

FORM AND FUNCTION OF CLASSIC MAYA RANGE STRUCTURES:  
THE CASE OF STRUCTURE B7 AT CAHAL PECH, BELIZE

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By

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## ABSTRACT

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When describing large monumental buildings throughout the Maya region, scholars were using the term *palace* but it was too broad and suggested a residential function. Instead, Mayanists introduced the term ‘range-type structure’ to emphasize the architectural masonry and features without denoting function. Range-type structures are proved to have had many types of functions, both domestic and non-domestic, and could have had more than one function during the same time.

This research focuses on defining the form and function of the terminal phase architecture of Structure B7 located in the largest plaza of Cahal Pech, Belize. Most of Plaza B, and other parts of the site, have been excavated and analyzed, except for Structures B6 and B7. These conjoining structures define the northern boundary of the site core, but their form and function have not been defined. The following data discusses the architectural and archaeological evidence gathered during two consecutive field seasons and argues that Structure B7 had an administrative role during its last days of occupation.

Epigraphic and iconographic evidence support the administrative function, as well as the archaeological evidence collected from the plaza floor excavations and summit excavations. The materials collected shed light on the types of activities that occurred inside the structure, as well as close by from the Plaza level. The information presented in

this thesis enhances the knowledge of Late Classic administrative structures in the Western Belize Valley region and the southern Maya Lowlands.

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## TABLE OF CONTENTS

Abstract.....	iv
Acknowledgments .....	vi
List of Figures.....	x
Chapter	
1. Introduction.....	1
Research Objectives.....	6
Thesis Overview .....	7
Significance.....	8
2. Range Structures .....	9
Range Structures as Residences.....	9
Ritual Activities in Range Structures.....	12
Range Structures with Thrones.....	14
Administrative Range Structures .....	18
3. Belize River Valley Background .....	20
Upper Belize Valley during the Classic Period .....	21
Xunantunich.....	21
Buenavista del Cayo .....	22
Baking Pot.....	22
Cahal Pech .....	24

Site Description.....	24
Previous Investigations .....	24
Classic Period Architecture.....	26
4. Investigating Structure B7 of Cahal Pech.....	28
Methodology.....	30
Structure B7’s Construction Sequence .....	32
Plaza Floor Level .....	32
Western Façade of Structure B7 .....	35
Previous Construction Stages .....	40
5. Artifact Analysis .....	42
Ceramics .....	43
Lithics .....	45
Groundstone.....	47
Other Materials .....	47
6. Discussion and Conclusion .....	50
Architectural Form Defined.....	50
Associated Artifacts and Preliminary Inferences of Function .....	52
Conclusion .....	52
References.....	54
Appendix - Oversized Figures .....	60

## LIST OF FIGURES

Figure	
1. Glyph for “house,” nah and ootoot (Stuart 1999). .....	10
2. Front edge of Lintel 25 at Yaxchilan (Graham and Von Euw 1977:56, McAnany and Plank 2001:106). .....	11
3. Uaxactun painting showing ritual activity (Smith 1950, Miller 2001:209). .....	13
4. Seated ruler on a throne (K767). .....	16
5. Sacrificial victims are presented to a seated ruler on a throne (K680). .....	17
6. Seated figure on throne partaking in ritual drinking (K1453). .....	17
7. A political act of tribute being offered and recorded by administrative member (K5453). .....	18
8. Cahal Pech Plaza B. .....	28
9. Profile drawing of Str. B7. .....	33
10. Narrow 20 cm wide architectural transition between Str B6 and B7, looking eastward; trowel points north. ....	34
11. 70 cm space between structure B7 (left) and B6 (right), view looking south. ....	36
12. Profile of narrow inset staircase. ....	37
13. Highest section of the central wall located on northern façade. ....	38
14. Central doorway and domino stones under tree roots, looking towards north. .....	38
15. Bench-like feature in eastern side of superstructure, trowel points north. ....	39
16. Drawing of penultimate architecture exposed in test pit. ....	41

17. Types of vessels represented by diagnostic sherds collected at plaza level units.....	43
18. Barton Ramie ceramic phases represented. ....	44
19. Ceramic groups represented within Spanish Lookout phase. ....	44
20. Quartzite biface fragment found in Unit 6.....	46
21. Yellow chert preform biface from Unit 7. ....	47
22. Modified shell pendant found on summit. ....	48
23. Star-shaped shell pendant from Unit 14.....	49

## CHAPTER 1

### Introduction

The first descriptions of Maya architecture were offered by the earliest explorers in the sixteenth and seventeenth centuries. Their narratives included descriptions of the architecture, “a form of construction they had seen nowhere else in the New World” (Pollock 1940:179). In the 1840s, Stephens (1841, 1843) and Catherwood (1844) explored Maya ruins and provided descriptions and illustrations of the ancient monuments in their abandoned form. In the 1880s, the first archaeologist, Alfred Maudslay, published material that focused on Maya architecture and also provided accurate illustrations and reports of his excavations (Maudslay, 1883). Pollock (1940) describes Maudslay’s work as modern and takes note of Maudslay’s “value of combining early documentary material, geography, ethnology, linguistics, mythology, and archaeology in the recovery of history.” Others, like E.H. Thompson (1889, 1897) and Teoberto Maler (1901, 1903) are worth mentioning, but their records are not strictly architectural, however, their photographs of the monuments are useful towards understanding the material.

Monumental architecture was finally classified into types based on ethnographic and linguistic areas by Karl Sapper (1895) in the 1890s. An ethnographer and geographer, Sapper also took into account the environmental effects, functions of the sites and structures, as well as their orientation, construction practices and designs that would reveal cultural associations and migrations (Sapper 1895). Around the same time, Eduard Seler (1915, 1917) was writing about possible functions of the buildings by incorporating the mythology and religion of the area. During this time period,

developments in comparative studies, chronological information using hieroglyphic information, as well as the methods and techniques were all increasing. In 1895, Samuel Holmes (1895-1897) understood the importance of reconstructing the history and lives of the ancient cultures to better understand the art and architecture under investigation. Holmes was the first to discuss the architecture in terms of its construction and masonry, treating it as a separate and important subject. Another great contribution to Maya architecture was provided by Herbert J. Spinden (1913). Spinden was able to analyze architectural styles and development by regions and various sites, offering a chronological timeline in art and architectural forms. This forty-year period of research, laid the pathway for the development of methods and techniques in understanding Maya architecture. Researchers were establishing a chronology of art forms and stylistic attributes, as well as understanding some of the functions of the architecture.

As research continued throughout the mid-1920s to late 1930s, Mayanists continued to explore architectural changes through time and space. Satterthwaite, Morris and Roys, were able to show the variant styles of architecture within the same region, and how masonry and construction were evidence of chronological and cultural change (Satterthwaite 1936, 1937, 1938, Morris 1931, Roys 1934). Architectural remains were finally beginning to be identified, named and given a function. Buildings like observatories, were identified as having astronomical correlations (Pollock 1940), sweat houses, temples, ceremonial structures, house mounds and residential sites were also categorized. However, Pollock was quick to realize that even though these advances in architectural research were beginning to gain momentum, there were some problems in the interpretations of the buildings. The comparative method was heavily relied on, but

Pollock stressed that Maya architecture was “concerned with the identity of cultures, with the contact and movement of cultures, and with adequate chronology, exact or relative, that will give order to otherwise unrelated facts and events” (Pollock 1940:198), and the applied method was not factoring in elements like “variety of causes, such as time, environment, culture, and function of buildings” (Pollock 1940:198). Furthermore, he suggested that “[...] we should have an inclusive, even though superficial, knowledge of the architecture as a whole before giving too much attention to the character and interrelationship of local forms” (Pollock 1940:199). Pollock continued to publish research on Maya architectural studies and was able to establish ten distinctive areas of architectural styles within the Maya lowlands (Pollock 1965).

In the 1930s, archaeology was mostly a male-dominated field, however, Tatiana Proskouriakoff made some of the biggest contributions that are still appreciated today. Proskouriakoff would use her drafting skills to reconstruct monumental architecture in the Maya region and was eventually offered to work at the Carnegie Institution of Washington. Her drawings of Piedras Negras caught the attention of other chief contributors, and she was hired to draw the remains of major sites, including: Uaxactun, Tikal, Palenque, Copan, Xpuhil, Sayil, Labna, Kabah, Uxmal, and Chichen Itza. Twenty-nine of her best drawings were published in a book, *Album of Maya Architecture* (Proskouriakoff 1946). Proskouriakoff’s drawings are considered to be the best representations of what the eroded structures once looked like in true form.

Large monumental structures were first identified as ‘palacios’ by the Spanish and first explorers, like J.L. Stephens (Christie 2003). The “palace” term was convenient when describing large elaborate masonry buildings and to distinguish them from the

temple buildings and ball courts (Christie 2003). However, the term was used for single structures as well as complexes of buildings and were assumed to be the residences of kings and the royal court. Mayanists soon realized that all types of construction categorized as a “palace” were not all residences and had other functions, like ritual and administrative (Webster 2001). Also, not all structures and complexes were associated with the royal elites and court, and therefore could not be categorized as palaces. These non-royal elite residences and buildings with non-residential function have the same architectural characteristics as royal palaces but functioned differently. The ‘palace’ term was too broad and needed clarification; one that did not imply function.

The term ‘range-type structure’ was introduced to emphasize form without making functional implication (Coe 1967:55 in Harrison 1970:204). “A Range structure is composed of rows, or ‘ranges’ of rooms, organized in variable arrangements” (Seibert 2006:108). Harrison draws upon the ranges of rooms and their orientation; whether or not they are facing in the same direction or in opposite directions (1999:185-86). A range structure can be a single building or part of a complex, or plazas, that include other range structures and non-range structure buildings.

When analyzing the function of a structure, or the built environment, there are more elements to consider other than just the architecture itself. It is difficult to understand the function and meaning of a structure solely based on the architectural form that is left standing in abandoned sites. Therefore, archaeologists have employed the material collections found within the structures to draw inferences of possible functions, as well as epigraphic and iconographic evidence recorded on various types of preserved mediums like painted vessels, murals, and etched stone stelae.

Since archaeologists have the habit of looking for patterns in the built environment, it is easy to see that “structures are not alike in their contents” (Chase and Chase 1994:299). The archaeological contents play an important role when analyzing function and can offer greater insight to the ritual activities that occurred in the buildings, as well as how these activities shifted overtime and what that may infer regarding societal change and organization. Ritual activities can be represented by caches, human burials and terminal offerings (Chase and Chase 1994:300). Human burials are often found in tombs and these tombs are considered to be sacred space. Evidence of burning can symbolize the act of destruction or activation of a building, whether it is on the floor, building or burned artifacts in caches (Chase and Chase 1994:324). These ritual activities give insight to their associated space and/or buildings and furthermore, human behavior.

