimated 33 x 27 m. There are three long and narrow structures that form the northern, southern, and eastern boundaries of Plaza 1 and range from 25 x 7 m to 33 x 7 m and 5 to 7 m in height. A fourth structure, similar in size but smaller in height, forms another segment of the northern boundary to the northwest of the plaza. All of these structures are dwarfed by the largest complex of the Yalbac core, the acropolis (Str. 1A).

The acropolis is approximately 45 x 55 m in size and is over 20 meters in height, and consumes the western portion of Plaza 1. There are at least 18 structures forming the acropolis, all surrounding one

of the four sunken plazas. Each sunken plaza connects to at least one other plaza, likely via a corbel archway, similar to Cahal Pech. Steep stairways surround the acropolis and provided the only means to reach the different levels of the acropolis, especially on the east side.

All structures are constructed with faced limestone, a feature revealed through the several looters trenches that cut into the acropolis at various locations (12 looters trenches on A1).

Discussion

The structures that surround Plaza 2 and its size suggest that the plaza served as a more public venue than did Plazas 1 and 3. The plaza is open, with a ball court, indicative of social events accessible to all. Although the ballgame itself is associated with the elite and serves ritual functions, the general public congregated to view and celebrate it. The three pyramidal temples that are also present in this plaza may have been used for ritual ceremonies for the public to observe, especially structure 2A (20 x 11 m, 15 m in height), the largest structure in the plaza, which serves as the foundation for western portion of the ball court. And the final building on Plaza 2, a long, narrow range structure consists of a series of rooms that served for residential and/or administrative functions.

Plaza 3 is similar to the semi-restricted plazas at Cahal Pech. The only entrance into this plaza is from the northwest, suggesting a degree of restricted access. Inside the plaza, there is a significant amount of open space, yet it is considerably smaller in size to that of Plaza 2. Structures 3A and 3D, which are directly across from one another, mirror each other in design and are the largest structures in the plaza. The remaining four structures are modest in size and may have been elite residences.

Plaza 1 is also semi-restricted. Three range structures and the royal acropolis enclose this plaza. The three range structures probably consist of several rooms that would have housed members of the court. Their location within the plaza and association with the acropolis indicate that the persons who lived in them had some degree of authoritative power and wealth, and were inclusive of the “palace complex”, yet were not as influential as the members who resided in the acropolis. David Webster uses the “palace complex” term to exemplify “...the whole set of court facilities that maintained the royal family and its closest associates, as well as the larger institution of rulership in all its political, ritual, and ideological dimensions, and provided a stage for royal drama” (Webster 2001:141). Though these three structures and their inhabitants contributed to the royal court, their functions were not as significant as those that physically and spatially occupied the acropolis.

The acropolis is constructed of one large pyramid and four restricted plazas, or courtyards. The plazas are smaller in size and are elevated above all other structures of Yalbac with the exception of the primary residence of the ruler. Therefore, both the restricted nature and the steep staircases of these plazas represents the status and political power of their residents. The restriction to these plazas and their small scale are further symbolic of the intimacy amongst the court members, and the individuals that resided in these plazas were the most influential and important figures of the royal court.

The primary royal residence of Yalbac is located on the extreme top of the acropolis and is oriented north-south, with the front of the structure facing the open area of Plaza 1 to the east, more than twenty meters below. There is a plaza associated with this structure that is rightfully smaller than all other acropolis plazas. This plaza is the highest plaza of Yalbac and can only be entered by climbing from the three lower plazas of the acropolis. A large looters trench has exposed two perpendicular rooms; both with corbel arched ceilings and one with a red plastered wall.

Clearly rulers at Yalbac had access to enough labor to construct the monumental architecture—hinterland farmers.

Hinterland Settlement

While one crew worked to establish the traverse and record the angles for all core structures, three to four other crews surveyed the periphery to evaluate surrounding settlement. Using a compass and pace technique, survey crews walked 1000 m transects, east and west, at 50 m intervals using the all weather, roughly north-south road as a baseline.

Our primary goal was to locate structures and surface collect any diagnostic ceramics that would provide us with some initial dates for at least terminal occupation. When a structure was found, the

members of the crew would walk the area of the structure to determine if it was a solitary mound or a small group. The majority of structures found in the hinterland were solitary and constructed with cut stone, however it was not uncommon to find a small group of three to six structures also constructed with cut stone. Once the number of mounds was identified, each structure was described, measured, and sketched on a standard form. The dimensions of the mounds were measured using compass and pace, or with a 50 m tape when available. Structures were sketched as either being less or greater than one meter in height. A site description, consisting of structural details and orientation, was recorded, as was a list of artifacts present and a summary of the collected diagnostic ceramics. The majority of the structures found were greater than one meter in height, and not all structures had artifacts present on the ground surface. We also noted a possible limestone altar found approximately one kilometer northwest of the core. Surface ceramics from 78 hinterland structures were collected and analyzed. Ceramics were predominantly from the Spanish Lookout phase (A.D. 700-900), but ranged from A.D. 400 to 1150-1500. The ceramics collected and the associated dates strongly indicate that Yalbac was occupied for at least 1100 years.

In sum, over 150 structures were found in the hinterland, in an area roughly 2 x 2.5 km, or 5 sq. km, with an average of 30 structures per square kilometer in the periphery (not including the core area) (Figure 8.3). The greatest numbers and highest density of structures were found on higher ground, north of Yalbac Creek and west and northwest of the 35 core structures on soil that is highly suitable for agriculture (Fedick 1996).

