Pahn-Ti-Pan: The Rise and Fall of Complex Socio-Political and Economic Systems as Attested in Subterranean Site Contexts of Central Belize, C.A.

by

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The question that drives this dissertation is “As integrated and varied ritual contexts, how do changing patterns of pre-Columbian cave use inform on the complex of historical, social, political, economic and related ideological processes in action during the inception, florescence, and collapse of Tipan Chen Uitz and other nucleated centres in the region [Central Belize]?”. It is intended to highlight, and within the specific regional context of this dissertation address, a tendency within the speleoarchaeology of the Maya area to isolate itself from broader topics of discourse. Following a brief introduction to the study area and the research project that supports work there—the Central Belize Archaeological Survey project—the remainder of this manuscript is divided into two broad sections. The first is structured along a chain of related concepts and datasets extending from the broad body of literature on ritual and religion, through discussion of the conceptual cave context drawn from epigraphic and iconographic sources, its invocation as recorded in contemporary (or at least, relatively recent) ethnographic contexts and earlier post-Columbian indigenous historic sources, and finally along the well-travelled paths of the archaeological study of caves. This forward section constitutes the web of theories, concepts, methods, and histories within which the rest of my study is caught. The second section deals explicitly with my own primary research in a number of caves located in Central Belize. While the identification of specific ritual motivations—through reference to material and environmental contexts—fell short of initial expectations, I am able to parse patterns from this body of work that serve to distinguish variability in behaviour within these contexts and define a regional pattern of ritual cave use. Thus defined, this manuscript finishes by turning from the dark passages of the Maya cave context to discuss the implications of these patterns on discussions of broader trends/developments in socio-political and economic systems in this region, and particular, in reference to the recently discovered civic-ceremonial centre of Tipan Chen Uitz.
ACKNOWLEDGEMENTS

“Promise me that you will never do that….“ This lingering sentence was uttered to me by my father over the Christmas holidays of 2001 as we sat in the living room watching a television program about archaeologists documenting a cave in the Maya area. The specific event that triggered my father’s plea was when the program’s hero (a prominent scholar in the field, and a very experienced caver) got hopelessly wedged in a crack. With squirming stomachs we watched, as over the course of what seemed an eternity, and with careful, relaxed, practiced movements, the archaeologist extricated himself from his predicament.

“Don’t worry, I have no intention whatsoever of working in caves.” I replied. Less than six months later, I was on an airplane for my first time, heading off as a student volunteer with the Western Belize Regional Cave Project. The experiences of that trip, and the people that I met, would ultimately alter the course of my academic career and my life.

While J. Eric S. Thompson can be credited with producing the first truly synthetic work on ancient Maya cave use, the credit for the emergence of a self-conscious sub-discipline focussed on cave utilization can be placed squarely at the feet of James Brady, unquestionably the most prolific scholar that has ever engaged with this particular field. Additionally, while producing synthetic works of his own, Brady stands among a relatively small (if expanding) group of colleagues at the vanguard of truly progressive research in the cave context. In particular, my approach to the study of ancient Maya cave use has been informed by the patient and generous hand of Karen Bassie-Sweet. This present work stands on the broad shoulders of these giants and their scholarship is referenced liberally throughout. If this dissertation has any value, then it is as a mere extension of their collected works.

To the Faculty, Staff and Students of the Department of Anthropology and Archaeology at the University of Calgary, I offer my most heartfelt thank you. Between my MA and PhD work, this department has been my home for more than a decade. I appreciate the experiences and opportunities that this association has afforded. What is more, and perhaps to a greater extent, I will forever treasure the collegiality, the friendships, and the family that I have been lucky enough to become a part of here. To Dr. Peter Dawson, Dr. Richard Callaghan, Dr. Geoff
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“[U]niversities are truly storehouses of knowledge: students arrive from school confident that they know very nearly everything, and they leave years later certain that they know practically nothing. Where did the knowledge go in the meantime? Into the university, of course, where it is carefully dried and stored” (Pratchett et al. 1999:44). I’d like to dedicate this work, first and foremost to my wife and inspiration, Meaghan Peuramaki-Brown, and to the general host of friends, colleagues, family and mentors that have effectively drawn the knowledge out of me over the years and proven beyond a doubt that I know practically nothing. You know who you are.
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“Next, I said, compare the effect of education and the lack of it upon our human nature to a situation like this: imagine men to be living in an underground cave-like dwelling place, which has a way up to the light along its whole width, but the entrance is a long way up. The men have been there from childhood, with their neck and legs in fetters, so that they remain in the same place and can only see ahead of them, as their bonds prevent them from turning their heads. Light is provided by a fire burning some way behind and above them. Between the fire and the prisoners, some way behind them and on a higher ground, there is a path across the cave and along this a low wall has been built, like the screen at a puppet show in front of the performers who show their puppets above it. – I see it.

See then also men carrying along that wall, so that they overtop it, all kinds of artifacts, statues of men, reproductions of other animals in stone or wood fashioned in all sorts of ways, and, as is likely, some of the carriers are talking while others are silent. – This is a strange picture, and strange prisoners.

They are like us, I said. Do you think, in the first place, that such men could see anything of themselves and each other except the shadows which the fire casts upon the wall of the cave in front of them? – How could they, if they have to keep their heads still throughout life?

And is not the same true of the objects carried along the wall? – Quite.

If they could converse with one another, do you not think that they would consider these shadows to be the real things? – Necessarily.

What if their prison had an echo which reached them from in front of them? Whenever one of the carriers passing behind the wall spoke, would they not think that it was the shadow passing in front of them which was talking? Do you agree? – By Zeus I do.

Altogether then, I said, such men would believe the truth to be nothing else than the shadows of the artifacts? – They must believe that.”

– Plato [1974]:168
A NOTE ON ORTHOGRAPHY

Despite the efforts of numerous scholars there remains in modern archaeological scholarship of the Maya area, a considerable diversity in orthographic convention. The problem is a complex one: As noted by Colas and Helmke (1999) numerous orthographies have been developed over the last five centuries that diversely record the subtleties of Mayan languages. We can add to this difficulty changing conventions in English and Spanish orthography.

With the concerns of these scholars noted, every effort has been made to adhere to modern orthographic convention in Maya writing (following Kettunen and Helmke 2009). Hence ‘Uitz’ rather than ‘Witz’, and ‘Actun Tunichil Mucnal’ rather than ‘Actun Tunichil Muknal’. Some words/names are so entrenched in the archaeological literature, however, that dogged adherence to these conventions would muddy, rather than clarify, the resulting discourse: it would hardly seem profitable, for instance, to change ‘Uaxactun’ to ‘Waxak Tun’, ‘Tikal’ to ‘Ti’ik’al’, ‘Actun Balam’ to ‘Aktun Balam’, and ‘Cahal Pech’ to ‘Kahal Pech’. Accents may also be problematic and are included as per SAA guidelines. Hence, while accents will appear in Spanish toponyms, they will not be included in Mayan toponyms (i.e. ‘Pasión’, but not ‘Copán’, rather, ‘Copan’). There are, however, some situations where accents do appear in Mayan words. Most commonly, this will be found where Mayan toponyms have entered into common/political/legal Spanish use (as with Petén, Yucatán, etc.). Also, where older sources are directly quoted, original conventions are maintained. While it is likely that errors of orthography will nonetheless creep into this manuscript; it is hoped than any such errors will at least be offset by internal consistency. I fully expect to have these errors pointed out in the fulness of time and in great detail by both Christophe and Harri.

Finally, the title of this manuscript may require some explanation: in English Kriol, the most commonly spoken language in Belize, “pahn ti” loosely translates as “about.” Thus, “Mi breda gaahn da skool, ahn laan pahn ti Mayans” would translate as “My brother went to school and learned about the Maya.” In terms of the title of the manuscript, “Pahn-Ti-Pan” is a play on “Pahn ti Tipan,” or “About Tipan.”
CHAPTER ONE—INTRODUCTION

A Word of Caution

A number of scholars, most notable among them Sir J. Eric S. Thompson (2005 [1975], 1990), and James E. Brady (2005a, 2005b), have emphasized the primacy of ritual/religious behaviour practiced by the ancient Maya within the cave context. The veracity of this position is not under question here, nor could it be. Indeed, at its most basic, this dissertation is about ‘caves.’ This dissertation, also, is about ‘ritual.’ Nonetheless, I would start this discussion with a word of caution: that is, that it is all-too-easy to allow the term ‘ritual’ to homogenize or essentialize our view of this extremely varied archaeological context. It is also all-too-easy to relegate ‘the cave’ to a secondary and isolated context when reconstructing our archaeological view of the past. Both are persistent issues of an otherwise vibrant and innovative specialization in Mesoamerican archaeology, representing a significant dearth in our articulation/interpretation of the cave context.1

Thus, we should be very careful indeed to ensure that discussions of the cave context, and the various human activities that were practiced in these settings, are not isolated from more ‘traditional’ surface contexts and their interpretation, but rather explicitly integrated. What should be abundantly clear by the end of this manuscript is that the study of ancient Maya cave use—in all of its complexity—is best accomplished with reference to the broader social, political, economic, and religious (etc.) milieu of the peoples under study.

Primary Question

The question that drives this dissertation is this: “As integrated and varied ritual contexts, how do changing patterns of pre-Columbian cave use inform on the complex of

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1 Notable exceptions include James Brady’s Petexbatun Regional Cave Survey, Takeshi Inomata’s work in the chasm of Aguateca, Christophe Helmke’s (2009) dissertation work in the Roaring Creek Valley, and Jon Spenard’s recent (2014) dissertation in the nearby Barton Creek area.
historical, social, political, economic and related ideological processes in action during
the inception, florescence, and collapse of Tipan Chen Uitz and other nucleated centres in
the region?” Following a brief introduction to the study region in this chapter, the
remainder of this manuscript will be divided into two broad sections. The first is
structured along a chain of related concepts and datasets extending from the broad body
of literature on ritual and religion, through discussion of the conceptual cave context
drawn from epigraphic and iconographic sources, its invocation as recorded in
contemporary (or at least, relatively recent) ethnographic contexts and earlier post-
Columbian indigenous historic sources, and finally along the well-travelled paths of the
archaeological study of caves. This forward section constitutes the web of theories,
concepts, methods, and histories within which the rest of my study is caught. The second
section deals explicitly with my own primary research in a number of caves located in
Central Belize and defines a regional pattern of cave utilization; the stopping point for
most studies of the Maya cave context. Thus defined, this manuscript will finish by
turning from the dark passages of the Maya cave context to discuss what the ‘shadows
cast upon the wall’\(^2\) can tell us of the world beyond the cave mouth.

\textbf{Introduction to the Regions and Cultures Discussed in this Dissertation}

As in many civilizations, for the ancient Maya, ritual served as one of the principal
mediators between religion and politics—between the state and its people. In this
dissertation, my interests focus on processes of development and change in an ancient
polity, and on the rites so associated. My study is focussed on emergent Maya centres in
Central Belize during the Late Classic (ca. AD 700-900)—their origins, florescence, and
decline—though in absolute terms, the material assemblage analyzed spans a much
broader period, from the Middle Formative through the Early Post-Classic periods (ca.
600 BC-AD 1000). Specifically, in this dissertation I explore the material remains of
various types of subterranean activities practiced within the ‘\textit{ch’e’en},’ glossed ‘caves,’

\(^2\) A reference to this document’s epigraph.
‘rock shelters,’ and ‘sinkholes’ of my study area. The majority of these activities are unquestionably of a ritual nature. I seat this discussion within that of cross-cultural studies of cave use, specifically, in neighbouring areas of Mesoamerica, Lower Central America, and the Caribbean, with additional references drawn from further afield. I discuss the various roles of subterranean site use—particularly vital contexts perhaps tied to political accession, legitimization, social incorporation, boundary maintenance, agricultural fertility, etc. (see Bassie-Sweet 1996; Heyden 1976, 2005; Prufer and Brady 2005; Vogt and Stuart 2005)—in the naturalization of the socio-political structure of the state, in the constitution, and re-constitution of community and social structure, and as coping mechanisms for the stresses of socio-political and economic change associated with this period. The point that I wish to emphasize above all others is that for ‘cave archaeology’ to remain a viable sub-disciplinary specialization, it must actively articulate with broader archaeological contexts. While the historical processes, and physical contexts of this dissertation are particular to the ancient Maya, I see this research as broadly applicable to our understanding of public liturgy, of the relationships between religion and state, of ritual/rite as an adaptive strategy, and of the developmental processes of polity growth and decline in general, particularly when these changes occur over relatively short spans of time.

**Regional Definition—Broad**

*Socio-Cultural*

Surrounded by other cultural groups, each with their own deep and complex roots, the Maya area stretches south from the Isthmus of Tehuantepec, and includes the whole of the Yucatán Peninsula (Mexico), much of Guatemala and Belize, and parts of El Salvador and westernmost Honduras (Figure 1.1). To be clear, the ‘Maya area’ is little more than an archaeological and ethnographic convenience, demarcating a geographical region within which historical indigenous inhabitants speak/spoke one of some 28-or-so related languages (Sharer and Traxler 2006:23), not including the outlying pocket of Waxtek
speakers of Veracruz. However, the ancient Maya, as indeed the modern Maya, have never been a monolithic group. Significant and deep-seated socio-cultural, political, religious, and economic differences, not to mention the linguistic differences already noted, serve to differentiate these groups one from the other and likely served as the basis for inter-group differentiation and interaction in the past. A rich assemblage of portable material culture and architectural form, not to mention of hieroglyphic and iconographic representation, marks these differences in the ancient past. Despite this variety, Maya peoples constitute a distinct cultural group within the much broader Mesoamerican culture area, which extends from northern Mexico into Central America, and at times may have spread as far as the American Southwest (Adams 1991b) and Lower Central America (Blanton et al. 1993:5). Indeed, both the Maya area and broader Mesoamerica are best thought of, not as definitive geographic regions, but as fluid entities where people likely self-identified at various, nested, levels (Carmack et al. 1996:7).
While the culture areas identified by archaeologists in general transcend state boundaries, these modern borders have nonetheless had a significant impact on the quantity and quality of archaeological excavation performed, on the subjects of archaeological research that are encouraged, on the methods and theories employed, on the specific identities of those conducting archaeological research, and on the dissemination and acceptance of this same.

**Physiographic**

The environment of broader Mesoamerica is very diverse, with vegetation patterns and hence human and other animal populations varying significantly with elevation, latitude, rainfall, underlying geology, and time. From the dry Highland plateaus of central Mexico, to the brackish swamps of the Gulf coast and the large standing fresh water lakes of Mexico and Guatemala; from the expansive, sun-drenched savannahs of the Belizean coastal plain and northern Yucatán, to the cool cloud forests of the Guatemalan Highlands; from the dense high-canopied jungles of the northern Petén and Maya Mountains, to the incongruous Pine Ridge of Belize, it is difficult to succinctly summarize the climatic conditions within which peoples of the past survived and thrived.

Within the Maya area itself, perhaps the greatest diversity comes with geology, and may be very basically divided up into: 1) the relatively flat Mesozoic and Tertiary, often karstic, limestone Lowlands of the Petén (Weyl 1980:74, 86), Cretaceous and Cenozoic sedimentary strata of the Yucatán Peninsula (Morán-Zenteno 1994:77), and Tertiary and Quaternary carbonates of the Belizean coastal plain (Miller 1981b:3); 2) the old, Cretaceous cave-bearing, and similarly karstic, mountain systems of Guatemala’s Cordillera Central (Weyl 1980:77)—extending across to the eastern province of Cuba and the northern cordillera of Hispaniola (Wilson 2007:10); 3) the Maya Mountains of Belize—containing sedimentary, folded, Upper Palaeozoic strata, as well as volcanic and plutonic (largely granite) rocks surrounded by Cretaceous limestones, and in the west, by Quaternary coastal sediments (Miller 1981b:2-3; Weyl 1980:86); and 4) the volcanically active Highlands, emphasized by 4,000 m high Tertiary and Quaternary volcanoes that
rise steeply from the south-eastern coastal plain (Weyl 1980:77). Of these, it is the cave-bearing strata of the Lowland plains, of the Cordillera Central, and of the Maya Mountains that are of particular interest in this manuscript, as it is in these areas that we find the development of a far-reaching and socio-culturally integral pattern of cave use (these practices were extended into areas without natural cave systems; see Brady 1993, 2012).

**Regional Definition—Local**

*Socio-Cultural*

At the local level, my dissertation research focuses on but a tiny corner of the Maya area, along the south-eastern margin of the Yucatán Peninsula, in what is now modern day Belize ([Figure 1.2](#)). By any measure, Belize is a small country: the territory of Belize encompasses a mere 22,800 km², and in 2012, the population of Belize included approximately 324,000-or-so individuals. Known as British Honduras until 1973, Belize has a unique political history in Central America as a former colony of the United Kingdom, only gaining independence in 1981. Belize is also distinguished for being the only country in Central America where English is the official language, for being the only country in Central America that has fought neither a ‘war of independence’ nor a civil war, and for being home to the longest-serving democratically elected national leader in modern history, George Cadle Price. Permission to conduct archaeological research in Belize has been granted by the Institute of Archaeology, a division of the National Institute of Culture and History.

A remarkably diverse population characterizes modern Belize. The most populous self-identified groups include Mestizos (of mixed Maya and European descent), Kriols, Spanish, Maya, and Afro-Amerindians (Garifunas; particularly along the south-eastern coast). People that self-identify as European, East Indian, Chinese, Lebanese, and Euro-American are now calling Belize home in ever-increasing numbers. Over the last half-century large groups of Mennonites have similarly congregated in Belize.
Today, Maya populations in Belize are concentrated in the economically poorer districts of Toledo and Stann Creek, though sizeable populations exist in less homogenous communities in other districts. Notable among these are the Yukatek-speaking villagers of San Antonio and San Jose Succotz in the Cayo District, and the

Figure 1.2 - Map of Belize
descendants of refugees from the 1840s Caste War in Orange Walk District. The Maya of southern Belize are largely Kekchi-speakers, having migrated from Verapaz, Guatemala, to the region in the late 1800s. However, in the past, many different Maya groups (the full extent of which linguistic studies of place-names are only now beginning to illuminate [Helmke 2009:194-196]) inhabited the whole of Belize in populations far greater than those of today. Caracol, alone, has been estimated to have housed approximately 100,000 people at its peak (while covering an area of only 177 km² [Chase et al. 2011:389; Chase and Chase 1994:5, 1998; Healy et al. 1983]).

Due in no small part to the relative paucity of historical texts inscribed/preserved on stone monuments, with the exception of Caracol, the ancient Maya sites of Belize have often been relegated by both archaeologists and the general public to a peripheral position in the history and culture of the Maya area, particularly during the Classic period. Yet, over the last several decades intensive research within Belize has revealed that the ancient Maya of this eastern region were well-integrated, influential, and tenaciously durable in the greater pre-Columbian Maya story. Far from being peripheral, Belize has been home to human populations since the end of the Pleistocene (Paleo-Indian period; before 12,000 BC – 10,000 BC), followed by a well-defined Archaic period (10,000 BC – 1200/900 BC [Lohse et al. 2006]) before the rise of some of the earliest culturally identifiable Maya (or, proto-Maya) centres in Mesoamerica (consisting of the Middle Formative Cunil and Kanocha complexes in western Belize and the Swasey sphere in northern Belize, beginning ca.1100 BC [see Freidel 1977; Garber et al. 2004; Gerhardt 1988; Hammond 1977, 1991; Healy et al. 2004; Maynard 1988]). The pre-Columbian centres of Belize were also some of the last to be abandoned, with sizeable populations continuing to service inland and coastal trade routes during the Post-Classic (Aimers 2007) and, in some cases, well into the post-Conquest 16th century AD (Graham 1998).

Physiographic
Topographically, Belize is dominated to the north and east by a seasonally swampy plain ranging in elevation between 0 and 100 meters above sea level. To the south and west, steep-sided and densely vegetated peaks dominate. In the Maya Mountains, Victoria Peak, the highest topographic point in Belize, tops at ~1,120 masl. In general, rainfall rises with increased elevation and as one travels further south. Estimations of mean annual rainfall may be as high as 5000 mm for areas northwest of Punta Gorda, nearly four times greater than in Corozal, to the north (Miller 1981b:11). Belize as a whole experiences distinct wet and dry seasons: March and April are typically the driest months, and June marks the beginning of the rainy season with a short break in which to dry one’s socks in late July/early August, known as the ‘little dry.’ Day lengths vary between 11-13 hours, with daily temperature variation being a factor of cloud cover more than hours of available sunlight. From October through February, cold ‘northers’ and associated cloud cover conspire to occasionally lower temperatures to below 10°C.

These differences in topography, humidity, and temperature are paralleled ecologically, with northern/eastern areas characterized by downland (i.e. below 400 masl) pine ridge savannah and lowland broadleaf forest, and southern/western areas characterized by the upland (i.e. above 400 masl) Mountain Pine Ridge—a unique region of Belize that puts one strongly in mind of the Canadian Shield—and upland broadleaf forest. Located near the geographic centre of Belize, the Central Belize Archaeological Survey (CBAS; under the auspices of which my research was conducted) study area (Figure 1.3) includes within its bounds all of these ecological systems (Miller 1981b:11; Trewartha 1968).

Historically, this area had been heavily logged, with the early (17th C.) colonial economy focussed on the extraction of logwood used to make blue and red dyes, and later followed by mahogany (in the late 18th C.). It seems likely that the ancient Maya would have similarly taken economic advantage of this diversity, perhaps through the extraction of wood (Graham 1987; Lentz et al. 2005), as well as other lowland forest products (Graham 1987; Kennedy Thornton 2011; Voorhies 1982). The extraction of tropical hardwoods, particularly mahogany and tropical/spanish cedar, continues today with the
result that much of the lowland broadleaf forest is criss-crossed by active and recently overgrown logging roads. This activity has been both a blessing and a curse to the local archaeological record; while facilitating access for researchers to the more remote portions of the CBAS study area, it has also taken a toll in the form of widespread and, in some cases, devastatingly destructive looting.

Figure 1.3 - Map of CBAS study area
The richness of this region’s ecology matches that of its geology (see Figure 1.4).

The geology and hydrology of the immediate study area was most thoroughly investigated and reported on by Thomas Miller as part of his dissertation work at McMaster University (Miller 1981b). In concept, and as permitted by the Institute of Archaeology, the study area encapsulated in this dissertation focuses on both the Caves...
Branch River Valley and Roaring Creek River Valley, defined as the hydrologic catchment contributing to the discharge of the Caves Branch River and Roaring Creek River at their confluences with the Sibun River and Belize River, respectively, as well as the broad inter-drainage region that lies between—the so-called Roaring Creek Works and Caves Works. The Caves Branch River heads in the escarpment of the non-carbonate highlands, its basin covering an area of about 200-235 km$^2$. Small streams join as the river flows northward, along with two major sources of input—that is, the resurgences of two major caves, Footprint Cave (a.k.a. Actun Chek) and Actun Lubul Ha (a.k.a. Waterfall Cave) (Miller 1981b:3)—in the heavily entrenched cockpit karst of the foothills. The remaining catchment area is internal and only loosely-defined, the product of a karstic landscape, and broad polje; the main stream of the Caves Branch, itself, subsumes approximately 3 km north of the Hummingbird Highway. Finally, after ~2.5 km under ground, the Caves Branch resurges, reaching the low, non-karst plains where it is joined by several minor streams before flowing into the Sibun River (Miller 1981b:5).

The Roaring Creek River shares much in common with that of the Caves Branch, heading in the upland, non-karstic, Pine Ridge, near Hidden Valley Falls (a.k.a. Thousand Foot Falls$^3$). From here, the river flows northward through cockpit foothills and across lowland polje dominated by dolomites and limestones, until its point of confluence with the Belize River on the outskirts of Belmopan. The Roaring Creek River is fed by a number of small tributaries that develop from the runoff of the Maya Mountains to the south. In the lower reaches, most of these are resurgences of caves in the karstic terrain, notably Yaxteel Ahau and Tunichil Mucnal (Helmke 2009:194; Marochov and Williams 1992:42; Miller 1989c:3, 1989d, 1990, 2006).

In practice, archaeological investigations by CBAS—and the Belize Valley Archaeological Reconnaissance (BVAR) project as its immediate forebear—within the study region have been considerably more restricted than the above regional definition, focussing heavily on lowland broadleaf regions, and in close proximity to navigable water, extant communities, or modern access to active agricultural/forestry industries.

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$^3$ The falls are actually closer to 1,400 feet high.
The requirements/restrictions of an archaeological fieldschool run by both projects further reinforce these constraints. Previous studies seem to have been similarly inhibited with the result that a map of known archaeological sites in the region (as in Figure 1.3) suggests what is likely unnatural linear clustering along both roads and waterways, as well as at the topographic transition from the low (<200 masl) coastal plains into the more rugged foothills of the Maya Mountains (between 200 and 400 masl). As one progresses further south, one is faced with increasingly difficult karstic terrain.

**Summary of Previous Work in the Region**

The study region has received sporadic attention from archaeologists from at least the mid/late-1970s, up until the mid-1990s. Understandably, most of the early studies in this region focussed on both surface, and subterranean sites in the immediate vicinity of easily navigable waterways, extant road networks, and valley escarpments adjacent to citrus groves and cacao plantations (Bonor 1995; Bonor, and Martínez Klemm 1995; Davis 1980; Goldstein 1995; Graham et al. 1980; MacLeod and Reents-Budet 1995; McNatt 1996; Miller 1981a, 1981b; Reents-Budet 1980; Reents-Budet and MacLeod 1986). Somewhat unique in the broader Maya area, evaluation of the Pre-Columbian heritage of this region has always focussed rather heavily on subterranean loci (though some surface sites were known and studied [see below and Davis 1980]). This has been fostered, in large part, by a long tradition of speleological exploration by geologists, biologists, avocational archaeologists and spelunkers (Albert and MacLeod 1971; Anonymous 1974; Bartholomew 1973; Blak 1990; Bowden 1988; Day 1985; Day et al. 1987; de la Haba and Long 1972; Frew 1989; Lloret and Ubach 1993; Luiszer 1985; Marochov and Williams 1992; McKenzie 1991; Miller 1977, 1980, 1981a, 1981b, 1986, 1987, 1989a, 1989b, 1989c, 1989d, 1990, 1996; Williams 1992, 1996; Young 1961). Much of this early work can be traced to/through Thomas Miller. A geologist and avid spelunker, Miller is also responsible for many of the earliest reports on archaeologically significant caves in the region (e.g. Miller 1980, 1981a, 1987, 1989a, 1989b, 1989c, 1989d).
The quality of the archaeological record in the CBAS study region sets it apart from most other cave-bearing regions of Mesoamerica. This is not coincidental, but the product of considerable legal forethought: archaeological sites in Belize are protected from unauthorized disturbance by law, and stiff penalties can await those found in violation. As a result of the frequency with which traces of the region’s rich Pre-Columbian past are encountered in caves (to the point of near-ubiquity), all caves are by definition archaeological sites. Permission to explore or conduct cave research, thus, must be obtained from the Institute of Archaeology (IA), and in some cases, the Forestry Department (Veni 1996:67). All authorized expeditions are required to submit a record in the form of a report of their activities to the IA. These records are kept and are made available to researchers at the IA’s library in Belmopan (the nation’s capital).

Beginning in the mid-1990s, the study region fell under closer archaeological scrutiny. Researchers, mainly working under the auspices of the Western Belize Regional Cave Project (WBRCP), and its parent, the BVAR project, both directed by Jaime Awe (recently, Director of Belize’s Institute of Archaeology), began to record systematically and in detail the archaeological remains of both the Roaring Creek River Valley, and Caves Branch River Valley. Their efforts revealed a rich archaeological heritage in the region, describing both new surface sites (Awe and Helmke 1998; Awe et al. 1998a; Conlon and Ehret 1999; Ehret and Conlon 1999; Ferguson 1999; Helmke 2000; Helmke and Awe 1998; Helmke et al. 1999; Helmke et al. 2001a; Jordan 2008; Song et al. 2000), and an abundance of additional caves, sinkholes, and rockshelters used by ancient Maya peoples (Awe et al. 2005; Awe et al. 1998b; Bonor 1995, 2002; Bonor and Glassman 1999; Bonor and Martínez Klemm 1995; Gibbs 1998; Glassman and Bonor Villarejo 2005; Griffith 1998; Hardy 2009; Helmke 2009; Morehart 2005; Morton 2008; Morton et al. 2012a; Wrobel 2008a, 2008b; Wrobel and Tyler 2006; Wrobel et al. 2007, 2010).

Previous studies at surface sites in the region constitute an important, if under articulated, facet of this research; a situation unusual in the Maya area, where investigations of surface sites typically dominate those of the subterranean context. Prior to investigations of the Central Belize Archaeological Survey project, our knowledge of
the region’s surface archaeology was encapsulated within a relatively small handful of studies, including the work of Clinton Davis (1980), David Goldstein (n.d.) and Jill Jordan (2008) in the Caves Branch River Valley, and that of Christophe Helmke (2009; though see individual reports of the BVAR and WBRCP projects) in the Roaring Creek River Valley. At Deep Valley Lookout (Davis 1980), the Xubzulima plazuela (Goldstein n.d.) and Deep Valley (previously identified as Baateelek [Jordan 2008]), ceramic chronologies universally focus on the Spanish Lookout complex, identified by James Gifford at Barton Ramie (1976:46) and associated with late Tepeu 2 and Tepeu 3 at Uaxactun (ca. AD 670-900, see Table 1.1 for basic chronology [Smith 1955]). The ‘Spanish Lookout Sphere’ is wide-spanning and includes sites in the Belize River Valley, (e.g. Baking Pot, Tipu [Aimers 2002], Xunantunich, and San Lorenzo [LeCount et al. 2002]), and the Sibun River Valley, (e.g. Hershey and Pakal Na [Harrison-Buck and McAnany 2007:120]). It is suggested by Jordan (2008) that the universally late date of diagnostic ceramics recovered from the Caves Branch sites along with the limited number of construction phases in turn indicates
a Late Classic date for the inception of nucleated settlement in the Caves Branch River Valley. Later excavations by Christopher Andres at Deep Valley substantiate this suggestion (Andres and Shelton 2010). This contrasts sharply with data from cave contexts. Deep Valley (Figure 1.5) is, by far, the largest known site in the Caves Branch River Valley, spread over nine distinct groups and incorporating the full gamut of architecture expected of a multi-functional Late Classic Lowland centre (Bullard 1960; Hammond 1975), though it appears both less spatially integrated and considerably less developed than its long established brethren in the neighbouring Belize River Valley. As there is little direct evidence for integration via either settlement or shared infrastructure, it is presently unclear whether we should be breaking apart these various groups into smaller (semi-)independent units. While this distribution fits comfortably within polity bounds suggested for both the Belize River Valley (Driver and Garber 2004) and Roaring Creek River Valley (Andres et al. 2014; Helmke 2009), it also serves to highlight the continuing problems associated with identifying settlement hierarchies cross-regionally (Iannone 2004).