The built environment is also depicted in art forms: drawings and illustrations of buildings are found painted on pottery, palace scenes with seated figures interacting with others, and three-dimensional models of buildings in stone and clay sculptures. For example, multiple drawings of buildings are etched into the architectural walls at Tikal. Some of these artistic drawings, also known as *graffito*, show structures with thatched rooftops and others with a built superstructure (Webster 1963:1). Webster notes that these depictions show that “not all important buildings at Tikal had masonry roofs” (Webster 1963:4). These sketches have been studied and analyzed under different lenses, considering their distribution patterns, themes, locations and time period. The sketches have been found in buildings predating the Late Classic period that were covered and built over and were exposed by archaeological excavations, offering ideas regarding structural function and endurance (Triak and Kampen 1983:4). “The depictions are useful

to us precisely because they show frozen vantage points and, in their details, provide a highly selective winnowing of architectural features” (Houston 1994:334). These depictions are insightful towards understanding how the built environment was used, and essentially how buildings functioned.

The ancient Maya are commonly known for their unique hieroglyphic writing system found on stone sculptures, painted pottery and even large staircases. The “dedication texts” are inscriptions that play an important role in understanding some of the activities that occurred, as well as architectural function, and is used to “commemorate the ownership or manufacture of venerated things” and “mark[ed] the political, social, or ritual activation of an object or monument” (Stuart 1999:374).

The typological category delineated as a “Range Structure,” will be used throughout the analysis and argument of this thesis, however, it does not imply function. Rather, it is through a multidisciplinary approach that utilizes the archaeological, epigraphic and iconographic record that will be employed in order to draw conclusions regarding a structure’s function(s). Range structures have been identified throughout the Mesoamerican region. This thesis focuses on a range structure in the Southern Maya Lowlands at the site Cahal Pech in Western Belize, Structure B7.

### *Research Objectives*

The main objective of this thesis is to define the form and function of Structure B7’s terminal phase architecture. The first goal was to gain a better understanding of range structures in public plazas during the Late Classic Period. The second goal was to identify the form of the terminal phase architecture of Structure B7 through horizontal excavations on the plaza floor and summit. The third goal was to analyze the function of

the structure through analysis of its form, features, and associated artifacts. The archaeological data, coupled with epigraphic and iconographic evidence, would suggest an administrative role during the Late Classic Period.

### *Thesis Overview*

In order to argue an administrative function for Structure B7, I have organized this thesis into multiple chapters to address the archaeological, epigraphic and iconographic evidence of range structures during the Late Classic period. Chapter 2 will expand on the definitional parameters of what a range structure is, the types of range structures in the southern Maya lowlands, and their functions based on epigraphic and iconographic evidence. Chapter 3 is an overview of the regional area in question, the Upper Belize Valley, presenting the historical context as well as archaeological evidence of other Late Classic period range structures within the area. Here, I will also introduce Cahal Pech, the ancient Maya site where Structure B7 is located. Chapter 4 presents the excavations I conducted on Structure B7 during 2013 and 2014 field seasons. The architectural data is presented as a construction sequence describing the remains of the terminal phase architecture, while also offering suggestions to its complete form during its final days of occupation in the Terminal Classic period (A.D. 850-950). The artifact assemblage is presented in Chapter 5, organized by artifact class and location. Location is separated by plaza floor and summit excavations since they were conducted in consecutive field seasons. Structure B7's form will be discussed furthermore in the first half of Chapter 6, followed by an evaluation of the structure's function. Conclusively, given the analysis of the architectural features and their association to certain artifact

assemblages, this information will support the idea that Structure B7 played an administrative role during the Late Classic period.

### *Significance*

This research is relevant to the study of range structures of the Late Classic Period, especially the Upper Belize Valley. Cahal Pech's main Plaza B has been mostly excavated, except for the northern perimeter structures B6 and B7. An abundant amount of data from Plaza B has been recorded and published primarily on the Eastern triadic pyramidal group (or "E Group") and southern boundary structures B4 and B5, offering a chronological timeline of the public plaza since its earliest occupation (Cunil Phase 1200-900 B.C) to its Terminal Classic occupation. The excavations conducted on Structure B7 is the first documented analysis of the northern perimeter of the plaza, therefore, it serves as a preliminary contribution to fully understanding Plaza B during the Late Classic period.

## CHAPTER 2

### Range Structures

The term ‘range-type buildings’ was first introduced by Coe (1967) while describing the structural complexes within the Central Acropolis in Tikal. The multiple “long, low-lying buildings of one, two and three stories, often containing many rooms” (Coe 1967:55) that surrounded the Central Acropolis could not all be palaces and required an objective term and definition since their true functions were still unknown. Coe recognized that some of the structures were facing toward the court, while others were facing outward toward an adjacent court. With so many buildings within the acropolis, they all could not have served the same purpose and ‘range-type building’ emphasized form without implying function. Harrison (1970, 1999) expanded on the various ‘ranging’ of rooms on a longitudinal axis in a single line, their orientation facing in the same or opposite directions, and the attributes found within the structures. These observations in turn led to a better understanding of some of the types of range structures and their function. However, it is important to clarify that form does not always assume function and there are many more elements to consider other than the architectural properties themselves.

The goal of this chapter is to discuss the four types of range structures – residential, ritual and ceremonial, range structures with thrones, and administrative – found in the southern Maya lowland region using epigraphic and iconographic examples.

#### *Range Structures as Residences*

The ancient Maya are commonly known for their unique hieroglyphic writing system found on stone sculptures, painted pottery, and murals. The “dedication texts” are

inscriptions that play an important role in understanding some of the activities that occurred, as well as architectural function, and is used to “commemorate the ownership or manufacture of venerated things” and “mark[ed] the political, social, or ritual activation of an object or monument” (Stuart 1999:374). One architectural term that has been deciphered and understood to be used for dedication ceremonies is the glyph for “house,” *nah* and *otot* (Stuart 1999:376; Figure 1). The *nah* term can also be translated as “building” or “structure,” or specifically “house” or “household group” (Stuart 1999:376). The *otot* term is typically translated as “dwelling,” and it is usually prefixed with a possessive pronoun, like, “my home,” or “their homes” (Stuart 1999:376). There are many variants in the glyphs and depending on how it is written could determine the type of “building” or “dwelling” it was. More importantly, who was it dedicated to and belonged to when it was built.

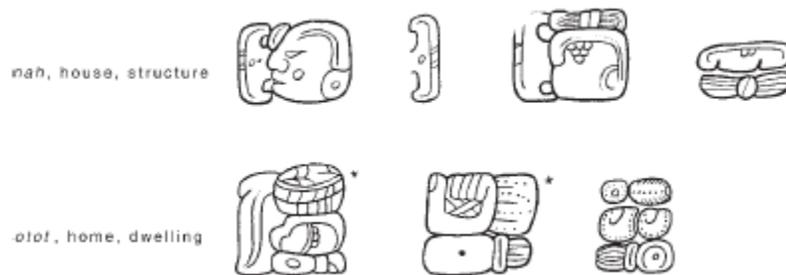


Figure 1. Glyph for “house,” *nah* and *otot* (Stuart 1999).

At Yaxchilan, there are dedicatory examples of residence with the *oto:t* glyph, or *y-oto:t*, meaning “his/her/its house”. These glyphs show ownership to female figures, which is not seen very often in Maya inscriptions. Furthermore, a specific woman, Lady Xok, is named in Lintels 23, 24, 25, 26 of Structure 26 with the *y-oto:t* glyph. Lady Xok is shown in the lintels with her husband Itsamnah Balam (Shield Jaguar) which include

eight dates spanning forty-five years (McAnany and Plank 2001). Lintel 25 describes the house of Lady Xok stating (McAnany and Plank 2001:106-7; Figure 2):

**yo-O:L-la TAN-na-IL TAN-HA' "Yaxchilan"**  
*y-o:l-tan ha' Yaxchilan*  
 "he/she/it is the *o:l-tan* of Tan-Ha' Yaxchilan

This glyphic text has been interpreted as "Lady Xok's house is the heart/center of Tan-Ha' Yaxchilan", placing Tan-Ha Yaxchilan architecturally at the epicenter of the city. McAnany and Plank (2001:107) conclude that Lady Xok and her house had a guiding influence on how Itsamnah Balam ruled his city politically and perhaps spiritually with her at the center of the site.

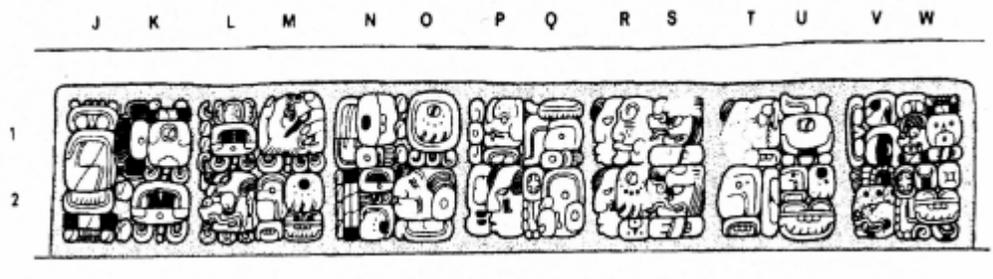


Figure 2. Front edge of Lintel 25 at Yaxchilan (Graham and Von Euw 1977:56, McAnany and Plank 2001:106).

A great example of the *nah* and *otoot* glyphs found on painted pottery comes from the vessel found beneath the west stair of Structure 5D-46 at Tikal. The inscription was painted on the lid of a polished black carved cache vessel and reads: "Jaguar Claw the Great, ruler of Tikal, his house" (Harrison 2004:119). This inscription was translated by Linda Schele and supported Harrison's archaeological data that the structure was indeed a permanent residence. Through his excavations, Harrison observed how the structure underwent renovations, adding a second story and an interior staircase to the original

east-west facing structure, and eventually dividing the structure into two parts in its final construction phase after A.D. 700 (2004:119). Doorways within the structure were sealed to create an eastern residential complex and a ceremonial area facing towards the west (Harrison 2004:119-120). These examples of glyphs show how range structures could be designated with a residential function. Furthermore, Structure 5D-46 example shows how a structure could have more than one function; residential and ceremonial.

### *Ritual Activities in Range Structures*

Rituals and ceremonies occurring in and around range structures are clearly documented in the epigraphic and iconographic records. In fact, range structures are the most represented type of monumental architecture in painted form, thus, offering colorful depictions of the various types of rituals and ceremonies that were performed, who was involved, and where they took place within the structure. Some rituals meant for public viewing, like state ceremonies, would occur on the broad stairways and terraces of the range structure complexes. These types of ceremonies gathered large audiences to witness events such as the presentation and sacrificing of war captives, musical performances, and dances. Other types of rituals were more private and took place within the rooms. A couple types of private rituals are royal visits and dressing in performance clothing (Miller 2001).