Concluding Remarks

Although the research at Yalbac is preliminary and limited excavation has taken place, the monumental architecture itself reveals the presence of a royal court.. A royal court had to have possessed and controlled land and resources in surrounding Yalbac. The volume of hinterland structures already found clearly indicates that there was both a labor force for architectural construction as well as a large enough population from whom to exact tribute. The materials found at Yalbac has only provided us with preliminary data (e.g., chronology), but it is anticipated that the material artifacts, along with the continued hinterland survey and mapping of monumental architecture in future field seasons, will further contribute information about ancient Maya court life and political power.

Appendix
Looter's Trenches

LT Number and Structure	Measurement (L x W x H in meters)	Location	Construction Type	Associated Photos
1 – 1A	4.70x3.50x2.40	Top of mound, west side, south end	Limestone boulder walls, plaster floor, corbel vault	Roll 8; exp.: 32/5, 31/6, 30/7
2 – 1A	4.30x1.50x1.50	Top of mound, east side, north end	Limestone boulder walls, plaster floor, bench	Roll 8; exp.: 35/2, 34/3, 33/4, 28/9, 27/10, 19/18, 14/23
3 – 1A	2.70x.75x.77	Top of mound, west side, north end	Limestone boulder walls with plaster	Roll 9; exp.: 33/4
4a – 1A	1.50x.50x.40	Bottom of mound, west side, south end	Limestone boulder walls with rubble fill	Roll 9; exp.: 34/3
4b – 1A	.90x.60x.30	Bottom of mound, west side, south end	Limestone boulder walls with rubble fill	Roll 9; exp.: 34/3
4c – 1A	.80x.50x.80	Bottom of mound, west side, south end	Limestone boulder walls with rubble fill	Roll 9; exp.: 34/3
4d – 1A	.30x.10x.20	Bottom of mound, west side, south end	Limestone boulder walls with rubble fill	Roll 9; exp.: 34/3
5 – 1D	2.80x.80x.62	Bottom of mound, south side, west end	Limestone rubble	Roll 8; exp.: 29/8, 20/17
6 – 1D	1.75x.60x.70	Bottom of mound south side, east end	Limestone boulder and rubble fill	Roll 8; exp.: 21/16
7 – 3A	11x1x1.70	Bottom of mound, west side, center	Limestone rubble fill	Roll 8; exp.: 26/11
8 – 3D	12.8x1x1	Center of mound, east to west, center	Limestone boulder	Roll 8; exp.: 25/12
9 – 3B	11x1.4x1.15	Center of mound, east to west, center	Limestone boulder and rubble fill	Roll 8; exp.: 24/13
10 – 2G	10x1x1.50	Bottom to almost top, south side, east end	Limestone and rubble fill	Roll 8; exp.: 23/14
11 – 2F	14.5x2x	Bottom to top, south side, west end	Limestone and rubble fill	Roll 8; exp.: 22/15
12 – 1E	3x.70x2	North of SE corner, west end, east to west	Limestone boulder and cobble fill, lower construction phase, above plaster floor	Roll 7; exp.: 6/31
13 – 1A	1.70x1.20x1.50	North side, north to south, west end	Limestone plaster floor, boulder, cobble, and marl fill	Roll 7; exp.: 5/32

14 – 1A	3.2x.90x1.8	North side, north to south, east end	Limestone plaster floor, cobble and pebble fill above, large boulder below floor	Roll 7; exp.: 4/33
15 – 1C	.67x1.9x2.0	South side, top of upper tier	Limestone boulder	Roll 7; exp.: 3/34
16 – 2E	5.4x1.4x2.1	SE corner, top to bottom, north to south	Limestone boulder fill, faced stone, plaster floor	Roll 7; exp.: 2/35
17a – 1A	2.20x1.2x1.3	Bottom center of east side	Small, compact limestone pebble fill	Roll 9; exp.: 35/2
17b – 1A	2.4x1.2x1	Bottom center of east side	Compact limestone boulder fill with small cobbles	Roll 9; exp.: 35/2
18 – 2C	3.15x1.25x1.6	East side near end of structure, east to west	Compact limestone boulder fill with small cobbles	Roll 9; exp.: 29/8
19 – 2C	1.4-1.8x2x1.9	East side near north end, east to west	Limestone boulder fill with cobbles	Roll 9; exp.: 28/9
20 – 2C	3.5x1.5x1.4	East side at north end, east to west	Limestone boulder fill	Roll 9; exp.: 27/10
21 – 2F	12x2.25x1.50	West side, from top to bottom, east to west	Limestone boulder and cobble fill	Roll 26; exp.: 27/10
22 – 4	2.92x.92x.92	North end of structure, north to south	Limestone boulder and cobble fill	Roll 26; exp.: 26/11
23 – 4	6.1x1.4x1.95	West side of structure, SW to NE	Limestone boulder fill with plaster, faced cap stone lying in trench	Roll 26; exp.: 24/13
24 – 3E	7x1x.65	West side of structure, east to west	Limestone boulder fill	Roll 26; exp.: 18/19

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Chapter 9

The Skeletal Remains from the 2001 Field Season at Saturday Creek

Jennifer Piehl

This report will detail the osteological and paleopathological information collected on the 9 individuals excavated at Saturday Creek during the 2002 field season. Analysis was conducted in the field laboratory after cleaning of the skeletal material was completed. Osteological and paleopathological information was collected using a system based on *Standards for Data Collection from Human Skeletal Remains* (Buikstra and Ubelaker 1994). Bone samples have been exported for the purpose of conducting stable isotope analysis on bone collagen and carbonate in order to gain information on paleodiet at Saturday Creek. This analysis is currently in process in the laboratory of Dr. Henry Schwarcz, McMaster University.