Figure 1.5 - Map of Deep Valley
In the Roaring Creek River Valley, Helmke (2009) and others (e.g. Awe and Helmke 1998; Ehret and Conlon 1999; Ferguson 1999; Helmke et al. 2001a, 2001b) have reported a very similar picture for the civic-ceremonial centre of Cahal Uitz Na (Figure 1.6), smaller Chaac Mool Ha, residential Pook’s Hill groups, and a handful of additional minor peripheral groups (Helmke 2000; Helmke et al. 1999). Datable materials are associated predominantly, but by no means exclusively, with the Late Classic (Spanish Lookout or late Tepeu 2 and 3) or later. Earlier ceramics, dating to the Terminal Late Formative to Early Classic (Proto-Classic) transition have been recovered in excavations at Cahal Uitz Na (Ferguson 1999:51). While smaller residential groups in the Roaring Creek River Valley, such as Pook’s Hill #1 (Helmke et al. 2001a) show considerable evidence of remodelling, it is interesting to note that the largest of sites appear to have been remodelled relatively infrequently. Josalyn Ferguson (1999:51) identified only three phases of construction in the Cahal Uitz Na ballcourt despite nearly a millennium of use. It is likely that the chronological differences between surface sites in the Caves Branch River Valley and the Roaring Creek River Valley represents sample bias more than

Figure 1.6 - Map of Cahal Uitz Na
significant chronological/developmental differences; direct evidence for the early nucleation of surface settlement will likely be found in the Caves Branch River Valley in time, either below known architecture, or elsewhere.

The Central Belize Archaeological Survey Project

As noted above, data for this dissertation has been collected, largely, as a senior staff member, and now co-Director, of the Central Belize Archaeological Survey (CBAS) project. The CBAS project is a direct intellectual descendant of the Belize Valley Archaeological Reconnaissance project in this region, beginning independent operations in the summer of 2009. Data collected as part of the CBAS project (Andres and Wrobel 2010, 2011; Wrobel et al. 2013, see also Helmke and Awe 2008), is supplemented/contextualized in this manuscript by archaeological, epigraphic, iconographic, indigenous historical, and ethnological scholarship in this, and the broader Maya region. Where appropriate, I also draw on cross-cultural studies from the much more extensive body of work on human cave use across the Americas, the Caribbean, and elsewhere. Finally, and in addition to the rich body of research already available for the immediate region, previous/parallel work in the Sibun River Valley reported by Patricia McAnany’s Xibun Archaeological Research Project and Polly Peterson’s dissertation in particular (McAnany et al. 2004; McAnany, and Thomas 2003; Peterson 2006), Christophe Helmke’s recent dissertation work in the Roaring Creek River Valley (2009), and recent work at Midnight Terror Cave by James Brady, and colleagues (Brady 2009a, 2009b), serve to contextualize my research.

As noted above, this research, while spanning the drainages of the Roaring Creek River and Caves Branch Rivers as well as the upland inter-drainage zone between, is centred on the major civic-ceremonial centre of Tipan Chen Uitz (Figure 1.7). First reported following the inaugural (2009) field season of the CBAS project, Tipan Chen Uitz (glossed ‘Fortress Well Mountain’; Tipan for short) lies in a rugged and little studied upland zone, the Roaring Creek Works. Steep hills, ridges, and karstic outcrops dominate
this dissected upland and Tipan lies atop one such feature. The centre is architecturally complex and impressive in scale (Figure 1.8): It incorporates the full variety of elite architecture expected of a Late Classic Lowland urban centre, including three pyramidal platforms, numerous range structures, a dominant acropolis, a ballcourt, and an impressive masonry cistern that lends the site its name (Andres et al. 2010, 2014; Morton et al. 2014). Currently, based on direct information from ceramics recovered from architectural excavations, Tipan appears to have been constructed at some point in the Early Facet of the Late Classic period (Tiger Run complex ca. AD 590-670; Tepeu 1 - 2), and was occupied until the beginning of the early portion of the Terminal Classic or Early
Post-Classic (early facet of the New Town complex; ca. AD 870; Caban). It appears that the site may have been abandoned rapidly, as several structures within the civic-ceremonial core appear incomplete (Andres 2011). As was the case with the Caves Branch sites and Cahal Uitz Na, it seems that Tipan was constructed in relatively few episodes.

What is more, two spectacular discoveries in 2010 and 2011 have served to transform completely our understanding of this portion of the eastern Southern Lowlands. In 2010 project members followed an ancient raised road, or *sacbe*, extending off the western edge of Tipan Plaza E. Tracking roughly west for approximately 1.5 km, the *sacbe* terminated at a second monumental centre. Dubbed ‘Yaxbe’ for the heavily forested road that led to it, the site is distributed around two large plazas that conform to local topographic constraints and again replicates the full gamut of architectural features expected of a functionally diverse civic-ceremonial centre (Figure 1.9). The architecture

Figure 1.8 - Map of Tipan Chen Uitz.
of Yaxbe clearly conforms to an emerging local pattern identified at Tipan (Andres et al. 2014), consisting of rough, dry-laid boulder core buildings, faced and plastered, and at least in some instances incorporating large crystalline limestone slabs on the lowest course. This latter architectural cue is significant in that it may tentatively suggest relationships farther afield: similar examples of large exposed masonry terrace faces are known from sites in the Pasión area of Guatemala, including Dos Pilas, Aguateca, Tamarindito, La Paciencia, and El Excavado (Houston 1993). Closer to home, they are also present on the stair-side outsets of Str. B-14 at Naranjo (Figure 1.10). We have argued elsewhere (Andres et al. 2014) that this architectural tradition may mark affiliation with Naranjo, and the Pasión region in the period associated with K’ahk’ Tiliw Chan Chaahk’s war campaigns in the late 7th and early 8th C. AD. Other elements of the local architectural tradition include the conspicuous use of slate to cap at least some masonry
vaults, and the incorporation of masonry-lined cisterns. Plazas appear at least partially unfinished, with rough bedrock extending above what must once have been smooth plastered surfaces; also noted by Andres at Deep Valley. At Yaxbe, too, a number of

Figure 1.10 - Large limestone blocks on lower architectural façades at Tipan (above; photo by C. Andres) and Naranjo (below).
structures appear to have been abandoned mid-construction; suggested by a complete absence of cut/finished masonry. In many ways, the architecture and incorporation of landscape features at Yaxbe reflect patterns evident at Tipan in miniature.

Another sacbe was found to extend off the western margin of Yaxbe and terminate, approximately 1.5 km to the west, at Cahal Uitz Na, in the Roaring Creek River Valley where local architectural patterns seem to be similarly in evidence (Ehret and Conlon 1999; Helmke 2009). Finally, a sacbe extending off the north margin of Tipan and trending toward the north-west is believed to lead to Chaac Mool Ha, also in the Roaring Creek River Valley, though traces of the sacbe vanish as it descends into the heavily cultivated valley bottom.

A second significant discovery came in 2011, when CBAS project co-Director Christopher Andres identified several large fragments of a carved monument on the outset axial stair of Structure A-1 (Figure 1.11) (Andres et al. 2014). This acropolis has been the focus of excavations within the site core of Tipan since 2010. Recovered fragments of the monument are embellished by five glyphic medallions that together form a coherent, if partial, statement. Project epigrapher, Christophe Helmke has loosely interpreted the statement as referring to the dedication of a stone simulacrum of a palanquin on a period ending on uxlajuun muwaan, “13 Muwan,” or 9.14.0.0.0—6 Ajaw 13 Muwan, corresponding to the first of December, AD 711 in the Julian Calendar (Andres et al. 2014:58-60). Thus, in the first two seasons of the CBAS project, our picture of the study region has shifted from one in which a mostly rural population may have only lately nucleated around but a couple of civic-ceremonial centres in the valley bottoms, to what may be a significantly urbanized region supporting—if we accept a relationship between direct areal control, shared infrastructure, and polity extent—one of the largest polities of the eastern Southern Lowlands during the turbulent final centuries of the Classic period.

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4 It is possible that the glyph block referring to a palanquin refers to the title pi’t ajaw or “palanquin lord,” though Helmke notes that there are problems with this interpretation (Andres et al. 2014:59).
Yet, studies in this region are still very much in their infancy. We as of yet know little of the region’s developmental chronology: When was the region first settled? When did nucleated settlements first appear (both in general and at the surface sites already identified)? We know that construction ceased mid-project at both Tipan and Yaxbe during the Terminal Classic, but when were these centres depopulated? Was there a gap between the ‘collapse’ of paramount elite rulership and generalized abandonment? Similarly, we have only glimpsed at the identities of those responsible for the florescence of the Tipan polity: Who inhabited the region before the rise of Tipan? Were these the same people responsible for the development of complex urban forms of organization in the region? Are we talking about the assertion of power by local ‘elites,’ or the importation of a cadet lineage from neighbouring regions? When did materially or contextually visible status differences develop? This is where parallel evidence from the Caves Branch River Valley may offer much-needed perspective. Finally, why did Tipan
follow this developmental trajectory in the first place and what were the socio-political, economic, and religious consequences of this? While certainly, many contexts are able to speak to these questions, in this portion of central Belize, perhaps no context affords such immediate insight as that of the cave. This is the dataset explored in this dissertation, and as will be shown, it has much to say concerning the complex of historical, social, political, economic and related ideological processes in action during the inception, florescence, and collapse of Tipan Chen Uitz and other nucleated centres in the region.
SECTION ONE

CHAPTER TWO—THE STUDY OF RITUAL

*Humans, with their highly developed brains, have turned ritual into a way of life.*—Pratchett et al. (2002:95)

A number of interrelated themes will wend their way through this document. Given the depositional context of the primary dataset involved, and despite the misgivings expressed at the outset of the previous chapter, I will be exploring themes of religion and ritual, the sacred and the profane, the incorporation of ideological and cosmological principles and their archaeological expression. On a broader scale, I will be addressing themes of urbanization, the constitution of community through shared practice, urban liturgy, and the appropriation of ritual by the ruling elite vs. its enactment by commoners. This constitutes a considerable body of theory drawn from a wide variety of sources, predominantly anthropology and sociology, but also geography, psychology, urban studies, and religious studies.

**Homo ritus**

The adoption and manipulation of ‘culture’ has long been privileged as a uniquely human adaptation. Consider the very name that we have given to ourselves, *Homo sapiens*, or ‘intelligent man,’ referring to our tendency toward reflective thought and complex learned behaviour. A lot of what makes us human is *not* passed on genetically. It is passed on by ‘the tribe,’ through teaching, by things that link brain to brain and mind to mind; what Ian Stewart and Jack Cohen have referred to as ‘extelligence’ (Pratchett et al.

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5 Not to be confused with ‘ritual man’ as used by Horton (1964) or Turner (1962).

6 I still favour Tylor’s (1871) definition of culture as "that complex whole which includes knowledge, belief, art, law, morals, custom, and any other capabilities and habits acquired by man as a member of society." More generically, as a process, culture could be defined simply as the rules governing *acquired*, rather than *instinctual*, behaviour.
1999:352). Much of culture’s communicative strength lies in its incorporation of symbols; things that carry meaning beyond simple identification. Over the last several decades, we have become increasingly cognizant of the fact that we are by no means the only ‘cultural animal’ on this globe. Nor are humans the only ‘symbolic animal’; Koko the gorilla has been recorded making more than 1,000 signs based on American Sign Language, may understand approximately 2,000 words of spoken English, and importantly can use these to identify and express concepts of her own. However, what separates humans from even our most accomplished brethren in the animal kingdom is the degree to which we embed our actions into a complex, often opaque ideology. This abstraction of meaning in communicative behaviour is perhaps nowhere more prevalent than in the ubiquitous human use of ritual, which can be thought of as a formulaic series of actions, performed primarily for their symbolic value. Ritual is a uniquely human expression of culture.  

There seems to be a common perception among many in the increasingly secular industrialized western world, that ritual and religion are relics of the past; senselessly holding out against ‘rationality’ or ‘common sense’ in backwaters and remote bowers. In such a view ritual provides the social validation for religion; the two are inextricably linked, and among the more extreme secularists, ritual, hence, is the enemy. Yet, as Elman Service (1966:74) notes, ritual is much more prevalent, and is far more engrained within every day life, than mere religion; “there are peoples and nations that disavow religion, oppose churches, or profess a philosophy rather than a mythology, but there are no societies that lack ritual and ceremony.” Roy Rappaport describes ritualized behaviour as compelling in that it must be performed given certain circumstances, rigidly scripted, divorced from goals in that cause and effect are only indirectly linked, and internally redundant (1979; see also Boyer and Bergstrom 2008). Consider the many and varied rites associated with a professional sport like baseball: these are often-personal,

\footnote{More colloquially, humans have been referred to as ‘creatures of habit.’ But so too, when we observe our brethren in the animal kingdom do we see individuals conforming to particular, identifiable, ‘habits.’ Huxley (1966), d’Aquili et al. (1979), Grimes (1982), Schechner (1977) and others have referred to this as ‘ritual.’ Following my definition, I explicitly reject these inferences/interpretations. Habits do not carry meaning. Habits are not ‘extelligent.’}
unemotional, private, but still incredibly important as it is believed that these rites somehow affect performance (Gmelch 2011). Ritual may be political (deference to the Speaker of the House of Commons), judicial (the swearing in of a witness), social (standing/singing the national anthem prior to the dropping of the puck), it may be present in relatively mundane social acts (for instance, ‘manners’ at the dinner table), and of course, ritual indeed serves as the foundation of most religious practice. Thus, while ritual may be both commonly and understandably associated with religion, it is by no means opposed or exclusive of the secular; ritual is not religion. Moreover, ritual is not an event, but rather a process, conducted over space and time, its meaning often transcending the specific context of its enactment (Turner 1977).

A closely related theme is the apparent dichotomy between the sacred and the profane. Often, particularly when discussing the archaeological record, we have tended toward facile uni-functional, or uni-characteristic, interpretations of archaeological contexts. While we tacitly recognize that all human contexts are multi-vocal, we nonetheless have a tendency to favour some characteristics over others. Thus, we may speak of ‘monumental centres,’ of ‘commoner households,’ of ‘temples,’ ‘palaces,’ and ‘ballcourts,’ of ‘regal-ritual,’ ‘mercantile,’ or ‘administrative’ centres (Fox 1977; Sanders and Webster 1988). These patterns of identification become manifest in our interpretations, but also in the particular questions that we pose, the data that we apply to answer these, and the proofs that we find acceptable. Thus, in the Maya context, we are still likely to study the monumental architecture of civic-ceremonial centres to understand top-down, elite or state, practice, or rural households to understand bottom-up commoner practice. We far more rarely study urban cores to understand bottom-up resistance in commoner populations or liminal processes of status negotiation (c.f. Morton 2012), or commoner households to understand processes and consequences of elite governance (c.f. Peuramaki-Brown 2012). Similarly, in the cave context, ‘sacred’ and ‘profane’ are often taken as immutable states, rather than as the perpetually negotiable, overlapping, and

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8 The implication being that, as monuments, they serve as top-down paths of communication.
9 Thus assuring that we under-appreciate their role in directing social forces.
contextual states that they are. In the particular context of this dissertation, cave sites within Mesoamerica are predominantly discussed as sacred\(^{10}\) (vs. profane) places, and to this extent are studied and interpreted primarily in this light. However, it is explicitly recognized that not all activities occurring within the cave context need be sacralized.

A number of distinct approaches have been taken toward the study of ritual. Functionalism, or the general study of social utility, has remained one of the basic paradigms for the anthropological study of the field, though as Mathias Guenther (1997:162) points out, it has been amended to draw the components of belief and meaning squarely within its analytical purview as in cognitive-processualist approaches. Such approaches are overwhelmingly materialist in orientation and have framed ideology and its physical products or actions (i.e. ritual) under various theoretical constructs from Marxism—in which ritual and ideology exist as an extension of production, reaffirming existing social relations for the benefit of the privileged class (e.g. Kristiansen 1984; Miller and Tilley 1984; Trigger 2006:451)\(^{11}\)—to cultural ecology—in which ritual serves to moderate and define our articulation with our environment and resources (e.g. Harris 1966; Rappaport 1967; Reichel-Domatoff 1976).\(^{12}\)

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\(^{10}\) Connected with the supernatural realm or dedicated to a religious purpose and so deserving veneration.

\(^{11}\) Homans (1941:172) famously stated that “Ritual actions do not produce a practical result on the external world—that is one of the reasons we call them ritual. But to make this statement is not to say that ritual has no function. Its function is not related to the world external to the society but to the internal constitution of the society. It gives the members of the society confidence, it dispels their anxieties, it disciplines their social organization.” In other words, functions that are strongly sociological and psychological.

\(^{12}\) Rappaport (1967:17-18) went on to show that ritual does produce “a practical result on the world.” Discussing the Tsembaga, Maring speakers of the New Guinea interior, he notes that ritual plays an important part in regulating the relationships of these groups with both the nonhuman components of their immediate environments and the human components of their less immediate environments, that is, with other similar territorial groups. Further, ritual helps to maintain biotic communities existing within their territories, redistributes land among people and people over land, and limits the frequency of fighting. In the absence of authoritative political statuses or offices, the ritual cycle likewise provides a means for mobilizing allies when warfare may be undertaken. Ritual also provides a mechanism for redistributing local pig surpluses in the form of pork throughout a large regional population while helping to assure the local population of a supply of pork when its members are most in need of high quality protein.
The flip side of the coin, structuralist approaches of the French school, have also remained popular. Going back to Claude Lévi-Strauss (1963), the most important point is that culture is akin to language, and language is composed of hidden rules. As we talk about the communicative role of ritual, below, the ability to understand and express conceptually complex social mores is accomplished through implicit, non-articulated, but nonetheless present rules.

The two positions aren’t as far apart as one might imagine. Matthew Johnson (1999:92) summarizes:

> [W]hereas a functional or systemic thinker’s immediate instinct is to ask ‘How does this practice/this subsystem function within the culture as a whole? And how does this help the system to work, to be better adapted, within a wider environment?,’ the structuralist will ask ‘What are the underlying rules governing this structure? And what do those rules tell us about the way this culture sees the world?’ For functionalists, culture is fundamentally adaptive; for structuralists, culture is fundamentally expressive, a system of (hidden, cognitive) meanings.

Clifford Geertz (1973:112) notes that “In a ritual, the world as lived and the world as imagined, fused under the agency of a single set of symbolic forms, turn out to be the same world.” In other words, functionalism and French structuralism are complementary, rather than oppositional; they approach the same topics, if from different ends.

I tend to lean toward the functional, materialist, and evolutionary end of the theoretical spectrum. This does not mean that all features of culture need be explicitly functional. But I do believe that humans have a tendency to rationalize their actions and beliefs and that this means that most aspects of the human experience become functional. While I tend to lean more toward materialist positions over idealist, a bias perhaps of the archaeological record, I do not believe that either is exclusive. Finally, while I favour evolutionary explanations of function, this is not to say that all features can be explained as adaptive or maladaptive. Some features of culture or behaviour may have no measurable effect on survivability or their effects may be so marginal as to not introduce significant pressure. It does mean that I believe that cultural features that negatively
impact survival will be less likely to be passed on in the long run. The attractiveness of functionalist/materialist approaches is that they focus on the archaeologically observable. Mary Braithwaite (1984:107) claims that understanding the role of material culture in ritual and prestige practices is a necessary first step in reconstructing other aspects of changes and patterns represented in the archaeological record. She (Braithwaite 1984:94) suggests that the exact content of belief systems might be irretrievable archaeologically, although their operation (function) was not.

What Does Ritual Do?

The axiom, “ask a simple question, get a simple answer,” does not apply here. Catherine Bell (1997:94) outlines a wide range of categories that might be invoked in a structured discussion of ritual. These include rites of passage, calendrical and commemorative rituals, rites of exchange and communion, rites of affliction, rites of feasting, fasting and festivals, and finally, political rituals. Cora Govers (2006:21) outlines a similar scheme, including ritual performances in the agriculture cycle, at life cycle events, annual public celebrations, state ceremonies, healing practices and interpersonal and inter-household exchanges. Phillips Stevens Jr. (2011b:12) offers yet another variation, distinguishing between collective and individual rituals, and calendrical and ‘crisis’ rituals. Others still, have grounded their studies in ‘ritual economy.’ As should be evident from the sheer number of contexts in which it is incorporated into daily human life, ritual serves a great many purposes and is not a concept particularly amenable to summarization.

Ritual and Society

Ritual economy is a theoretical approach for understanding and explaining the ways in which worldview, economy, power, and human agency interlink in society and social change (McAnany and Wells 2008:1). While the recent literature dealing with this subject is rich and insightful, it is somewhat fallacious to consider this a new theoretical movement. Ritual economy is firmly grounded in more recent functionalist, marxist, and ecological approaches. It will not be discussed separate from these.

The reader is directed to the rich literature available on the subject. In particular, to the recent four volume set, titled Anthropology of Religion, edited by Phillips Stevens, Jr. (2011a).
John Baldovin (1991:25; see also Trigger 2003:495) notes that across most of the ancient world an “ideology of the sacred” characterized the centre of urban socio-political life. This consists of acts and ideas, of rites and beliefs, and fulfills several functions (Wolf 1966:96): some are expressive, others have coping functions,¹⁵ some are moral, and most exist to support and unite actors who might otherwise fall out with one another and seek separate social identities. The functioning of the city was inexorably tied to the state religion and was referenced through ritual. The ancient Maya were no exception; one would be hard pressed to over-emphasize the importance of ritual and religion in the establishment, operation, and maintenance of social, political, and economic governance—civil authority—in the Maya area during the Classic period (at least).

Alfred Radcliffe-Brown’s (2011 [1945]:184) “General Theory of the Social Function of Rites and Ceremonies” applies here:

*The theory is that an orderly social life amongst human beings depends upon the presence in the minds of the members of a society of certain sentiments, which control the behaviour of the individual in his relation to others. Rites can be seen to be the regulated symbolic expressions of certain sentiments. Rites can therefore be shown to have a special social function when, and to the extent that, they have for their effect to regulate, maintain and transmit from one generation to another sentiments on which the constitution of the society depends. Religion is everywhere an expression in one form or another of a sense of dependence on a power outside ourselves, a power which we may speak of as a spiritual or moral power.*

While Radcliffe-Brown tacitly links ritual and religion, as discussed above, we are still able to discuss the “special social function” of rites in the absence of religious-based “spiritual or moral power."

Anthropology has established regular and predictable correlations between types of ritual specialists and relative levels of socio-political complexity. Thus, shamans, capable individuals working by direct communication with the supernatural, predominate

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¹⁵ “They help men to deal with the inevitable and irreducible crises of life, of failure, of sickness, of death” (Wolf 1966:96).
in small-scale, food-gathering, egalitarian societies. These individuals often serve personal and critical needs such as presiding over local establishment and transition rites, healing rites, etc. Priests, a formalized and sanctioned class are more commonly associated with more complex food-producing, hierarchical societies with more varied specializations of labour (Turner 1972). These may perform similar services as the shaman, though their role is typically institutionalized and carries the legitimacy of that status. In complex urban systems, it is most likely that a priest would officiate over state-sponsored public rituals. One does not necessarily replace the other, and in most urban societies both exist and may be differentially accessed depending on the nature of one’s needs (Stevens 2011b:13). In modern Maya Yucatán, there are multiple distinct, and sometimes competing levels of ritual specialists, including shamans (h-men), reciters of prayers, as well as regular catholic clergy. Eric Wolf (1966:100) notes that, “The religious referents of the peasant are the natural objects and the human beings that surround him; we may call his explanations first-order explanations, while the religious specialist—seeking explanations of explanations—deals with second-order or third-order meanings.”

As I explore the ethnographic and indigenous historic literature on cave ritual in Chapter Four, I’ll attempt to identify and reconcile both perspectives.

A recent volume edited by Takeshi Inomata and Lawrence Coben (2006) has highlighted the subject of ritual performance among the ancient Maya. In particular, this volume emphasizes the role of public performance in solidifying socio-political structure in the guise of ‘the state,’ or polis, and highlights its parallel role in the creation of a sense of ‘community,’ as in Turner’s use of communitas (Turner 1969, 1974). Both concepts

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16 ‘Simple’ and ‘complex’ exist as bookends along a sliding scale of complexity. As will be discussed in a following chapter, the differences between the two are often related to the relative scale of the particular systems being discussed. Thus, ‘complex’ hierarchical systems often incorporate ‘simple’ egalitarian systems and visa versa.
may be profitably subsumed under the Roman concept of *civitas*, one’s communal identity as a citizen of the state, and applied to the Maya context.  

When Mayanists discuss public ritual performance, it is often set against the backdrop of monumental architecture and the civic-ceremonial core. However, based on ethnographic, iconographic, epigraphic and archaeological data that will be discussed in greater detail in the following chapters, it is clear that processes of ritual extended well beyond the city centre. Further, while remote from the architectural symbols of the state, it seems that many of these ‘hinterland’ or ‘non-architectural’ rituals were nonetheless sponsored by the state, likely included the highest echelons of the socio-political hierarchy, and nonetheless served to support the state’s hegemony. Many others did not, and it remains the archaeologist’s task to distinguish between these. As will become clear, this is in many cases easier said than done.

Reifying the Socio-Political Structure of the Society through Ritual Practice

While public ritual served as an important instrument in the creation of *civitas*, the specific points of articulation between ritual as practice and the constitution of both *polis* and *communitas* is slightly different, and somewhat paradoxical.

Many studies have interpreted civic rituals as multi-directional dialogues, as commentaries on the city, its internal dynamics, and its relationship with the outside world (Govers 2006:21; Muir 1981:5). This is particularly significant where they are organized, not by the dominant political authority, but by marginalized classes: Juris (2008:62) describes a modern city caught in the throws of public political demonstration as a ‘terrain of resistance’ in which competing social movement networks inscribe distinct political messages on the urban and mass media landscapes, enacted through diverse bodily movements and protest styles. Similarly, Swenson notes, “Performed ritual

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17 Note that while I make use of the terms ‘*polis,*’ ‘*communitas,*’ and ‘*civitas,*’ it is not my intention to overstate similarities with Classical Old World civilizations, but merely to engage in a common discourse. Rather than ‘*polis,*’ and ‘*communitas,*’ I could have written of vertical and horizontal integration (respectively) with little consequence to the content of the discussion itself. Further, I openly acknowledge that ‘the state’ need not conflate with any specific community and that community can exist in both complement and opposition to the state and at many different scales.
is complicit… in the ideological negotiation of both normative and subversive sociocosmic orders” (Swenson 2011:285, emphasis added). Moreover, Rearick (1977:437) points out that French fêtes during the Third Republic were known not only as times of rejoicing, but were recognized by the church and state as potential “trouble-fêtes, in which heady crowds unleashed violent resentments or turned celebrations into protests.” In these formulations, performance is reflexive, multi-vocal, and largely free from the machinations of the state (see Asad 1993; Bell 1992:25-9; Gluckman 1963; Smith 1987).

In most discussions of ritual in the archaeological context, an entirely different type of act is referenced. Specifically, archaeologists have tended to view ritual, especially public ritual, as a formalized, elite-controlled, state-sponsored act; an act entirely different to that described by Juris in its censorship of freedom of expression and uni-vocality. Maurice Bloch (1989) notes that state-sponsored public ritual in ancient cities creates and makes use of a charged, incontestable aesthetic field, emphasizing that the structures on display are universal and indisputable. In such acts, power sharing is illusory (symbolic) rather than real (Mosse 1973), and the conservative, seemingly timeless rules of ritual performance “protect the content of the rite from evaluation and merge the past and present by casting social divisions as part of the never-changing natural order” (Swenson 2011:286). Following the theatre-state model proposed by Demarest and others (Demarest 2004:206, 2006; Demarest et al. 2003; see also Tambiah 1976, 1977) and in accord with both Baldovin’s (1991) and Trigger’s (2003) work on the governance of early states, this manuscript situates public cave ritual in a heavily structured symbolic landscape, a ‘cavescape’ that may be either natural or architectural, in which the status system, rather than being suspended or opened for critique is often intensified and thus solidifies the polis (Grimes 1992:67-68; Price 1984, cited in Connor 1987:41).

18 Though not always, we’ll discuss situations in which this is precisely not the case in the following chapter.
While certainly easier to deal with, such uni-vocal rituals are a fallacy, though this recognition in no way diminishes the power of state-sponsored ceremony in the fostering of the polis. A considerable body of research shows that, even when the message is tightly controlled by the state, public rituals, especially, are multi-referential and multi-vocal (see Cohen 1985:53; Turner 1969). “At the level of group-as-a-whole, of orthodoxy, they say something about the relation of the group to others. At the level of individual participant, they speak of the individual’s relation to his group and to the world as mediated by his group membership. Both construct and allow the individual to experience social boundary” (Cohen 1985:54).