An example of a royal visit taking place inside of a range structure is depicted in a mural from Uaxactun showing a visitor in Teotihuacano styled attire receiving a cordial welcome with women in a seated position and multiple musicians overlap one another welcoming the individual (Miller 2001:209; Figure 3). This mural represents a more

private intimate setting indicating which members of the court were allowed to witness this type of ritual presentation of a visitor.

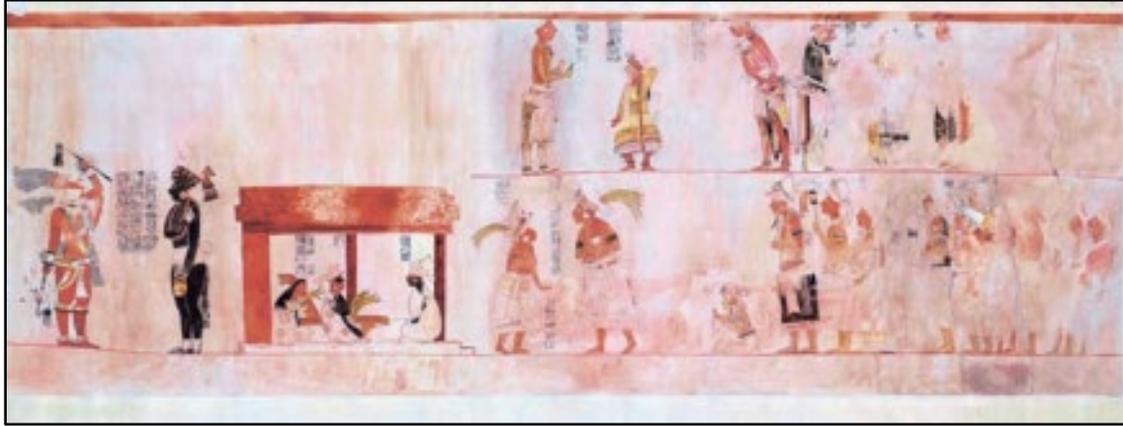


Figure 3. Uaxactun painting showing ritual activity (Smith 1950, Miller 2001:209).

Similar to the Uaxactun murals, the Bonampak murals are a great representation of the various types of courtly activities, ritual and ceremonial, that took place inside structures rather than in a more public setting. Room 1 displays a scene of a tribute paid in cacao beans by lords dressed in white pledging their loyalty to the royal family (Miller 2001:210). The dressing ritual is also represented in Room 1 showing ceremonial attire and headdresses stored in a vaulted room, while the individual (perhaps a Maya lord or a principal dancer) dresses before the ritual dancing ensued. (Miller 2001:210). Ritual dancing then proceeds outside in public space with musicians in an adjacent plaza or courtyard (Miller 2001:214-215); an act of public ritual performance for an audience to witness.

Public displays of rituals can be considered means of enjoyment and pleasure for audiences involved. Aside from ritual performances accompanied by musicians, sociopolitical powers were flaunted outside of range structures where audiences could

gather at the base of broad staircases to witness the presentation of prisoners and occasionally their sacrifices (Miller 2001). Elaborate ritual ceremonies like the ones discussed show multiple members of the court and a figure with high official status seated on a throne.

### *Range Structures with Thrones*

Most of the representations of thrones painted on ceramic vessels and murals have depicted people of higher status in courtly activities, such as the ones described above. The multitude of courtly activities showcase a variety of thrones with differences in decoration, elaborate stone carvings and masonry, hieroglyphic texts and decorative textiles honoring the seated individual. Furthermore, these attributes can be categorized geographically. For example, thrones in Tikal are described to be plain, simple, and less-decorated within the Maya lowlands, whereas in Palenque and Piedras Negras thrones are elaborately decorated (Harrison 2001:78-79).

The seated figure on the throne was usually someone of high status within the court, if not the ruler. The throne has many forms and functions, can be plain or highly decorated, can be portable, and positioned in various rooms within range structures. A throne built in the first chamber centrally located in a doorway with high visibility would offer someone, like a ruler, full control and accessibility to their court and visitors (Valdes 2001:150). Unlike a bench, which would be built in a rear room or not as visible, would be used for sleeping. However, interpreting function of benches and thrones based on position, or form, cannot be confirmed exclusively without considering other elements of functionality that the structure may have served.

The epigraphy of hieroglyphic texts has offered vital information about the function of thrones and whom they belonged to. There are carved thrones with glyph *te:m*, which has been translated to “high seat” (Harrison 2001:79); suggesting that the thrones are meant for those with higher status. This information in turn supports the painted scenes on polychrome vessels and murals, helping to identify that the seated individual in each scene is an important figure, if not the ruler.

The seated individual in ritual depictions have been identified as one of high status, therefore, the throne can then be associated with the ritual activities described above. As stated before, ritual activities can take place both inside and outside of range structures. For example, a seated ruler presiding over ritual scenes of official court visits and presentations of captives and their sacrificial rites can take place on broad staircases with a gathering of an audience (e.g. K767; Figure 4, K680; Figure 5). Other types of gatherings shown taking place inside of range structures are those related to royal visits, tribute or gifts, banquets and ritual drinking (Reents-Budet 2001:203; K1453; Figure 6). More specifically, Reents-Budet (2001:203) identifies these range structures as gallery-type buildings marked by their curtains, benches and a single line of stepped motifs below the vessels’ rims.

Range structures with thrones are also associated with political activities. A painted reception scene, such as the one from Burial 116 at Tikal, shows Hasaw Chan K’awil seated on a throne looking down at another character in a submissive position on his knees with his arms crossed over his chest. Another example is the scene in the Bonampak mural depicting Room 1, which shows the tribute of cacao beans being offered to the royal family on a throne (Miller 2001:210; see Figure 3). Political acts of

tribute to the royal family were also recorded on bark paper or leaves by administrative members (McAnany and Plank 2001:91), as demonstrated in a setting showing two individuals from Calakmul offering a bundle to a seated lord of Tikal with an individual in the act of record-keeping standing behind him (K5453; Figure 7). A form of tribute, or tax, is not only seen as a ritual act but is also political in nature incorporating an administrative role. Range structures with thrones can be inferred to have functions associated to ritual, political and administrative activities.



Figure 4. Seated ruler on a throne (K767).



Figure 5. Sacrificial victims are presented to a seated ruler on a throne (K680).

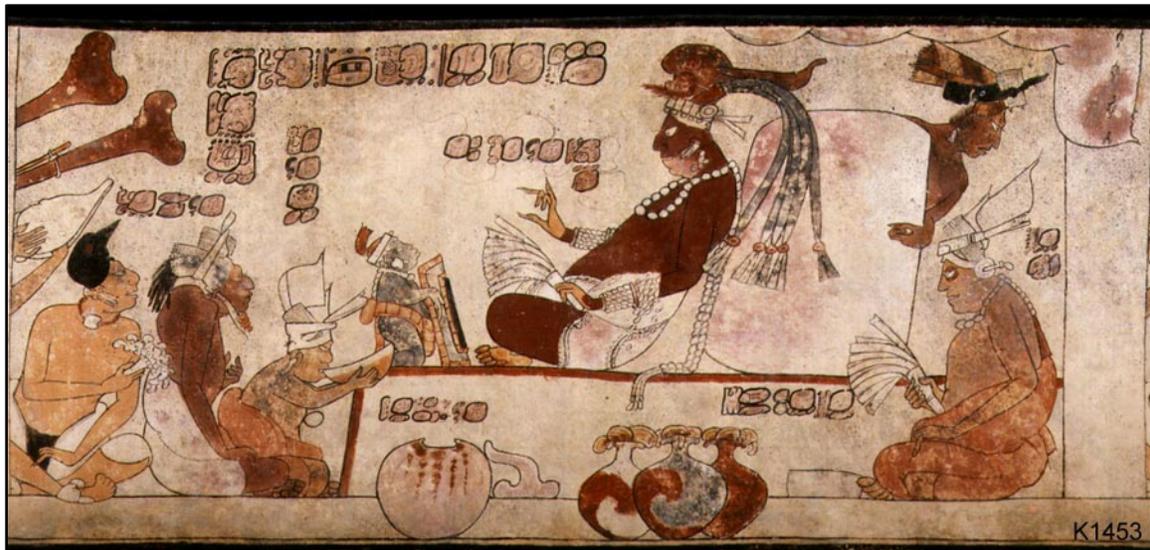


Figure 6. Seated figure on throne partaking in ritual drinking (K1453).



Figure 7. A political act of tribute being offered and recorded by administrative member (K5453).

### *Administrative Range Structures*

As previously mentioned in multiple examples above, the royal court performed activities in range structures that also included administrative duties. Members who performed these duties were most likely high-ranked officials who oversaw “polity administration, adjudication, diplomacy, ritual and ceremonial activities, artistic and scribal production, and attended to various needs of the royal family, ranging from food and clothing to entertainment” (Inomata 2001:28). However, Inomata (2001) makes a distinction between royal court members and bureaucratic roles claiming that they are separate and their official duties and personal connections to the royal family are predefined by polity administration and royal household management. Furthermore, specific duties and roles could be predetermined by recruitment, birthright and hereditary

lineage to the royal and noble classes, resources and personal network (See Inomata 2001 for further explanation).

Administrative roles are perceived in various scenes pertaining to diplomatic affairs, military duties, ceremonies, scribal and artistic work (Inomata 2001). Emissaries would accompany the ruler during ritual diplomatic affairs, visiting other centers and receiving other rulers and emissaries of other dynasties (Inomata 2001:32; Miller 2001:209; see Figure 3). Foreigners would visit other sites to solidify social relationships and perhaps to establish alliances for economic gains. During these travels, rulers would not travel alone and would be accompanied by their administrative entourage for reinforcement. Likewise, the hosting ruler would be accompanied by courtiers while receiving guests within the confines of a range structure. Diplomatic officials are the trusted individuals to handle vital information in the interest of the ruler and the overall polity. Trusted military representatives would also accompany the ruler while travelling, especially during times of war and conflict. Warriors are recorded going to battle and returning with captives presented to their ruler Chan Muwan as depicted in the Bonampak murals. These types of examples of public performances of captives and prisoners followed by their sacrifice can be inferred as ritual and ceremonial activities.