The skeletal remains were inventoried, and age and sex were estimated using standard visual techniques (Buikstra and Ubelaker 1994; White 2000). Additionally, the aging standards under development by Milner and Boldsen (1999) were used. Completeness of the skeletal remains and preservation quality was recorded in order to clarify what elements of each individual were available for aging, sexing, and assessment of pathological conditions.

Skeletal Indicators of Stress

This study uses standard pathologies to assess health conditions at the site of Saturday Creek, and to elucidate patterns in differential health status among the residents. Those pathologies recorded for this study are described below.

Porotic hyperostosis is the bony indicator of iron deficiency anemia in childhood. It is evidenced by symmetrical patches of porosity and thickening of the cranial vault on the frontals, parietals and occipital. This condition is common on Pre-Columbian Maya skeletons, and is evidence of the interaction of a number of environmental factors. Maize, the dietary staple of the Maya, is not only a poor iron source but also contains phytates, which inhibit absorption of any iron that is consumed. Intestinal infections and parasitic infestations also contribute to iron-deficiency anemia.

The skeletal manifestation of infections used here is periostitis, a nonspecific indicator. In most cases in this sample, the specific cause of the infection cannot be determined, but the presence of infection on the bones means that the individual survived the initial stage of the infection and lived into the chronic stages of the illness. As such, nonspecific indicators of infection are a useful guide to relative susceptibility of the population to illness. A distinction is made in this study between slight infections and severe infections. Slight infections are defined here as periosteal, limited in skeletal elements infected and extent of infected area on each element. Severe infections may also include sclerotic involvement, and are extensive in number of elements affected and infected area on each element. This distinction may relate to the seriousness or duration during which the individual suffered with the infection.

Linear enamel hypoplasias are another nonspecific stress indicator manifested on the teeth. They are the result of disruptions in enamel matrix formation during the development of the tooth, and may be due to a variety of causes, including illnesses of many types and malnutrition. Linear enamel hypoplasias aid in reconstruction of susceptibility of the individual to illness or other health insults during childhood. Teeth are differentially susceptible to linear enamel hypoplasias, with the maxillary first incisors most susceptible, followed by the canines and then the remaining incisors (Goodman and Armelagos 1985:482). Therefore, individuals in this sample without the anterior teeth present were not scored for linear enamel hypoplasia. The position of each hypoplastic band on the tooth can be used to approximate the age at which the stress occurred. The method of age estimation here is that of Goodman and Rose

(1990), with the recognition that the nonlinear nature of crown formation results in only approximate estimates of the age at which linear enamel hypoplasias formed (Reid and Dean 2000). A related hypoplastic defect is pitting hypoplasia, expressed as isolated pits or linear arrays of pits in the enamel. These are also caused by disruptions in the enamel matrix, brought on by similar environmental stresses.

Hypocalcifications are the result of defects in the mineralization of the enamel matrix during tooth formation. They can be seen as opaque white or yellow areas of the enamel. Like hypoplasias, these are nonspecific indicators of environmental stress. The relationship between the position of an opacity and the age at which it was formed is not as direct as with hypoplasias, so hypocalcifications are not used to age the time of stress to the individual.

Caries is an infectious disease, produced by bacterial activity on carbohydrates and leading to breakdown of dental enamel. Caries may progress to abscess and antemortem tooth loss. Susceptibility to caries depends on a variety of individual and environmental factors, including morphology and location of the tooth, age and gender of the individual, and other stresses to which the individual has been subjected. Caries rates are typically high in populations relying on maize agriculture (Larsen 1987). In the Maya area females often have a higher incidence of caries than males (Whittington 1999). Antemortem tooth loss is often the result of caries, but can also be the result of periodontal disease.

Calculus is mineralized plaque adhering to the tooth. It may be associated with periodontal disease, especially when occurring subgingivally (Lieverse 1999:219). Both diets high in protein and those high in carbohydrates have been argued to promote calculus formation (Lieverse 1999). In the case of the Maya, where caries rates are also high, indicating high carbohydrate consumption, a diet high in carbohydrates may also contribute to calculus formation. The formation of calculus is, like many of these stress indicators, multifactorial, and so single direct causes often cannot be detailed.

In this study, porotic hyperostosis and enamel defects, including hypoplasias and hypocalcifications will be used to discuss childhood health at Saturday Creek. Skeletal infection, caries, and calculus provide a view of health status in the years preceding an individual's death. The interaction of inadequate nutrition, susceptibility to infectious disease and parasitic infection, and environmental stresses related to urbanism and sanitation, among others, is a complex one that affects the expression of each of these stress indicators. A holistic view that considers stress indicators in relation to each other and to what is known about the population archaeologically is the best way to offer interpretations of health status and its possible underlying causes.

Structure SC-18

Structure SC-18 contained 5 individual interments (Table 9.1). Of these, VOPA archaeologists excavated three, which were subsequently analyzed by the author (see chapter 7 for context descriptions and excavation strategies). These consisted of the remains of an adolescent, a 20-30 year old female, and an adult of undetermined sex, 40-50 years of age.