As in modern cities, the heart of the ancient city was a palimpsest of complimentary and self-referencing symbols of the polis. For the ancient Maya, disparity was literally written in stone. In their everyday lives, the citizenry, both elite and common, were engaged with the symbols of this structure: during the Classic period, this was a city centre filled with writing and calendrical inscriptions laboriously carved on prominent stelae and altars likely incomprehensible to the majority of the population, sumptuous polychrome ceramics traded from far off places along with the finer costume elements of elite dress, expensive corbeled vault stone architecture in the forms of towering pyramidal temple platforms, elegant palaces and administrative structures, causeways and grand plazas painted in brightest red and white. From their simple stick houses dotted through field and forest for kilometres around this stone and plaster heart, the common people came to market, and to work, and to act as political subjects. This is also the venue for elaborate public rituals as depicted on numerous stelae, altars, and ceramic vessels, where the elite openly satisfied their religious and political obligations to their people and their gods alike, and secured their status roles at the controlling pinnacle of the social hierarchy. Importantly in the context of this manuscript, much of this built environment actively invokes features of the natural environment, prominently, caves and mountains. Moreover, it seems that such features of the natural environment, themselves, served as foci for ritual activities at a variety of scales, from the household and small community scale to that of the state itself. In some cases, common ritual loci spread
across the broader landscape may have been expropriated by emergent or growing state interests. In some cases, this likely resulted in sanctions against common use and would have emphasized the power structure of Maya society.

Given this, theoretical traction for a discussion of public ritual may be found in the expansive body of literature concerned with ‘urban’ or ‘public’ liturgy. Broadly defined, urban liturgy refers to customary or formulaic religious practice carried out in a public setting; here, these need not all lie within the urban core. In such performances the ritual is strongly tied to specific symbolic elements of the built or natural environment. Referencing Aztec ritual, Carrasco points out that the structure of ceremonies ensured that the ‘sacred’ centre moved from place to place during ritual performance, fostering a potent mix of political and religious symbolism, centred always, on the elite ritualists (Carrasco 1999:149). In this setting, ceremonies not only “re-present city [state] values but also functioned to re-generate and re-make the cities as meaningful landscapes” (Carrasco 1999:8). The messages of the rituals were metaphorically inscribed on the settings themselves and were thus perpetuated through everyday interaction.

The constitution of the polis may be supported by ritual at all levels. While most potent at the specific level/scale of enactment, public ritual at any scale is capable of connecting groups that transcend the immediate, active, cross-section of society, and tie them to the broader system of which they are a part. Looking from the bottom-up, Wolf (1966:100) notes:

*Peasant religion cannot be explained solely in its own terms. If it functions to support and balance the peasant ecosystem and social organization, it also constitutes a component in a larger ideological order. Responsive to stimuli which derive both from the peasant sector of society and from the wider social order, religion forges one more link binding the peasantry to that order.*

**Fostering a Sense of Community through Ritual Practice**

Communities may be seen as one of the most important and meaningful contexts for social interaction and socio-political legitimization (Anderson 1991; Isbell 2000; McAnany and Bartlett 2000; Read 1997). I have already used the term ‘community’
several times, and an explicit definition seems in order before continuing: in this manuscript, community may be defined as an ever-evolving, negotiable social institution that is generated primarily through quotidian interactions and practices, structured and synchronized by a set of places within a particular span of time (following Yaeger and Canuto 2000:5-6; Morton et al. 2012b). I explicitly reject the notion that communities are inherently supra household in scale; I see no theoretical justification (though admit a lexical utility) for drawing an artificial line between the concepts of household and community, particularly communities of daily interaction (cf. usage in Wylie 2007). Nor would I explicitly separate civic-level identities from a concept of community; I judge these differences to be a matter of scale and degree, marked by levels of increasing and nested complexity (at the higher levels of city and state, transcending the individual in favour of the institution), rather than of kind (see Anderson 1991; Isbell 2000; re. ‘imagined communities’). In this formulation practice is the locus for the production of the patterned processes that create and recreate social institutions, communities included (Bourdieu 1977; Giddens 1984).

Fostering a sense of community through public ritual is just as important in the constitution of civitas as the reification of the socio-political structure. Fundamental to Turner’s use of ‘communitas’ is that a feeling of social equality, solidarity, and togetherness is fostered by people experiencing liminality together.19 Cohen (1985:55; see also Sallnow 1981) has called Turner’s assertion that ritual fosters communitas into question, at least, with regard to state-sponsored ritual. He points to the political structure involved, the ambiguity of symbol involved and, hence, the individualization of the experience to suggest that such ritual is incapable of supporting the necessary sense of liminality. Further, as discussed above, the overt message of ritual is often heavily politicized.

Paradoxically, however, in constructing ‘community,' the ritual effectively suspends certain, and otherwise significant, socio-political norms. Specifically, the ritual

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19 I am not suggesting that ‘community’ and ‘communitas’ are the same. Rather, that fostering a sense of communitas is an important element in the maintenance of community.
dispenses with otherwise apparent class-based protocols of proxemics and socio-political interaction. The experience is a corporeal one; while inherently visual, a public performance integrates its participants through a shared experience of sight, sound, smell, taste, touch and basic bodily co-presence (D. Brown 1995). While ritual reifies the polis through vertical discourse, it creates ‘community’ through horizontal discourse. Further, and again referring to the literature on ‘urban liturgy,’ there are no requirements of participation; participation is a de facto consequence of presence. Kertzer notes “solidarity is produced by people acting together, not people thinking together” (Kertzer 1988:99-100, emphasis added, cited in Swenson 2011:286; see also Bordieu 1980:73; Inomata and Coben 2006:12). In this context, a community assumes an imagined character that becomes social through performance, and ritual is particularly strong in this regard precisely because it is a “special form of symbolic communication that can create strong emotions of togetherness and belonging and is well suited to include a wide variety of people because it can be interpreted differently by its participants” (Govers 2006:20; see also Blokland 2003:60). As Bordieu (1980:73) famously stated, “The body believes in what it plays at: it weeps if it mimes grief. It does not represent what it performs, it does not memorize the past, it enacts the past, bringing it back to life. What is ‘learned by the body’ is not something that one has, like knowledge that can be brandished, but something that one is.” Cohen’s critique misses the central point of Turner’s study of ritual and community. That is, that community is both thought and action, layered, nested, held in opposition, it is malleable and situational. In other words, the relationship is complex and can be both structuring and de-structuring. Importantly, communitas in ritual can only be evoked easily when there are many occasions outside the individual ritual on which communitas has been achieved (Turner 1974:56). I’ll talk about some of the ways that this is accomplished, below.

Ritual and Defining Boundaries

An important factor in the constitution of community is not only creating an internally shared identity, but bounding this, separating it from ‘the other.’ We tend to think of the
boundaries of neighbouring territories/communities as well defined, well marked, and touching one another. Where these characteristics are not evident, we are apt to declare that people are ‘non-territorial.’ Such a supposition is likely incorrect. Humans are territorial animals. What is variable is the manner in which territory is marked, the identities of the groups/individuals that have access to it, and the ways in which boundaries and borders are negotiated by those crossing them. The image of the discrete boundaries of our modern world are fallacious, not the idea of bounded territoriality. In the Maya area, it is unlikely that territories ever appeared as pictured through the use of Theissen polygons or central place theory (see Driver and Garber 2004; Earle 1976; Flannery 1976). Rather, territories may very well have been defined by tightly controlled cores with more-or-less permeable neutral territories between. Contrary to our present experience, such territorial systems may have been the norm throughout human history, indeed, only ceasing to exist in Europe in 1856 (Cohen 1985).  

Such border areas represent zones of transition, marking sharply felt differences in identity, though often porous to goods and ideas. Human territories abound with such borders and exist at many different, often overlapping, sometimes contrary, levels. Communities of various sizes and constituent members often form the nuclei of such territories. Communities might import structural forms across their boundaries but, having done so, they often infuse them with their own meanings and use them to serve their own symbolic purposes (Cohen 1985:37). Different societies and communities within a society may manifest apparently similar forms, but this is not to suggest that they have become culturally homogeneous, nor self identify with one another (an important point to keep in mind when discussing the ancient Maya). Cohen (1985:47) relates the appropriation of catholic rituals and symbols, specifically holy communion, into traditional Naskapi (Labrador) communal ritual of the caribou spirit (see Henriksen 1973:78; see also Larsen 1983:47 for a similar example among the Micmac of Nova Scotia):

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20 The term ‘letter of marquee’ retains the meaning of a permit issued by a sovereign to pass from one territory to another through a neutral zone and was only outlawed by the Congress of Paris in 1856 (Cohen 1985).
And so while Father Pieter feeds his flock with the body (but not the blood! (ibid.)) of Christ, and gives thanks for the conversion of the pagan, the Naskapi chew on the wafer and commune with the caribou spirit. In so doing they contemplate the essence of Naskapi culture and reaffirm their community’s boundaries.

As Cohen notes, “The symbolic expression and affirmation of boundary heightens peoples’ awareness of and sensitivity to their community,” and “the symbolic expression of community and its boundaries increases in importance as the actual geo-social boundaries of the community are undermined, blurred or otherwise weakened” (note the case study of Huichol pilgrims [Cohen 1985:50-53; see also Myerhoff 1974:62]).

In other instances, boundaries or borders may be more literal. Van Gennep points out that boundaries may be ritually marked, occasionally incorporate natural features, and are often marked by structures, monuments, etc., whose installation at that particular spot has been accompanied by rites of consecration. “When milestones or boundary signs are ceremonially placed by a defined group on a delimited piece of earth, the group takes possession of it in such a way that a stranger who sets foot on it commits a sacrilege analogous to a profane person’s entrance into a sacred forest or temple” (2011 [1960]: 206). The prohibition against entering a given territory is therefore intrinsically magico-religious. There are direct parallels between rites associated with the delineation of social boundaries of all levels, from territory to status. Describing the classical world, van Gennep (2011 [1960]:207) notes that territorial passages (i.e. delineating or moving out of one’s own territory) involves numerous related rites at ‘threshold’ locations. These very much emulate the three stage act of The Rites of Passage discussed below. Similar rites have been recorded in the Maya area (Vogt 1969).

Defining Status Relationships through Ritual Practice

A closely related social function of ritual falls under the broad category of ‘rites of transition.’ These are perhaps the most common form of ritual/rite in human society. In these transformative rites, status relationships are identified and adjusted. Such
adjustments may be related to status elevation, reversal—often temporary, and for the
duration of part or the whole of the rite—or degradation (Turner 1969:168-169,
1974:232). In The Rites of Passage, Arnold van Gennep (2011 [1960]; see also Turner
1974:196) demonstrated that many types of rituals, and notably initiation rites, have three
distinguishable stages of varying relative duration: 1) separation, 2) margin or limen, and
3) re-aggregation—aka “rites of separation, transition rites, and rites of
incorporation” (van Gennep 2011 [1960]:203). The particular emphasis on each of these
stages varies widely from rite to rite and people to people, but their presence nonetheless
appears cross-culturally universal:

The first phase, separation, comprises symbolic behavior signifying
the detachment of the individual or the group from either an earlier
fixed point in the social structure or from an established set of cultural
conditions (a “state”). During the intervening liminal period, the state
of the ritual subject (the “passenger;” or “liminar;”) becomes
ambiguous, neither here nor there, betwixt and between all fixed
points of classification; he passes through a symbolic domain that has
few or none of the attributes of his past or coming state. In the third
phase the passage is consummated and the ritual subject, the neophyte
or initiand reenters the social structure, often, but not always at a
higher status level [Turner 1974:232].

Turner has expanded on van Gennep’s liminal stage in particular, noting that this is the
most significant element of any transitionary rite, and indeed appears as a significant
stage in a number of other rituals as well (Turner 1974:232). Stevens (2011 [1991]) notes
that funeral ceremonies among the Bachama of Nigeria explicitly include social reversals
during the liminal state. Guenther (1997:163) notes that in Zulu agricultural rites, women
are often similarly involved in dramatic expressions of gender reversal. Indeed, most
rituals are plural, involving multiple different rites, and include elements of van Gennep’s
transitional stages (e.g. marriage rituals often incorporate fertility rites [van Gennep 2011
[1960]:204]). It appears as if liminality may have been an important part of Maya cave
ritual as well (see Chapter Three), to some extent addressing Cohen’s concerns on the use
of communitas.

42
How Does Ritual Do It?

Why is ritual such a powerful tool for the reification of the *polis* and for fostering *communitas* in society? How does it draw boundaries and enforce status? According to Turner (1964:22), the symbol is the smallest unit of specific structure in a ritual context. A symbol is a thing regarded by general consent as naturally typifying or representing or recalling something by possession of analogous qualities or by association in fact or thought. “Symbols,… produce action, and dominant symbols tend to become focuses of interaction. Groups mobilize around them, worship before them, perform other symbolic activities near them, and add other symbolic objects to them, often to make composite shrines” (Turner 1964:25). A series of “instrumental symbols” work in concert with dominant symbols. These are often thought to directly affect the efficacy of the ritual. For example, parts of plants bearing fruit or rootlets are used in rituals to make Ndembu women likewise fruitful (Turner 1964:29-30). Rituals explicitly call upon these symbols to generate meaning.

Bloch (1989) has argued that the force of rite lies in its emotional intensity and communicative properties. However, there is a fundamental difference of opinion in studies of ritual and its role in communication (Boyer and Bergstrom 2008), between: 1) those who believe ritual allows the transmission of deep symbolic meaning (Bell 1992; Gluckman 1975; Turbott 1997), and; 2) those who believe that ritual seriously limits the amount of information transmitted vs. other forms of communication and thus question from an evolutionary perspective why it persists (Humphrey and Laidlaw 1993; Staal 1990; c.f. Bloch 1974). However, this latter argument misses the essential functional point of ritual: the discursive strength of ritual is not *limited* to narrative—it is also conceptual, symbolic, individually processed and shared through non-ritualized explication—but is communicative nonetheless.

Following up on the role of symbol and the often difficult job of disentangling, and indeed understanding the entanglement of, various meanings, Turner (1964)
describes the many and overlapping meanings coalesced in the image of the *mudyi* tree among the Ndembu of Northern Rhodesia, modern Zambia. The tree is the senior symbol in both the female puberty ritual and the male circumcision ritual and different meanings are tied to each. In the case of the former, the white latex that flows when the tree is cut is thought to represent breast milk; the ritual takes place when development of the breast is first noted rather than at first menstruation. The tree is explicitly associated with the line from mother to child. Other, male, associations also exist within broader society and reflect patterns of ancestry. “At its highest level of abstraction, therefore, the milk-tree stands for the unity and continuity of Ndembu society” (Turner 1964:23). Wolf (1966:99) notes that the rules of a peasant ceremonial “are enjoined upon the interacting parties from above. Representing the interests of the wider community, such rules appear to stand above and beyond it, to have a reality of their own independent of the rival claims of the contestants. They are said to be supernatural.” In his formulation of Hawaiian kingship, Valeri (1985:344-346) has maintained that communal rituals can be interpreted as a procedure for making participants conscious of their society’s basic concepts and principles. In the terms of Stewart and Cohen, rituals form an essential part of society’s ‘how-to-make-a-human kit’ (Pratchett et al. 2002). Yet, ritual may also be contrary: While the Nkang’s (the name of the ritual) use of the milk-tree is universalizing, in the early parts of the ritual, the actors and focus are female, creating an opposition to men. This distinguishes women as a social category and indicates their solidarity (Turner 1964:25). But how can ritual accomplish this?

“The formal and repetitive orchestration of ritual practice… numbs the participant into misapprehending the existence of alternate experiential and explanatory frameworks” (Swenson 2011:286). As Weston La Barre has been quoted, “a surprisingly good case could be made that much of culture is hallucination,” and that “the whole intent and function of ritual appears to be… [a] group wish to hallucinate reality” (cited in Sagan 1996:105). While the extents to which this is true stands as a matter of debate, it is generally acknowledged that both the structure of ritual, as well as its specific semantic dimensions, are important. More so as the message transmitted is often concept driven.
and general and thus ritual cannot necessarily be read directly as a text. This poses a serious problem to the archaeologist, for how can we get at meaning in any but the most general of terms? I’ll discuss some routes to achieving just this in the subsequent chapter, for now it is unnecessary for the task of understanding how ritual functions.

We can glean something of the structural form of ritual among the ancient Maya from the written texts that remain to us, their post-Columbian brethren, and the archaeological record. It has been noted that expressive elements of Maya culture, both in the past and in the present, are dominated by complementary couplets, dualities, and triads (Bricker 1974; Christenson 2003a:42-51; Hanks 1989; Norman 1980). In antiquity this was expressed in the pairing of male and female characters (the principal deities combining elements of both sexes [Bassie-Sweet 2002; Looper 2002]), the construction of ‘nodes’ of contact between levels of the cosmos (points in space where all three levels of the cosmos simultaneously coexisted [Freidel et al. 1993; Gossen 1974:18; Schele and Freidel 1990]), and even in general architectural conventions (Andrews 1975). In the ethnographic and indigenous historic records these concepts are manifested in various ways including references to the mother/father (Christenson 2003b), and to the complimentarily partitioned self (Brown, L. 2004). Written verse may be similarly structured; the Popol Vuh is replete with repetitive and parallel structure (Christenson 2003b:13):
This its root ancient word,  
Here Quiché its name.  
Here we shall write,  
We shall plant ancient word, 
Its planting,  
Its root-beginning as well,  
Everything done in  
Citadel Quiché,  
Its nation Quiché people.  
This therefore we shall gather 
Its being manifested,  
Its being declared,  
Its being expressed as well,  
Means of sowing,  
Means of dawning,  
By Framer,  
Shaper,  
She Who Has Borne Children,  
He Who Has Begotten Sons, their names...

Are’ u xe’ ojer tzij,  
Waral K’iche’ u b ‘i.’  
Waral xchiqatz’ib’aj wi,  
Xchiqatikib’ a’ wi ojer tzij,  
U tikarib’al,  
U xe’nab’al puch,  
Ronojel xb’an pa  
Tinamit K’iche,’  
Ramaq’ K’iche’ winaq.  
Are’ k’ut xchiqak’am wi  
U k’utunisaxik,  
U q’alajob’isaxik,  
U tzixoxik puch,  
Awaxib’al,  
Saqirib’al,  
Rumal Tz’aqol,  
B’itol;  
Alom,  
K’ajolom, ki b’i’...

Likewise, prayer may follow the same structure. In the words of a shaman petitioning for the return of a patient’s lost soul in Zinacantan (Vogt 1969:659-664):

Divine Kalvaryo, holy father,  
Divine Kalvaryo, holy mother,  
Kalvaryo, holy ancient ones,  
Kalvaryo, holy yellow ones,  
Take this, then, Father  
Receive this, then, Lord...

Unitedly now,  
In unison now,
Will you stand up in holiness,
Will you stand firm in holiness,
    Behind the lowly back of,
    By the lowly side of,
    Your sons,
    Your children,
    Your flowers,
    Your sprouts...

Take these my words,
Take these my prayers,
    At the circuit,
    At the circling..., 
    Of your divine countenances,
    Of your divine faces...

Receive, four holy Fathers,
Receive, four holy Mothers,
    Four holy ancient ones,
    Four holy yellow ones,
    Holy white cave..., holy Father,
    Holy white cave, holy Mother,

Receive, holy senior great mountain, holy Father,
Holy senior great mountain, holy Mother...

In much ethnographically recorded ritual performance, the structuring principles of complementary couplets, dualities, and triads are maintained (Gossen 1974; Tozzer 1941; Vogt 1969, 1976). The significance of this statement takes shape when we again consider ritual’s communicative role. The performance of the ritual “constitutes the ‘communicative behaviour’ that serves to perpetuate knowledge essential to the survival of the culture” (Vogt 1976:8; see also Gossen 1974:57).

The repetitive element of the ritual’s structure supports the creation and maintenance of the message in two ways: 1) through repetitive action and rephrasing, ambiguity in the message is reduced; and 2) repetitive structure serves to make the information being transmitted more ‘real.’ Following Clifford Geertz (his description of
ritual as both a model of and a model for reality [1965]), in the case of a Zinacanteco healing ritual Vogt (1976:9-10) states:

*By conveying the message in prayer form and repeating it in ritual action, and again in the arrangement of ritual plants used to restore the lost soul to the patient, the Zinacanteco shaman affirms the ultimate validity of the information. That is, when the essence of a ritual message is an irrevocable principle of reality, it must be transmitted through the praying, singing, dancing, and gesturing of ritualists, and through the symbolic arrangement of candles, plants, incense, and other paraphernalia used.*

While the purpose of the above example was not principally directed toward the creation or maintenance of *polis*, it may be expected that, by manipulating principles of scale and structure—by incorporating speech, action, and referencing the more expressive and symbolic elements of the monumental built and natural environment (the ‘structural cues’ of the ritual environment)—a message of a strongly socio-political nature may be similarly transmitted. While in subsequent chapters, I will discuss the religious and economic aspects of ritual at considerable depth—specifically, as enacted within the cave context—it is the socio-political context of ritual which will draw the majority of my attention, as we explore the rise and fall of the Tipan polity and other centres in the region.
CHAPTER THREE—THE CAVE AS A CONCEPT: THE EPIGRAPHIC AND ICONOGRAPHIC CORPUS

The aim of art is to represent not the outward appearance of things, but their inward significance.—Aristotle

For complex societies such as those of later Mesoamerica, propaganda was the means by which ideology was disseminated to make political acts acceptable and intelligible to the masses of society.—Marcus (1992:11)

In the previous chapter I discussed the complex role of ritual in society, its referential and communicative elements. Essential in the enactment of ritual is the incorporation of symbolic referents, and in the context of this dissertation the dominant symbol\(^\text{21}\) is the cave itself. The cave, whether a natural feature, its architectural correlate, or a symbolic portion thereof, is the focus of ritualized interaction discussed throughout this manuscript. Groups mobilize around them, worship within them, perform other symbolic activities near them, and add other symbolic objects to them. As in the case of the Ndembu milk-tree, the meanings invoked by the cave context are multiple, situational, overlapping, complementary, and at times contrary. Acquiescing to Hawk’s (1954) infamous ‘ladder of inference,’ it can be incredibly challenging to access the human, ideational, aspects of religious institutions and spiritual life—of symbolic meaning—from archaeological remains alone. Thus, this chapter takes a mixed approach to understanding ‘the cave as a concept.’ Drawing largely from epigraphic and iconographic data, the intention of this chapter is to explore the ideological landscape of the cave context and thus shed light on behaviours and biases that may not be immediately apparent from archaeological data alone, something of the motivation that drives these, and to illustrate elements of the regional variation that underlie these same.

The ancient iconographic and epigraphic sources available to us are various and rich, preserved through the centuries on stone monuments and cave paintings, ceramic vessels and other portable and more-or-less perishable artifacts. Thankfully, a number of

\(^{21}\) To use Turner’s (1964:25) terminology.
additional indigenous historic documents survive to inform our understanding of the Maya cave concept. A small number of these, such as the Dresden Codex, the Paris Codex, the Madrid Codex, and the less sophisticated Grolier Codex, have origins in the recent pre-Columbian past, miraculously escaping the hungry flames lit by zealous Spanish clergy and the harsh censure of the early Spanish colonial authorities. While Joyce Marcus’ (1992:11) concerns over the biases inherent in this dataset are entirely valid, they nonetheless constitute our best line of evidence for understanding the cave as a concept in the ancient context. The names of Stuart, Zender, Stone and Bassie-Sweet will appear prominent in the following pages.

**Ancient Maya Cosmology**

As much of the following discussion, and indeed the rest of this dissertation, will focus on ritualized articulations with specific aspects of Maya cosmology, it seems appropriate to begin with a general outline of Classic Maya cosmological principles. Much of our knowledge of the Maya cosmos has been reconstructed from the fragmentary inscriptions and iconographic representations on Formative, Classic and Postclassic period monuments, murals, and ceramics. We also possess a wealth of ethnographic and indigenous historic sources, including a number of Postclassic codices, depicting ritual behaviour and the cosmos, that seems to have deep roots in the pre-Columbian past. Thus, this picture has been derived from much the same dataset as will be discussed later in the specific context of the cave.

The following summary of Classic Maya cosmology draws from a wide variety of sources, including several excellent synopses of the subject (the reader is referred to these for greater detail; see Ashmore 1991; Bassie-Sweet 2008; Coe 1999; Dunning 1992; Freidel et al. 1993; Houk 1996; Thompson 1990). A word of caution is introduced here as much of what we suspect about Classic Maya cosmology, especially concerning the details, is heavily informed by Postclassic and contact period data, and principally from the Northern Lowlands and Highlands. It is clear that there are some elements of the
Postclassic belief system that were shared by Classic period and even Middle Formative period Lowland Maya (see Freidel et al. 1993; Reilly 1994), however, the danger of an uncritical assumption that Maya belief remained static over space and time is obvious. The following discussion incorporates very general ideas of Maya cosmology that are widely accepted and that are represented by sufficient evidence to suggest that they existed in the Classic period. Many of the concepts discussed seem to be pan-Mesoamerican in nature, though certainly regional variations in interpretation and belief existed in the past as they do today.

In its general outlines, the Classic Maya cosmos conforms to the shamanistic model described by Mircea Eliade (1964). Their world was ordered according to a basic three-part division: the upper, middle, and under worlds (Figure 3.1) (Coe 1999; Schele and Freidel 1990; Thompson 1990). The land of the living, the middle world, was that space inhabited by humans and all the visible parts of our world. The four sides of the world were oriented toward the four cardinal directions (Coe 1999; Freidel et al. 1993:72; Schele and Freidel 1990) and the corners were marked in the inter-cardinal directions (Freidel et al. 1993:115; Girard 1966:33). Across Mesoamerica, the middle world was often portrayed as a theriomorph (zoomorph), in Classic period Maya art, this was often depicted as the back of a turtle, a crocodile, or a peccary floating in the primordial sea (Figure 3.2, see also Copan Altar T and Quirigua Zoomorph B [Freidel et al. 1993; Schele and Freidel 1990; Wagner 2001:286]). This concept of an animate earth is widely shared by many cultures the world over, with particularly notable affinities among the Taíno of Hispaniola, who conceived of the island itself as a giant living, female, beast (de las Casas 1967:1:24; Harris 1994:10-11), the Aztec Tlaltecuhtli, whose rent body formed the earth (Stone 1995:21), or the ‘Olmec Dragon’ (as seen on Izapa Stela 25 [Joralemon 1976]).

The living world is sandwiched, above and below, by a multi-layered supernatural realm. Roughly associated with the arc of the sky, the thirteen layered upper world was often represented by a ‘sky band’ in Classic period art and was home to the principle gods of creation, including the ancestral mother/father figures, the latter seemingly conflated
Figure 3.1 - Maya cosmological model.
with the ubiquitous Maize God, as well as the supreme being, Itzamnaaj or K’awil, often represented as a bird. Furthermore, the upper world was the home of the royal ancestors and each level was inhabited by its own god (Ashmore 1991; Coe 1999). The under world, in contrast, existing below the surface of the living world, was often depicted, particularly in the Northern Lowlands, as a damp, shadowy, nine-tiered mirror-world filled with rot and mould, and inhabited by the twelve lords who presided over death and disease (Schele and Freidel 1990). The under world, however, is a tough nut to crack, ideologically speaking, and considerable variety seems to be associated with conceptions

Figure 3.2 - The Maize God emerging from a cleft in the earth. From a Classic period polychrome dish (redrawn from K1892).
of this realm across the Maya area. We’ll return to these in more detail below, for obvious reasons.

In Lowland Maya tradition, each direction was associated with a particular time of year, day, season, etc., its own colour, gods, tree, bird, and ‘flavour’ (auspicious or inauspicious [Coe 1999; Schele and Freidel 1990]). The centre of the world was likewise associated with its own gods, colour, tree, and bird (Schele and Freidel 1990). There were a number of points of articulation, or communication (nodes) between the three principal levels of the Maya world. Primary among these was the axis mundi, the central link. Conceved of in the Postclassic period as a giant ceiba tree (Dunning 1992; Reilly 1994), or more generically, as a ‘World Tree’ growing at the centre of the model, its roots penetrated the darkness of the underworld and its branches reached the heavens of the upper world (Freidel et al. 1993; Schele and Freidel 1990).

This model was not simply ideational, but conceptualized and constructed (Knapp and Ashmore 1999:10-13), and apparently focussed on local geography. The belief in a geographically specific axis mundi is maintained today among the Chamulans of the Chiapas Highlands, who believe that Chamula, itself, sits at the naval of the earth, and as a sacred place can allow communication between the levels of the cosmos (Gossen 1974:18). Karen Bassie-Sweet (2008) has convincingly argued that the landscape of the Post-Colonial Popol Vuh was similarly centred on the Highland geography surrounding Lake Atitlán, in Guatemala. Vogt and Stuart (2005:160-162; see also Stuart and Houston 1994; Tokovinine 2013:38-43) note that an important and recurring ritual term in the inscriptions is chan ch’een, ‘sky-cave,’ a term that encapsulates the dual supernatural realms, indicating “some universal totality.” The term is frequently paired with emblem glyphs, suggesting that each polity was similarly located at the centre of the cosmos. Furthermore, during the Classic period, it was not unknown for the ajaw, or ‘ruler’ to take the place of the World Tree in carved images (i.e Tikal Stela 1, Quirigua Stela F) (Schele and Freidel 1990). A particularly strong example from the archaeological record is found in Tomb 12 at Rio Azul, where directional glyphs mark each of the four walls

22 i.e. The world was not only animate, but was ordered by time (Rice 2013).
with the body of the ruler unambiguously marking the centre (Wagner 2001:289). According to David Freidel and colleagues (1993:419 n.24), a throne discovered at Copan similarly uses directional referents to place the person seated upon it at the centre of the vertical and horizontal axes. Such centring appears necessary in the exercise of power, as ethnographically attested rituals that symbolically recreate and re-centre the cosmological model are performed by shamans in the field, the home, and around the sick bed (Vogt 1976:58). Plurality and localization applies not only to the cosmological model itself, but to the supernatural denizens that inhabit it. Both Alexandre Tokovinine (2015) and Christophe Helmke and colleagues (2015) have recently noted the plurality and localization of deities and their associated symbols in the context of inter-polity conflict: the early 8th century AD defeat of Naranjo by Tikal featured the competition of local versions of the Maize God, and ultimately the acquisition of the symbols associated with this deity (a palanquin), and ostensibly his favour, by the victor.