The examples outlined in this chapter are the most common examples of private and public activities that occurred in range structures. Furthermore, the epigraphic and iconographic data serves to support the archaeological data, especially when data counts are low. As stated before, function cannot be derived from form alone, the archaeological data further supports the types of activities that occurred in the range structure.

## CHAPTER 3

### Belize River Valley Background

This chapter places Cahal Pech in a geographical context within the Belize River Valley, highlighting the surrounding sites that share Classic period architectural developments within the upper Belize Valley. I discuss architectural evidence reported from Xunantunich, Buenavista del Cayo, Baking Pot and finally, Cahal Pech. These four sites share a comparable history and are similar in the way that they were architecturally planned both physically and stylistically. They are also recognized to have been under Naranjo's control for most of the Classic period (See Audet and Awe 2004, Ashmore 1998; Ball 1993; LeCount et al. 2002; Reents-Budet 1994). Architectural developments, especially monumental constructions within the site core of each controlled polity alludes to the various activities that were occurring in Cahal Pech's Plaza B, and conclusively Structure B7 during the Late Classic period.

The Belize Valley is located in western Belize and is geologically made up of rich alluvial soils, limestone foothills and the three rivers: the Mopan, Macal and the Belize River. The abundance of natural resources made this area ideal for settlement, agriculture and trade. The western side of the Belize Valley, or the "upper Belize Valley", is lined with limestone foothills and is where the convergence of the Mopan and Macal rivers with the Belize River – the longest river in the country – occurs. The Belize River extends into the "central Belize Valley", characterized by mostly flat alluvial terrain. The eastern perimeter of the Belize Valley is approximately 30 km inland from the Caribbean Sea where the Belize River extends into marshy swamps and savanna plains (Chase and Garber 2004). Settlement in the Belize Valley was most populated near the rivers, not

only because the rich alluvial soils were good for growing crops, but also because of the trade route that came from the Caribbean coast that flowed along the Belize River inland towards the Peten region in Guatemala – making the location central for obtaining resources not locally available.

Archaeological studies in the Belize Valley began over fifty years ago when Wiley et al. (1965) conducted the first settlement pattern project in the Maya area. The first published articles by Wiley and colleagues (1965) about the Belize Valley encouraged archaeologists to reconsider broader questions regarding the ancient Maya and the non-elites, and to take another look at how major, as well as minor, ceremonial centers played a part in the geographical area (Chase and Garber 2004:1). Since then, archaeologists have conducted excavations throughout the valley formulating new ideas and perfecting the chronological record of the region. Investigations at the four sites discussed in this chapter became focal points for long-term projects to better understand the region and relationships amongst the sites (Chase and Garber 2004).

#### *Upper Belize Valley during the Classic Period*

*Xunantunich.* Xunantunich is a medium-sized center sitting on a ridge top just east of the Mopan River. It is considered to be an administrative and ritual center (Levanthal and Ashmore 2004; Yaeger 2010), where most of its architecture dates to the Late Classic period and continued for at least 200 years into the Terminal Classic period when the site was eventually abandoned around AD 950 (Levanthal 2010).

During the Late Classic period Xunantunich expanded its layout northward and constructed various structures, adding complexes and plazas to the site core. Construction upgrades to the Castillo reached a maximum height of 39 m high, making it visible to

surrounding sites. Architecturally, the Castillo was updated with two *audencia* structures, A-26 and A-32, and a multi-room summit building adorned with an impressive iconographic plaster frieze on its exterior (LeCount et al. 2002). With such architectural grandeur the Castillo became the “focus of civic and religious attention” (LeCount et al. 2002:3). Ceramic evidence reveals that many of the monumental structures were constructed during a single building phase between AD 670-780 (LeCount et al. 2002; Yaeger 1997; Yaeger 2010). Major construction efforts were focused on expanding the civic center, adding public and administrative structures, and adding a royal compound on the northern edge of the site core (Yaeger 2010).

*Buenavista del Cayo.* Buenavista del Cayo is a medium-sized center approximately 18 hectares in size, situated around “two ball courts, an acropolis-palace, two major plaza-groups, and more than 10 additional courtyard groups” (Ball and Taschek 2004:150). The site underwent large-scale modifications during the Early-Middle and Late Classic Periods, enlarging Structure 2 and modifying Structures 1 and 3 in the Central Plaza, as well as constructing smaller public structures (Ball and Taschek 2004:150). Residential constructions were also added to the North and South Plaza Groups (Ball and Taschek 2004). During the Late Classic period Buenavista appeared to have been an administrative center for the upper Belize Valley (Leventhal and Ashmore 2004). The East Plaza served as the site’s marketplace during the Late Classic Period identified by segregated production areas separated by material type and architectural features resembling vendor stalls (Yaeger, Peuramaki-Brown, and Cap, 2010).

*Baking Pot.* Baking Pot is a medium-sized center consisting of two large groups connected by a sacbe and expands outward with smaller settlements in its periphery. The

architectural center showcases monumental architecture from the Classic period to the Terminal Classic period, with evidence of Postclassic occupation in the outer housemound and plazuela groups (Aimers 2003; Audet and Awe 2004; Hoggarth 2012).

Monumental architecture sprouted during the Late Classic period, constructing Group A and Group B 250 m apart. Group A shows to have been built during the Tiger Run phase, while Group B was constructed during the Spanish Lookout phase (Audet and Awe 2004). Group A consists of 2 large temple structures, 2 ballcourts and several range structures (Audet and Awe 2004), situated around two plazas and a raised courtyard (Helmke 2007). Ballcourt 1 on the north side and Ballcourt 2 on south side served as access points into the main plaza; visitors had to walk passed, or through, the ballcourt in order to enter Group A. Helmke (2007) explains that the two ballcourts could have been non-functional and served as symbolic entryways.

Group B consists of 2 temples, 1 ballcourt and several range structures (Audet and Awe 2004). The main plaza (Plaza B) consists of a large pyramidal structure (Str. B1), defined by 3 range structures (Str. B3, B4, B6), and audencia (Str. B7) and a ballcourt located on the southwest corner of the plaza. Similar to Group A, the ballcourt (Ballcourt 3) served as an entry point into the plaza from Causeway 2, which led south towards a terminus group. The western side of Group B consists of five elevated courtyards surrounding the northern, eastern, and southern facades of Structure B1.

During the Terminal Classic period, monumental structures were renovated using various techniques. Some large structures and ballcourts were enlarged by applying layers of thick mud from the Belize River nearby, or limestone plaster. Aimers (2003) believes that the structures were not functional, and this method of construction upgrade

was symbolic. Buildings were also altered using cut stone but with mud mortar. These techniques were not the finest quality and could not withstand tropical storms of the region. Furthermore, sections of buildings were missing indicating that the remodeling process was not completed before the structure and site were abandoned in the Terminal Classic period (Aimers 2003).

### *Cahal Pech*

*Site Description.* Cahal Pech sits on top of a hill overlooking the town of San Ignacio in the Cayo District. The site is surrounded by views of the Belize Valley, Maya Mountains, the Macal and Mopan Rivers, as well as other major sites between six and twelve kilometers away. The site was named in the 1950's meaning "Place of Ticks" in the Yucatec and Mopan Maya languages (Awe and Campbell 1988). The medium-sized center consists of thirty-four large structures situated around seven plazas. The western half of the acropolis includes enclosed courtyards (Plazas A, D and E) with limited access to other plazas. The open courtyards (Plazas B, C, F, G and H) are less clustered but still limit access to the site core (Awe 2008).

*Previous Investigations.* In 1951, Linton Satterthwaite was visiting the area looking for a suitable site to conduct his "Housemound Project." While visiting Cahal Pech he conducted preliminary mapping and "exploratory digging" (Satterthwaite 1951), discovering five stelae and a plain altar, a ballcourt, various types of buildings, architectural evidence throughout the Classic Period and ceramic evidence of longer occupation (Awe 1992; Satterthwaite 1951). His time spent at the site is explained in two short paragraphs (1951), with no description of where excavation units were placed or their archaeological record. The site was also briefly described by Gordon Willey while

conducting the first settlement survey in the Belize River Valley (Awe and Campbell 1988; Willey et al. 1965:313), however excavations were not conducted by Willey and his team.

In 1969 as the newly appointed Archaeological Commissioner of Belize, Peter Schmidt conducted excavations in the large temple Structure B-1 to salvage the remains within its elite tomb (Awe and Campbell 1988). A report was never published by Schmidt, but his notes are available in the Belize Department of Archaeology (Awe and Campbell 1988:5). Schmidt's notes indicate that the remains within the tomb consisted of two burials from the Late Classic period (Awe and Campbell 1988; Awe 1992:59).

With the help of the Belizean government, an extensive survey project commenced at Cahal Pech in 1988 presenting extensive data about the structures in the site core (Awe and Campbell 1988; Awe 1992). The project was a beginning attempt to map and preserve the site core as a National Park and establish a chronological study of the site and its relationship with other sites in the surrounding area. The preliminary report by Awe and Campbell (1988) of Cahal Pech established a thorough description of the site core and initial comments of its periphery, including: an updated map, observations of looter's trenches and pits on individual structures, observations of a second ballcourt, and a possible sweathouse. Awe and Campbell (1988) were successful in conducting 10 excavations within the site core, defining measurements of each excavated structure, describing and dating architectural and archaeological findings, and placing noted phases of construction within an overall chronological assessment of the site core. Awe ultimately founded the Belize Valley Archaeological Reconnaissance (BVAR) project and has conducted consecutive excavations at Cahal Pech since 1988.

*Classic Period Architecture.* During the Classic period Cahal Pech is believed to have covered approximately 16 square kilometers, with much of its architectural expansion occurring during the Middle Classic period (AD 500-700) (Awe 1988, 1992). The largest temple pyramid on the site is located in Plaza A, Structure A-1. This building measures approximately 24 meters high. Its terminal phase architecture showcased a “long vaulted, single-room building on a narrow platform several steps above the plaza level. Within the room is a long-decorated bench (originally painted red) with an axially located throne-like construction above it” (Awe 1988:15). A poorly preserved seating glyph was also uncovered behind the bench and throne (Awe 1988). It is believed that this phase of construction was built between the 6<sup>th</sup> and 7<sup>th</sup> centuries based on the architectural similarities at other sites like Altun Ha and Lamanai, which was previously identified as the Lamanai Type Building by Pendergast (1981:41; see also Awe 1988:15).