Site	Burial	Sex	Age (yrs)	Infection	Porotic Hyperostosis	Trauma	Caries	LEH	Hypoplasia	Hypo-calcification	Calculus	Tooth Filing
SC-18	2	N/A	14-20	chronic, legs	N/A		N/A	N/A	N/A	N/A	heavy	
SC-18	5	N/A	40-50	severe, legs	N/A		100%	64%	9%	45%	none	incisors, B4
SC-18	7	female	20-30	none	N/A	R MCIII rotation	60%	N/A	0	0	slight	
SC-85	1	female	24-30	slight, legs	yes	L hand phalanx compression	88%	30%	11%	37%	none	incisors, B4 and C5
SC-85	3	N/A	10 ± 2.5	N/A	N/A		<1%	42%	7%	0%	heavy	
SC-85	4	N/A	4 ± 1	slight, arm	no		14%	30%	0%	0%	none	
SC-85	6	male	18-25	slight, legs	no		33%	11%	0%	0%	heavy	
SC-85	8	male	24-30	arms and legs	no	R tibia callus, lipping L-vert	none	none	0%	26%	slight	
SC-85	9	female	30-34	arms and legs	N/A		N/A	N/A	N/A	N/A	N/A	

Table 9.1: Summary of burials excavated and analyzed during the 2001 field season.

SC-18 Burial 2 is that of an adolescent, 14-20 years of age. The fragmentary nature of the skeleton and dentition have prevented a narrower range of age estimation. This individual suffered a chronic infection of the left femur and both fibulae, characterized by diffuse porosity across the diaphyses but concentrated around midshaft. The nature of the infection is slight, but chronic in duration. Areas of infection that were healed, in the process of healing, and active were all present at time of death. This individual also shows heavy calculus on the mandibular right first incisor and left second incisor. Other dental pathologies could not be evaluated due to the fragmentary nature of the dental remains.

SC-18 Burial 5 is the burial of an older adult, 40-50 years of age, of indeterminate sex. A healed woven bone infection covers much of the femora, tibiae, and right fibula. This periosteal infection includes sclerotic involvement in the right metatarsals. This individual could not be scored for porotic hyperostosis or cribra orbitalia.

Cariou lesions are present in each tooth recovered. Seven carious lesions are present in the maxillary dentition, and four in the mandibular dentition. Most of these are located at the cervicoenamel junction. Maxillary caries on the incisors and canines are lingual, on the right third premolar buccal, and on the left first molar mesial and occlusal. The location of caries on the mandibular dentition is mesial on the left second incisor, right first incisor, and right canine, and ring caries on the left third premolar. Linear enamel hypoplasia is present in two bands on the maxillary first incisors and right second incisor. Two hypoplastic bands are also present on the mandibular left second incisor and left third premolar. A single hypoplastic band was observed on the mandibular right first incisor and right canine. The location of these bands indicates that this individual experienced stress in at least two episodes between the ages of 2.23 and 3.27 years.

This individual's upper and lower incisors had been filed. The maxillary first incisors and right second incisor are present, and have been filed into the pattern designated B4 in the Romero (1970) system of classification. The mandibular right first incisor and left second incisor are present. The right first incisor has also been filed into the B4 pattern. Wear on the left second incisor has obscured any evidence of whether it was filed or not. This filing pattern produces the iconographic symbol for *ik* in the anterior teeth. *Ik* refers to wind or breath, and includes reference to the life force of an individual (Taube 1999:10). This pattern of tooth filing was very common in the Late Classic Maya area.

SC-18 Burial 7 contained the remains of a female, aged 20-30 years based on the left pubic symphysis and, secondarily, dental attrition. Preservation has adversely affected the remains to the extent that the cranium and much of the axial skeleton had deteriorated and bone fragments were not present to be recovered. As a consequence, this individual could not be evaluated for evidence of porotic hyperostosis or cribra orbitalia. The diaphyses of the appendicular skeleton are present, but no evidence of periosteal infection was found on this individual. The right third metacarpal shows trauma which has resulted in the head being rotated approximately 30 degrees laterally.

Five teeth were recovered from this individual. These are the maxillary left first molar and the

mandibular left first incisor, right fourth premolar, right first molar, and left third molar. Slight calculus is present at the cervicoenamel junction of all teeth. Carious lesions are located at the mesial cervicoenamel junction of the maxillary left first molar and the mandibular right fourth premolar, and on the occlusal surface of the mandibular right first molar at the metaconid. No linear enamel hypoplasias or other hypoplastic defects were observed.

In summary, three burials were excavated at Structure SC-18. The older adult shows evidence of a slight, healed infection that covers much of the legs. The adolescent also shows chronic infection on the legs, in various stages of healing. Only the adult female does not show any evidence of infection. The two adults could be evaluated for dental pathologies. Both show high frequency of caries. The older adult, who could be evaluated for linear enamel hypoplasia, shows a high prevalence of this stress indicator. Only the adolescent could be evaluated for evidence of childhood anemia, and it is absent on this individual.

Structure SC-85

Structure SC-85 contained 7 burials, 6 of which were excavated and analyzed (see Table 9.1). Two adult females, 2 adult males, an adolescent and a child were interred in this structure. All of the adults are young or middle adults, aged no more than 35 years. Incidence of infection in this group of individuals is very high; only the adolescent has no evidence of infection. The pattern of infections tends to be slight in nature but covering many of the skeletal elements of the arms and/or legs. The frequencies of caries in the teeth are also very high. Likewise, linear enamel hypoplasia occurs in many teeth of each individual save one adult male. Only one individual, an adult female, shows evidence of childhood anemia.

SC-85 Burial 1 is a female aged 24-30 years old. The skeletal remains were fragmentary but diaphyses were mostly complete. This individual shows evidence of healed porotic hyperostosis in the form of diffuse porosity on the right and left parietals and occipital. A healed periosteal infection is present on the femoral diaphyses. Evidence of healed trauma can be seen on the left hand. The first proximal phalanx has been compressed anteroposteriorly, affecting the shape of the phalanx head.