Other natural features of the landscape likewise connected worlds. The ocean, ponds and pools, springs, bajos, and cenotes all served as portals and places of petition to the supernatural world. Mountains and caves similarly served as portals between worlds and as discussed at length in the following chapters, these locations likewise served as important places of worship. In the contemporary highlands, the cosmological model specifically included four such mountains/caves, one located at the edge of the surface of the earth in each of the four cardinal directions (Bassie-Sweet 1991:172). As in the case of the axis mundi, many of these features were replicated in the built environment in the form of reservoirs, causeways, ballcourts, pyramidal platforms and temples.

The Cave Context

The Epigraphic Data

A decade ago, Evon Vogt and David Stuart (2005) announced the tentative decipherment of a glyph (T571/T598/T599), read CH’EEN, or ‘cave’ (Figure 3.3). While clearly referencing features of the natural landscape, it seems that this term was most frequently
applied (at least within the written corpus) to architectural features within the monumental cores of civic-ceremonial centres. Further, it seems likely that, while caves were clearly important ritual loci, the majority of ritual contexts in which ‘the cave’ was invoked as a concept, at least by the ruling elite, would have focussed not on natural voids, but rather on their architectural analogues. Yet, with this decipherment, the door was optimistically opened to explore some of the ways in which the ancient Maya conceived of the cave context, in which contexts its symbolic and physiographic features were invoked, and the associated identities and motivations of actors engaging with this context and within a particular historical framework. Alas, I am not an epigrapher and work with this term in the corpus has so far been very limited, including a brief discussion by Vogt and Stuart (2005) and a more extended discussion by Tokovinine (2013). Nonetheless, in future, this decipherment stands to make significant contributions to our understanding of ancient Maya cave use and will be discussed in this light, here.

Figure 3.3 - Cave-related glyphs: a) i-ii (after Stone and Zender 2011:133; iii, detail of a tablet (M15), Temple of the Foliated Cross, Palenque (after Tokovinine 2013:20); iv, detail of Stela 1, Copan (after Tokovinine 2013:20); b) i-ii (after Stone and Zender 2011:135; c) i (after Stone and Zender 2011:137); ii, detail of Drawing 34 (A4), Naj Tunich (after Tokovinine 2013:22); d) i (after Stone and Zender 2011:147); e) i (after Stone and Zender 2011:169); f) i (after Stone and Zender 2011:139).
Among the most significant of contributions based on the decipherment of the CH’EEN glyph at present is the apparent confirmation, beyond doubt, of the conceptual overlap between caves as natural features and particular elements of the built environment: temples and their associated platforms. The initial hypotheses surrounding this relationship were based on the offhand observational similarities of mountains to pyramids, and caves to the temples at platform summits (Vogt 1964:194). It was suggested, thus, that cultural articulations with these features of the natural landscape in the ethnographic record could inform, not only on articulations with similar contexts in the ancient past, but on articulations with their conceptual brethren in the built environment (Vogt 1964). Iconographic programs on temple façades, particularly among the Puuc sites of Campeche, and at Copan (Figure 3.4) reinforce this simile. Epigraphically, this structural relationship became generally accepted with the reading of the UITZ, ‘mountain’ glyph (Stuart 1997), and its unambiguous application to both natural peaks and artificial platforms. The CH’EEN glyph was the other, missing, part of the puzzle.

Figure 3.4 - Uitz monster on exterior of Hormiguero structure.
More recently, Tokovinine (2013:20) has stressed the need for caution when referencing this particular decipherment. He notes that Stuart’s interpretation is contextual, rather than substitutive; “No phonetic substitutions like ch’e-ne or ch’e-na have so far been attested in the Classic Maya inscriptions. In fact, the sign ch’e remains unidentified” (Tokovinine 2013:20). Stuart’s argument is based on providing enough cases in which the word ‘cave’ would be the best fit. Perhaps, the evidence from the Jolja cave, near Joloniel, Chiapas provides the most convincing contextual corroboration for Stuart’s decipherment. Here, an Early Classic text within the cave reads hul-iiy t-u-ch’e-en, ‘he arrived in his cave(?)’ (Vogt and Stuart 2005:160). A second text in this cave refers to the completion of a 400 year cycle in ?CH’E’N-na (Tokovinine 2013:21). Other lines of evidence rely on associations between the CH’EEN glyph and under world symbolism, or with mountains, on portable media such as ceramic vessels.

Tokovinine has also noted that, even if we accept the reading as ch’e’en, we must still concede that multiple meanings may be tied to the term. Thus, the use of the CH’EEN glyph in any particular context is not constant. “The pan-Mesoamerican quatrefoil motif associated with caves is well attested in Classic Maya imagery, and there is a corresponding sign T510 in the script that appears in place names” (Tokovinine 2013:23). Another candidate for the cave sign identified by Tokovinine is a stacked KAB ‘earth’ sign and is found as an optional part of the place name for Naj Tunich Cave (Figure 3.3) (Tokovinine 2013).

What is more worrying, according to Tokovinine—or more exciting, depending on your perspective—is the sheer abundance of contexts in which this sign occurs. Some of these contexts may refer to actual caves, while others seem to use the term metaphorically, referencing the cave and its associated ideology within features of the built environment, or as the symbolic invocation of the cave as a place of ethnogenesis, or the dwellings of gods and ancestors. Vogt and Stuart (2005:163) note that at Palenque, where the T598 glyph shows up most frequently, it may serve to additionally conflate places in the built environment with springs or other sources of water. Thus, it appears in ut-iy tan ch’e’en Lakamha,’ ‘it happened before the spring at Lakamha,’ and ut’iiy tan
ch’een, apparently, ‘it happened before the temple.’ Similar associations are also noted for the major acropolises of Dos Pilas’ centre and the neighbouring complex of El Duende. While in these instances, as at Palenque, the CH’EEN glyph seems to refer to springs, James Brady (1997) notes that large caves are also associated with these groups. The root of Tokovinine’s hesitation is an apparent disjunction between the abundant usage of the CH’EEN glyph in place names of the Classic period and the near absence of ch’e’en in the modern ethnographic record:

Despite the importance of natural sinkholes as sources of water and places to grow cacao, the metonymic use of ch’e’en with place names is still rare in the books of Chilam Balam when compared to the frequency of the terms kab ['earth/land'], luum ['agricultural lands'], and kaaj ['land']. This pattern contradicts the situation in the Classic Maya inscriptions, where ch’e’n is the most frequent term [Tokovinine 2013:25].

Further, Tokovinine (2013:25) points out:

[T]here is a range of meanings of ch’e’n in Mayan languages and ‘cave’ is only one of them. In Ch’orti’ (Wisdom 1950:718), it is ‘opening, hole, perforation, cave, grave, ditch, well, tank, canyon, arroyo, hollow, valley, cavity.’ ‘Cave’ and ‘hole’ for ch’e’n are also found in Ch’ol (Aulie and Aulie 1978:53) and Chontal (Keller and Luciano 1997:101). ‘Graves’ in Chontal are the ‘ch’en of the dead’ (Keller and Luciano 1997:101). In colonial Tzeltal ([de] Ara 1986 [1571]:265), it is ‘hole’ and ‘canyon.’ Ch’en in Tzotzil (Laughlin and Haviland 1988:99, 197, 271, 294, 303, 324, 327) is ‘hole, burrow, cave, ravine, cliff.’ In Yukatec (Barrera Vásquez et al. 1995:46, 131-133), it means ‘hole, cistern, cave with water’ as well as a collapsed sinkhole used to grow cacao. In summary, any opening in the ground can be ch’e’n, particularly if there is water in it. If we consider the representations of mountains... then the cleft in almost every mountain image in Classic Maya art would fit this definition of ch’e’n.

The term may indicate places, something pertaining to specific places, or places that may be owned by humans or gods.
This particular diversity of meaning is at least partially the result of hundreds of years of historical development, regionalization, and likely, semantic widening. However, the common element in all of these historical meanings is that ch’e’en denotes a hole, cleft, or void in the earth. While Tokovinine’s warnings for caution are valid, they in no way invalidate this essential, and presumably, oldest meaning. So too, must we exercise caution in applying our spatial divisions to other peoples, let alone of other times. Indeed, it could be argued that the strict divisions that modern English-speaking westerners make between ‘caves,’ ‘sinkholes,’ ‘rock shelters,’ ‘springs,’ etc., may have been entirely irrelevant to the ancient Maya. Hence, there is little problem with the diversity of meanings apparent in modern Mayan.23 An alternative explanation for the apparent discrepancy is that the CH’EEN glyph may not translate directly as ‘ch’e’en,’ per se, though its semantic meaning is preserved. Thus, Tokovinine’s critique, rather than warning away from use of this term, suggests that it may be applied to tie together a much richer web of meanings and uses than the English word ‘cave’ suggests.24

The iconographic elements of the CH’EEN glyph, itself, reinforce this point. Consider the other glyphs in Figure 3.3: central to the meaning of ch’e’en “is the concept of a moist opening in the earth and, like the signs for earth, mountain and stone, the CH’EEN glyph features a profile enclosure which highlights its significance as a shadowy Underworld environment” (Stone and Zender 2011:52). In fact, the KAB (earth) glyph, is sometimes found stacked, with the upper portion forming the familiar profile enclosure associated with hollow spaces (Tokovinine 2013:22). It is similarly clear that there is considerable iconographic overlap between the CH’EEN glyph and the WAAY? (cenote), and UH (moon25) glyphs, thus unambiguously linking all of these words together within a single conceptual framework. Non-glyphic iconography similarly illustrates the conceptual overlap between these. The CH’EEN glyph is commonly

23 One need look no further than the commonly cited conflation of ‘blue’ and ‘green’ within the Mayan word yax.

24 When discussing specific examples from the archaeological record, however, this does not mean that different caves were not used for different purposes.

25 The Moon Goddess was thought to retire to her home in the under world when not in the sky.
infixed with under world symbols such as an impinged bone, a skeletal mandible or a disembodied eye; symbols that are commonly found depicted on bat wings (Figure 3.5) or in depictions of the under world (Vogt and Stuart 2005). Further, caves are often shown as stacked mountain monsters or, as in the case of the Late Formative San Bartolo murals, as the profile maws of zoomorphic mountains (Figure 3.6).

Thus, perhaps the most exciting development associated with the decipherment of the CH’EEN glyph is that the epigraphic dataset affords insight into the truly broad set of meanings that surround the cave context and may thus help us to extend our interpretations of this landscape beyond the cave mouth, so to speak. As Andrea Stone (1995:34) notes, in Mesoamerica, cave symbolism and its associated concepts are fluid, polysemic, and sometimes contradictory. It is precisely this entanglement that is the source of its power. In future, the epigraphic dataset may afford contextual information, suggesting both motivation and timing of at least some cave-related acts.
The Iconographic Data

What is more useful at this point is the insight that has been gathered from the iconographic corpus. The Maya corpus of images depicting cave-related acts is small. It can be subdivided into two general bodies based on context: 1) images in caves, and 2) images of caves. The latter is problematic, especially where informed by epigraphic data, and may in fact muddy the water by extending cave-related concepts to non-cave-related contexts in ways that obscure our understanding of the physiographic cave context; a topic that has been explicitly grappled with by Bassie-Sweet (1991, 1996). As noted above, this may also represent an opportunity. The former body of data may be less-
ambiguous, however, even here we must be careful not to uncritically treat images encountered within the cave context as either ‘complete’ or ‘literal’ depictions of persons, activities, or materials exclusively or even directly associated with the cave context.

Nonetheless, from these sources the potential exists to learn much, at least in a general sense, about how the Classic Maya perceived of the cave context, the reasons for which activities in this context were initiated, and perhaps more significant still, the associated identities of peoples and objects engaging in these activities. The previous work of two scholars in particular, Andrea Stone and Karen Bassie-Sweet, will be foundational to this discussion.

**Images in Caves**

Scores of painted caves have been identified in the Maya area. Together, these furnish a corpus of some two thousand separate images and texts. By far, handprints and geometric or abstract designs dominate this body. Perhaps not surprisingly, these have proven resistant to interpretation (but see Chapter Five). From those remaining, Andrea Stone has identified seven specific categories of activity that she suggests occurred within the cave context itself during the Classic period (Stone 1995:135-146): 1) the presentation of various offerings, both burnt and non-burnt; 2) blood sacrifice; 3) sexual intercourse/masturbation; 4) oration, presumably prayer or song; 5) dance; 6) non-vocal musical performance; and 7) ritual decapitation/prisoner sacrifice. A number of acts are found illustrated only infrequently in the cave context. Indeed, images of figures burning offerings, engaged in sexual intercourse, or masturbating are found only at Naj Tunich, Guatemala. Images of figures engaged in dance are more common, found both at Naj Tunich and at Actun Dzib, Belize, as are images of musicians (Stone 1995). All of these acts are interpreted as being explicitly ritual in nature.

Many of these acts, such as sexual intercourse/masturbation, oration, or dance, are unlikely to leave diagnostic traces in the archaeological record in and of themselves.\(^{26}\)

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\(^{26}\) Though note that Marieka Arksey and colleagues (2014) have interpreted small, well-built and plastered platforms in Las Cuevas, Belize, as dance platforms.
However, on the assumption that, especially in more elaborate episodes, some of these acts (particularly dance and musical performance) were meant to be seen, then locations and facilities that support this dramatization of ritual might be important: in the ethnographic record, such public access is overwhelmingly associated with rites of rain and fertility, such as the ‘Fiesta of the Cave’ at Jotana (Brody 1987), or the *K’in Krus* ceremonies in Zinacantan (Vogt 1969). Depictions of masturbation and sexual intercourse, not a part of ethnographically attested ritual, remain more obscure in both purpose and meaning, though the frequent associations with Chaak and God N, suggest that they may similarly be related to fertility rites.

Other activities, such as those incorporating the burning of incense or offering of other items, and while suggesting direct material correlates, are less than helpful due to the ubiquity of their enactment in ritual activity.

As discussed in Chapter Five, evidence of burning is present in the vast majority of cave contexts, either in the form of hearth features directly on the cave floor, or within vessels as in Drawing 63 from Naj Tunich (Figure 3.7). Indeed, in the dozens of caves with dark zones that I’ve explored in my time with CBAS, I can think of only a few instances where there is a complete absence of evidence for some form of ceremonial burning, and in these cases, excavation may very well reveal that burning did, indeed, take place.

**Figure 3.7 - Drawing 63 from Naj Tunich (redrawn from Stone 1995:f. 6-9).**
Still other activities are more amenable to direct observation. Blood sacrifice and human sacrifice are included among these. In particular, obsidian blades recovered from cave contexts have often been associated with auto-sacrifice based on contextual associations (Awe et al. 2005; Colas et al. 2000) or use-wear analysis (Aoyama 2001; Reents-Budet and MacLeod 1986), though Stemp and colleagues (2013) note that such evidence is problematic, at best. For instance, how much cutting needs to occur to leave evidence in the form of use-wear? How can we distinguish between cutting that occurred in the cave from that which occurred without? Where cutting is demonstrated, can we differentiate between that applied to humans vs. other animals? For instance, chickens are often sacrificed in the ethnographic cave context and other animal remains are frequently found in caves used in pre-Columbian periods. In general, auto-sacrifice is not particularly prevalent in modern cave ritual. It is, however, quite common in Classic period art, and almost exclusively in the context of petitioning ancestral deities during elite political rites such as in rites of accession, submission, or other types of transition, and is hence a worthwhile potential correlate to keep in mind.

Andrea Stone (1995) has pointed out that humans depicted in the cave context itself are typically shown in simple, modest, clothing. Assuming that these images represent accurate depictions of those taking part in cave ritual, several interesting interpretations warrant mention: 1) commoners were the dominant actors in cave ritual, even in prominent and rich caves like Naj Tunich, 2) those taking part in elaborate cave rituals are indeed elite, and our assumptions about the norms of elite dress therefore need to be re-examined, or 3) following van Gennep (2011 [1960]) and Turner (1974) and again assuming that depicted individuals are of elite status, cave rites involve a liminal

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27 Stone (1995:142) suggests that an act of human sacrifice/decapitation is recorded on the walls of Naj Tunich, citing examples of this act from other sources both within the cave context (at Actun Ch’on, Yucatán) and without. In addition to concerns stemming from interpretation of the archaeological record, cave-related images often involve supernaturals committing sacrifice, rather than priests/impersonators/humans. Second, Kathryn Reese-Taylor notes (personal communication 2009), that Actun Ch’on Drawing 1 may not actually show an act of sacrifice, and the protagonist of Naj Tunich Drawing 11 holds the ‘severed head’ in a manner inconsistent with better-preserved examples from other sources (in which it is typically grabbed by the hair; see Kerr vessel 8803).
period in which quotidian status relationships (or their representation) are suspended.
Based on the variable socio-economic status of material culture encountered in
archaeological cave contexts (see Chapters Six and Seven), it seems that this liminality
did not always extend to the paraphernalia of ritual.

Images of Caves
The second source of images—primarily from ceramics and stone monuments found
outside of the cave environment, and perhaps associated with a very particular top-down
‘elite’ ideology—can be called upon to illustrate the general variety of ceremonial
circumstances in which cave related imagery is invoked. There is a surprisingly long
record of such depictions from across ancient Mesoamerica; the earliest representation of
a cave in Mesoamerican art occurs with the end of the Early Formative at the Olmec site
of San Lorenzo, in the form of a niche carved into a tabletop altar (Stone 1995:22). By
the Middle Formative, the conventional quatrefoil and zoomorphic representations appear
(ex. Chalcatzingo Monument 9 [Stone 1995:22]). The convention is firmly established in
Maya art by the Late Formative (ex. San Bartolo Murals). Tikal Altar 4 shows the earth
monster, also referred to as the ‘cauac’ or ‘uitz’ monster:

...eyes draped in foliage and the edge of the upper lip marked by
reptilian scales that ally this creature with wild animals of the
forest.... The open mouth takes the expected form of a quatrefoil, and
within it sits the Old God N, wearing his turtle carapace. In his right
hand he raises a dish holding some ritual object: A torch or cigar and
a sharp bloodletting instrument. Here the cauac monster surely
alludes to a topographic (cave) shrine wherein a quadripartite version

Depictions of the cave mouth as the open maw of the ‘earth monster’ (Tate 1980; Taylor
1980), especially in architecture, becomes the standard across the Maya area, and persists
into the ethnographic present (Sosa 1985:414; Stone 1995:23). In the Zinacanteco healing
ritual quoted in the previous chapter, the ritualist makes petitions to the ‘holy white cave,’
the conceptual entrance to a, or the, ‘great mountain’ (Vogt 1976:9). Vogt clarifies (Vogt
1981:122), noting that vits (‘mountain’) and ch’en exist as complementary opposites in
the sacred geography of Highland Chiapas, representing two ends of a spectrum from
‘hotter and of higher rank’ to ‘colder and of lower rank.’ It is a concept that is shared
across much of Mesoamerica: one conventional sign for mountains in central Mexican
iconography, such as in the Mixtec codices (ex. Nuttall 53), or the mural art of
Teotihuacan (Tlalocan mural, Tepantitla) is a stepped hill or mountain including a basal
cavity filled with water, or issuing forth water. As a toponym, the depiction of a mountain
and water-filled cave, neatly encapsulates the Nahuatl compound word for ‘city’: altepetl,

Yet, in other instances, imagery associated with caves is regionally specific: Stone
(1995:29) notes that the U-shaped depictions of cenotes, as they represent a
physiographic feature largely isolated to the Yucatán, are for the most part restricted to
the art of this region. The associated glyph for cenote (WAAY? [Stone and Zender
2011:135]), is likewise regionally focussed. In particular, in the Yucatán there seems to be
a strong link between, not caves and mountains as in the Highlands, but between caves
and the sea. Here, wind issuing from both cenotes and dry caves “comes from the sea to
which all wind returns” (Redfield 1941:118; Redfield and Villa Rojas 1971 [1934]:205).
From an observational standpoint, especially in the Yucatán, this association makes
perfect sense as many cenotes and caves quite literally contact the sea, and near the coast
may even heave with the tides. A similar association was noted by De Booy (1912), in the
Caicos Islands, where the highly jointed limestone allows communication between bodies
of water.

In contrast to figural depictions made in the cave environment itself, in which
humans are frequently depicted, readily apparent depictions of the cavescape and under
world on ceramics and monuments are typically inhabited by supernatural beings. Their
acts are nonetheless familiar. In the San Bartolo murals, a female supernatural seated
before a theriomorphic cave is depicted offering tamales from a vessel in much the same
fashion as the figure in Naj Tunich Drawing 63 (see above) offers incense. On K0531
(Figure 3.8), a toad conjures a Vision Serpent through a similar ritual offering. Note, too,
that in the San Bartolo murals a serpentine body extends from the cave mouth, forming the plane upon which the other actors stand. Denizens of the under world are commonly depicted engaging in dance, accompanied by musicians, and committing acts of sacrifice.

Stone (1995:35-44), following Thompson (1959, 2005 [1975]), Heyden (1975, 1976, 1981), MacLeod and Puleston (1978), Brady (1988, 1989), Taube (1986), and Bassie-Sweet (1991), has outlined a series of inter-related concepts, including the cave as a house, the cave as a hole (or passage), the cave as a setting for transformation, the cave as a source of fertility and material wealth, the cave as a source of sustenance, the cave as an abode of witches and ghouls, and the cave as an articulation point with the ancestors. In most of these formulations, the essential identification of the cave as a point of articulation with the supernatural realm is key.

**The Cave as a Concept**

Each of the above-mentioned categories are both distinct and complementary in their articulation with the cave context though if anything, they tend toward the latter. They are both self- and co-referential, thus their separation within this discussion is more an attempt at imposing a logical order for discussion and at aligning the present discussion with that of Stone, than a real reflection of hard distinctions. What are distinct, are the sources used to discuss these conceptual categories—iconographic, epigraphic,
ethnographic and indigenous historic—according to their particular peoples and places of origin.

As I discuss the ideological and functional aspects of these various sources within the same breath, I could rightly be accused of inappropriately conflating the ideas of modern Maya and their recent ancestors, of conflating the practices of Highland groups and Lowland groups. Indeed, I am. I would counter that such a conflation is essential. It is in the similarities between these diverse groups, with their particular histories and the variety of contexts in which caves are discussed that we are most likely to find elements of ancient origin. However, so too in the discussion of differences are we able to better evaluate this similarity and I will take some pain to discuss the diversity that likely marked cave use in the past in later discussion.

*The Cave as a House*

The representation of the cave as a house-like container is well attested across Mesoamerica and is seen in modern Mayan place names, such as Naj Tunich (‘Stone House,’ Mopan [Stone 1995:35]), Na ‘Ch’en (‘Cave House,’ Jacaltec [La Farge and Beyers 1931:243]), and the cave named Dzab Na (‘Rattle House,’ Yukatec [Strömsuik 1956]). This same concept explains the common association between cave related imagery and temple architecture, as temples were conceived of as ‘houses of the gods’ (Stone 1995:36); as noted above, decorative motifs on structures throughout the Maya area make the connection between temple structures and caves explicit. Copan’s Temple 22 is a dramatic example of this association:

> 18-Rabbit’s [Waxaklajuun Ub’aah K’awiil’s] master masons shaped the central door of his temple to represent the mouth and gullet of the great Witz Monster. This was meant to indicate that the interior of the temple symbolized a living cave that opened into the heart of the mountain….Deep behind this cave door stood the sanctum where 18-Rabbit and his successor conjured up their ancestors and the gods. (Freidel et al. 1993:149-151, my parentheses)
Additionally, the corners of Temple 22 are adorned with masks of Chac (Figure 3.9). Further to the north, at Xunantunich, Belize, we find otherworld imagery adorning the eastern and western façades of the Castillo, again making the association explicit (Figure 3.10). The striking similarities in style between cave art and the ‘graffiti’ found in temple structures in the Petén seem to link the two locales qualitatively, though the association may be coincidental.

The concept of ‘the cave as a house’ can be taken more broadly, as ‘the cave as refuge or shelter,’ an activity category identified by Thompson (2005 [1975]; see Chapter Five). Prosaically, the first mention of a cave in the Popol Vuh, is as a place of refuge. We are told that the creator deities originally attempted to make humans out of wood, and while they multiplied and spread, “they still did not possess their hearts nor their minds. They did not remember their Framer or their Shaper. They walked without purpose. They crawled on their hands and knees and did not remember Heart of Sky. Thus they were weighed in the balance. They were merely an experiment, an attempt at people” (Christenson 2007:72). This experiment came to a close as their dogs, their
hearth stones, and their griddles eventually rose up against them. Though they attempted to hide themselves in caves, the mouths of the caves closed up before their faces and “Thus the framed people, the shaped people, were undone” (Christenson 2007:77). Brody (1987:41) relates a much more recent, but strikingly similar, tale from the Tojolabal of Chiapas, in which an earlier creation of people existed, but were destroyed by water; “those who tried to save themselves by going into caves emerged as animals.” It is further related that this tactic would not work the next time; that caves would not provide refuge of any kind.

In the ‘historical’ narratives of the Annals of the Cakchiquels, the use of caves as a place of refuge is again presented. In this text, two Kaqchikel lords, Cay Noh and Cay Batz, promise service to the K’iche’ lord, Tepeuh. While collecting tribute for the K’iche’ lord, they are tricked and robbed by the Tz’utujils. In fear of Tepeuh’s expected wrath,
Cay Noh and Cay Batz hide in a cave (Hernández Arana Xajila and Díaz Gebuta Quej 1885:53):

But they did not reach there, they feared to come before Tepeuh; so they hid themselves in a cavern, and they retired into the cavern. The place where they hid was called by Caynoh Pecparupec.

The concept of a ‘pecparu pec,’ or a ‘cave within a cave’ is an interesting one that brings us full circle and reinforces our insight into the cosmological form of caves, and more broadly, of the under world. In the Popol Vuh, Xib’alb’a the K’iche’ under world is conceived of as existing as a world of damp, disease and decay. It is a shadowy reflection of the surface world inhabited by humanity and closely related supernaturals. As suggested by the term ‘pecparu pec,’ it is essentially a nested space; the Popol Vuh describes a series of ‘houses’ in Xib’alb’a, ‘caves within caves’ in which the Hero Twins and their father and uncle undertake a number of trials (Christenson 2007:112-113).

The Cave as a Hole (or Passage)

Stone (1995:36) notes that the cave was seen as an entry and exit point for celestial bodies, winds, and even human souls. In the iconographic tradition, it is most often the entrance itself, the opening into the earth represented as a quatrefoil or skeletal maw that is the focus; it is not surprising that the entrances to caves are similarly, though by no means always, the focus of human activity. In the ethnographic record of both the Highlands and the Northern Lowlands, caves are seen as portals, providing access to other realms of the cosmos. While these realms are petitioned for fertility, for rain, or for wealth, etc., they need not be benevolent. If the world is animate, then it also has a personality, hence, the same caves from which winds are thought to issue forth bringing life-sustaining rains, may at the same time be sources for vientos, or ‘evil winds’ that are thought to carry bad omens, sickness, and in some cases, death (Redfield 1941:239, 305; Redfield and Villa Rojas 1971 [1934]:165, 205).
Contrarily, caves are places for disposing of the ills of the world. John Sosa (1985:447), in his study of Yalcoba, Yucatán, states that “the hmeen ‘shaman’ disposes of tannkas ‘illness’ by sweeping it into a cave at the western horizon. It is then sent off with the sun in the west, disappearing via the cave into the underworld” (Stone 1995:36).

Similarly, Stone describes a shrine located outside the cave of Dzibichen, central Yucatán, as built for the purpose of removing weariness from travellers’ legs by ‘sweeping’ them into the cave (Stone 1995).

So too are caves places of origin, for both communities and peoples. Caves (vs. the under world) as a place of origin feature explicitly in the later ‘historical’ section of the Popol Vuh. In this, the ancestral founders of the K’iche’ are described as drifters, wandering through a wilderness in search of their eventual home: “THIS, then, is the name of the mountain that they went to. Balam Quitze, Balam Acab, Mahucutah, and Iqui Balam, along with the Tamub and the Ilocab, arrived at Tulan Zuyva. Seven Caves and Seven Canyons was the name of the citadel. There they arrived to obtain their gods” (Christenson 2007:197). As Allen Christenson (2007:197 n.549) notes, the equivalent in Central Mexican mythology is Chicomoztoc (Seven Caves), the legendary origin place of the Early Postclassic Toltecs and the many Nahua groups who claim Toltec ancestry (Alvarado Tezozomoc 1975:14-15; Davies 1977:35-37). As Doris Heyden (1975) suggests, this particular concept likely has considerable history behind it; a multi-chambered partially-artificial cave beneath the Pyramid of the Sun at Teotihuacan may very well represent this concept in physical form.

**The Cave as a Setting for Transformation**

As a portal, it may be expected that caves and the broader related category, ch’e’en, are inherently liminal or dual places. Indeed, this supposition would be correct. Sacred geography in Zinacantan or Chamula falls into one of five classes: vits, ch’en, hap ?osil, ton, and te?, roughly translated as ‘mountain,’ ‘hole in the ground,’ ‘mountain pass,’ ‘rock,’ and ‘tree,’ (Vogt 1981:120). “Of the five classes of sacred geographic features, the most common and most important are VITS and CH’EN which provide natural reference
points in the world view for a set of crucial binary oppositions: mountain versus cave, up versus down, Ancestral God versus Earth Lord” (Vogt 1981:120-122). Tozzer (1941:181 n.949, citing the Relación de la Ciudad de Valladolid 1900:24-26) notes the divinatory nature of ritual at both Chichen Itza’s cenote and the cave at Salamanca, where women were apparently cast into the maw. In both cases, if any survived, they were drawn back out and pressed to relay information to their lord about the harvest, rains, etc. On the other hand, if they died, as they apparently often did, it was taken as an indication that the gods were displeased. This razor’s edge between life and death is essential to the identification of caves as places of transition, where these opposing states are both malleable and temporary.