The large A-1 pyramid is surrounded by three range-type buildings to enclose the area, creating a semi-restricted courtyard. Access through Plaza A is granted by Structure A-2 located on the eastern side of the plaza. Excavations on Structure A-2 uncovered multiple phases of construction from the Late Preclassic period to Late Classic period (Awe 1988; 1992). Like Structure A-1, A-2 Sub showcased architectural styles from the Lamanai Building Type dating to AD 600-700 (Awe 1988). The Terminal phase of the range-type building expanded the structure to approximately 50 m long by 20 m wide and 5 m tall (Awe 1988:16) including a double-vaulted ceiling and multiple rooms with benches. The Terminal phase of A-2 was dated by two unslipped ceramic vessels from the 7<sup>th</sup> century uncovered in one of the doorways (Awe 1988). Similarly, ceramics dating

to the 7<sup>th</sup> century were uncovered in the Terminal phase of construction of Structure A-4, a range-type building with a vaulted ceiling and multiple rooms.

Plaza B is the largest plaza within the site core measuring 50 m by 60 m and is 3 m lower in elevation than Plaza A (Awe 1988). The plaza consists of a large pyramidal structure (B-1) measuring approximately 12 m high on the eastern side of the plaza with two smaller structures (B-2 and B-3) adjoining its north and south sides. Structures B-4 and B-5 border the southern side of the plaza, B-6 and B-7 on the northern side of the plaza, and Structure A-2 on the western side. Three stelae (B-1, B-3 and B-4) and an altar (B-3) were identified in Plaza B by Satterthwaite in 1950, and a large fragment of a sixth stela (B-2) was discovered by Awe (1992). However, all of the monuments at the site had a plain surface (Awe 1992:98;).

## CHAPTER 4

### Investigating Structure B7 of Cahal Pech

Structure B7 is positioned on the north side of Cahal Pech's largest plaza, Plaza B, with Structures B1, B2 and B3 to the east, B4 and B5 to the south, Structure A2 to the west, and abuts Structure B6. Structure B7 also provides the only access into the site core from the north (Figure 8). During the 2013-2014 field season of the BVAR project, I supervised the excavation of Structure B7. This investigation aimed to elucidate the form and function of the last construction stage of the building dating to the Late Classic period. In order to achieve this, I placed seven excavation units to explore the basal platform, the staircase (Units 3 through 7) and the superstructure (Units 8 through 15). A 1 m by 1 m test pit was opened in order to explore the construction sequence of the building (Unit 9E Sub). Additionally, two looter's trenches were investigated – one on the western façade of the structure's summit, and the second located on the eastern side of the summit.

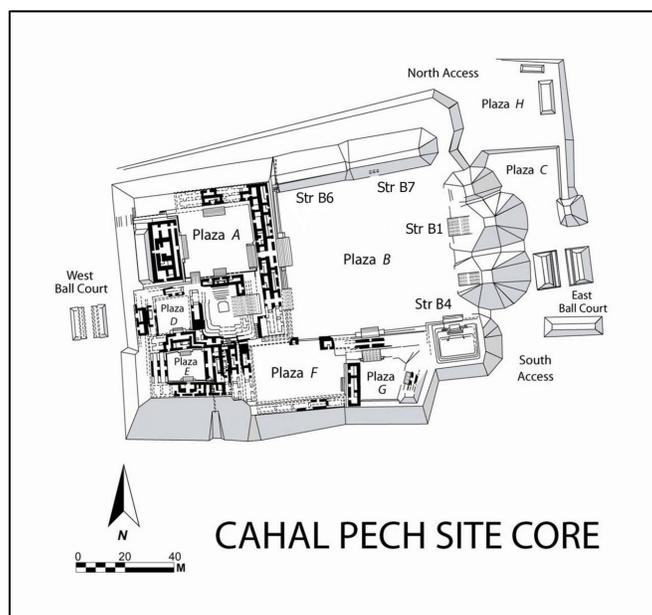


Figure 8. Cahal Pech Plaza B.

Although the structure was not excavated in its totality, the architectural evidence obtained through the excavation units and looter's trenches provided enough data to establish the form of Structure B7 last construction stage. Along with the artifacts recovered during the excavation, the morphological characteristics of the building offers hints about the function that it could have held during the Late Classic period.

Horizontal excavations at the base of the southern façade of Structure B7 helped determine the form of the basal platform, as well as access points into the structure from the public Plaza B. Clearing the looter's trench on the western façade determined any other points of entrance into Structure B7's superstructure from Structure B6's platform.

Excavations on the summit of Structure B7 aimed to establish the form the superstructure. The analysis of the structure's form, features and associated artifacts contributed to determining the structure's function(s).

Before excavations began in 2013, the northern side of Plaza B had remained untouched by BVAR researchers. There is speculation that excavations may have occurred on Structure B7 by Joseph Ball and Jennifer Taschek (1993), however, there are no published articles or documentation to refer to, as far as unit placement and archaeological evidence. When Jaime Awe (1992) initially inspected the site core, he briefly described Structure B7 and the looter's trench on its summit. The second looter's trench on the western façade near Structure B6's platform is not documented in any published material. Since Cahal Pech is visited by locals and tourists throughout the year, it is routinely landscaped and maintained by NICH staff members. However, Structure B7 remained untouched and was covered by low, secondary scrub vegetation, and

various-sized trees. Its form was vaguely outlined but it was clear that the covered mound was going to reveal some interesting data.

### *Methodology*

The methodology used to record data follow BVAR protocols, with the exception of using lot numbers, which were not used. Lot numbers were not used for simplification purposes for the AFAR high school students who participated in the practical work as well as note-taking every day in order to gain knowledge of the field research process and to complete their field school requirements.

In 2013, investigations at the base of Structure B6 and B7 were conducted using horizontal excavations. Seven excavation units were placed on an East-West axis along the boundary of the plaza floor. Structure B6 and B7, Units 1 through 6, measured 8 m (E/W) by 5 m (N/S), while Unit 7 measured 4 m (E/W) by 5 m (N/S) because it was located at the end of the length of the excavation. In total, the excavated area covered 52 m by 5 m. Units 1 and 2 were associated with Structure B6. Units 3 through 7 were associated with Structure B7. Four temporary datums were placed along the northern edge of the 52-meter-long excavation (Datums A-D).

In 2014, to explore the terminal phase architecture on the summit, the eastern looter's trench was initially excavated for architectural evidence. Two floors were exposed and then a 2 m by 2 m unit (Unit 8) was placed roughly at the central axis of the summit. Once architecture was exposed, units were opened for architectural evidence, but was not given a numbered unit. In order to explore the construction sequence of the building and for dating purposes, a 1 m by 1 m test pit (Unit 9E Sub) was opened on the summit and continued approximately 1.70 m in depth. In total, the excavation exposed 28

m of architecture. Five temporary datums were placed at the northern edge of the excavation unit (Datums: E, F, F-2, G, and I). Datum H was placed near a small unit on Structure B6's platform.

All excavations were conducted using cultural levels. Matrices were sifted through ¼ inch screen (2013 excavations sifted all matrices associated to the plaza floor and staircase, and every 3-4 buckets of soil that was collapsed debris- this was done to expedite the screening process with AFAR students and to collect more archaeological data that was more closely associated to the architecture). Cultural material was collected, separated and bagged based on unit, level and class (ceramic, chert, shell, obsidian, and quartz). Additionally, all artifact bags included a BVAR artifact card to ensure proper labeling and cataloguing.

All artifact bags were brought to the Cahal Pech laboratory at the end of every workday. Ceramic, chert, shell, obsidian, and quartz were washed, air-dried and counted. All other materials that were not washed were also counted. All counts were recorded into the artifact inventory. Ceramic sherds were sorted and separated by diagnostic and non-diagnostic. For chronological purposes, sherds were classified using Gifford's (1976) type-variety typology. Artifact bags were put into labeled plastic boxes and are kept at the Cahal Pech laboratory in San Ignacio, Cayo District, Belize.

Note taking was conducted by myself, as well as AFAR staff supervisors and students, and BVAR students. Photographs were taken of each unit with a labeled photo board and Marshalltown trowel serving as a north arrow, and they were primarily taken at the opening of the unit, at the beginning/end of levels, and closing of the unit. Additional photos were taken of features, and/or interesting occurrences that would be useful for

personal memory recording. In addition, all artifact bags and photographs were recorded in separate inventories and updated into digital files.

### *Structure B7's Construction Sequence*

*Plaza Floor Level.* The terminal phase architecture revealed evidence of occupation during the Late Classic period (AD 600-800); ceramics found in association with the structure will be discussed in a later chapter. During the Late Classic period, the plaza floor was re-plastered before construction of Structure B7 began. Evidence of the final plaza floor was not well preserved and consisted of mostly ballast, especially on the eastern side of the structure near one of the two main entrances into Plaza B and the site core. The basal platform was built on top of the plaza floor. Its retaining walls were constructed of roughly shaped, rectangular blocks made of limestone. The remains of the platform were low in height and ranged between one to four courses in various areas. However, the variation in height and number of course stones is an indication that the platform wall may have been partially dismantled and the stones were repurposed in another area of construction. The length of the building platform stretched approximately 34 m east-west, continuing into the architectural transition between Structure B6 and B7 on the western side. The height of the platform wall may have been as tall as 2 m based on the remains of the inset staircase described below. Unfortunately, the platform width cannot be determined since excavations were only focused on one side of the structure. However, the prepared drawing of B7 shows its width to be approximately 18 m north-south. It could be assumed that the platform is just as wide, but further evidence is needed to confirm since the north side of the structure is much lower than the plaza floor in Plaza B (Figure 9).

The architectural transition between Structure B6 and B7 revealed the basal platforms of the two buildings were conjoined, suggesting that the terminal phase architecture was a single phase of construction, occurring simultaneously on both structures (See Figure A-1). Moreover, a narrow trench above the exposed architectural wall revealed two parallel rows of facing stones approximately 20 cm apart, showing the restricted separation of the two structures (Figure 100). The conjoined structures formed the northern boundary of Plaza B, controlling foot traffic and limiting visibility from outside the site core.