This individual suffered from several severe carious lesions that have left only the roots of the maxillary central incisors, right third premolar, and right first molar. The hypocone of the left first molar has been removed by caries. Carious lesions at the cervicoenamel junction are present on the maxillary left third premolar (distal), and left third molar (mesial). A similar pattern can be found in the mandibular dentition. The crowns of the mandibular left canine and right fourth premolar are completely absent due to caries. The buccal half of the right first molar has also been removed by caries. Carious lesions at the cervicoenamel junction are present on the mandibular right first incisor (distal), right and left second incisors (mesial), right canine (mesial), and right third premolar (buccal). In total, 71% of teeth present have carious lesions. Antemortem loss of teeth has occurred in the mandible in all positions distal to the left canine and the right first molar, probably related to caries. The right first molar has almost been lost, and it is affected by caries and abscess. The anterior mandible shows advanced periodontal disease, with significant resorption of the alveolus.

Linear enamel hypoplasia indicates several episodes of stress in this individual. Two hypoplastic bands were observed on the maxillary right second incisor and right third premolar (a peg tooth), and the mandibular right canine. Single hypoplastic bands are present on the maxillary canines and mandibular right second incisor. These bands indicate that this individual experienced at least five episodes of stress at the approximate ages of 2.62, 2.94, 3.5, 4.27 and 4.91 years. Pitting hypoplasias are also present on the maxillary canines. Hypocalcification is present in the form of white opacities on the maxillary right second incisor, left canine, left premolars and left first molar, and on the mandibular first incisors.

The mandibular incisors of this individual have been filed. The central incisors are filed into the B4 pattern (discussed above), and the second incisors are filed into the C5 pattern (Romero 1970).

SC-85 Burial 3 is the interment of a 10-12 year-old, as determined by epiphyseal fusion and dental development. The skeletal remains are fragmentary, and weathering has caused spalling of the outer table of the cortex. No skeletal pathologies were observed, but the condition of the cortex

precludes a definite statement that pathologies are absent.

This individual has complete dentition present, including three deciduous second molars (the maxillary left deciduous second molar had been lost antemortem). A carious lesion is present on the buccal side of the maxillary left second molar, halfway between the cervicoenamel junction and the occlusal surface. Slight calculus rings the maxillary incisors and first molars. The mandibular teeth display heavy calculus on the labial and lingual surfaces of the incisors, and moderate calculus rings on the deciduous second molars and permanent first molars. Linear enamel hypoplasia occurs in three bands on the maxillary right first incisor and second incisors, in two bands on the maxillary left first incisor, canines, and fourth premolars, and in one band on the maxillary third premolars, and the mandibular left canine and right premolars. Estimated ages of stress indicated by these hypoplasias are 0.87, 2.05, 2.64, 3.14, 3.78 and 4.80 years of age. Pitting hypoplasia is present on the mandibular canines.

SC-85 Burial 4 is a child, aged 4 years \pm 1 year on the basis of epiphyseal fusion and dental development. The skeletal remains show some weathering in the form of slight cortex spalling, but the skeleton is moderately complete. A slight healed periosteal infection is evident on the left radial diaphysis. This individual shows no evidence of childhood anemia.

Cariou lesions are present on the maxillary deciduous left canine (labial), deciduous left first molar (ring), deciduous left second molar (lingual) and deciduous right second molar (buccal). The mandibular deciduous second molars also bear carious lesions.

Deep linear enamel hypoplasias are present on many of the permanent teeth, whose crowns are not fully developed (Figure 9.1). The maxillary incisors, canines and first molars and the mandibular incisors, canines and right third premolar are affected. The age of occurrence of these hypoplasias cannot be estimated using the Goodman and Rose (1990) method, as the crowns are not fully formed.



Figure 9.1: Dentition of the individual from Burial 4, showing severe linear enamel hypoplasia.

SC-85 Burial 6 is the interment of a male adult, aged 18-25 years by the criteria of cortical thickness, lack of degenerative bone changes, and dental attrition. Preservation is fair, with many elements in a fragmentary state and incomplete dentition. Gummy weathering of the cortex has affected many elements, especially the arms. A slight woven bone infection was observed on the left femur and tibiae around midshaft. This infection was healed at the time of death. This individual bears no skeletal

evidence of childhood anemia.

Nine teeth were recovered from this individual. Caries is present at the cervicoenamel junction of the mandibular left canine (linguodistal) and left third premolar (distal), and on the distal enamel of the right third premolar. The mandibular right canine has three bands of linear enamel hypoplasia, at the approximate ages of 2.09, 2.97 and 4.97 years. Heavy calculus is apparent on the maxillary second incisors and mandibular right first incisor.

SC-85 Burial 8 is that of a male, 24-30 years of age. Age was determined based on cranial suture closure and dental attrition. Preservation of this individual is moderate to good, with diaphyses fragmentary but present. An active periosteal infection is present on the diaphyses of the right radius, ulnae, and left fibula. The right tibia shows healed infection around midshaft. There is a bony callus measuring 2.9cm supero-inferior by 1.2cm medio-lateral on the anterior midshaft of the right tibia, probably the result of minor trauma. One lumbar vertebra shows lipping on both superior and inferior lips of the posterior centrum, with curved spicules on the superior lip.