The ancient Maya likely took advantage of this cosmological concept in their transitional rituals. Bassie-Sweet (1991, 1996) has raised the intriguing possibility that many depictions of humans engaging in ceremonies, commemorated on megalithic monuments and polychrome ceramics, and associated with under world symbols, may celebrate ritual acts that took part in the cave environment. In the Madrid Codex, a depiction of the rain god Chac sitting within a cenote was identified by David Kelley (1980) as depicting a scene occurring on the period ending date 12.9.0.0.0, a date from the mythological past. Accepting this as convention, Bassie-Sweet (1991:91) interprets the numerous examples of such figures in similar locations in the New Year pages of the Dresden Codex, as evidence that Postclassic New Year ceremonies were held at cave locations. Further, she notes that acts depicted on carved monuments are often cosmologically specific; on the sarcophagus lid of K’inich Janaab’ Pakal I, of Palenque, for instance, the resurrected lord is pictured between the upper world, represented by the branches of the World Tree, and the under world, represented by an open, quatrefoil maw. While this example is clearly conceptual, Pakal’s sarcophagus was, after all, found in an architectural tomb, others involving living protagonists may reflect physical acts: on Palenque’s Tablet of the Foliated Cross, living protagonists are depicted surrounded by,

28 One would be well-advised to avoid the essentialism that might suggest that all ceremonies depicted in association with under world symbols necessarily took place in the physical environs of the cave.
associated with, or indeed as in this particular example, standing on under world symbols. Kan B’alam II is represented standing on a uitz monster with a quatrefoil cave opening in its head. Bassie-Sweet suggests that monuments such as these record ceremonies that may have, likewise, taken place in caves; in the case of this example, the Tablet of the Foliated Cross is therefore interpreted as depicting the accession of Kan B’alam II at an unknown physiographic cave location (Bassie-Sweet 1991; Pohl and Pohl 1983:51). K’inich Kan B’alam II is similarly depicted interacting with a uitz deity in a parentage statement from the northern doorjamb of the sanctuary in the Temple of the Sun. Indeed, iconographic associations between Maya elites engaged in ceremonial rites and the under world are common across the Maya area. At sites as far away from Palenque as Copan this association is made explicit; on Copan Stela B, an elongated Uitz Monster backs a depiction of Waxaklajuun Ub’aah K’awiil, dedicated as part of a period ending ritual. At the Cave of Joloniel, rediscovered in modern times by Wilbur Aulie and Gertrude Blom (noted above; Nicholson 1962), Stone interprets a scene of two individuals facing one another across an altar marked with a 9 Ahau as some form of period-ending ritual (Stone 1995:88). Based on the style of the image, she dates its drawing to the Early Classic, specifically to the k’atun ending on 9.6.0.0.0, 9 Ahau 3 Uayeb (AD 554).

In this light, Stone (1995) discusses an interesting contrast between depictions of caves and depictions in caves. She has suggested that the conspicuous lack of locational information demonstrated in the corpus of figural images from within the cave context may be a consequence of the cave environment itself: the images were in the physical and cosmological context of the ceremonies depicted. By contrast, following the reasonable assumption that one of the functions of monumental sculpture is the public commemoration of private or semi-private rituals, the importance of depicting locational information on surface monuments may be a result of the separation of the monument from the ritual act and the physical and cosmological setting that gave the depicted act its meaning. This divergence in representation adds an interesting dimension to the discussion of status noted above (and carried over in Chapter Five). If the cave is a liminal environment, as emphasized by depictions of ritualists within the cave context
itself, then this stands in stark contrast to its later representation on public monuments. Though related to the same type of act, they reference different aspects. In the terminology of the previous chapter, while the liminal portion of the ritual itself may foster the creation of *communitas*, its commemoration in the public monuments of the civic-ceremonial centre, with the elite protagonist dressed in the full regalia commensurate with their higher status, unquestionably serves to reaffirm the *polis*.

*The Cave as a Source of Fertility and Material Wealth*

Of the various sources affording insight into the cave context, perhaps some of the most interesting, and most problematic are the late pre-Columbian codices. Consensus suggests that they are as yet still very late products and in many ways alien from our other pre-Columbian textual sources etched or painted on non-perishable materials. All four extant codices are similar in content and execution; commonly described as ‘almanacs,' these texts are strongly structured by calendrical inscriptions charting the movement of the sun, moon, planets and stars and pair lengthy texts with individual, complex, images. They are, at once, divinatory and historical. So too, perhaps to a greater degree than any other, are they the sources for the continued perceptions of Maya mysticism and stargazing that have so-dominated popular discourse. Such issues notwithstanding, it is within this calendrically structured and ideologically charged context that the cave environment is pictorially displayed as a setting related to the theme of prosperity; an association rarely discussed directly in other pre-Columbian texts.

In both the *Madrid* and *Dresden Codices*, the cave context or the related *cenote* is explicitly depicted as a place for ritual action and overwhelmingly in association with symbols of agricultural fertility. In the *Madrid Codex*, Chac, who is thought to make his home in caves and from which he is thought to draw or send forth the rains, is depicted sitting within a crescent-shaped enclosure that J. E. S. Thompson (1972:150) identified as a *cenote* (noted above in reference to textual sources). A similar depiction can be seen on the right hand side of the lower register of page 39 of the *Dresden Codex* (Kingsborough Edition). In fact, this particular context, and this particular figure, are one of the most
common, explicitly rendered combinations recorded in the codices, and in the Dresden Codex in particular (see Kingsborough pg. 29, 32-36, 38, 39, 43, 44, 55, 56). There are only two instances in the Dresden (an animal, possibly an opossum, in one instance, and two fishing figures in the other [Kingsborough pg. 27-28, 33]) where Chac is not the principle figure associated with cenotes. Another example of a skeletal under world figure standing above a cenote can be found in the Madrid Codex (pg. XXI).

Other possible depictions of caves exist in the Dresden Codex as well. On both pg. 30 and 67 of the Dresden (Kingsborough Edition), Chac is depicted in a vertical ‘half-quatrefoil’ cave mouth embellished with the T501 naab sign, which Bassie-Sweet (1996:71) notes is a pictograph of a waterlily, and carries the meaning of both waterlily and sea, a common Northern Lowland association noted above. In another instance, a seated Chac is depicted in the centre of the lower register of Kingsborough pg. 38, seated atop a bench in what appears to be an architectural feature. Such representations are common throughout both the codices and pre-Columbian ceramic corpus. In this case, the bench is decorated with the familiar ‘cluster of grapes’ symbol that constitutes a diagnostic feature of the TUN or UITZ glyphs and may represent a dripping speleothem. This symbol has been suggested to demarcate the ‘cave-like’ qualities of the object/place being depicted (Bassie-Sweet 1991:102-120, 1996:66-69). The same convention marks Chac’s watery seat on the middle register of Kingsborough pg. 29. In the Madrid Codex, a corn deity occupies a similarly marked bench on two pages (pg. 95 and 51). A final, explicit, reference to the cave context can be found on pg. 66 of the Dresden Codex. Here, God B (likely Chac) is depicted sitting atop a cauac monster (a theriomorphic mountain). “The second glyph in the accompanying caption text is composed of a locative prepositional prefix with the meaning ‘in, within,’ and a glyph (T117:507) that Stuart (1987:17) has read phonetically as wits [mountain]” (Bassie-Sweet 1991:109).

While the locations, characters, and dates associated with the above mentioned depictions may be relatively clear, it is often difficult to identify specific acts that may have been carried out in the cave context from these sources, let alone their specific material correlates. A notable exception can be found on pg. 67 of the Dresden Codex.
(Kingsborough). Stuart paraphrases the text as “Chac is in his mountain; (there is) great rain; (and) turkey is its offering” (Stuart 1987). Such offerings appear to be a ubiquitous part of cave ritual in both the ethnographic and archaeological records, and in the case of the sacrifice of animals, appears particularly associated with rituals of fertility and sustenance.

The Cave as a Source of Sustenance

Closely related to the discussion above is the idea that caves are sources of sustenance. Indeed, these two sections could be profitably merged. We learn from the Popol Vuh that sustenance for human life, as well as that very life itself, comes from the land of death and decay. In this text, it is noted:

> IT was from within the places called Paxil and Cayala that the yellow ears of ripe maize and the white ears of ripe maize came.... Thus was found the food that would become the flesh of the newly framed and shaped people. Water was their blood. It became the blood of humanity. The ears of maize entered into their flesh by means of She Who Has Borne Children and He Who Has Begotten Sons [Christenson 2007:180-182].

As humanity, in general, was born of the cave context, so was the deified symbol of their matter in the guise of the Maize God. In the Popol Vuh, One Hunahpu, father of the famed Hero Twins is only partially restored following his sons’ victory over the lords of the under world (Christenson 2007:115-116, 178-179). However, as noted above, in Classic period imagery, he is clearly depicted rising from a cleft in the theriomorphic carapace of the earth as the Maize God (refer back to Figure 3.2) (Taube 1985). There is considerable time depth to this concept: on the north wall of the spectacular Late Formative murals of San Bartolo the Maize God and several female associates are depicted standing atop an under world serpent, drawing sustenance in the form of maize tamales and a sprouting water gourd from the mouth of a theriomorphic cave (Saturno et al. 2005). The psychoduct of Pakal’s tomb at Palenque likewise reaffirms these concepts of resurrection and the continuation of the deceased’s essence. Ximénez relates a parallel
practice in the ethnographic literature. Specifically, he notes that persons were frequently
buried in maize fields, an indication that the dead were reborn as maize (Ximénez
1929-31, I, 100). In fact, it appears that many of these concepts are regularly referenced
in ethnographically recorded practice. The well-attested agricultural rituals of the
Northern Lowlands come particularly to mind (but more on this in the following chapter;
see Bassie-Sweet 2008:43; Breedlove and Laughlin 1993:57; Carter 1969:39; Colby and
1966:23, 113; Redfield and Villa Rojas 1971 [1934]:139; Siebers 1999:67; Thompson

The Cave as an Abode of Witches and Ghouls
The Maya universe is an animate one and deities/spirits of various sort are proliferate.
The cave context claims more than its fair share of this presence. Discussed above, there
is an explicit tie between architectural space, caves, and the under world. This tie is key
in petitions for rain and resources and as noted often invoke such generally benevolent, if
somewhat unpredictable, figures as the Moon Goddess (Thompson 1990:245) or the
Chacs (Redfield 1941:117). This association is also potentially dangerous with such
under world characters as the various skeletal lords of death and rot. Indeed, as I’ll
discuss more fully in the following chapter, many cave denizens in the ethnographic
literature exhibit socially reprehensible behaviour that ranges from the outlandish to the
a Ch’ol tale in which men and women dancing wildly in caves are thought to engage in
and entice others to participate in adultery, rape, and even murder. Such lecherous
associations appear common in the Classic period as well, with numerous examples of
under world denizens, particularly the ‘Old Gods,’ consuming drugs and alcohol, engaged
in violent acts, and often in the company of young women (e.g. Kerr 530, 719, 956, or
2847). This image of the cave as dangerous and amoral makes sense in the context of the
liminality or alternative states of being discussed in the previous chapter.
The Cave as an Articulation Point with the Ancestors

As in each of the concepts already discussed, this is a pan-Mesoamerican association. Heyden (1975) states that many Nahua peoples from around the Valley of Mexico believed their ancestors had migrated from Chicomoztoc, or “Seven Caves.” She further suggests that the seven-lobed cave under the Pyramid of the Sun at Teotihuacan may be a Classic period precursor to this. In the Maya area, Bonor Villarejo (1989) has interpreted six figures depicted in quatrefoil openings on the margins of Pakal’s sarcophagus lid, and the ex-ruler himself poised above the earth’s maw as representing this same seven-cave place of the ancestors. The association is strong and logical. Stone (1995:44) states:

The association of caves with ancestors can be understood in terms of various threads that weave through cave symbolism. Ancestors and caves have a mutual association with the life and death cycle. As archetypal mothers and fathers, ancestors are identified with life-giving concepts like fertility, just as caves are identified with maize, water, and other aspects of fertility. At the same time, ancestors have attained the status of the dead and belong in the underworld realm of the cave.

Discussion and Summary

While the above-explored sources suggest a considerable amount of local variation, particularly with regard to emphases and specific details, underlying patterns are far more robust (indeed, pan-Mesoamerican/American in extent). This is especially compelling given the environmental, political, and historical variability between the various regions discussed.

The iconographic corpus of the ancient Maya is rich, and represents a dataset enviable in many other regions, however, an articulation with archaeological data has always been problematic. Given the Classic Maya proclivity for depicting ceremonial rites in their art, it may be expected that such images may be readily tied to material remains identified in the cave context. Yet, as will become apparent as we discuss the archaeological record in Chapter Five, we in fact find precious little footing for the
association of specific archaeological materials found in the cave context with specific iconographically identifiable ceremonies. The reasons for this are several, rooted mainly in the considerable disjunction between cave-related ceremonials acts depicted in figural cave art as well as in other images, and the archaeological record of the cave context.

The iconographic and archaeological records are disparate in their temporal depth. Iconographic representations are synchronic ‘snapshots’ of individual, often generic, ritual acts within a ceremony—burning incense, bloodletting, etc. Archaeological ‘activity areas’ are, by contrast, often composed of the diachronic remains from a series of acts in one locale and likely incorporated several of these locales in a ritual circuit. Indeed, as individual acts may be common among a variety of different ceremonies, it is the particular and prescribed combination of ritual acts that defines the ceremony. The problem facing the archaeologist is, thus, considerable: in most cases, it is impossible to connect individual cave images together in order to reconstruct a diachronic ‘narrative’ for particular ceremonies comparable to the archaeological record (if such multi-locality rituals could likewise be reconstructed archaeologically). The iconographic and archaeological records in this case do not simply represent a difference in medium, but in content.

For very similar reasons, as a disparate source, the epigraphic record sometimes rests uneasily with archaeological datasets and their interpretation. These sources are separated by their individual mediums, the identities (particularly status) of their producers and of their intended audience, the subjects of discussion, and in some cases, wildly varying temporal, and cultural associations. For the purpose of informing on the archaeological record of the cave context, the analytical value of images and text is not the few specific details of cave ritual that they provide, but rather in the general concepts that they engender. Indeed, one of the hermeneutical strengths of the body of sources discussed in this chapter is precisely the disparity that makes their comparison difficult. In the following chapter, I will focus on the ethnographic and indigenous historical records. While these records provide descriptions of ritual acts carried out directly within the cave context, here too there are a number of significant issues of context and audience
(not to mention time) that must be considered. The concepts discussed in this chapter will never be far removed.
One of the first rituals to be performed in the agricultural cycle is an offering to the supernatural owner of the earth to obtain his permission to create a field and to disturb the wild plants and animals that live there (Wagley 1941:32; Villa Rojas 1945:70, 111; Mayers 1966:23, 113; Carter 1969:39; M. Wilson 1972:90; Colby and Colby 1981:122-23; Johannessen 1982:93; Hanks 1990:363; Breedlove and Laughlin 1993:57; Faust 1998:120; Siebers 1999:67). In the Highlands, these ceremonies include pilgrimages by individuals and entire communities to important mountains and caves. In the Q’eqchi’ area of El Estor, site selection begins with prayers to Jesus, the saints, and the mountain spirits that inhabit all the important mountains in the region (Carter 1969:42-43). The farmer and his wife go to the site of a new field at dawn and erect a small cross in the middle of the field. They then scatter two bottles of water mixed with the blood from a sacrificed chicken around the cross and in the four directions. They also offer burning incense to the four corners. The area around the center cross is called the heart of the milpa. It is cleared of brush, and offerings of blood, incense, and candles are made. The sides of the field are then measured out. Similar cleaning rituals are conducted in other areas (Thompson 1930:45, 115; Wagley 1941:32; Hanks 1990:363; Breedlove and Laughlin 1993:57; Preuss 1993:126-27; Faust 1998:119; de Jong 1999:223).—Bassie-Sweet (2008:43)

In this chapter we continue to build our model of the cave as a concept, seeking analogies for Pre-Columbian cave use in central Belize through reference to the Post-Conquest/Colonial ethnographic and indigenous historic sources. From Chapter Three we have some idea of the symbolic matrix within which cave ritual operated. I want to build on this base here to identify some of the specific goals or outcomes for which cave ritual may have been enacted, some of the potentially significant locational contexts of these acts, and some of the material correlates that may prove of value in identifying similar acts in the archaeological record. While this dataset is rich it is not without issue, but more on this later (no spoilers).

In 1964, William R. Holland became one of the first scholars to critically explore the question of whether or not ‘modern’ ethnographic observations of Maya ritual and its
Attendant ideology offer epistemological insight into discussions of the Classic period archaeological context. Earlier articulations with this subject matter, such as Tozzer’s (1907) work with the Lacandon or Redfield’s (1941) *The Folk Culture of Yucatan*, suggested that ‘simple’ Post-Conquest/Colonial Maya peoples had little of value to offer the archaeologist in her/his study of the Classic period (writ, ‘elite’) Maya. By the time of Holland’s work, the surviving elements of the Maya calendar, of hieroglyphic texts, of ideology, social organization, political systems, economy and the rites that served to formalize and transmit their expressions, while of interest to those scholars concerned with the quotidian rhythms of life in the ancient Maya world (see Thompson 1950; Willey 1956a, 1956b; Willey and Bullard 1956; Willey et al. 1965) were still considered a dilute and largely uninformative dataset, worthy of only passing mention or as a jumping off point for more in-depth discussions based on ‘concrete’ archaeological data. Holland showed that it is possible to expect more, and articulated a number of significant insights into Classic Maya ideology and worship that remain tolerably intact to this day (Holland 1964:305-306):

1) *Adams’ archaeological survey shows that the Classic Maya migrants into Highland Chiapas settled on steep ridgelines, bluffs, hilltops, and sharp pinnacles, probably for defensive reasons. In late Post-Classic times there was a shift away from these headland settlements to more concentrated settlements around the larger valleys, probably accompanied by the dispersed hamlet pattern. As this happened, the original headland settlements may have evolved into sacred mountains and places where ancestor worship developed. A similar process of change is suggested for the ancient Quiché described in the Popol Vuh.*

2) *Some of the smaller pyramids in the Classic Maya archaeological sites may have been the functional counterparts of the sacred mountains of the contemporary Tzotzil. Evidence suggests that in the beginning both may have been the centers of rule of patrilineal groups. With successive generations of priest-rulers, the Maya pyramids quite possibly became sacred places where former leaders were worshipped as deified ancestors.*

3) *Successive layers of Maya pyramids often associated with tomb burial may reflect the elevation of a new generation of priest-rulers.*
They may, therefore, be analogous to the level concept of sacred mountains, also associated with the generational principle by the contemporary Tzotzil and ancient Quiché.

4) In light of the last statement, Proskouriakoff’s (1960) suggestion that ancient Maya hieroglyphs at Piedras Negras may have been used for recording historical events, such as dynastic successions, seems quite plausible.

5) Contemporary Tzotzil beliefs in a society of companion animals centered around sacred mountains may have had prehistoric Maya counterparts centered around lineage pyramids (Holland 1961) in ancient Maya archaeological sites. Ancient Maya ancestor worship may have functioned as a supernatural system of social control, as it still does among the Tzotzil and Tzeltal.

6) The Maya ancestor gods centered in the pyramids may have been approached ceremonially for favors in agriculture and curing, just as those of the Tzotzil on the sacred mountains are today. The Maya ancestor gods were probably placated with incense and blood sacrifices, as are those of the Tzotzil. The main difference is that the Maya used human as well as animal sacrifices, whereas only the latter are used by their Tzotzil descendants.

Despite the potential for such sources to provide this insight, and indeed Holland’s and others enthusiasm in this regard (see also, Vogt 1961, 1981), scholars have often seemed reticent to place too much faith in those inferences drawn from the ethnographic and indigenous historic records. This reticence is perhaps expressed no more clearly than in the late and ongoing debates surrounding the nature of Classic period socio-political organization in the Maya area (Carmack 1966; Chase 1992:119; Culbert 1991; de Montmollin 1989; Fox et al. 1996:797; Sharer 1993:92; Vogt 1969). Rice’s recent (2013) article in *Current Anthropology* is a manifestation of this phenomenon, drawing unnecessary criticism by relying far too heavily on questionable translations of indigenous historic sources (though the model proposed is no less intriguing for this critique). Indeed, such over-extended supplications to the ‘ethno’ dataset continue to polarize discipline-wide articulations with this, and encourage an overly pessimistic attitude among many Maya scholars (see in particular, comments by Oswaldo Chinchilla Mazariegos, Rafael Cobos, and Nikolai Grube in Rice [2013]). This is perhaps a result of the problematic tendency to treat the ethnographic dataset, not as a source of inspiration,
but as a source of explanation. In the remainder of this chapter I will tread lightly, wary of falling prey to the tyranny of the ethnographic record while refusing to throw the baby out with the proverbial bathwater.

Identity in the Ethnographic and Indigenous Historic Records

As noted in the introductory chapter, post-Columbian ‘Maya’ groups live in a wide variety of environmental, social, political, economic, and historical contexts. They are ideologically varied and speak tens of different, if related, languages. In the last several centuries there has been considerable movement of indigenous groups within the Maya area. These include fresh Yukatec migrations into northern and central Belize, particularly following the Caste Wars of Mexico, continuing to the present, and Mopan migrations into southern Belize in reaction to the genocidal conflicts in 1970s/80s-era Guatemala, etc. Further, these processes are by no means new, and the entirety of Maya history (as indeed, Mesoamerican history) can be characterized by cycles of historical continuity and discontinuity, of cultural creation and destruction. So too, is variability evident within the myriad ethnographic and indigenous historic datasets available to us that may be rooted at a more fundamental level, still, than even these differences. Specifically, I’m referring to the particular segment of society referenced in these sources.

Shinji Yamase (2002) argues that, while the ethnographic record speaks primarily to ‘folk’ or ‘commoner’ culture—an explicit recognition in early modern accounts such as Redfield (1941), Redfield and Villa Rojas (1971), Roys (1932), and Vogt (1969), but emphasized less in later works—the indigenous historic records are more closely associated with the remnants of pre-Columbian ‘elite’ culture. This division is exemplified by the specific contexts in which caves, as ritual loci, are referenced in these two bodies of scholarship: while caves are most often mentioned in rites associated with the field, with health, and with the investiture of specialists in folk religion in ethnographic accounts, in the indigenous historic documents, caves are more commonly referred to in terms of ethnogenesis and political demarkation. Though, in fairness, both
records are in a significant number of cases more diverse than this basic characterization suggests. Thus, for the present, I’ll deal with each of these sources individually.

The Indigenous Historic Record

Thankfully, a number of indigenous historic documents survive to inform our understanding of Maya peoples today. As discussed in the previous chapter, a small number of these, such as the Dresden Codex, the Paris Codex, the Madrid Codex, and the Grolier Codex, have origins in the recent pre-Columbian past. Other documents appear to have pre-Columbian roots, though they were written in the early colonial period by literate Maya, likely of upper class origin, and in the latin script. Among these, we can count the Popol Vuh, the Annals of the Cakchiquels (Kaqchikels), the Historia de los Xpantzay, and the Books of Chilam Balam, among others. Still others, such as the various ‘Títulos,’ are administrative in nature and include territorial claims written in the latin script, intended for the colonial courts, but apparently describing pre-Columbian systems of land ownership/stewardship. In many but by no means all of these documents, a locally specific landscape including mountains, caves, springs and cenotes is directly referenced, suggesting their essential role in framing formal aspects of pan-Maya ideology and organization.

Títulos and Other Administrative Documents

Most of these sources, straddling the border between pre- and post-Columbian periods were discussed in the previous chapter. A final category of early post-Columbian indigenous documents are the so-called ‘títulos,’ or ‘titles.’ These are administrative documents, produced for the colonial authorities, that recount origin narratives and outline territorial boundaries of indigenous communities. Many of these, such as the Título de Yax, the Título de la Casa Ixquin Nejaib, the Título del Ahjpop Huitzitzil

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Tzunún, etc., were produced in the mid-16th century, and continued to exist as important legal documents until the relatively recent past.  

Here, I’d like to focus on one título in particular; that is, the *Título del Barrio de Santa Ana* (documents and original translations by Sapper [1897], provided courtesy of Karen Bassie-Sweet 2013). This document, drafted in 1565, describes a territory bounded by rivers and defined by nodes at prominent peaks and caves:

\[
\begin{array}{lll}
\text{xi-helik ar, tiklik xilak jäh cumat-jäh;} & \text{sale de alli, coge sobre el rio Cumatjah;} & \text{leave there, go on the Cumat Ja River;} \\
\text{xi-helik ar, tiklik xilak-jah Kar-ay;} & \text{sale de alli, coge sobre el rio Karay;} & \text{leave there, go to the Karay River;} \\
\text{xi-helik ar, tiklik in-hokik hui jáh Masinil-jäh;} & \text{sale de alli, coge y entra en el rio Masinil-jäh;} & \text{leave there, take and enter the Masinil-Jäh River;} \\
\text{xi-helik ar, tiklik chi Hrel-hual jäh;} & \text{sale de alli, coge a donde nace el rio;} & \text{leave there, go to where the river is born;} \\
\text{xi-helik ar, tiklikin nahg yuk Chihax;} & \text{sale de alli, llega á la cumbre del cerro Chihax;} & \text{leave there, arrive at the peak of the mountain Chihax;} \\
\text{xi-nihelik ar, tiklik hrokhuel jäh xilak yuk;} & \text{vuelve á salir de alli, endereza á donde entra el rio entre el cerro;} & \text{leave there again, go straight to where the river enters the mountain;} \\
\end{array}
\]

This document, as with its brethren, is particularly important for not only its identification of caves as important landscape nodes delimiting territory, but as it offers significant insight into the nature of that territory itself. While I will return to this in the latter half of this manuscript, I would take this opportunity to linger for a moment on this point as its significance to archaeological methodology may be great: To date, archaeological studies with a supra-site level focus in the Maya area, including that of CBAS until relatively recently (Andres et al. 2010), have tended to define ‘regions’ by their hydrological catchments. Navigable waterways, in particular, are often viewed as exerting centrifugal influence on settlement. As a consequence, sites concentrated within

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29 The *Título Sacapulas*, for instance, was presented in court as a land title in the 18th century.

30 If the format of the following land title looks familiar, recall the ritualized speech patterns noted in the previous chapters. The same principles of complementarity and repetition are preserved in this territorial ritual.
drainages (e.g., the Pasion, Copan, Belize, Mopan, and Sibun River valleys) are often interpreted as members of common interaction spheres (Chase and Garber 2004; Demarest 1997; LaPorte 2004; Schele 1991; Webster et al. 2004) and regional approaches to survey and interpretation generally focus on intra-drainage site relationships rather than considering patterns of connectivity across less permissive, inter-drainage, landscape features. Such approaches clearly run counter to the territorial boundaries described in the *Título del Barrio de Santa Ana* and other ‘títulos,’ and should perhaps be subjected to more critical attention. The presence of a large centre, such as Tipan Chen Uitz in the CBAS study area—as well as a constellation of smaller centres—in a rugged, less obviously hospitable upland zone provides an opportunity to consider alternative bases for site location and to reassess how ‘regional’ distinctions are made in Maya studies.

**The Ethnographic Record**

*Early Spanish-Colonial Accounts*

During the initial Spanish Conquest and the early Spanish Colonial periods, both and too often characterized by a fervent lash-and-rod style of missionary zeal, the temples and pyramids, plazas, shrines, and altars—in other words, those most visible loci for Pre-Columbian ritual/religion—were co-opted by colonists and Colonial authorities. The symbols and seats of Maya authority became those of the Spanish. The public rites and religion of Maya society, too, became those of the Spanish or a variation thereof. Perhaps nowhere is this so explicitly represented than in modern-day Petén: many-a-dreadlocked tourist can daily be seen appreciating the Spanish Colonial church, public square, and administrative buildings where once the so-called ‘last Maya kingdom,’ Nojpeten, now lies buried. If Classic-style elite ritual/rule was not already in decline in a particular region by the time of the Conquest, it soon was.

In contrast, it has long been remarked that commoner ritual and religion—that of the field, the home, the country, and the cave—have retained a significant pre-Columbian character (Thompson 1990). The common thread between these particular ritual realms is
that of ‘privacy’ or scale; in the simplest of terms, the idiom ‘out of sight, out of mind’ applies here. While the Spanish authorities, including clergy and administrators, were aware that their new converts and subjects previously made use of caves as places for burial/sacrifice and presently engaged in other ritual acts (and indeed, the response to such knowledge was severe), the most visible articulations with the cave context seem to have encouraged little in the way of colonial objection.

Arguably, the most prominent articulation with caves in the early Colonial period was for the purpose of acquiring necessary daily drinking water. While the mundane nature of this activity seems to have made it less than noteworthy in most early accounts, Diego de Landa writes of Maya cave use in explicitly these terms, noting in particular the use of the Cenote of Sacrifice at Chichen Itza as a source of drinking water for local populations (Tozzer 1941:19-20).

Another prominent category of cave use, already discussed above in the context of post-Conquest títulos, seems to have been abundantly apparent to early Spanish authorities. This is their use as boundary markers, included in ritualized circuits delimiting corporate territorial bounds. Tozzer notes that in the Relación de Gaspar Antonio Chi (Chi 1934 [1582], cited in Tozzer 1941:96-97 n.429), it is stated:

*The lands were in common and (so between the towns there were no boundaries or land marks to divide them) except between one province (and another because of wars), and in the case of certain hollows and caves (plantations of fruit and) cacao trees, and certain lands (which had been purchased for the purpose of improving them in some respect).*

As Evon Vogt would later describe, these places are sacred, marked by cross shrines, symbolic of the basic social and natural units, and thus serve as boundary markers in the supernatural, social, and natural systems (Vogt 1981:135).

Likely less prominent, but certainly engendering more discussion are ritual articulations with the cave context. López Mendel (1612:XX, cited in Tozzer 1941:130 n. 604) tells us that in pre-Columbian times the nobility were buried in caves together with food, drink, riches, and with them “many male and female slaves…and some of their
most beloved wives.” Such grand burials, if indeed present, were certainly not the norm, though as discussed in the previous chapter there was a strong association between caves and concepts of life and death. By the time of the Spanish Conquest, the use of caves as burial locations was largely a thing of the past (Relación de la Ciudad de Valladolid 1900:24-26; c.f. Blom 1954:126-129).