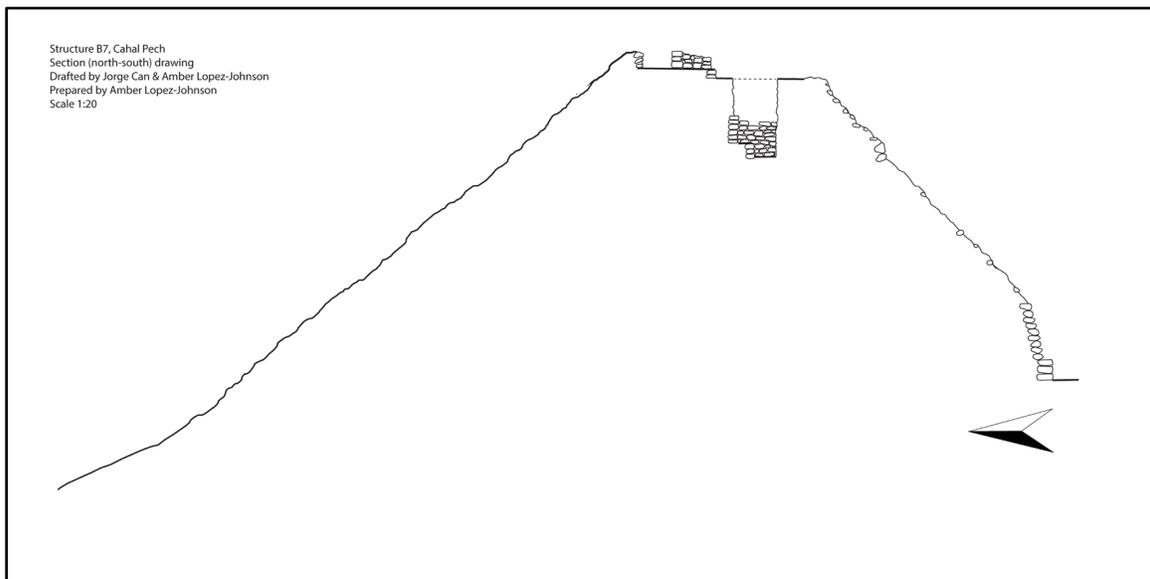


Figure 9. Profile drawing of Str. B7.



Figure 10. Narrow 20 cm wide architectural transition between Str B6 and B7, looking eastward; trowel points north.

The only point of access into the building from Plaza B was the narrow-inset staircase centrally located within the structure. The inset of the staircase was approximately 1.30 m wide and 1 m in depth, with a single plastered step providing access from the plaza floor. The interior walls of the inset were beautifully preserved with evidence of stucco still lingering on the six courses of limestone blocks. The remains of the staircase included five collapsed steps running toward the western direction. The three lowest steps consisted of three courses of aligned limestone blocks, offering the best preservation of the collapsed staircase. Of particular note, the general appearance of the inset staircase is not proportional to the large scale of Structure B7's height and length and could be an indication of how the smaller-sized staircase functioned overall in relation to Structure B7 and the function of the building.

*Western Façade of Structure B7.* The western façade of Structure B7 was supported by large limestone blocks aligned in a north-south direction at its base, creating the basal platform supporting the superstructure on the summit. The large cut blocks were plastered over by Floor 9 and then re-plastered by Floor 8, which was poorly preserved. A row of parallel facing stones 70 cm away from the western façade base was uncovered; It appears this row of smaller facing stones is the boundary line of Structure B6's platform (Figure 11). Like the narrow trench described above, the separation between the two structures are especially close- almost blurring the lines connecting them together. Clearing the looter's trench exposed the defaced western façade of B7 with only backing masonry left behind. No evidence of a staircase was apparent, concluding access was not granted from the platform on Structure B6 into the superstructure of Structure B7. This suggests that the only point of access into the building was from the narrow-inset staircase at the base of the structure in Plaza B.



Figure 11. 70 cm space between structure B7 (left) and B6 (right), view looking south.

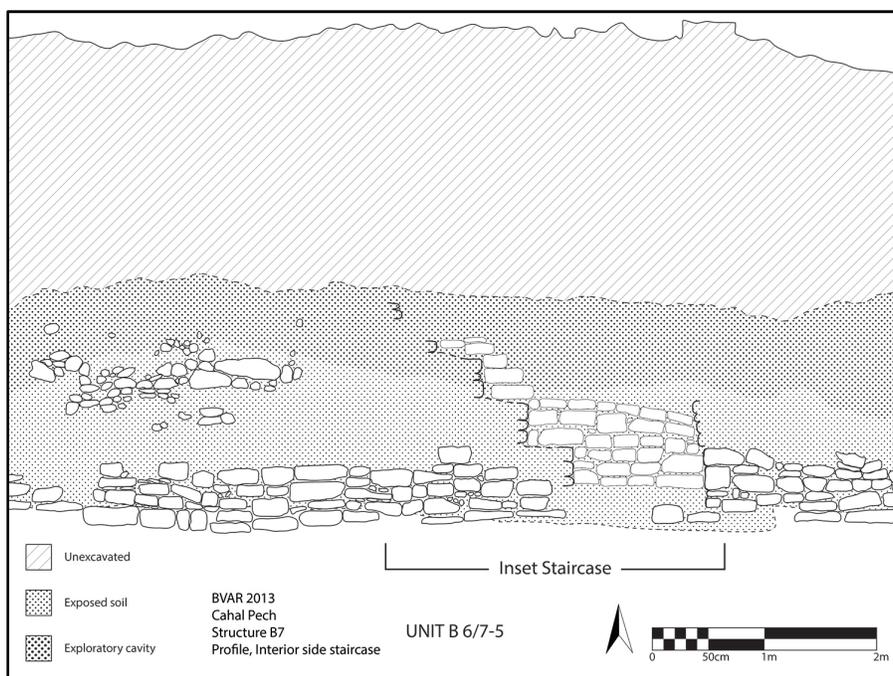


Figure 12. Profile of narrow inset staircase.

The superstructure was a building approximately 23 m long by 4 m wide. This building was resting on a low platform with a nicely preserved stucco floor (Floor 2). A central wall divided the building to create two long, parallel, narrow rooms with three doorways (See Figure A-2). The central wall was narrow, only 1 m wide, featuring a basal molding lining the front-facing room towards Plaza B. Constructed with well-dressed limestone blocks, the best-preserved section of the central wall stood 8 courses high (Unit 8-E) (Figure 13). Three doorways allowed access into the rear rooms plastered by a well-preserved stucco floor higher floor (Floor 1). The western and eastern doorways measured 1 m wide, while the wider central doorway measured 1.20 m (Figure 14). Elevations of both floors were taken across the entire excavation and exhibited a height difference between 20-24 cm.

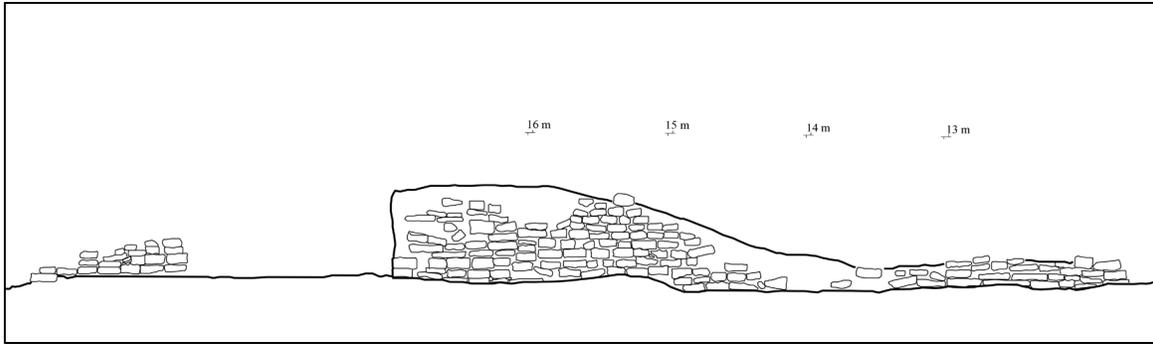


Figure 13. Highest section of the central wall located on northern façade.



Figure 14. Central doorway and domino stones under tree roots, looking towards north.

A dividing wall in the rear room on the eastern side of the summit appears to have been a later phase of construction, built with smaller facing stones than the ones seen in the rest of the building. The north-south wall 1.10 m wide was constructed to divide the

back corridor into two smaller rooms. Evidence of a bench was uncovered by large stones on the eastern side of the dividing wall. These stones rested on top of 20 cm of fill above Floor 1 and were once plastered over (Figure 15). It is likely that another dividing wall existed on the western side of the summit as well, but no architectural evidence was uncovered, with the exception of a small area of plaster (Floor 1, Unit 12) that had a slight upward slope. This minor clue could be evidence that the plaster may have covered facing stones and there was indeed another north-south dividing wall, separating the rear corridor into three smaller rooms.



Figure 15. Bench-like feature in eastern side of superstructure, trowel points north.

The rooftop of the superstructure is still questionable and lacks definite evidence of a perishable-type roofing and/or a double-vault ceiling. One argument for a perishable

rooftop is the width of the central wall. Usually, by definition, this central wall would be identified as a spinewall, however, the width of the wall is too narrow to support a double-vaulted ceiling. On the contrary, there were a few large capstones found sporadically throughout the excavation. For example, a set of three large irregular-shaped blocks were uncovered in a “domino” alignment in Unit 12 resting on top of Floor 1. The lack of vault-shaped stones could also be evidence that the stones were taken and repurposed in another construction within the site core. Furthermore, there were no postholes found throughout the excavation. One possibility is that the perishable rooftop was flat made of beams and logs, which laid horizontally across the central wall. The superstructure of Structure 40-1<sup>st</sup> at Buenavista also showcased thin masonry walls and no vaulted stones, evidence of daub, suggesting a pole and thatched rooftop (Yaeger et. al 2013:132).

#### *Previous Construction Stages*

Evidence of a substructure was uncovered in a 1 m by 1 m test pit, which was opened with the objective to collect more artifacts to help date the superstructure. However, the test pit offered minimal dating material and a minor glimpse of the penultimate architecture which laid beneath the superstructure. The test pit was excavated 1.70 m in depth, exposing five additional floors below Floor 2.

The lowest floor exposed, Floor 7, was a nicely preserved floor with some ballast showing. Sitting on top of Floor 7 was an east-west alignment of three course facing stones which were once plastered over, with Floor 6 covering the top most course. This wall alignment, or possible step, was approximately 37 cm high. Above Floor 6, an inset corner of a wall was exposed, an east-west wall abutting a north-south wall,

approximately 42 cm in height. This penultimate architecture was eventually filled and covered by Floor 5. Multiple stages of construction occurred consisting of re-plastering events, including: Floor 4- 53 cm above Floor 5, Floor 3- 20 cm above Floor 4, and finally, Floor 2- 14 cm above Floor 3. Ultimately, the substructure architecture exposed in the test pit was approximately 87 cm below terminal phase architecture (Figure 16).