This individual has no caries or linear enamel hypoplasia on the 25 teeth present. The absence of most of the incisors and canines may be affecting the assessment of linear enamel hypoplasia; only the maxillary right canine, mandibular second incisor, and mandibular left canine are present. All premolars are present. Hypocalcification in the form of white enamel opacities was observed on the mandibular premolars and first molars. Maxillary canines and premolars, and mandibular premolars and molars show slight calculus at the cervicoenamel junction.

SC-85 Burial 9 contains the remains of a female, aged 30-34 years on the basis of the right auricular surface of the ilium. The cranium and dentition were not recovered, nor were the arms except for the right radius and ulna and both hands. A slight healed periosteal reaction is visible on the fibulae around the midshaft of the right fibula and across two-thirds of the left fibular diaphysis. The tibiae are more weathered than the fibulae, with striations and linear breakdown of the cortex, so this infection may be present on the tibiae also and not be observable. The right ulna also has a healed infection on the inferior half of the diaphysis.

Discussion

The patterns of pathologies for individuals interred in both of these housemounds are very similar. Childhood health can be evaluated by evidence for anemia and by enamel hypoplasias and hypocalcifications of the teeth, which indicate episodes of illness. In addition, evidence of infection on the children in this sample can be used to summarize childhood health. The pathological indicators show that while iron deficiency anemia was apparently not a problem in this community, childhood illness was relatively frequent and sometimes severe.

Porotic hyperostosis can only be evaluated for 4 of the individuals interred in Structure SC-85, and for none of those interred in Structure SC-18. 75% of those individuals that could be evaluated do not bear skeletal evidence of childhood anemia. Analysts have frequently found that anemia is widespread in lowland Maya populations, particularly in nonelite samples such as these individuals from Saturday Creek. The low incidence of porotic hyperostosis in the Saturday Creek individuals suggests that inadequate nutrition or lack of access to protein sources was not a problem for this population.

The data for enamel defects present a somewhat different picture. Since linear enamel hypoplasia most frequently affects the anterior teeth, individuals with all anterior teeth present were separated from those with only some anterior teeth present for construction of frequencies. Structure SC-85 has three individuals with all anterior teeth present (Burials 1, 3, and 4). Frequencies of linear enamel hypoplasia are 42%, 58% and 100% of anterior teeth, respectively (Figure 9.2). Burials 1 and 3 also have a high percentage of teeth with multiple episodes of linear enamel hypoplasia on one crown. All of these individuals have additional linear enamel hypoplasias on the posterior teeth. Incidence of linear enamel hypoplasia is lower (measured in % of teeth affected of anterior teeth present) for those individuals in Structure SC-85 for whom only some anterior teeth are present (Burials 6 and 8), but this may be a function of sampling error. In particular, the maxillary first incisors are absent for both of these

individuals, which may be significantly affecting the percentages. Burial 6 shows linear enamel hypoplasia on 20% of anterior teeth present, and all of these teeth have multiple hypoplastic bands. Burial 8 shows no linear enamel hypoplasia on the three anterior teeth present. Overall, the incidence of linear enamel hypoplasia is high for the individuals in this structure, and often includes evidence of multiple stress episodes on a single tooth. The stress episodes recorded by linear enamel hypoplasias range in timing from less than one year to almost 5 years, occurring most frequently between 2 and 3 years (Figure 9.3).

None of the individuals in Structure SC-18 have a full set of anterior teeth, so any percentages obtained from these 3 individuals may be more affected by sample bias. The most complete set of anterior teeth is that of the individual in Burial 5, for whom we have 8 anterior teeth. Linear enamel hypoplasia is present on 63% of these teeth, and 50% of the anterior teeth present have multiple hypoplastic bands. This individual therefore also falls within the range of occurrence established by the individuals from Structure SC-85 for whom all anterior teeth are present. The individuals from Burials 2 and 7 have 3 and 1 anterior tooth present respectively, and show no linear enamel hypoplasia on any of these teeth. Clearly, percentages of linear enamel hypoplasia rise in this sample the more complete the anterior tooth set. If we take the most complete sets from both structures, a similar pattern of high incidence of linear enamel hypoplasias and frequent multiple hypoplastic bands emerges. From this limited data set, no difference can be discerned in this pattern between individuals from the two structures.

Pitting hypoplasias occur more sporadically throughout this sample, as is generally the pattern in comparison to linear enamel hypoplasia. Individuals from Burials 1 and 3 (Structure SC-85) each have 2 canines (maxillary for Burial 1, mandibular for Burial 3) with arrays of hypoplastic pits. The individual from Burial 5 in Structure SC-18 has pitting hypoplasia on the mandibular right canine. With the exception of Burial 4, which is the most severe case of linear enamel hypoplasia in this sample, all individuals who do not have pitting hypoplasias do not have a complete set of anterior teeth, and particularly do not have 4 canines present. This fact is probably causing sample bias in the evaluation of this enamel defect.

Hypocalcifications, or enamel opacities, occur more frequently on a wider range of teeth than hypoplasias, so for this enamel defect the entire dental arcade is included in the construction of frequencies. Hypocalcifications are present in the dentitions of three individuals in this sample (Burials 1, 5, and 8). From Structure SC-85, 37% of all teeth present have hypocalcifications for the individual in Burial 1, and the individual in Burial 8 has hypocalcifications on 26% of all teeth present. The individual in Burial 5, in Structure SC-18, has hypocalcifications on 45% of all teeth present. It is difficult to establish any patterns with such a small sample size, but the incidence of hypocalcifications seems to follow that of hypoplasias in being moderately high. Since we have seen that anemia did not seem to be a pervasive problem for this population, the stressors indicated by the enamel defects likely stem from environmental conditions such as heavy disease and/or parasite load. This is a common situation in the Maya lowlands.