Other ritual acts actively taking place in the cave context drew particularly negative attention, and the consequences for Maya peoples and culture would reverberate through the centuries. The main event leading up to the infamous Inquisition at Mani occurred in May 1562 and involved the discovery, by one Pedro Che, a *portero* of the convent in Mani, of a recently used ritual cave. Cogolludo (1957 [1688]:309) relates:

*A eﬁe el diò vn Domingo gana de falir por el Pueblo à caçar conejos, de que en todos ay abundancia. Saliò por las calles, mas de bofque, que de Pueblo (porque los Indios no los tenían tan limpios de arboleda, como ya eftàn) y los perrillos, que con el Indio iban, llegados de el olor, entraron en van cueua, y facaron arrastrando vn venado pequeño, acabado de matar, y arrancado el coraçôn. El Indio admirado, entrò donde los perrillos falieron, y por el olor de faumerio de copal (que es fu incienfo) llegò en lo interior de la cueua, donde eftaban vnos Altares, y mefas muy compueftas, con muchos Idolos, que con la fangre del venado, que aun eftaba fresca, auian rociado.*

This “buen Christiano” speedily told what he had seen to the guardian of the Convent, Pedro de Ciudad Rodgrigo, and he in turn told the *provincial*, Landa, who was in Merida (Tozzer 1941:76 n.340). Upon hearing of this, Landa sent friars to various parts of the province of Mani to gather information. They soon found that not only the *gente popular* but the *caciques, principales*, and school teachers were guilty of taking part in these activities. This inquisition, through incarceration and testimony extracted by torture, led to further punishment in the form of confinement, corporal punishment, and fines. Among those ‘charged’ in June of this same year, were Francisco de Montejo Xiu, governor of Mani, Juan, *cacique* of Tzuccacab, Alonso, *cacique* of Tekit, Pedro or Ah Op, *cacique* of Yaxakumche, Juan Pech, *principal* of Mama, and Gaspar Che, governor of Sacalum (Tozzer 1941:76 n.340).
On July 12, 1562, Landa held at Mani his famous \textit{auto de fe}, easily one of the most tragic moments in New World history. While not cited by Landa as being in direct connection with the idols found near Mani, de Lizana, writing in 1633 (cited in Tozzer 1941:78 n.340), relates that after telling of the discovery of the idols in the cave and of Landa being recalled to Mani, that Landa “collected the books and the ancient writing and he commanded them burned and tied up. They burned many historical books of the ancient Yucatan which told of its beginning and history….” Cogolludo (1957 [1688]:309) concurs, saying “\textit{Con el rezelo de efta Idolatria, hizo junta todos los libros, y caracteres antiguos, que los Indios tenian, y por quitarles toda ocafion, y memoria de fus antiguos ritos: quantos fe pudieron hallar, fe quemaran públicamente el dia del Auto, y à las bueltas con ellos fus Hiftorias de fus antiguedades}.”

\textit{Later Ethnographic Studies}

Turning toward the more recent ethnographic record, we are perhaps fortunate that caves were largely ignored by these earliest chroniclers. For today there remains a thriving cave ‘cult’ in several parts of the Maya area that may shed light on ancient cave practices. Significant environmental, sociopolitical and historical differences separate the modern nuclei of these practices in the Highlands and Northern Lowlands. These differences are primarily manifested in the particular emphases of activity and specific local symbols invoked in each of these regions. While I will take some pains in the coming pages to highlight these differences, it is the breadth and depth of practice, the overlap between regions, to which I will direct the bulk of my effort. The goal is to discuss not only the social contexts of cave ritual (\textit{á la} Yamase), but its motivations, its paraphernalia, and its physical settings.

Perhaps no other ethnographer has spilt so much ink on these aspects of the cave context as Evon Vogt. Vogt’s work traditionally focussed on the peoples of Zinacantan, a Tzotzil Maya community in Highland Chiapas, Mexico. Our first clue as to the importance of caves and their related concepts in the life of Zinacantan can be found in the very name of the \textit{municipio} itself: according to Vogt (1969:ii), the name ‘Zinacantan’
derives from “the preconquest epoch when Aztec traders named the region and its people ‘Tzinacantlan,’ meaning ‘place of bats’” in Nahuatl apparently due to the remarkable abundance of this animal (Peñafiel 1885:227). The image of the bat finds its way into representations of the region found in the Codex Mendoza (Peñafiel 1885:227), and a Dominican missionary, Fray Tomás de la Torre (Ximénez 1929-31) noted that the then patron deity of Zinacantan was a stone bat, a transformative animal with explicit associations to caves and the under world (Blaffer 1972). The majority of data on Highland cave use is derived from studies at Zinacantan.

Many of the early-observed uses of the cave context noted by Spanish chroniclers remain observable up to the present. Most apparent is the use of caves for sources of drinking water. In Zinacantan, ‘voʔ’ (waterholes) are important for providing water to both the household and livestock and these water sources are without exception marked by cross shrines at their edges. Vogt has noted the importance of this use, not only in daily life but as the symbolic focus for one of the crucial social units in Zinacanteeco society, the waterhole group. The cross shrines at their margins are the settings for elaborate waterhole ceremonies performed by the hamlet shamans (Vogt 1976, 1981:129). As noted above, large cenotes such as the so-called ‘Cenote of Sacrifice’ at Chichen Itza (Tozzer 1941:19-20) and other subterranean sites (Roys 1943:4) have long been known to provide access to daily water in the Northern Lowlands. Xtacumbilxunan, near the town of Bolonchen likewise served as a water supply when nearby wells ran dry (Thompson 1990:245). While the use of the cave context in this case is mundane its importance in the continuation of everyday life, particularly in the Northern Lowlands, has understandably led to significant ritual elaboration. De Landa noted that the Cenote of Sacrifice served as a ritual location from which to petition for rain (Tozzer 1941:54) and John Lloyd Stephens described festivities that accompanied the seasonal opening of Xtacumbilxunan—of a day passed in feasting, prayer, music, and dancing (Stephens 1963 [1843]:95-104). In each of these cases, while ritual specialists are called upon to oversee and conduct certain acts, these rituals, their associated festivities, and the bulk of participants/observers are broadly public. Participants may represent the community as a
whole as at Xtacumbilxunan or a specific segment thereof as in the waterhole groups of Zinacantan.

The use of caves and other features of the natural landscape in the delineation of corporate boundaries continues into the more recent ethnographic present as well. Contrary to the impression given by the previously discussed *Título del Barrio de Santa Ana*, it seems that many such boundaries were situational and fluid. In *Zinacantan: A Maya Community in the Highlands of Chiapas* (1969) Vogt discusses the demarkation of boundaries through the concept of ‘encapsulation.’ As was the case regarding caves as the source of drinking water, it seems that the delineation of boundaries is in fact a heavily ritualized act. Vogt describes a series of cross shrines that are placed at prominent features of the landscape—mountain/hill tops, caves, waterholes, and the like—and periodically moved to either expand or contract an encircled territory. Returning to the discussion of boundaries from Chapter Two, it thus seems clear that, at least in the ethnographic record, such boundaries are essentially magico-religious (Van Gennep 2011 [1960]:206), defining not only various levels of territorial claim/access, but the boundaries between the settled and the wild, those areas that can be ritually manipulated by the Zinacanteco shamans and those that cannot. Vogt (1969:582-587) relates an episode that illustrates this concept in action: in 1957, a man was killed by lighting near the school in the hamlet of Paste?, an area outside the then encapsulated territory of the community. This incident was interpreted as a supernatural manifestation of the anger of the Ancestral Gods and the Earth Lord for an unknown slight. In reaction, the community extended their boundaries to encapsulate both the National Indigenous Institute School and the Harvard Field House, and thus ensure that these areas received greater protection from unpredictable supernatural forces. The specific ritual act symbolizing this encapsulation was their inclusion in a special *K’in Krus* rite marked by the erection of new cross shrines joined one-to-the-other and to previously established boundary markers in a ceremonial circuit.

Just as important, subterranean sites frequently mark the centre of corporate territories. The waterhole groups of Zinacantan (Vogt 1976, 1981:129) come particularly
to mind, where specific caves are the symbolic centre and exclusive ‘property’ of the Sna (a cluster of related houses) and their inherited house sites, fields, and cross shrines. K’in Krus celebrations mark the boundaries of these territories with processions and the deposition of offerings at shrine sites (Vogt 1976:109; see also Cancian 1992:187).

Likewise, in Chan Kom, Redfield and Villa Rojas (1971 [1934]:114) note that the cenote is often both the physical and conceptual centre of the village and both social and economic life is drawn to it (Redfield 1941:119). At both Chan Kom and Tusik, the village is more-or-less formally disposed around the cenote and all such features are considered communal (Redfield 1941:4, 55-56).

Caves may have occasionally served as places of storage for culturally significant objects—safe havens or symbolically significant places in which objects may be curated. Vogt relates that during the period of anticlericalism in the late 1920s and early 1930s, the Governor of Chiapas told the Zinacantecos that the government “did not want saints,” and that they should pull the churches down and destroy the saints (Vogt 1976:161). In an act of resistance, shamans recommended that certain items be placed in caves for safekeeping. Such was the fate of a large drum associated with San Sebastián, hidden in a small cave near Lac Cikin. In a closely related pattern, subterranean sites were occasionally seen as the source of symbolically or religiously significant items. At the hermitage of Equipulas (Vogt 1976:17), religious officials take their oaths of office before a cristo aparecido named “The Buyer.” This small Christ-on-the-Cross image apparently revealed itself in a cave. The archaeological evidence for similar use of the cave context will be discussed in the following chapter, but it is worth mentioning now that the use of caves in both curation and in the acquisition of symbolically charged objects, perhaps including curated goods, stands among the most prominent of discrete acts identified within the cave context of central Belize (Chapters Six and Seven). In the case of those objects discussed ethnographically, if the point of hiding such items was that they could be retrieved when conditions improved, they remain as particularly poignant testimony to the destruction wrought in the colonial period.
A wide variety of other more-or-less ritualized acts were also conducted within the cave context. In the previous chapter, it was suggested that certain rites of investiture/accession, social incorporation, or renewal were conducted within caves (Bassie-Sweet 1991). Vogt (1976:172) notes that cargo holders in Zinacantan conduct rituals at caves associated with their changes of office. So too, do day keepers make pilgrimages to caves and mountain shrines as part of their initiation near Momostenango (Tedlock 1982; see also Freidel et al. 1993:419 n.24). ‘Cleaning’ or annual renewal rituals, such as those associated with the Zinacanteco waterhole groups (Vogt 1969:448) similarly serve to renew and validate the group’s, rather than an individual’s, status and rights of control.

Other rites include petitions for rain, fertility, wealth, or health, either on behalf of an individual or the group. Yahval Balamil, the Earth Lord of Zinacantan was conceived of as a compound being exercising ownership over all of the waterholes; he controls the lightning and the clouds that are thought to emerge from his caves, rising into the sky, and producing rain for crops (Vogt 1981:126). In this role, he is very much akin to Chac (discussed in the previous chapter), and rain rituals make explicit use of plants/animals and other objects associated with the cave context (Redfield 1941:117, 129). But not only is the Earth Lord a source of water, but his beneficence can lead to great material wealth as his caves are filled chock-a-block with treasure and other precious objects for those daring enough to seek it.\footnote{While some may strike it rich, others are less lucky, being captured and forced to work for years until their iron shoes wear out (Vogt 1976:17).} Such tales may go some way toward explaining modern attitudes to ancient remains found in the cave context of central Belize, wherein they may be viewed as ‘gifts’ from their ancestors. A friend and colleague from Belize related that his father used to occasionally acquire ‘new’ manos and metates from caves near his home. He would apparently leave a small offering in return. Clearly, this seems to tie into aspects of curation noted above. The Tzotzil (Thompson 1970:267) also speak of Chauc (Chac) or Anhel, whose breath is thought to be the wind that often issues from cave mouths. Chauc is subservient to, and less powerful than, the Earth Lord. Tzultacah of the Kekchi, a god petitioned to for fertility, similarly lives in caves (Thompson 1970:268).
The Tzotzil go to caves to pray to these deities for their afflictions to be sated, for a successful sowing and harvesting, and particularly on May 3, K’in Krus (Day of the Holy Cross), in petition or gratitude of the coming of the rains (Thompson 1970). The Chacs shelter in caves or cenotes when not making rain as depicted in the Dresden Codex. The Chacs are multiple, and “In the prayers uttered by the shaman-priest in the agricultural ceremonies all the cenotes in the region in which the native moves and makes his milpas are mentioned by name; thus the priest calls, one by one, upon the Chaacs associated with the cenotes” (Redfield 1941:117). For the Tzutujil Maya near Lake Atitlan, Guatemala, the most important gods were the patron deities of the highest lineages. According to Orellana (1984:96), it is specifically these gods that are modelled in clay and wood and served as the focus of Highland temple and cave cults, though he remains surprisingly uncertain whether this is a holdover from pre-Columbian contexts or a product of the Spanish Conquest (Orellana 1984:99; see also Miles 1965:279).

In the Zinacanteco healing ritual, quoted at length in the previous chapter, caves were explicitly referenced (Vogt 1976:9, 11, 63). This is perhaps not surprising given the associations between life and death, prosperity and ruin discussed above and in the previous chapter. Indeed, in Tzotzil myth, the ancestral deities led humans out of caves at the beginning of the third world (Thompson 1970:202). Yet, in the Northern Lowlands, the same caves from which winds are thought to issue forth bringing life-sustaining rains, may at the same time be sources for vientos, or ‘evil winds’ that are thought to carry bad omens, sickness, and in some cases, death (Redfield 1941:239, 305; Redfield and Villa Rojas 1971 [1934]:165, 205).

This connection to the great cycles of time, life and death, and the supernatural may explain a number of accounts describing the use of caves in prognostication. Tozzer (1941:181 n.949, citing the Relación de la Ciudad de Valladolid 1900:24-26) notes the divinatory nature of ‘sacrifice’ at both Chichen Itza’s cenote and the cave at Salamanca where women were apparently cast into the maw. In both cases, if any survived, they were drawn back out and pressed to relay information to their lord about the harvest, rains, etc. On the other hand, if they died, as they often did, it was taken as an indication
that the Gods were displeased. I’ll address this particular aspect of cave use in more detail in the following chapter.

Not all caves are created equal in this light. Neither is all water retrieved from caves for the purposes of consumption. Redfield and Villa Rojas (1971 [1934]:139) note that water, specifically ‘virgin water’ (see Thompson 2005 [1975]:xv-xxii) from cenotes located away from the village centre are important for rituals of the field. While in some instances, water from the local cenote, if recovered in the first hour after dawn before it can be ‘polluted’ by women and other sources, may be used. In other cases, this is not acceptable. Some, indeed, may not be approached by women and are visited by men only when water of that high degree of sacredness is to be fetched for use in the most important ceremony (see Thompson 2005 [1975]; Redfield 1941:119). In contrast, the cenote of the village becomes a part of the mundane and human life. “To it the women and girls come for water; there they exchange gossip and talk, and there the cattle are driven to water” (Redfield 1941:119).

In terms of broad significance for this dissertation, perhaps the most revealing observation derived from the ethnographic and indigenous historic sources is that cave ritual never occurs in isolation. Indeed, the Tzotzil Maya worldview requires complementarity and opposition, often though not always explicitly dual (Vogt 1976:32). Thus cave rituals, associated with the under world and Earth Lord are often paired with rituals associated with mountain-tops, the upper world, and the ancestral deities.

Material and Spatial Correlates of Ethnographic Cave Use
Where one source of evidence is strong, so often, another is weak. From the ethnographic sources discussed thus far we’ve outlined a body of practice and belief related to the cave context. Sadly, as with the epigraphic/iconographic record, where these sources remain relatively silent is in their description, beyond broad generalizations, of attendant ritualists, costume, and paraphernalia. The precise distribution of ritual objects is never noted. This represents a significant lacuna in our understanding of Maya cave use as drawn from the ethnographic record, and significantly limits our ability to draw direct
parallels between the ethnographic ‘present’ and the necessarily materially-oriented archaeological past. This limitation will, in the following chapters, be seen to in turn limit opportunities for interpretation. We can, however, endeavour to compile a basic list that may prove useful in interpreting materials from the archaeological context. Interestingly, these materials do not appear to be in any way specific to the particular location in which the rite is taking place, with similar assemblages and foci being deposited at caves, mountain shrines, and in domestic centres. In general, these fall into several distinct material classes that should be familiar to those with experience in the cave context.

As Turner (1964) and many others have pointed out, ritual requires the use of symbolic foci, and Vogt (1976:25) relates that for the Tzotzil Maya of Zinacantan, wooden crosses often serve as such foci and are erected in a variety of locations from mountain-top shrines to caves. Whether the desire is to communicate with the ancestral deities, the Earth Lord, or Chauc, the cross or altar serves as the point of communication. Other foci are more permanent/substantial, including walls, platforms, etc. Trial of entry seems important for establishing the sacred nature of caves near Chan Kom. Redfield and Villa Rojas (1971 [1934]:139) note that the sacred cenote used in the rites of Cha-Chaak by the H-Men of Chan Kom “can be reached only by crawling through a dark and slippery tunnel, about 30 meters in length. The difficulty of entrance, and the snake-wise movement of the torch-lit procession enhance the awesomeness of the ritual act.” In Chapter Five, I’ll discuss a number of archaeological examples where passage is hindered by architecture. In contrast Xtacumbilxunan, a cave lying much more at the heart of everyday life, is marked by facilitated access through the construction and occasional refurbishment of a large ladder (Stephens 1963 [1843]:95-104).

Whether as a sacrifice or the product of ritualized consumption, faunal remains are commonly incorporated into cave related activities. Vogt notes that a black chicken is sacrificed in a Zinacanteco healing ritual (Vogt 1976:11), its life forfeit for the benefit of the patient. A ritual meal often marks a transition in a broader ritual sequence; in the context of Vogt’s healing ritual (Vogt 1976:42), this meal took place at the cave site itself and its refuse remained as part of the broader material assemblage. Thus, the presence of
faunal material in caves is ubiquitous. The problem lies in identifying what materials were deposited by humans and what materials may have been introduced by other means. While some remains, such as the deer encountered by Pedro Che near Mani (Cogolludo 1957 [1688]) stand out conspicuously in the cave context, in the Yucatán, Redfield (1941:117; Redfield and Villa Rojas 1971 [1934]:207) notes that animals and plants naturally associated with caves and cenotes, especially tortoise, are often the very species used in rain rituals at these self-same locations. Easier to identify are the human remains that may have been introduced through burial or sacrifice in the remembered pre-Colonial past (Tozzer 1941:181 n.949), through suicide (Redfield 1941:119), or in a more macabre and tragic twist, through murder (Redfield and Villa Rojas 1971 [1934]:219-222). 32

Botanical remains are another common class of artefact noted in the ethnographic cave context of the Highlands. As mentioned above, wooden crosses are often erected at sacred locations to serve as the focus of the ritual. In Zinacantan, pine boughs are often used in place of these crosses (Vogt 1976:44), and both Morehart (2002, 2005) and Moyes (2006) have demonstrated a similar prevalence of this plant in the archaeological context. The situation is similar in the Lowlands, whether in the form of corn or other consumables as offerings, as boughs for decoration (Stephens 1963 [1843]:95-98), or as carbon from torches or fires, as incense, or in the case of looters noted in Actun Kabul, Belize as bedding. As in the case of the faunal material, identifying introduced botanical remains can sometimes be difficult, especially in entryways, and their identification relies heavily on their specific context.

Other manufactured materials are noted as well. Prominently noted as part of the annual K’in Krus ceremonies, candles tied in threes are left as offerings at cross shrines (Vogt 1976:109). Perhaps more important than the objects deposited in caves are those thought to originate in caves. As already noted above, there is a strong tradition in the Maya Highlands of objects ‘aparecido’—San Sebastián’s drum (Vogt 1976:161), ‘The Buyer’ (Vogt 1976:17) and other Christ-on-the-cross images and crucifixes (Vogt

32 During the politically turbulent years following the Caste War of Yucatán, ‘Liberale assassins’ were known for throwing socialist supporters/leaders into cenotes.

Summary

Much as we did in the previous chapter, we can summarize post-Columbian Maya cave use and its attendant symbols as a list that we will continue to expand upon and modify in this and the following chapter.33

The chief uses of caves by the Maya according to the ethnographic record were the following:

1. Sources of drinking water,
2. Sources of ‘virgin’ water for religious rites (associated with concepts of sustenance and agricultural fertility),
3. As doorways or portals to the multi-layered under world, and hence,
4. As locations for religious rites (associated with supernatural beings such as the Rain God, the Earth Lord, and a variety of other denizens),
   - These rituals may be performed for a wide variety of reasons (to petition for health, wealth, or fertility, or to legitimize political power or foster group solidarity).
5. As locations for the burial/deposition of human or animal remains (perhaps as sacrifice),
6. As centralizing or structuring features in both settlement and society, delimiting corporate territorial bounds or separating the ‘human’ from the ‘wild,’ or the ‘mundane’ from the ‘sacred’ (sometimes serving as physical nodes in the delineation of territorial boundaries),
7. As depositories of ceremonially discarded utensils, and,
8. As places of refuge (for both people and objects).

Discussion

In the epigraph at the start of this chapter, Karen Bassie-Sweet (2008:43) provides an excellent, typical, example of these broader webs of activity. Thus, while the discussion so far has focussed largely on the cave context in isolation, this should simply be

33 If this list looks vaguely familiar, it is because it is loosely based on a list produced by Thompson (2005 [1975]) that will provide the basic structure for the chapter to follow.
understood as an expedient for the purposes of this discussion and the ultimate goal of
this dissertation is to show the value in explicitly rejecting this narrow view and looking
to broader contexts for explanation and significance.

Given the apparent similarities between the indigenous historic and ethnographic
datasets, we might also re-examine Yamase’s (2002) distinction between ‘elite’ and ‘folk’
practices/beliefs, at least with reference to this particular context. While Yamase’s
observations concerning authorship of the various sources certainly stands, it seems that a
likely explanation for the considerable overlap in cave use in both of these contexts may
be related to the antiquity of the practices in question. We are able to demonstrate the
ritualized use of caves in the CBAS study area as early as the Middle Formative period.
As will be seen in the following chapters, and as noted in the previous, the underlying
beliefs that structure this use are pan-Mesoamerican and of even greater antiquity still.
Hence, while we may viably suggest that ‘elite’ cave activities may have specific
concerns relative to the social standing of their practitioners—this may have a direct
impact on the particular qualities or types of materials used in cave related activities—the
fundamental activities, associations, and motivations bely the facile distinction between
‘elite’ and ‘folk’ culture.

This similarly holds true for the regional variation. While the above-explored
sources suggest a considerable amount of local variation, particularly with regard to
emphases and specific details, underlying patterns are far more robust. This is especially
compelling given the environmental, political, and historical variability between the
various indigenous and historical sources. Thus, while it is unlikely that we can use these
sources to identify specific ritual assemblages or specific acts, there is hope that we can
build this material into a broader model of ancient Maya cave use. We’ll continue to
explore and modify this picture over the course of the next chapter.
CHAPTER FIVE—THE ARCHAEOLOGY OF MAYA CAVE USE

Cave worship, a highly important factor in ancient Middle America, was a third focus of Maya religious life. Many vestiges, both of offerings and of religious architecture (altars, shrines, and stairways), occur in caves, and pilgrimages to certain caves continue to this day in areas to which European influences have not penetrated in strength. Caves were used for worship of rain and earth gods, and in many, incense burners are found in considerable quantities. Sometimes, too, they served as depositories of human remains. A notable use of caves in the Yucatan Peninsula was as a source for ‘virgin’ water used in ceremonies, for water, like all participants and utensils used in ritual, had to be uncontaminated. Water dripping from the roofs of caves was about as uncontaminated as could be found anywhere. Accordingly, in dripping caves—and they are numerous in limestone country—scores of pottery and sometimes stone vessels were placed below stalactites to collect the drips, particularly under those farthest from the entrance where the danger of contamination by the approach of women was least likely. Consequently, immense quantities of sherds of pottery jars often strew the floors of the remotest chambers of labyrinthic caves, where, because of complete darkness and difficult and sometimes dangerous access, one can be sure no one ever lived. In such caves, sherds of incense burners or of polychrome pottery are seldom, if ever, found.

Caves, then, were adjuncts of both ceremonial center and peasant religion....

—Thompson (1990:183-184)

In 1959, the great Mayanist Sir J. Eric S. Thompson contributed an obscure paper to Mitteilungen aus dem Museum für Völkerkunde im Hamburg that would prove in the fulness of time to be the most significant contribution to the academic study of ancient Maya cave use written in over a century. However, it wasn’t until 1975, with the reprint of Henry C. Mercer’s The Hill-Caves of Yucatan (2005 [1896]) that, as an appended Introduction, Thompson’s contribution, much updated, finally became available to a broader audience. Due in no small part to the particular attentions of James Brady, this article has since become a touchstone for all serious studies of the Maya cave context. As a literature review, Thompson’s Introduction is invaluable, though perhaps more significantly still, it is his organization of this literature into a description of distinct
categories for ancient Maya cave use that has structured subsequent studies. Indeed, for the time being, this work will be similarly structured with important additions/amendments introduced through other synthetic works (Brady 2005a; Brady and Prufer 2005; Scott 2012). Thompson’s study can be summarized in the following ubiquitously referenced list (Thompson 2005 [1975]:xiv):

*The chief uses of caves by the Maya were the following:*

1. Sources of drinking water
2. Sources of ‘virgin’ water for religious rites
3. Religious rites
4. Burials, ossuaries, and cremations
5. Art galleries, perhaps in connection with religious rites
6. Depositories of ceremonially discarded utensils
7. Places of refuge, a minor use
8. Other uses

This chapter will provide a historical context for the discussion of cave use in the CBAS study area. It will also provide a critical assessment of the current state of archaeological knowledge of ancient Maya practice within the cave context, and will outline the sometimes problematic material correlates for this. Emphasis on methodology will be placed on materials and contexts addressed through my primary research and will outline the specific methodology employed in the recording of the archaeological cave context. This chapter will pick up on some of the limitations of our current knowledge and approaches and incorporate concepts and theories drawn from the previous chapters in an effort toward addressing these. Additional discussion of the place of caves and associated activities, particularly ritual, within the larger religious, social and political systems of the ancient Maya, while addressed specifically in Chapters Two and Three, will be reintroduced in this chapter as it relates to interpretations of the archaeological record.

**Caves and Water Collection: A Northern Concern?**

34 Ann Scott’s recent synthesis, while it differs significantly in perspective from previous works as the accumulated product of hindsight, remains aligned with these others in content.
The intention here is not flippancy. James Brady (2005a:f-7-f-8) eloquently summarizes the apparent differences in emphasis between Northern Lowland cave use on the one hand and Southern Lowland and Highland cave use on the other: “In the Maya Highlands, with their rivers and deep soils, there is no elaboration of the rain cult comparable to that of the north.\textsuperscript{35} Instead, indigenous religion focuses on Earth Lords as owners of the land and controllers of fertility.” Indeed, while Thompson’s first two categories of cave use deal specifically with their practical association with water, they have little immediate bearing on the present study. Yet, as the history of Maya speleoarchaeology, particularly its early history, has focussed on the Northern Lowlands, and as ethnographic and indigenous historic data from this region was explored in Chapter Four, it seems necessary to spend some minimal time discussing these aspects of cave use.

\textit{Caves as Sources of Drinking Water}

Across the Yucatán, where the availability of surface water is limited, caves and cenotes once served an important function as sources of every-day drinking water. Settlement grew only where sufficient water could be acquired to support its population, and while pre-Columbian dug wells (pozos, some of which are still in use in the CBAS study region) and reservoirs are common features on the ancient landscape, most communities would have relied on discretely distributed natural sources. Thus, in a very tangible way, in some parts of the Maya area caves or sinkholes affording access to the water table, or as outlets for subterranean rivers in karstic landscapes, may have served as the most important structuring feature in settlement distribution, planning, and organization.\textsuperscript{36}

Thompson (2005 [1975]:xv) notes that the principle physical trait of such use, the trait that separates it from most other uses explored below, is that for this purpose the

\textsuperscript{35} Not entirely true; see previous chapter.

\textsuperscript{36} Note that where abundant surface water is present, this was not the case, a fact noted by Brady (2005a:f-7-f-8) as being reflected in regionalization of associated belief and practice across the Maya area.
more accessible a cave, the better. Perhaps the best-known example of this is the cave of Xtacumbilxunan (aka. Xtacumbi Xunan), written about by John Lloyd Stephens and famously illustrated by Frederick Catherwood in the mid-19th century (Stephens 1963 [1843]:92-104). This cave, lying near the modern town of Bolonchén de Rejón (aka. Bolon Che’e’en, or Bolonchen, ‘Nine Wells’), Campeche, served as an important secondary source of water for the, then, village. It likely served similarly for the local pre-Columbian community Itzimte-Bolonchen, the ruins of which lie nearly 4 km to the north-west (von Euw 1977:4:5-4:31; see also Maler 1902:216-217 and Ruz Lhuillier 1945:47). Accessed only when wells in the village centre dried up, and through what one would imagine to be an arduous journey carrying both a guttering torch along with a full load of water in a fragile ceramic vessel, access is eased through the construction of several large ladders. The renewal of these was an annual event (Stephens 1963 [1843]:98-100). So too at Actun Chac, Yucatán, Mercer (2005 [1896]:92-93) reports that where necessary, ladders are installed to ease access to the nonetheless remote water source and in some places, as at the cenote of X-Coton, more permanent facilities may be installed (in this case, a masonry stairway [see Smith 1953:73]). This by no means indicates that the journey was not still laborious. Andrews (1965:11), following excavation in the Gruta de Chac recounts:

Although interrupted by large chambers where visitors can walk upright for a few moments, most of the passage roof is so low that the journey must be made on hands and knees. Stephens noted that the Indians of his day attached their jicaras [water gourds] to long tumplines, so that they hung behind their buttocks as they crawled. It must have been a considerable athletic feat to bring through a delicate clay jar containing 40 pounds of water.