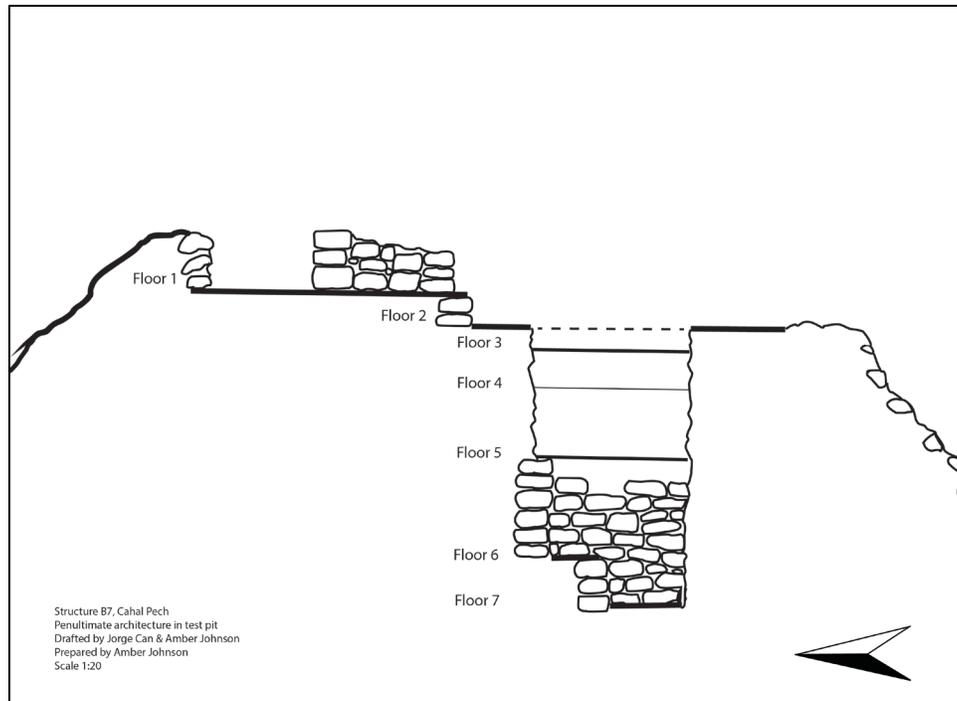


Figure 16. Drawing of penultimate architecture exposed in test pit.

## CHAPTER 5

### Artifact Analysis

Although the material collection from both excavation seasons did not yield as many artifacts as anticipated, the wide range of artifact types collected shed light on some of the possible activities that occurred within Structure B7. Artifact types collected include: ceramic (n=1592), chert (n=540), groundstone (n=5), obsidian (n=3), quartz (n=9), freshwater shell (n=62), daub (not counted) and slate (n=1). A few notable special finds also included in the artifact inventory are two chert bifaces, a quartzite biface fragment, a shell pendant and a star-shaped shell pendant. Contrasts between plaza level and summit inventories are not only quantitative but differ slightly by types found only either at plaza level units or only summit level units. For instance, groundstone was only collected at plaza level units, while the two modified shell pendants were only collected at summit level units.

As explained in the previous chapter, the 1m by 1m test pit (Unit 9E-Sub) was opened to explore the penultimate architecture below the existing remains of the terminal phase architecture on the summit of the structure. The unit was excavated 1.70 m deep but lacked substantial dating material. The only diagnostic ceramic sherd is a Late Classic (600 CE- 800 CE) body sherd from the Mountain Pine Type Variety, Tiger Run Complex (Gifford 1976). This information may not be conclusive; however, it sheds light for future research regarding depths of penultimate architecture of the structure.

On the summit, no artifacts were collected in the western half of the superstructure's remains, specifically Units 8 - 9. These units are located between the central and western doorway of the superstructure. However, a plethora of artifacts were

included in the inventory from the eastern half of the summit. Units that were east of the central doorway (Units 11-13) included artifacts such as ceramic, chert, obsidian and freshwater shell. The ceramics from this area of the superstructure were diagnostic to the Late Classic period. The eastern most room with the north-south partition and bench was built as the last phase of construction but is not supported to have been later than the Late Classic period.

### *Ceramics*

On the plaza floor, the diagnostic sherds ranged from Late Classic (600 - 800 CE) to Terminal Classic (800 - 925 CE) period, consisting mostly of bowl sherds, jar sherds, dish sherds, and vase sherds. The ceramic group most represented was within the Spanish Lookout Complex (Gifford 1976): Belize (37%), Cayo (17.74%), Chunhuitz (9.6%), and Dolphin Head (8%). Other ceramic groups represented are Tiger Run, Jenney Creek, New Town and Hermitage.

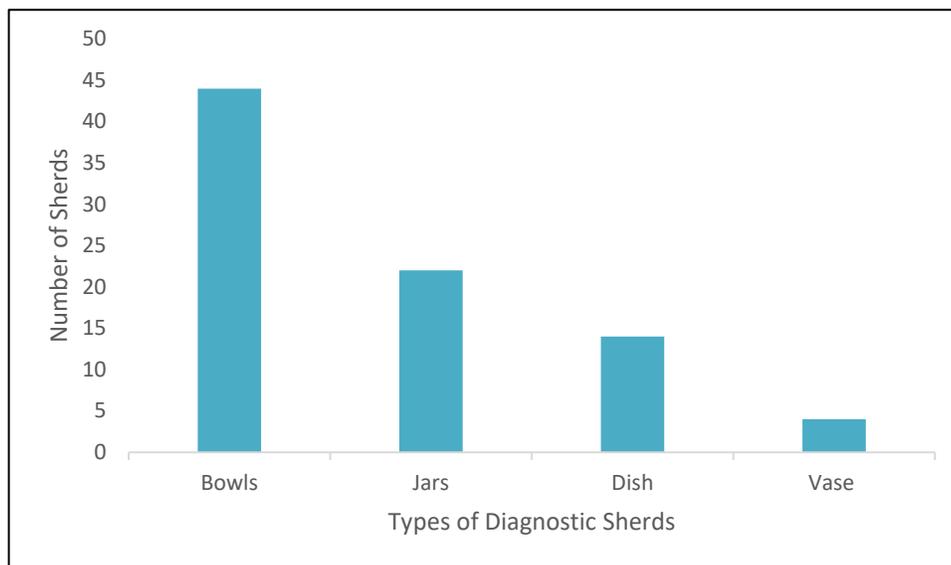


Figure 17. Types of vessels represented by diagnostic sherds collected at plaza level units.

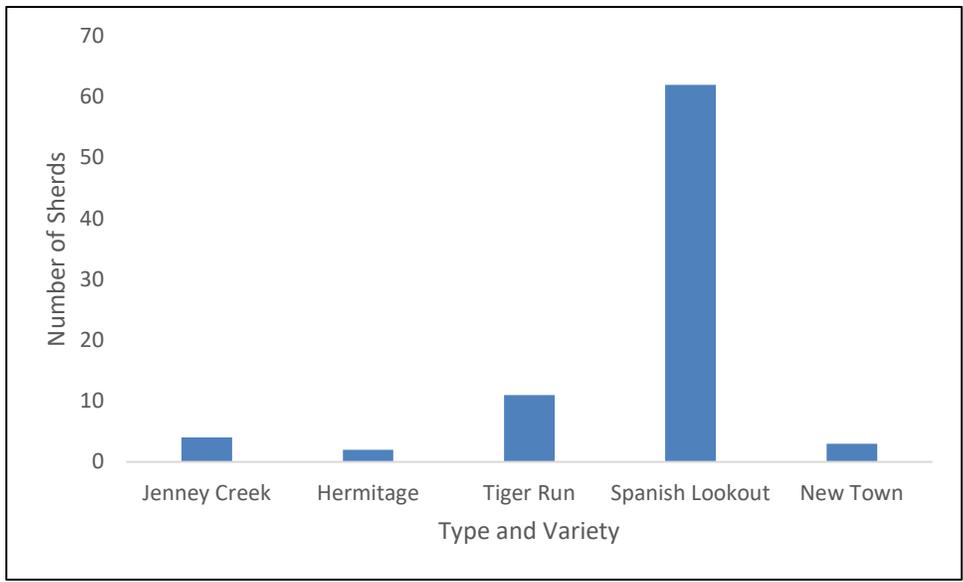


Figure 18. Barton Ramie ceramic phases represented.

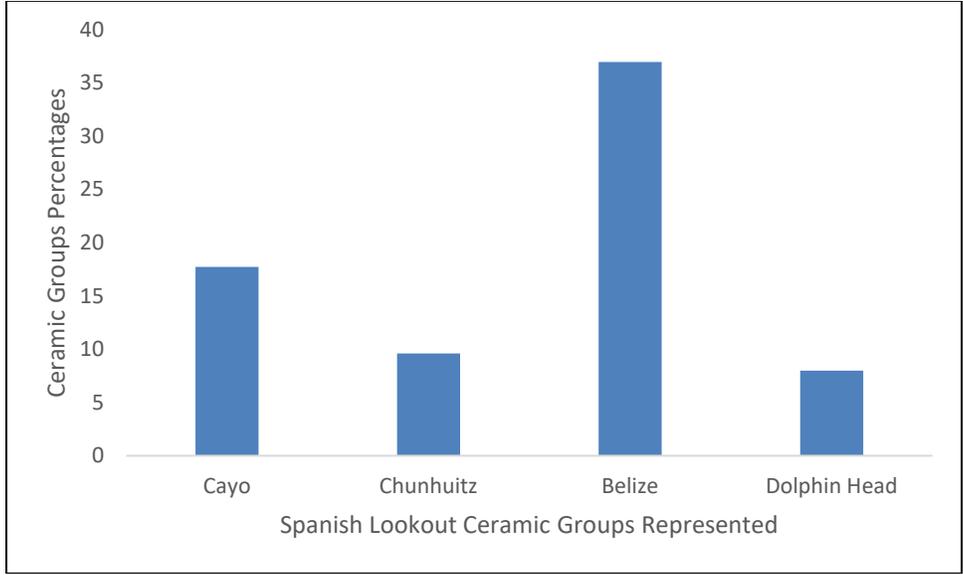


Figure 19. Ceramic groups represented within Spanish Lookout phase.

On the summit, only 177 ceramic sherds were recovered, of which only 40 were diagnostic. Due to time constraints bags with most-identifiable diagnostic sherds were analyzed; sherds with distinguishable attributes such as temper, slip, and/or sherd type were selected to analyze and record. Therefore, the entire ceramic inventory from summit

level units were not analyzed, yet presented a date range from Early Classic period (250 CE- 600 CE) to Post Classic period (925 CE-1530 CE). Most of the sample appeared to be dishes and bowls, with one small jar. Of the sample, Spanish Lookout was the most represented ceramic complex consisting of Belize Ceramic Group, Dolphin Head Ceramic Group, Mt. Maloney Ceramic Group, and Garbutt Creek Ceramic Group. More specifically, ceramicist Jim Aimers (personal communication 2014) identified three sherds from the Spanish Lookout Complex as Pine Ridge Carbonate Ware, Peten Gloss Ware, and Platon Punctated Incised. The other identified ceramic complexes were Hermitage, Tiger Run, and New Town. One sherd, found in Unit 15, was identified as Hewlett Bank Unslipped type-variety, dating to the Early Classic period. This sherd was identified solely based on its squared lip rim. There is no clear explanation as to why only one sherd from this complex period was recovered, and perhaps the sherd needs to be reevaluated. Furthermore, only two sherds were identified as belonging to the Daylight Orange type-variety, which dates to the New Town complex (Post Classic period). With this considered, it is not conclusive to date the superstructure to the Post Classic period; it was most likely constructed during the Late to Terminal Classic period.