The evidence for childhood infection parallels that of the enamel defects in suggesting a high infectious disease load. The sample of subadults includes a 4-year-old interred in Burial 4, and a 10-year-old interred in Burial 3, both in Structure SC-85. One adolescent was interred in Burial 2 of Structure SC-18. Preservation conditions prevent assessment of periostitis on the skeletal remains in Burial 3. Both the child and the adolescent show evidence of infection, which is of a more chronic nature on the adolescent.

The continuation of episodes of infection into adulthood is clearly indicated in this sample. Most of the adults in this sample show extensive chronic infection, although severe cases are not frequent. Most of these infections show healing. 50% of the adults in SC-18 show infection of the legs (Burial 5 is a severe infection), and 100% of the adults in SC-18 show infections of the arms and/or legs. Since an individual must suffer an infection for some time before skeletal involvement occurs, and because most of the infections in this sample show some healing, it is apparent that individuals in this community suffered a heavy disease load but were well enough equipped to survive such infections for some time. This supports the lack of evidence of anemia in suggesting adequate nutrition, so that individuals were healthy enough to be somewhat buffered against threats to their immune systems.

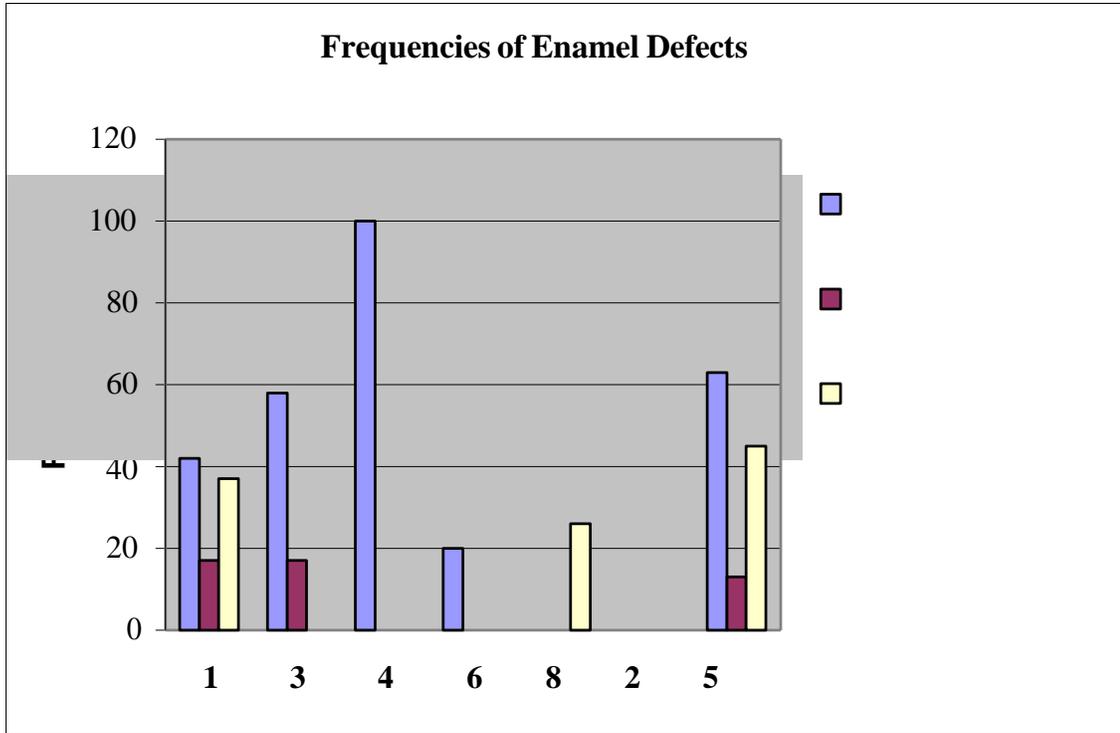


Figure 9.2: Frequencies of enamel defects. Burial numbers are indicated along the bottom row.