Clearly they often failed, because so many jars were broken that the passageways became blocked. Periodically, the debris was gathered up and piled at wider spots along the way.

Andrews’ observation that a preponderance of broken, utilitarian, water carrying or storage vessels may be associated with such use is significant, though it may be difficult to disentangle from other patterns of cave deposition discussed below. Likely
assemblages of this type have also been noted at caves in the Greater Antilles, most notably in De Booy’s (1915) discoveries on Saona Island. Here, off the south-eastern coast of the Dominican Republic, evidence of extensive habitation was identified near a small bluff 1 km inland from the eastern coast. The find is significant, as the eastern portion of the island is not known to provide bodies of potable water. However, potsherds, chiefly fragments of cooking vessels, were found by De Booy (1915:82-83) in several caves at the foot of this bluff, which, he interprets as having served in the collection of drinking water from dripping stalactites. This is a distinctly different interpretation from that offered by Thompson, below, in reference to zuhuy ha. The presence of particular vessel forms may further support such interpretations. The overwhelming presence of potizas (water bottles) found at the Cueva de Chicho and other fresh water-bearing caverns in the Padre Nuestro complex, a few kilometres east of the coastal town of Bayahibe, Dominican Republic (Beeker et al. 2002), have been suggested to demonstrate just such a purpose. Also, at Macao, De Booy (1915:87-88) reports the presence of a large quantity of potizas in two caves associated with a foul tasting, but potable, underground lake. A preponderance of narrow-mouthed ollas (water vessels) found in Maya cave contexts may reflect similar patterns.

Caves as Sources of Zuhuy Ha, ‘Virgin’ Water

It has long been known that the ancient Maya, too, collected dripping water from caves (as opposed to the pooled water of Xtacumbilxunan) in ceramic and stone vessels. Mercer (2005 [1896]:25-27) describes stone water containers in Actun Spukil near Calcehtok, adding that he found similar receptacles in almost every cave he explored: at the cave of Oskintok, at Chekt-a-leh, and Actun Xmak, near Yokat, Yucatán (Mercer 2005 [1896]:57, 67, 79). Edward Thompson similarly described a long stone trough at Loltun and interprets its presence in the context of water collection (Thompson 1897:15-16). Frederick Starr (1908:314-315) describes a large water jar set on stones much like Thompson’s trough, in a cave at Tekax, near the foot of the Puuc range. Brady (2005a:f-3) relates that in Postclassic Central Mexico, certain categories of sacrificial
victims were ritually cleansed with such ‘virgin’ or ‘divine’ water (Anderson 1982:82; Durán 1971:131; Sahagún 1981:141). In Belize, too, where underground sources of water are not so critical for survival, Thomas Gann (1928:46-48) describes a cave near the town of Benque Viejo del Carmen, as containing hundreds of vessels, “of every conceivable shape and size, from the tiny food-bowl holding perhaps half a pint, to the immense receptacle…holding nearly 15 gallons.” David Pendergast (1971), in discussion of Eduardo Quiroz cave, likewise interprets intact ceramics as so being placed for the purposes of collecting water.

Unfortunately, these material assemblages look an awful lot like those suggested above. How can we distinguish between water collection for the purposes of sustenance, and water collection for the purposes of ritual use? The key may lie in the specific context of the finds. Consider the following descriptions:

*The lantern, let down on the rope by an Indian, showed the rungs in good condition and a ledge below, and we descended through the rushing wind, until, reaching the rock, with rope and lantern, we saw another chasm and another ladder below us, and going down came to a third descent. In the flickering lantern light I could see that the rocks were polished, as if by the rubbing of clothes, and the rungs of the ladder, bound on with twigs, seemed well worn. Eight ladders in all brought us to the bottom....* (Mercer 2005 [1896]:92).

vs.

*The most extensive modification of the cave occurs in the area between chambers 2 and 3, where there was originally a low, wide slit connecting the two rooms. The Maya filled most of the slit with large limestone blocks probably collected from surrounding areas, leaving only a narrow passage-way....The passageway is 350 cm in length, and varies in height from 46 to 81 cm, and in width from 55 to 65 cm. The archaeologist struggling through this small tunnel wonders, even when he allows for the smaller size of the Mayas, how any priest entering the rear chambers of the cave for ceremonial purposes could have maintained his dignity, let alone the cleanliness of his robes, in such a place (Pendergast 1971:10).*
While both represent onerous journeys, the key point to bear in mind is that in the former, passage was eased—even in other caves with a strong vertical component, by no means a guarantee—while in the latter it was hindered. The site of Las Cuevas, in the Chiquibul Reserve of western Belize, currently under investigation by Holly Moyes (see Moyes et al. 2012), may encapsulate this difference. Both Adrian Digby (1958) and Thompson (2005 [1975]:xviii-xix) cite the presence of a readily accessible stream near the cave entrance as evidence that the dense collection of broken ceramic vessels discovered in isolated, artificially restricted, dripping chambers deeper within the cave, were the remains of vessels so placed as to collect water for ceremonial purposes rather than for mundane consumption. Logically, with a readily accessible water source available for every-day consumption, the collection of drip water for this purpose would have been redundant.

Thompson (2005 [1975]:xx) relates this activity directly to the collection of ‘zuhuy ha,’ or uncontaminated ‘virgin’ water. He notes, rather generically:

In their ceremonies they insisted that zuhuy, that is brand new, utensils be used. Vessels had to be zuhuy; the ceremonial fire was zuhuy, that is new-kindled by the stick-twirling process; sacrificial dogs had to be virgin; and only virgins could perform the temple chores.... Virgin water fits this pattern, and, of course, its containers must be periodically broken and replaced, thereby accounting for the masses of broken pottery found in such caves.

Unfortunately, it is apparent that ceramic vessels were introduced into the cave context for a wide variety of purposes, likely inclusively but by no means exclusively, for the purposes of collecting drip water. Indeed, the contextual distinctions made above may refer, more broadly, to distinctions between ‘sacred’ and ‘profane’ rather than to the collection of “zuhuy ha.” Moreover, Thompson, basing his interpretation on a relatively specific element of the ethnographic record, over-states the necessity of ‘virginity’ in ritual paraphernalia used in this context. While the collection of ‘unpolluted’ water has been attested for in some rituals near Chan Kom, Yucatán (see Redfield and Villa Rojas 1971 [1934]:139), it is by no means a necessity in all ritual acts. So too, as it is not
uncommon to find vessels from different periods occurring together within distinct activity areas (as at Cuychen [Helmke et al. 2012] and Actun Lubul Ha, discussed later) —i.e. clear evidence for the re-use of material—we may call Thompson’s essentialization of this concept as it relates to other artefacts, similarly, into question. It is difficult to imagine how one would distinguish between ceramic vessels introduced into the cave context primarily for the collection of water, often a _de facto_ consequence in wet caves, regardless, from those deposited for other purposes. Thus, while early scholars seem to have favoured this explanation above all others for the near-ubiquitous assemblages of both intact and broken ceramic vessels encountered in the cave context, it has since fallen to use as a default explanation when other forms of activity are not adequately in evidence.

**Caves as Locations for Burials, Ossuaries, and Cremations**

The study of human remains, particularly in the cave context, stands as one of the pillars of the CBAS project, and represents the principle specialization of one of the project’s co-Directors, Gabriel Wrobel. This topic, hence, lies outside the scope of my current, primary, research. Nonetheless, such research in the CBAS study region has direct implications in the discussion that will follow in later chapters and, as it will not be explicitly returned to later, an expanded treatment at this point seems justified. I am interested in two facets of this data: 1) how and why are human remains interred in caves, and 2) who is interred in caves. In summarizing this body of literature it is my aim to thus contextualize my own work, highlight Wrobel’s and his colleagues’ work as it fits into broader patterns of Maya cave studies, and set the stage for socio-political discussions on the CBAS study region to follow.

Properly, a sub-category of ‘ritual,’ other, non-mortuary elements of which I will discuss in more depth below and in following chapters, among the earliest explicitly identified uses of caves in the New World was as repositories for the dead. While the practice does not appear to have been widespread in the early colonial Maya area,
Spanish authorities would have likely been familiar with such use based on contemporary published accounts of pre-Columbian Caribbean caves (see Sloane 1707-25:iv, lxx) as well as those of the Spanish Main (Tozzer 1941:188, 220; see previous chapter). Discussions of caves as repositories for the dead have featured prominently in archaeological literature of the Maya area from at least the end of the 19th century (e.g. Ballinger 1986; Blom 1954; Butler 1934:223; Mercer 2005 [1896]:161; Moser 1976, 1983; Palmer 1882; Pastron and Clewlow 1974; Prufer and Dunham 2009; Saul et al. 2005; Scott and Brady 2005; E.H. Thompson 1897, 1904; and Tiesler 2005), particularly in oft-melodramatic (but equally ‘oft’-entertaining) testimonials such as that written by George Byron Gordon (1898:7-8) in reference to a cave near Copan:

The walls are black, the air close and foul, and altogether it is as repulsive a hole as could be found in the face of nature. The floor seemed more uneven than in either of the other chambers, and gave way still more to the pressure of the feet, and with a crushing sound. I soon discovered that I was walking upon the dust and crumbling bones of decomposed human bodies, mingled with ashes and lime. A mass of charred and calcined bones occupied the entire floor to a depth of about two feet. Among these were a few larger pieces which did not show traces of fire, and around the walls were found a number of small jars. The chamber seems to have been used for depositing the partly cremated remains of human bodies. I do not think that fires were built in this chamber itself, for there were no large fragments of charred wood such as would have marked the remains of a fire.

Types of Cave Burial
The encounter quoted above describes a mortuary context in which human remains are not ‘buried’ per se. Ann Scott and Brady (2005:266) define a burial as “the deliberate and intentional interment of the remains of a community member. Burials may be primary or secondary and can be found on the surface or in the ground. Thus, the body does not need to have been buried to be a burial.” The term ‘burial’ will therefore be used as a catch-all for this practice. A number of distinct depositional patterns, assemblages, and treatments characterize burial within the cave context.
Isolated/Individual Interments

A wide variety of depositional patterns, elaboration, body treatments, and associated material goods may be associated with human remains in the cave context. Those associated with individuals are usually the easiest to understand as they conform to one degree or another to our expectations from surface contexts. Individuals were sometimes cremated. Frans Blom compiled the first comprehensive literature review of human remains in caves in the context of his broader investigations in Chiapas, Mexico (Blom 1954). At Cieneguilla Cave, Chiptic Cave, the Cave at Colonia Vitorico Grajales and Rosario Trabajo Cave (all, properly, small rockshelters [see Blom 1954:126-129]) ashes, charcoal and fragments of calcined bone were found inside narrow-mouthed ceramic vessels covered with re-purposed ceramic sherds, and sealed with cotton textiles, plant resin and wax. Blom associates all of these finds with the late pre-Colonial and early Colonial periods based on the inclusion of a “Venitian glass bead” in one of the vessels in Rosario Trabajo Cave (Blom 1954:129). No attempt was made to infer status or other aspects of identity save ethnic affiliation based on the physical proximity of these rockshelters to Tojolabal.

Unquestionably, the ‘High Priest’s Grave’ at Chichen Itza, documented by Edward H. Thompson (1938) is the most spectacular burial ever found in the cave context. It is also, far and away, an aberration. An incredibly rich deposit, very much akin to those tombs commonly found in direct association with monumental architecture, the identification of this individual as elite is reinforced by its placement directly under a major structure in the civic-ceremonial core. Annabeth Headrick (1991), following interpretations of similar interments in surface architecture, suggests that the occupants of this grave may have been community founders or early leaders (see also McAnany 1995). So too, at Naj Tunich, did Brady (1989) identify four elaborate masonry structures located on a highly modified natural rise in the entrance chamber as ‘elite.’ The use of

37 Binford (1971) and Tainter (1978) note that treatment in death should correspond to status/position in life (even if this is only a short-term condition as appears to be the case with children sacrificed in the Incan Andes [see Ceruti 2004]).
this space seems to have shifted over time with the earliest structure changing from an open-doored shrine similar to that described by Edward Seler (1901:163-169), to a richly appointed, sealed, burial chamber during the Early Classic (Scott and Brady 2005:267). The other four structures appear to have been purpose-built following this latter pattern of use. Other walled niches throughout Naj Tunich may have been put to similar use, but differences in formal characteristics, damage due to looting, and their earlier date of construction relative to the four structures in the entrance chamber make this interpretation tenuous (Brady 1989:354). Similar blocked niches were discovered in Balam Na Cave 4 in the southeastern Petén and seem to date to the Late Formative period (Garza, Brady, and Christensen 2001).

In contrast, Scott and Brady (2005:271) note that, individual, non-elite, non-tomb remains in caves are some of the most difficult to interpret. The frequent lack of well associated grave goods, whether due to initial absence, loss, or poor reporting, compounds the issue. Hence, much of the interpretation is contextually based. Brady reports that in a small cave near Naj Tunich, the body of an adult was neatly laid out on the cave floor, against one wall. Previously discovered by looters, the wall that had blocked entrance to the cave was destroyed and any non-skeletal materials that had been located inside were now missing. Nonetheless, Brady suggests that the neat arrangement of the body suggests a deliberate primary burial (i.e mortuary activity; Scott and Brady 2005:271). The so-called ‘crystal maiden’ of Actun Tunichil Mucnal and other isolated human remains, in contrast, have been interpreted as sacrificial victims due to the treatment of individual elements or their aberrant, or ‘careless,' burial position (Awe and Helmke 2007). Still other isolated human remains may represent curated objects, perhaps used in other cave ceremonies, and were perhaps related to ancestor veneration—akin to subsurface deposits in houses, widely noted across the Maya area (e.g. McAnany 1995:104, 126)—and understandable given the conceptual associations noted in the previous chapters. Thompson (2005 [1975]:xxxii) makes this suggestion in reference to the presence of isolated skulls on altars or in association with areas of intense ritual activity. According to Bishop Núñez de la Vega (1702:134, cited in Thompson 2005
[1975]:xxxiii), the remains of community founders were interred in caves as objects of veneration, and offerings of flowers and copal were periodically made to them. Brady (1989:353) identifies a single tibia placed inside an altar at Naj Tunich that may have been similarly used, and Scott and Brady (2005:274) identify a fragment of a tibia found in the Cueva de Sangre, near Dos Pilas, as the curated remains of a warrior captured and sacrificed, the associated events being recorded on a broken Late Classic tripod vessel found with the remains. This latter example opens the door to discussions of sacrifice in the cave context, an important topic that I will return to below.

Clustered/Group Interments
Thompson referred to large assemblages of commingled human remains found in caves as ‘ossuaries.’ These could be built up through the deposition of individuals over time, or they may represent mass events. Defined as a cave in which the main function of the whole or at least one of its chambers is to hold burials, until recently these have been most commonly identified outside the Maya area, and are particularly noted in Oaxaca (Dahlgren de Jordan 1966:295; de Burgoa 1934 [1674]:I:338, II:115; Moser 1975, 1976, 1983) and the south-eastern Maya periphery (Scott and Brady 2005:271-272). Gordon’s Cave 3, noted above, while including a good number of cremated remains, likewise fits the definition of an ossuary. However, if Brady’s (1995) dating of the site holds, it predates Maya influence in the region. Hence, along with the Talgua, Arañas, and Piedra Blanca caves of eastern Honduras (Brady, Hasemann, and Fogarty 1995; Brady et al. 2000; Dixon et al. 1998), it may be better thought of as part of a ‘greater Honduran pattern’ of cave burial that, during the Early/Middle Formative, may have extended north-west into the Guatemalan Highlands (Scott and Brady 2005:272).

Within the Maya area, such multiple interments have more commonly been associated with rockshelters (Bonor Villarejo 1995; Bonor Villarejo and Martinez Klemm 1995; Glassman and Bonor Villarejo 2005; Lee and Clark 1988; Lee and Hayden 1988; Prufer 2002; Saul et al. 2005), though this pattern includes the light zone areas of small

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38 The Bishop had the bones removed from the cave and burned (Thompson 2005 [1975]:xxxiii).
caves such as Actun Nak Beh (Halperin 2005), and Actun Uayazba Kab (Handprint Cave [Gibbs 1998]) as well. Other possible ossuaries identified in the literature by Scott and Brady (2005) include those of the Lacandon caves of Tsibaná (Petryshyn 1969) and Mensäbak (Boremanse 1993:327-328; McGee 1990:58-59). Near the site of Ek Xux, in southern Belize, three rockshelters—Saki Tzul, Mohibal Kanchi, and Mayahak Cab Pek—appear to have been used as cemeteries before and during the Late Formative through to the Late Classic (ca. AD 200-750). At Saki Tzul and Mohibal Kanchi, individuals are interpreted as non-elite, and are associated with minimal grave goods with apparent intensification indicated for the Late/Terminal classic period, though this may be the result of bias in datable materials (see Saul et al. 2005:302). Earlier materials (Proto-Classic) have been identified related to individual burials in Mayahak Cab Pek. Multiple, staged, burials in this cave show that it was reused, possibly by individual family units (Saul et al.:303-305), though frequent disturbance of older graves suggests that interments were poorly marked, if at all. Working at the Caves Branch Rockshelter, Wrobel has similarly identified a mortuary sequence spanning nearly 800 years (Wrobel 2008a, 2008b). Whole ceramic vessels interred as grave goods are entirely restricted to the Late Formative period, meaning that the mortuary use of the rockshelter persisted for hundreds of years after people discontinued leaving diagnostic ceramic grave goods. Caves Branch Rockshelter is located toward the north-eastern corner of the CBAS study area, remote from significant architecture though a courtyard group is located nearby and other evidence may well have succumbed to the intensive agricultural activity in the valley. Following preliminary excavations in 1994-96, Juan Luis Bonor (Glassman and Bonor Villarejo 2005) estimated that the site contained approximately 150 burials. Work conducted between 2005-07 by the Belize Valley Archaeological Reconnaissance Project revealed that the site’s use was more extensive than previously believed, and likely contains over twice Bonor’s estimate, including individuals of both sexes and a wide age range, and hence, an unrestricted mortuary repository (Wrobel 2008b). Ceramic sherds span the Floral Park/Hermitage/Spanish Lookout and New Town Complexes, representing a lifespan extending from the first centuries AD (Proto-Classic/Chicanel).
through the early 10th century AD (Early Post Classic). The specific material assemblage is likely utilitarian and local with minimal material that would be classified as ‘exotic’—marine shell *adornos*, carved bone and pieces of jadeite, etc.—though obsidian and non-local cherts are present if not common. Other artifacts include burnt animal bones, freshwater jute shells, and small lithic fragments. Burial 66 was found in close association with a Lowe spearpoint, a type generally attributed to the Late Archaic period (2500 - 1900 B.C. [see Lohse et al. 2006]), though the point was broken and the individual was dated by AMS to the Late Formative (Wrobel 2008a). Based on the large number of interred individuals, the disturbed/intrusive context of these, relative lack of skeletal modification, and the lack of grave goods, Wrobel and colleagues have interpreted this complex as ‘non-elite’. Further, there are close similarities between this population/context and that of Sapodilla Rockshelter, located approximately 1 km south of CBR, perhaps indicative of a local pattern of behaviour (Michael and Burbank 2013; Shelton 2013; Wrobel and Shelton 2011). As in the case of human remains recovered near Ek Xux, this question of ‘elite’ and ‘non-elite’ at the Caves Branch Rockshelter will be re-addressed below.

It has only recently been widely acknowledged that deep caves, too, appear to have been used extensively as group/multiple-individual ossuaries. This practice has been most-extensively documented in the CBAS study region. Je’reftheel (aka. Franz Harder Cave) is located in the Mennonite village of Springfield, to the north-east of Tipan Chen Uitz. It was initially investigated by Jaime Awe and Helmke under the Belize Valley Archaeological Reconnaissance (BVAR) project (Helmke 2009). The cave is narrow and dark with a significant vertical component, though only measuring some 30 m in length. Wrobel reports that the burial assemblage includes individuals spanning a range of ages, and adults of both sexes, similar to population demographics represented in the region’s rockshelters. Analyses of the burial context indicate re-use/re-entry involving the disturbance of older materials. Associated artefacts seem to date primarily to the Late Classic period in a notable shift from our Formative and Early Classic rockshelter deposits (Wrobel et al. 2010:75). Cranial and dental modifications, largely absent from
both CBR and Sapodilla similarly serve as a contrast between these contexts (Helmke and Wrobel 2012; Wrobel et al. 2012). Interestingly, Wrobel (Wrobel et al. 2010:76) has identified a staged pattern of mortuary activity with a flattened area for the initial deposition of largely or partially articulated interments, and a depressed area in which the decomposed remains were swept. This mortuary pattern appears relatively consistent in other deep caves of the region, including Actun Kabul (Wrobel 2013) and Midnight Terror (Kieffer and Saldana 2009), both located within 1 km of each other and the Tipan site centre.

Secondary interment of human skeletal remains after decomposition in crevices or stacked in piles is likewise common. This final pattern is by far the most frequently encountered in the cave context, and has been reported from Belize (MacLeod and Puleston 1978:72; Pendergast 1971:15), Chiapas (Blom 1954:132), and the Yucatán (Márquez de González et al. 1982; Brainerd 1958:21). Thompson (2005 [1975]:xxxiii) imagined several reasons why the often disorganized remains found in cave contexts might be there with little discernible orientation, posture, or grave goods, “One can imagine circumstances which would account for some such burials. Men engaged in religious rites in caves must, over the centuries, have died while on duty, and for that very reason have been buried on the spot, in hallowed ground, so to speak.” It is clear, however, that this material is present as part of a coherent mortuary system and at a scale that seems to preclude being composed solely of ‘holy men’ that died in the line of duty. Vanessa Owen (2005:327) describes the deposition of at least 31 individuals, spread across several ledges in Barton Creek Cave. The usual absence of grave goods accompanying these interments suggested to Owen that these individuals held a marginal status, and perhaps were present in the context of human sacrifice. Similar deposits are noted at nearby Actun Kabul (Gibbs and Weinberg 2002; Wrobel 2013:9-10) and Actun Yaxteel Ahau, though in the latter, a large number of ceramic sherds, lithics, and a small number of jade and shell beads were found commingled with the remains (Gibbs 2000:79; Owen 2005:331).
While these studies certainly serve to describe patterns in the deposition of human remains in the cave context, an important point remains to be critically considered. That is, *who* ended up being buried in the cave context and *why*? All significant understanding of such deposits are predicated on answering this question. There are two related topics that I’d like to address in this light. The first, concerns the basic role that human remains played in the cave context (i.e. what evidence can be marshalled to interpret human remains in either a mortuary context, or as a ritual offering), and turns specifically on the controversial topic of human sacrifice. The second, concerns the basic social identity of individuals so interred (i.e. the identification of ‘elite’ and ‘non-elite’). While these discussions unquestionably draw us further from the primary dataset that I will be working with later in this dissertation, it is critical for our task of identifying broader regional diachronic processes to understand precisely what human remains found in the cave context *do* and *do not* represent.

*A Question of Sacrifice*

The ancient Maya engaged in human sacrifice. This fact has long been accepted (e.g. Bricker 1981:20; Madsen 1967:386; and Thompson 1977:29) citing Classic and Postclassic text and image. While the archaeological signatures of this may be difficult to distinguish from other forms of violent death or ritualized disposal, its veracity is not under question. So too, does it seem that the best identification of some individuals whose remains are found in the cave context are as the victims of such activity. However, as a backlash against long years of failure on the part of Mayanists to acknowledge this behaviour in the cave context, the prevalence of human sacrifice may have become somewhat overstated. Certainly, the popular media’s fascination with this macabre aspect of ancient Maya cave use—as well as that of professional scholars, re. the “prisoners and beautiful maidens” cast into the well at Chichen Itza (E.H. Thompson 1914)—has served to fuel discussions along these lines. The argument in support of wide scale human sacrifice in the cave context stands on two legs. The first rests on testimony from the historic and ethnographic records. The second rests on archaeological interpretation.
While neither constitute particularly stable foundations, it is the former, the reliance on post-Conquest testimonial, that is the weakest. Part of the issue revolves around a continued misrepresentation/misinterpretation of what the ethnographic and early Colonial sources say on the subject as it directly relates to the cave context.

The ethnographic and early Colonial sources are often referred to in arguments supporting the identification of sacrificial victims in the cave context. However, as pointed out by Dennis Tedlock (1993; see also Clendinnen 1982), such arguments are based on problematic accounts:

Soon after the European invasion Mayan writers produced a good many texts in the medium of the Roman alphabet, but in cases where such a text seems to contradict a European one on some point of history, we have tended to favor the European account. And when our only source has been Mayan statements reported by Europeans, we have accepted these with little concern for the circumstances of the dialogues that produced them, even in the case of the proceedings of the Holy Inquisition [Tedlock 1993:139].

Under torture, ‘witnesses’ testified to Landa’s Inquisition that they sacrificed children in the church, the cemetery and in the forests outside the pueblo. The figures associated with these testimonials, as reported by Tedlock (Tedlock 1993:144) are both staggering and tragic:

It was while the trials at Sotuta were under way that Yucatán received its first resident bishop in the person of Francisco Toral. Jurisdiction in matters of the faith now belonged to the bishop, but he was willing to let Landa continue, provided that he made no use of torture. Landa insisted that without torture the Indians would not confess, and he refused to go on unless authorized to use it (Scholes and Adams 1938:1:1vi). In the end, amid rising complaints about Landa’s past actions from both colonists and Mayas, Bishop Toral opened an investigation of his own, calling upon the services of both clergy and laypersons. It was the Inquisition itself that became the principal object of their inquiry. According to the figures they compiled, 6,330 persons had been subjected to penances, while another 4,549 had been tortured. Those who were maimed or crippled as a result of torture numbered 32, while those who died numbered 157, not counting 13 persons who were
known to have committed suicide before they could be arrested and another 18 who disappeared under circumstances that pointed to suicide. There were two cases in which a suspect already incarcerated in a monastery managed to end his life by striking himself in the throat with a stone, as if to make doubly sure of not having to speak. And finally, 140 persons were convicted posthumously, resulting in the disinterment and cremation of their remains.

In the absence of torture, surviving witnesses recanted their testimony, Bishop Toral came to the conclusion that the evidence compiled by Landa was largely false, and he reduced some sentences, revoked others, and released all prisoners. Further, Landa’s oft-cited Relación was largely a casus belli statement, written in justification of his actions, and it must be acknowledged that it too can hardly be taken as an unbiased text.

Yet, most archaeologists investigating sacrifice in the cave context of the Maya area still rest a significant portion of their argument on this rather shaky ethnohistorical dataset. Even the most compelling of studies (e.g. Tiesler 2005) uncritically cite the products of Diego de Landa and its direct derivatives (e.g. Roys 1943; Scholes and Roys 1938; Tozzer 1941). To make matters worse, a certain amount of erroneous testimonial appears to have become accidentally embedded within the literature on this subject. As a recent example, Scott and Brady (2005:276) state:

*The sacrifice of victims, particularly children, by throwing them into the Cenote of Sacrifice at Chichén Itzá is documented by both ethnohistorical sources (Tozzer 1941:44n) and archaeology (Tiesler 2005)... As part of the cenote cult, children were often publicly sacrificed and the body was disposed of in a cenote/cave (Scholes and Roys 1938:615; Tozzer 1941:44n, 116n).*

Unfortunately, in neither of the notes by Tozzer cited in this work (44n, 116n) is there to be found reference to sacrifice of any kind. This error has been directly carried over in the work of Keith Prufer and Jeffrey Hurst (2007:288) and others (see also Healy 2007:263; Lucero and Gibbs 2007) though in all cases only as a passing reference.

Diego de Landa *does* discuss sacrifice, beginning on pg. 115 (Tozzer 1941), however even here, there is no reference to *cenotes* or caves. Rather, de Landa describing
events from the pre-Columbian past, relates the sacrifice of children by various violent means in the temple courts and their subsequent burial in these selfsame courts (or their cannibalistic consumption [Tozzer 1941:115-120]). Where the casting of humans into *cenotes* is mentioned by Landa, it is either in the context of divinatory rituals (Tozzer 1941:120-121) or as part of rain rituals in sacrifice to the gods (Tozzer 1941:179-181). In the case of the former, while Landa indicates that people often died, here, the point is clearly not ‘sacrifice’ as it was intended that individuals be recovered alive following their ordeal to relate the will of the gods. In the case of the latter, while we do indeed find human remains in *cenotes* and other subterranean contexts, it must be acknowledged that Landa is describing an act that he did not witness and that was no longer in practice; a memory from out of the past and out of context. Other commonly cited accounts (such as Roys 1943, or Scholes and Roys 1938) are derivative from Landa and his Inquisition. Thus, in the end, reliance on the ethnohistoric record to substantiate ancient Maya cave sacrifice all comes back to de Landa and whether or not we accept his accounts as fact, fiction, or a combination thereof.