### *Lithics*

Three hundred sixty-three pieces of chert were recovered from the plaza floor excavations. Due to time constraints a sample (n=148; 40%) was analyzed, focusing on bags associated closer to architecture and not collapsed debris. The analyzed sample consisted mostly of flakes (n=107; 72%) chunks (n=18; 12%) and cores (n=14; 9%). The represented flakes showed multiple stages of reduction: primary, secondary, debitage and evidence of use wear and retouching. Some of the most interesting lithics recovered were

a quartzite biface fragment 10 cm in length from Unit 6 (Figure 20), a yellow chert preform 10 cm in length from Unit 7 (Figure 21), and 14 cores from Units 4 -7. More specifically, ten of the fourteen cores were collected from Unit 5 and Unit 6; Unit 5 is directly positioned in front of Structure B7's inset side staircase- the only access point into the structure's upper levels.



Figure 20. Quartzite biface fragment found in Unit 6.



Figure 21. Yellow chert preform biface from Unit 7.

The lithic inventory from the summit excavations consisted of 65 pieces of the following types: flake (n=44; 69%), core (n=7; 10%), chunk (n=7; 10%), uniface (n=3; 4%), nodule (n=3; 4%), and shatter (n=1; 1%). Twelve of the flakes showed evidence of retouched edges and use wear, and/or appears to be a scraper tool. Unit 3A trench yielded the most lithics: 10 flakes, three chert cores and one quartz core, a possible scraper, two unifaces and one biface.

#### *Groundstone*

Five granite mano fragments were collected from units near the plaza floor. They were analyzed, measured, photographed and recorded. Some of the fragments appear to have rounded edges, while others have smoothed edges for milling purposes. Metates, or grinding surfaces, were not encountered during excavations.

#### *Other Materials*

Two small pieces of obsidian were recovered from the collapsed debris in Unit 3 and Unit 6. Nine quartz rocks were recovered from Units 4, 5 and 7, but they were also in the collapsed debris and did not show evidence of significant use wear. The freshwater shell collected from collapsed debris and architectural context consisted of 37 applesnails (*Pomacea flagellate*) and nine jute (*Pachychilus indorum* and *Pachychilus glaphyrus*).

On the summit, other artifacts collected were obsidian (n=1), freshwater shell (n=6), quartz (n=4), daub (not counted) and modified shell (n=6). Of the freshwater shell, six pieces of shell were collected: one river clam (*Nephronaias sp.*) and five apple snails (*Pomacea flagellate*).



Figure 22. Modified shell pendant found on summit.

Unit 14 - level 2, yielded the greatest amount of collected artifacts: ceramic (n=63), chert (n=8), daub (not counted), quartz (n=4), and a star-shaped modified shell pendant (Figure 23). This unit also yielded the greatest amount of ceramics collected on the summit in one bag (n=63). Daub was not observed or collected in any units near the

summit or close to the Structure B6 platform. However, daub was collected in Unit 2, located on the opposite side of Structure B6 outset staircase – west of Unit 3. Therefore, the daub may be evidence of a perishable structure on Structure B6's platform.



Figure 23. Star-shaped shell pendant from Unit 14.

## CHAPTER 6

### Discussion and Conclusion

This main objective of this chapter is to determine the form and function of Structure B7's Terminal Phase architecture. To achieve this objective, I first examine the architectural data and features exposed during preliminary excavations to define the structure's form. The associated artifact assemblage is then analyzed to suggest possible activities that occurred near the structure at plaza level and within the superstructure. To further understand the function of the building, the archaeological data is coupled with epigraphic and iconographic evidence of range structures to determine its administrative role during its final days of occupation.

#### *Architectural Form Defined*

The construction sequence revealed that the Terminal Phase architecture of Structure B7 was erected during the Late Classic Period (AD 600-800) which was dated by the ceramics collected throughout plaza floor and summit excavations. The basal platform was simultaneously built as a single phase of construction with Structure B6's Terminal Phase architecture shown by the architectural transition between the two structures. In turn, the conjoined structures outlined the northern boundary and created an access route into Plaza B. The overall length, width and height of the structure limited visibility outside of the site core. Foot traffic was channeled through this northern access route into the semi-restricted Plaza B (Awe et al. 1991).

The only access route into Structure B7's superstructure appears somewhat limited by the narrow-inset staircase that was exposed during plaza floor excavations.

The five collapsed stair treads define the narrow-inset staircase, further implying foot traffic was controlled into the superstructure.

Once in the superstructure, granted entrance and mobility was divided by a central wall and three doorways. The central doorway was constructed as the widest, with an eastern doorway and western doorway permitting access into a higher elevated rear room. The eastern doorway presented a bench-like feature in the rear room with a constructed partition separating this rear room from the rest of the superstructure. The construction of the bench feature and the partition was constructed using smaller cut limestone blocks, suggesting this room was a later addition to the superstructure. Furthermore, the bench in the eastern room presents a lookout view over the northern access route mentioned above. To be clearer, any high-status official sitting on this bench can see anyone who approaches the northern boundary and enters the site core.

The width of the superstructure is somewhat narrow, approximately 3.5 m wide, with a central wall only 1 m wide. The narrow width of the central wall suggests it could not have supported a double vaulted ceiling but cannot be confirmed by the lack of architectural data. The only supportive evidence of a double vaulted ceiling were the three large irregular-shaped limestone blocks resting on top of the floor in Unit 12. As mentioned before, the lack of vault-shaped stones and dismantled central wall suggests the possibility that the stones were taken and repurposed in another construction within the site core. Another possibility is that the central wall supported a perishable rooftop, creating an open patio on the superstructure to overlook Plaza B's activities. The overall 24 m length and form of the multi-room superstructure classifies Structure B7 as a range-type structure.

### *Associated Artifacts and Preliminary Inferences of Function*

The associated artifacts gathered at the plaza level and summit level excavations imply different types of activities that occurred near the structure and in the superstructure. As we already know, the front of the building was defined by the exposed basal platform and staircase on the southern façade facing towards Plaza B, the largest public plaza within Cahal Pech. The variety of artifacts, including types of ceramic vessels, lithics, number of cores, mano fragments and freshwater shell, are all indicative of the domestic activities that occurred in the open space of Plaza B. Similarly, the artifact assemblage collected from summit excavations within the superstructure also suggests domestic activities based on the ceramic dishes, bowls and jar sherds, as well as the high percentage of flakes (69%) and evidence of retouched edges and use wear. However, the lack of manos, cores and freshwater shell does not support the likelihood of domestic activities occurring within the superstructure. The six pieces of modified shell and pendants collected are clues to the type of people who engaged in activities within the superstructure. Ornaments like the star-shaped shell pendant could suggest the type of visitor, perhaps one of high-status, who was granted access into the superstructure.

### *Conclusion*

Based on the architectural features and the ranging of rooms, it can be concluded that Structure B7 was not a palace, but indeed a range-structure during the Late Classic Period. The architectural features, as well as the material evidence, suggests the building had a non-domestic function. Its position within the semi-restrictive access plaza combined with the narrow-inset staircase suggests controlled access into the superstructure. The limited space within the superstructure would not allow many people

to congregate and would be limited to court officials and administrative personnel. Those who served the court were positioned in the superstructure to oversee all visitors and guests entering the site from the northern route. The view from the superstructure also served to oversee the activities that occurred within the large open plaza, Plaza B.

This analysis offers a more complete understanding of how all the structures within Plaza B functioned collectively, as well as individually, during the Late Classic period.

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## APPENDIX

### Oversized Figures

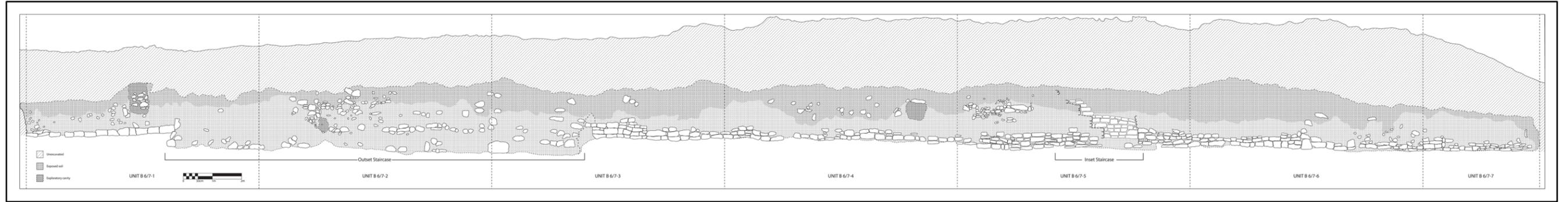
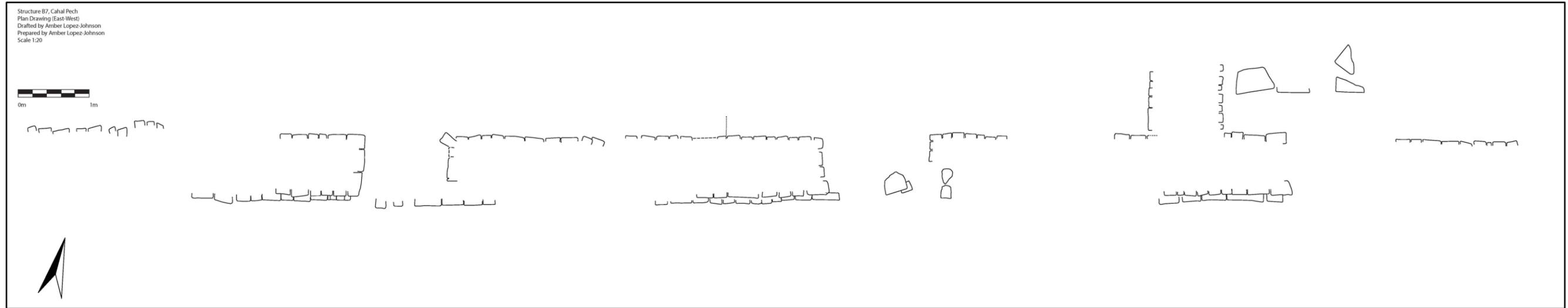


Figure A-1. Drawing of horizontal excavations at plaza level across Structure B6 and B7.



A-2. Plan view drawing of superstructure architecture, central wall and three doorways.