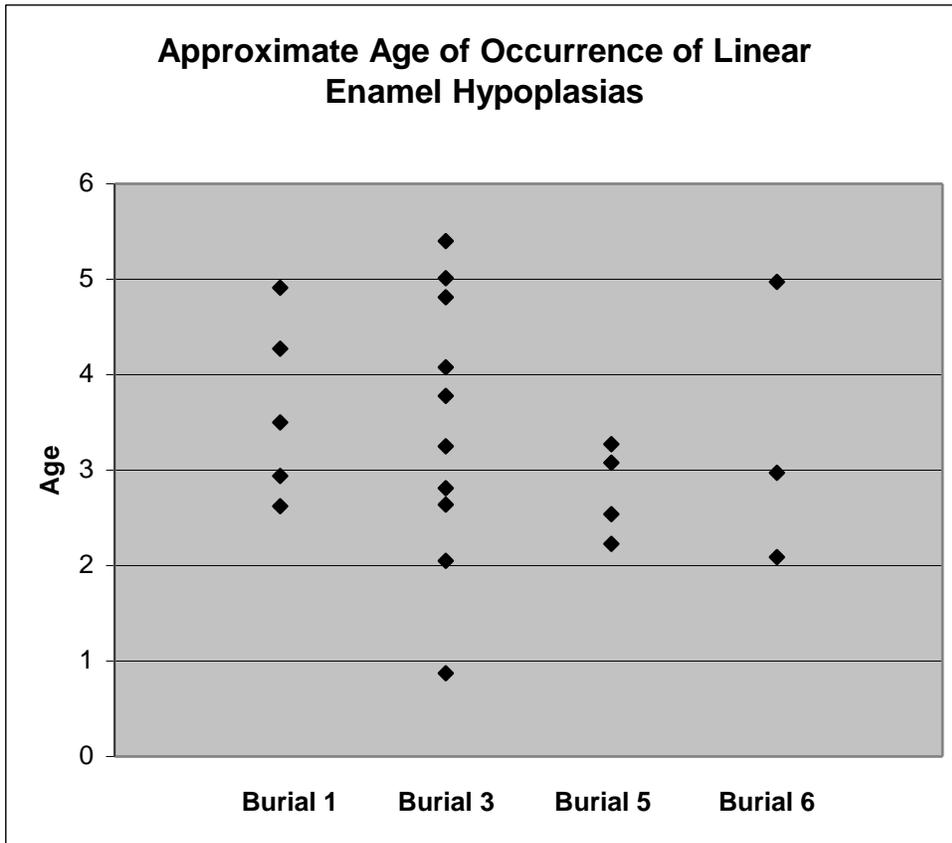


Figure 9.3: Approximate age of occurrence of linear enamel hypoplasia.

The frequency of caries was calculated using Erdal's (1999) proportional correction factor. This corrects for the number of anterior and posterior teeth present, and also accounts for differential susceptibility of anterior and posterior teeth to caries. The incidence of caries in the permanent dentition of the adult individuals shows a range from moderate to heavy, with the exception of the individual interred in Burial 8, who has no caries (Figure 9.4). The permanent dentition of the subadults shows a much lower incidence of caries. The 10-12-year-old of Burial 3 is the only subadult with caries in the permanent dentition, at the rate of 3.75%. However, the individual in Burial 4, who as the youngest child in this sample retains the most deciduous dentition, has a high rate of caries on the deciduous teeth. This suggests that caries rates in the permanent dentition are related to frequency of carbohydrate consumption over the span of adult life (Whittington 1999:152). The 100% caries rate in the oldest individual in this sample, the 40-50-year-old individual in Burial 4, supports this suggestion. With the exception of Burial 8, the rate of caries increases with age. There is a slight tendency for higher caries rates in females, but this sample is too small to show any significant differences by sex. Caries rates in this sample conform to those of populations dependent on carbohydrate staples, like maize. The moderate to high incidence of calculus also indicates a carbohydrate-reliant diet.

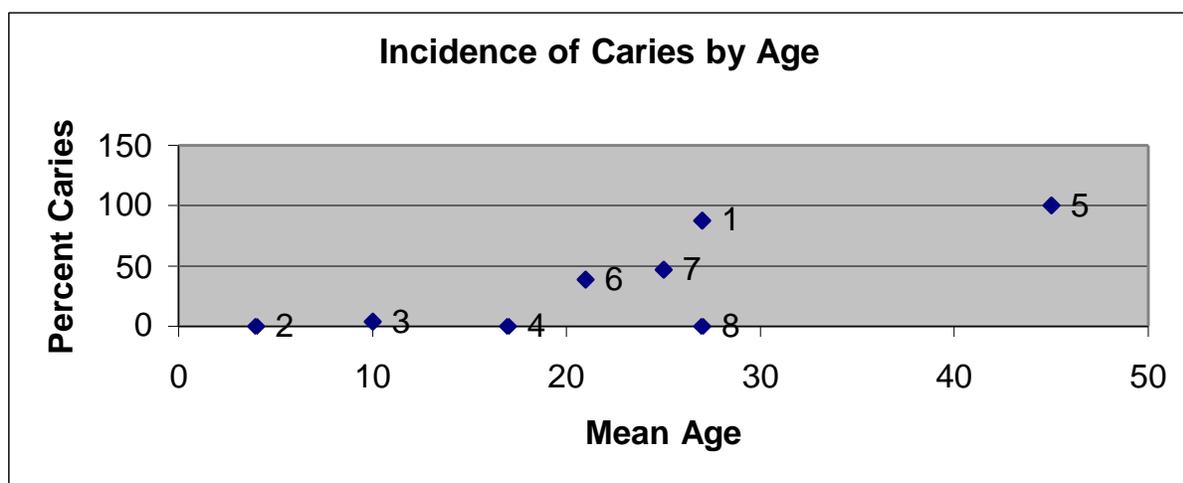


Figure 9.4: Frequency of caries, arranged by age. Note the general increase in incidence of caries with age.

The pathologies represented among these individuals do not show sex differentiation, suggesting that in the nonelite community of Saturday Creek, preference of males probably did not extend to differential eating patterns or differential susceptibility to health problems. A larger sample size is required to test significant patterns of sex differentiation.

Pathologies represented in this population follow to some extent those common in the Maya nonelite population, including several episodes of nonspecific stress in childhood and a relatively high disease load. However, incidence of iron deficiency anemia, a problem associated in part with reliance on maize as a dietary staple and exacerbated by a heavy parasite load in the environment, is very low at Saturday Creek. This suggests that the nonelite population here may have had a diet with greater variety and a larger protein component than at other Maya sites in the Belize Valley and the Peten. Stable isotope analysis is currently being conducted to explore the diet of this community and its effect on health status. Overall, the Saturday Creek community fits in well with traditional patterns of mortuary ritual and health status in the Maya lowlands. Further excavation and a larger sample of burials from this community will assist in the elaboration of cultural patterns and treatment of ancestors at Saturday Creek.

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