The archaeological data is more compelling. In addition to some of the human remains encountered in Actun Tunichil Mucnal, noted above, good candidates for such behaviour include a child buried under a plaster floor at Eduardo Quiroz Cave with perimortem damage to the cranium (Pendergast 1971:18-19), a similar burial in Naj Tunich (Brady 1989:351), and inconsistencies in the treatment of some remains at Petroglyph Cave (Reents-Budet and MacLeod 1997:41-45, 80-81), Gordon’s Cave 3 (though it may be non-Maya [Brady 1995:35]), and Cueva de Sangre (Scott and Brady 2005:277-278). MacLeod and Puleston (1978) interpreted skeletal remains from caves in the Caves Branch area of Belize, predominantly children and in the absence of grave goods, as sacrifices. Pohl and Pohl (1983:31, cited in Gibbs 2000:69) similarly interpret remains from Petroglyph cave. These cases conform to a list of depositional and taphonomic traits, prepared by Vera Tiesler (2007:22), considered diagnostic of the cave context (Table 5.1).
Table 5.1 - Sequenced sacrificial and funerary conduct and sets of indicators (from Tiesler 2007:22)

<table>
<thead>
<tr>
<th>Time Sequence</th>
<th>Biographic Profile</th>
<th>Form of Death</th>
<th>Predepositional Body Treatment</th>
<th>Primary Deposition</th>
<th>Postdepositional Manipulation</th>
<th>Secondary Deposition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Expected Funerary Attributes</strong></td>
<td>- All age groups</td>
<td>- Natural</td>
<td>- Embalming</td>
<td>- Single</td>
<td>- Removal of body parts</td>
<td>- Single or multiple successive</td>
</tr>
<tr>
<td></td>
<td>- Both sexes</td>
<td>- Accidental</td>
<td>- Cremation application</td>
<td>- Body placement and offerings</td>
<td>- Desecration</td>
<td>- Bone arrangement and offerings caching</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Dismemberment?</td>
<td>- Association to living spaces, interment</td>
<td>- Bone relics</td>
<td>- Association to living spaces, container</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Adornments</td>
<td>- Cremation (Predominantly Postclassic)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Osteological/Taphonomic Correlates</strong></td>
<td>- Sex/age distribution</td>
<td>- No information</td>
<td>- Construction effects</td>
<td>- Body arrangement</td>
<td>- Disturbance</td>
<td>- Bone arrangement</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Pigmentation</td>
<td>- Funerary container and associated artifacts</td>
<td>- Missing body segments</td>
<td>- Funerary container</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Associated artifacts</td>
<td>- Location</td>
<td>- Worked bones and teeth</td>
<td>- Location</td>
</tr>
<tr>
<td><strong>Expected Attributes in Post-Sacrificial Deposits</strong></td>
<td>- Predominantly 2nd and 3rd infancy adolescents and young adults</td>
<td>- Violent</td>
<td>- Butchering</td>
<td>- Single or multiple (complete/incomplete)</td>
<td>- Reduction</td>
<td>- Single or collective incomplete disposal</td>
</tr>
<tr>
<td></td>
<td>- Mostly male</td>
<td>- Non-natural</td>
<td>- Dismemberment</td>
<td>- No body arrangement or substantial offerings</td>
<td>- Extraction</td>
<td>- No bone arrangement or offerings</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Skinning</td>
<td>- Association to public-ceremonial spaces</td>
<td>- Desecration</td>
<td>- Discarded in public domain, ritual spaces, refuse middens</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Defleshing</td>
<td>- Simple internment or placing above ground</td>
<td>- Re-use of bone segments</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Consumption</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Osteological/Taphonomic Correlates</strong></td>
<td>- Sex/age distribution</td>
<td>- Signs of perimortem violence (cuts or stab marks on skull, ribs, sternum and vertebrae)</td>
<td>- Cut marks, slicing, percussion, fractures</td>
<td>- Irregular arrangement</td>
<td>- Disturbance</td>
<td>- No bone arrangement, isolated bone</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Burning</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>- Heat exposure (&lt;600°C)</td>
<td>- No funerary container</td>
<td>- Missing body segments</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- No/few associated artifacts</td>
<td>- Worked bones and teeth</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In each of these cases discussed above, the argument is contextual, emphasizing burial position (or rather, the lack of concern for burial position), specific burial location within the cave, and a lack of associated grave goods (Brady and Stone 1986). This latter facet is based on the premise that if human remains aren’t deposited with offerings, then they may be deposited as offerings. If this sounds familiar, it is because a very similar list of attributes was used above to describe secondary burial in non-elite contexts. Owen identified several of the Barton Creek Cave burials, as sacrifices based on their ‘less-than-reverential’ deposition in circumscribed features such as depressions, pits, alcoves, or crevasses. “There are at least three cases in Barton Creek Cave where individuals were placed in an area of high pedestrian traffic (in past and present times), which resulted in significant damage to the skeletal material” (Owen 2005:327-328). She notes that two young adult males were placed in a muddy area of actively dripping water, which Brady (1989:262) has argued as being inconsistent with the interment of a relative and thus suggestive of sacrifice.

This brings up an important point of discussion. There seems to be a common assumption that “caves were not the usual repository for the deceased” (Owen 2005:323; Ricketson 1925:394). At this point, however, in both the CBAS study area and elsewhere where studies of the cave context are sufficiently advanced, far greater numbers of individuals, both ‘elite’ and ‘non-elite,’ male and female, young and old, have been found in caves and rockshelters than in any other context. Thus, it is perhaps time to re-evaluate our assumptions concerning what constitutes ‘normal’ or ‘inconsistent’ mortuary behaviour. While Scott and Brady caution against the reduction of human

\[39\] Below, I will discuss the lack of grave goods in the context of status and liminality.

\[40\] A sentiment seemingly based on the essentialization of modern Western notions of propriety rather than demonstrable and quantifiable patterns evident in the archaeological record. Not to be crass, but why couldn’t I simply throw my grandmother on the trash heap when she dies? Given the frequency with which human remains are found in household middens, this may very well be the case at times (Moholy-Nagy 1997). I am reminded of the excavation of an ossuary that I took part in, in southern Ontario (the ‘normal’ burial location); for the local Huron group watching over the excavation the remains were not seen as something to be honoured or revered, but something to be feared: they were a supernatural cesspool of all that was negative (physically and spiritually) that had existed in the deceased.
sacrifice to ritualized violent death that would have left a mark on the skeleton (cf. Pendergast 1971:18)—a point well taken, as they point out, “On strictly osteological grounds, one would have to conclude that the individuals recovered from the Cenote of Sacrifice died of natural causes” (Scott and Brady 2005:277)—one must ask, being conservative, ‘which interpretation is more likely?’ Is it more likely that the multitude of individuals strewn haphazardly in a location such as the rear chamber of Actun Kabul—perhaps 100-200 individuals at Actun Kabul, about 25 at Je’reftheel, up to 450 individuals at Caves Branch Rockshelter, and no more than 50 at Sapodilla Rockshelter, etc.—with little or no associated grave goods, are sacrificial victims? Or is it more likely that these individuals, along with more singularly placed examples, were deposited as part of a multi-staged, periodic, mortuary practice in which the deposition of grave goods are unimportant? The problem lies in historical momentum, and the potential essentialization of modern western biases. Comparative trait lists, such as that produced by Tiesler do not identify emic or culturally specific categories of behaviour as suggested by the archaeological dataset, but rather identify, replicate, and reinforce categories of behaviour that have historically, and often unconsciously, been applied by researchers in classifying their datasets. Rather than identifying inherent categories within the data, it shoehorns the data into assumed categories. This issue has long been recognized (Coe 1959, 1965), and indeed, Tiesler herself wrestles with its reconciliation (2007). This does not mean that such categorization is incorrect, based as it is on contemporary and cross-cultural studies and iconographic sources (Tiesler 2007), but it must still be recognized that the resulting legacy has been a lack of critical articulation with this question of funerary vs. non-funerary disposal of human remains, particularly in the cave context. In a very fundamental way, as Liz Graham (2012) has pointed out, such discussions have sidestepped an important question: “for the ancient Maya, what is ‘sacrifice’?”

Going back to our so-called ‘typical’ burial pattern under house floors—the identities of those interred often being interpreted as lineage heads or other reverential

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41 Note that the same criteria defines many of the contexts outlined above, save in the number of individuals deposited.
individuals associated with the household/community—is it not probable that the reason they are found interred with significant quantities of grave goods and associated with considerable elaboration is precisely because they are *atypical*? Perhaps ‘typical’ burial practice for the majority of the ancient Maya didn’t involve the inclusion of grave goods or the elaboration of their interments.\(^{42}\) Provocatively, Wrobel and colleagues note (Wrobel et al. 2007:187) that “demographic proportions [found in large ossuary deposits in caves and rockshelters of the CBAS study region] are typical of pre-industrial societies, though are rarely found at Maya sites because of cultural bias in mortuary patterning at complex urban centers.” The reality is that, in the absence of proper comparative data, much of the contextual argument likewise falls flat. Thus, reductionist as it may be, perhaps the most convincing example of human sacrifice from the Caves Branch River Valley was found in Actun Tzimin (Wrobel and Morton 2013). The cave was used for a broad span of time, ranging from the Archaic period through the Terminal/Postclassic. Our investigations are still in their preliminary stages, and due to a lack of direct association with diagnostic materials, the date associated with the human remains is yet uncertain. However, what matters is not the specific date of the remains, but their context and particular treatment. They consist of a cranium and cervical vertebrae, perhaps suggesting decapitation. The assemblage is located in a small antechamber off a large, strongly down-trending fault with considerable quantities of breakdown. While other artifacts are found strewn in amongst this breakdown, the cranium and vertebrae rest in isolation, suggesting that special consideration was taken in their placement. Another small rockshelter in the region, Overlook Rockshelter, contained select elements from a single female individual, presumably deposited as part of an offering (Wrobel et al. 2013). Yet, even in these cases, we must be careful to draw an interpretive line between human remains left as an offering and those left in sacrifice as we have solid archaeological, epigraphic, and iconographic evidence that there is no one-to-one relationship between the use of human remains in rituals of veneration and the

\(^{42}\) This seems to be the case in the complex Taíno chiefdoms of Paso del Indio and Punta Candelero on Puerto Rico (Pestle 2013:34).
termination of an individual’s life specifically for this purpose; consider the exhumation recorded on Tikal Altar 5 (Martin and Grube 2000:46). Note that by no means are all or even most caves or rockshelters used primarily for the interment of human remains, though many if not the vast majority of subterranean site contexts, regardless of their form, are likely to contain at least some fragments of human bone (see Wrobel et al. 2007, 2010 for local examples).

**Who is Buried in Caves? Bioarchaeology and Status**

Thus, the question of whether or not, and to what extent, human remains in the cave context represent sacrificial rites, leads into a broader discussion of identity. This question is of particular interest in the context of this dissertation as I explore the processes associated with the inception, florescence, and decline of civic-ceremonial centres in the CBAS study region; in other words, the rise and fall of significantly stratified socio-political identities. What do human remains recovered from the cave context have to say about status? It’s complicated…

Beginning in earnest in the 1980s, a debate, often heated, has hinged on the nature and expression of Classic period Maya social structure. This discourse has focussed on the division, or lack thereof, between so-called ‘elite’ and ‘non-elite’ members of society. In this section, the goal is to outline the discussion, its history, and its current trajectory. I will discuss the critical role that osteological analyses can and have played in studies of status both within the Maya area and beyond, highlighting the techniques employed, their underlying assumptions and their advantages/disadvantages. However, this discussion has further, general, relevance in reference to the social and political systems that the rest of this dissertation is couched within.

Thus, to begin, the debate over Maya status relationships was largely formulated in the absence of osteological data. It is generally agreed that the primary organizing principle in Classic period Maya society, just as in many ‘Maya’ communities today, was kinship (Hendon 1991). We have Classic period texts and images (Copan Altar Q is a notable example [Schele and Miller 1986]) as well as archaeological evidence for
ancestor worship that illustrate the importance of kinship for the legitimization of power, land-claims, and inheritance (McAnany 1995). The importance of kinship is also expressed clearly in Postclassic texts such as the *Popol Vuh* and the various books of the *Chilam Balam*.

Among the Classic period Maya, it seems that kinship was organized according to lineages, with a patrilineal preference (based largely on epigraphic and iconographic data), and individuals within these lineages being ranked according to birth order, gender, and individual genealogy (Hendon 1991). McAnany (1995) has hypothesized that lineages within a site were ranked according to the ‘principle of first occupancy,’ where the antiquity of a lineage would determine its place in the social system.

A debate has focussed on the social divisions built atop this base and is explicitly concerned with the identities of status adopted by people in social interaction. Arlen Chase (1992:30) has placed models of Maya social structure into three categories: 1) egalitarian, 2) two-class, and 3) complex. The egalitarian model, most strongly expounded by, and based on, the ethnographic work of Evon Vogt (1968, 1969, 1983) suggests that Classic Maya society was basically, as the name suggests, egalitarian, with rotating civic or ceremonial offices. Under this model, a dispersed population would have been settled around a ceremonial centre (see Thompson 1966) and important offices would have rotated among the different lineages, much like in the present-day cargo system of Zinacantan or other highland Maya communities (A. Chase 1992:31). While there is some evidence in support of this model from the Southern lowlands (Bullard 1960, 1964; Willey 1956c; see also Freidel 1981), the discovery of dense populations in and around large centres, significant residential components in monumental cores, and aggrandizing dynastic records (Haviland 1970; Rice and Puleston 1981) have largely discredited this model as a pan-Maya construct.

The two-class model that dominates current conceptions of Classic period Maya social structure was championed early on by J. Eric S. Thompson (1966; A. Chase 1992:31). Originally defined as a dichotomy between ‘priest’ and ‘peasant’ within a ‘ceremonial centre’ (A. Chase 1992:31), the division of choice has since become ‘elite’
and ‘non-elite.’ The relationship is phrased as essentially hierarchical. More recently, the two-class model has acquired a certain amount of complexity.

Today under this model, Classic Maya social structure is commonly seen as two broad, non-contiguous, heterarchical strata: The concept of heterarchy encourages an understanding of social systems that does not privilege hierarchy as the only mode of complexity (Crumley 1987), and emphasizes the possibility of multiple bases of influence and power within a society. Following this idea, ‘elite’ and ‘non-elite’ represent two distinct and separate social classes in Maya society; however each class has its own range of stratified relationships. Just as not all ‘elite’ individuals were of equal social standing, so too were there various strata among ‘non-elite’ individuals and each in turn operated along different hierarchical scales (A. Chase 1992:32; Scarborough et al. 2003; Sharer 1993).

By the Late Classic, occupational specialization had developed in Maya society. We have epigraphic, iconographic, and archaeological evidence to suggest that individuals were specializing in such occupations as scribes, musicians, priests, warriors, architects, astronomers, farmers, potters, lithicists, even as domestic servants among many other possible specializations (Adams 1991a). Under the two-class model, specialists are unilaterally subsumed under the elite class; the nobles and their retainers (A. Chase 1992:32; Webster 1985:385). Phrased as a binary opposition, the two-class model facilitates monolithic studies relating the presence or absence of specific traits to specific status groups. Considerations of multiple status relationships, though acknowledged to exist, and ones based on more extensive concepts than economics and power, are generally not a priority in these studies (Babic 2005:71).

Further, in the complex model the three levels of society are locked together in a heterarchical relationship with the result that classes were capable of crosscutting social boundaries; for example, a high-ranking member of the middle class may have held more social clout than a low-ranking ‘elite.’ As such, the complex model explicitly recognizes considerations of multiple status relationships. This model also considers multiple avenues of social navigation—status relationships based on ideology, gender, occupation, beauty, and so on—and provides a framework for their study. It is likely that the complex model reflects a more accurate picture of human society than does the two-class. However, the difficulties of identifying archaeologically, the intricate status relationships implied in the complex model, may be the reason for its limited adoption by Mayanists, in any kind of consistently operationalized way. Regardless, in both the two-class and complex models a system is set up between the ‘haves’ and ‘have-nots,’ those with power and those without. This relationship between the ‘elite’ and ‘non-elite’ is defined by the apparent disparate access to resources and esteemed social positions. I will refer to these general theoretical models as they relate to other activities and materials in later chapters. For now, we can return to the mortuary context.

The Role of Mortuary Archaeology in the Discourse on Status

It has often been observed that treatment in death is closely related to social position in life (Keswani 1989; Wright 2006:37-41); mortuary practice is therefore heavily influenced by social organization (Wason 1994:67). Based on a survey of the ethnographic literature, Binford (1971:14) compiled the following list of status attributes that are likely to be expressed in mortuary ritual:

The following were offered by many...as the basic components of the social personality symbolized through differential burial treatments: (1) age, (2) sex, (3) relative social status within a given social unit, and (4) social affiliation in terms of multiple membership in the society itself. In addition it was frequently noted that peculiar circumstances surrounding the death...may be perceived...as altering, in a substantial manner, the obligations of the survivors to acknowledge the social personality of the deceased.
Goldstein (1981:59) identifies a number of characteristics of the burial environment that may be related to social variables of status identified by Binford:

1. **Treatment of the body**
   a. Degree of skeletal articulation
   b. Disposition of the burial
   c. Number of individuals per burial
   d. Mutilations and anatomical modifications

2. **Preparation of disposal facility**
   a. Form of the facility
   b. Orientation of the facility and the body within the facility
   c. Location relative to the community
   d. Location within the disposal area itself
   e. Form of disposal area

3. **Burial context within the grave**
   a. Arrangement of bones within the grave and in relation to furniture and facility
   b. Form of the grave
   c. Quantity of inclusions

4. **Biological dimensions**
   a. Age
   b. Sex
   c. Disease states and circumstances of death
   d. Nutritional evidence
   e. Genetic relationships.

We’ve already discussed the first three of Goldstein’s categories in the cave context, with the result being that, with the exception of elaborated funerary deposits (an extreme rarity in the cave context), few status relationships are visible. Most osteological studies of status, hence, have focussed on human remains recovered from surface contexts. Osteological studies, based on skeletal traits developed over a lifetime, have the unique ability to peer directly into the lives that people led before they ended up in the grave. Osteological studies focussed on the Maya area have a long, if somewhat sporadic, history within the discipline, beginning in the first half of the 19th century (see Danforth et al. 1997 for a relatively recent bibliography). Most studies of status follow the two-class model of social structure outlined above. The disparity upon which this model was
based was writ large in the grand monumental architecture and art of the city centre. As such, it was in the city centre that archaeologists first began looking for markers of socio-economic status—variously termed rank, class, etc.—in the bones of recovered skeletal populations (Wright 2004:201). Such investigations include the landmark studies by Haviland at Tikal (1967) and Saul at Altar de Sacrificios (1972). The study of status based on skeletal material requires an assumption that socio-economic status directly affects, or conversely, is affected by, differences in the diets, health, sex/gender, age, genetics, occupation/lifestyle, physical appearance and survivorship among a multitude of other factors related to ‘identity,’ of different groups of people. It also assumes that these differences were great enough to leave traces in human bones and teeth.

Two general approaches to the study of ancient Maya status have emerged as prominent in the literature: 1) Those related to intentional cultural modifications of the human body reflective of status (cranial and dental modification) and 2) those related to unintentional consequences of status relationships (health or dietary differences).

Cranial and Dental Modification
The earliest osteological studies of Maya status date to the first half of the 20th century. Studies from this time focussed on the categorization of cranial and dental modification from archaeologically identified ‘elite’ contexts such as those from elaborate tombs at Tikal and other major centres (see Alexanderson 1940; Blom et al. 1933; Rubin de la Bordolla 1940). General interest in the Maya body as related to cranial modification can be traced back to the very roots of Maya studies, to Diego de Landa (1978 [1566]:33), who states that “the Indians of Yucatan are people of good physique, tall, robust and of great strength…they also had their heads and foreheads flattened from infancy by their mothers.” This statement is of special interest to studies of cranial modification as it suggests that, in post-conquest Maya society, a society largely stripped of its ‘elite’ class, the practice was still prevalent. Indeed, interest in the types and frequencies of these modifications continues today and has shown that these features, once thought to be the exclusive morphological purview of the Classic period elite, are commonly found in
remains related to ‘non-elite’ or ‘commoner’ houses, though certain inlay materials, such as pyrite and jade, are often absent (see Glassman 1995; Olivares 1997:115; Romero 1970). While at some times and in some places, intentional skeletal modification may have been a symbol of social status, like the tattoo in modern western society it was likely to be adopted by all social strata based on aesthetic or ideological principles. That cranial and dental modification may not be an appropriate correlate for socio-economic status may be reflected in the recent shift in emphasis to discussions of these characteristics as they relate to concepts of beauty (Joyce 2005) and occupational social groups (Havill et al. 1997); studies more in line with the multivariate approach suggested by the complex model.

**Stature, Health and Nutrition**

Studies of health and nutrition began in concert with processual studies related to cultural ecology and operate on the assumption that these unintentional consequences of status are more reflective of social reality than the intentional modifications discussed above. In addition to noting dental alteration and sex, Hooton’s (1940) study of bones dredged from the *Cenote de Sacrificios*, Chichen Itza, emphasized stature; stature was used to infer health differences, nutrition being given priority over genetics (Goff 1953; Haviland 1967; Haviland and Moholy-Nagy 1992; Stewart 1953). By far the best-known study relating stature to socio-economic status is Haviland’s (1967) analysis of 55 skeletal specimens from ‘elite’ contexts at Tikal. Though his collection was small and in poor condition (Haviland 1967:317) he was able to suggest that the ‘elite’ of the Classic period were taller than modern-day Maya populations. The inference is that the greater stature of the Classic elite was related to superior access to diverse and nutritious foods compared to the often ‘impoverished’ modern communities. Unfortunately, care must be taken when referencing Haviland’s study, as his small sample size means that results are not statistically meaningful unless all time periods represented by the collection (several hundred years) are lumped together (Reed 1998:65; Webster 1997:9 and Wright 2004:204). This ‘lumping’ effectively eliminates the sample’s value in any kind of
synchronic population study, masking variability over time. Haviland was also forced to use stature charts based on modern Mexicans, a heavily interbred population and not necessarily an appropriate corollary for the ancient Maya. A number of scholars have attempted to pick up where Haviland left off; Marquez and Angel (1997) have undertaken a stature study of the Prehispanic Maya of the Yucatán Peninsula. Storey (1999) and Whittington (1992) have made similar attempts at Copan. Bogin et al. (1992) have suggested that a trend toward decreased stature in the Maya population of modern Guatemala, when compared to Haviland’s (1967) study from Tikal, is related to genetic causes rather than nutritional. Unfortunately these studies have continued to be hampered by small sample size. In fact, Wright states, “very few studies have shown [statistically valid] social differences in skeletal indicators of health status, despite the widespread perception that social inequality had significant implications for disparity in health and survivorship among the Maya” (Wright 2004:203, my brackets).

More recently, stable isotope studies have been directed at identifying social inequality in paleonutrition. Isotope studies follow earlier studies of paleonutrition focussed on morphological changes or pathologies in both the skeleton (Storey 1999) and the teeth (Whittington 1999), as these relate to differential access to food resources. A word of caution is introduced at the outset. Following Walker and Hewlett’s study of the dental health of pygmy hunter-gatherers in Zaire, caution must be used when interpreting differential diet as an indicator of differential status. As they state:

Even though pygmies are famous for the lack of importance they place on social distinctions, we, nevertheless, found a large difference between the dental health of pygmy ‘leaders’ and ‘nonleaders.’ This finding has implications for archaeologists who study the relationship between social stratification and health in prehistoric societies. Significant status-related health differences apparently exist in societies that de-emphasize the significance of status distinctions.—Walker and Hewlett 1990:396

Nonetheless, isotopic studies in the Maya area are some of the most extensive of the ancient world (dozens of lowland sites, and several highland sites have been investigated
Discussion

The advantages of using Maya burials and human skeletons in the study of status are obvious. Without a doubt, human remains represent our best, strongest tie to the individual; an enviable position supported by few other lines of inquiry, excluding iconography and epigraphy. However, too often, archaeologists not specializing in osteology fail to recognize the difficulties inherent in analyses linked to status and the human body (Gillespie 2001).

As should be clear from the discussion above, the principle obstacle that osteologists working in the Maya area have to face is preservation. Humid, tropical environments under extreme bioturbation characterize the Maya area, especially the lowlands. The result is that, in most ordinary contexts, the preservation of bone is minimal (Tiesler 2005:341; Webster 1997:8). Poor preservation is at least partially responsible for the small sample sizes endemic of human osteology studies across the
tropics. Limited sample sizes, in turn, pose serious problems to a statistically valid study of human remains. Thankfully, skeletal collections are continuing to grow in the Maya area. Due in large part to the sweeping settlement studies of the latter half of the 20th century (Bullard 1960, 1964; Haviland 1970; Rice and Puleston 1981; Willey 1956c), new collections of human remains have become available, and should continue to become available to osteologists working in the Maya area.

Even when preservation is excellent, it is recognized that sample bias represents a persistent problem: A skeletal population recovered from the Tlajinga 33 apartment complex at Teotihuacan, Central Mexico, some 206 individuals, has been estimated to represent around 23% of all those who lived within the complex over a 450-500 year span (Storey 1985, 1992, cited in Chase et al. 1997:25). A sample of this quality is unheard of in the Maya area, yet Sempowski (Chase et al. 1997:25) still cautions that this population is not representative of Teotihuacan as a whole given the relatively narrow, intermediate social strata from which it is drawn.

A number of additional sample biases should also be considered. There is generally an ‘elite,’ adult, male bias to many skeletal collections in the Maya area (e.g. Haviland 1967; Saul 1972). These biases are reflective of both the archaeological preoccupation with ‘elite’ contexts (the monuments and structures of the site core), and of the pre-Columbian mortuary customs responsible for their deposition. The recovery of non-elite individuals through expanding settlement studies—those interred under house floors, in rural cemeteries, and in rockshelters (see Wrobel et al. 2008)—will likely aid in ameliorating the elite bias in the sample. The other biases are best dealt with through recognition of the cultural processes that created them. As such, they demonstrate the need for explicitly embedding osteological data in social theory. As discussed above, Maya society appears to have been largely patrilineal; it should therefore not be surprising that the primary occupants of elite tombs across the Maya area are principally male (as at Altar de Sacrificios and Rio Azul [see Saul 1972; Saul and Saul 2000]).

Further, as human remains recovered from below house floors are interpreted as evidence of ancestor worship (McAnany 1995), then a bias toward individuals of reproductive age
(i.e. those who contribute to the continuance of a lineage) may be observed. This raises the possibility that children buried under house floors were not related to ancestor cults. This incongruity is only recognized when theory and data are explicitly matched.

Archaeologists also have to be conscious of the biological processes operating on the human skeleton. Many of the suggested osteological markers associated with status are related to long-term biological/environmental influences on the human skeleton; they therefore develop throughout the life of an individual. Consequently, associated analyses often fail to recognize status changes that may have occurred throughout that person’s life, let alone changes that may have occurred close to/directly associated with the time of death. The use of mortuary context to infer the deceased’s status among the living has proven similarly problematic, especially when one considers the implications of burial elaboration (Parker Pearson 1982; Wason 1994), or, as will be argued below in the case of the cave context, simplification.

Finally, current social theory emphasizing heterarchy over hierarchy has serious implications for the study of socio-economic status in general. As discussed above, the concept suggests that individuals may be participating in multiple status relationships making elite/non-elite divisions somewhat inappropriate. Socio-economic status alone is likely not responsible for the development of so-called ‘status markers’ in bone, such as stature, health, diet, or cranial/dental modification. Osteological analyses—too often two-dimensional interpretations based on the simple two-class model discussed above—therefore need to be incorporated into multivariate studies of identity reflective of the diversity of status relationships likely present in Classic Maya society. This means that no archaeological discussion of osteological data can legitimately be divorced from social theory and archaeological context, and indeed must be incorporated even more strongly than is currently the case. As many of the factors affecting our critical articulation with questions of status are historically particular and regionally specific, and with this last point in particular in mind, I will conclude this discussion of human remains within the cave context with a review of the Caves Branch Rockshelter material and the implications of considering both a complex model of social status and social scaling in
this region. The arguments made with regard to this singular assemblage apply equally well to other skeletal populations in the CBAS study region.

A Reassessment of the CBR Skeletal Collection by way of Example

As should be evident by this point, osteological and mortuary data have been recovered from a remarkable range of contexts both within settlements—including elite tombs located in monumental architecture, and graves in house floors—and in the surrounding landscape—from cenotes, caves, and rockshelters. As noted above, the Caves Branch Rockshelter is estimated to contain several hundred deliberately interred individuals (Glassman and Bonor Villarejo 2005:286; Wrobel 2008b). Artefacts recovered through the course of the excavation were interpreted predominantly as local, and suggest that the rockshelter was used as a burial location over several hundred years (Glassman and Bonor Villarejo 2005:286). In line with Blom’s interpretation of human remains in caves, the rockshelter has been interpreted by Glassman and Bonor Villarejo as a burial location for ‘non-elites’ or ‘commoners’ living on and around the small plazuela group located nearby, some one-hundred meters from the rockshelter. This interpretation is based on the low quality of cultural items recovered, differing dramatically from the types found at ritual mass burial sites and tombs of upper-class or ‘elite’ prehistoric Maya elsewhere (Owen 2005:331; Rushin-Bell 1982:13). Their interpretation is supported by a number of observations based on the manner of skeletal deposition and osteological studies of status: The highly disturbed burial pattern evident at the site, largely the result of cemetery renewal activities, suggested to Glassman and Bonor Villarejo (2005) that, unlike in elite burial contexts in site cores that ‘venerate’ and ‘respect’ the dead, at the Caves Branch Rockshelter, status differences were not marked enough to discourage the disturbance of previous burials in order to inter someone new. Further, osteological analysis of the remains showed little evidence for elite status markers. Of the 32 primary burials excavated, there were no examples of cranial modification and only one example of dental modification (Glassman and Bonor Villarejo 2005:289). Additionally, there were no clear differences between the health status or incidence of disease among the
sample (Cohen 1989; see also Goodman and Armelagos 1988 for a discussion of health-related status differences among the Middle Mississippians). Vertebral osteoarthritis, interpreted as representing a life of physical labour, was observed in almost all adult individuals (Glassman and Bonor Villarejo 2005:290; see also Cohen 1989:119). Finally, the burial population of the Caves Branch Rockshelter includes both males and females in relatively equal proportions and over a broad age range from child to adult (Glassman and Bonor Villarejo 2005:289). The male/adult biases prevalent in elite contexts therefore don’t appear to be present in this sample.

I would like to offer an alternative interpretation of skeletal deposits from the Caves Branch Rockshelter to emphasize, that in this case, the question is not, “what does this assemblage tell us about status?” But, “what does it not tell us about status?” To begin, I would draw attention to several of the assumptions inherent in the example above:

1. Low quality goods = low status goods.
2. Absence of burial goods = absence of material wealth (hence, low status).
3. Absence of monumental architecture = absence of ‘elite.’
4. Presence of skeletal markers of ‘non-elite’ status = absence of ‘elite.’

These assumptions are based on a static view of status drawn from clearly disparate access to ‘high status’ goods and labour at larger centres. They are all direct consequences of the two-class socioeconomic model of Maya society. They can all be dismissed as products of scale, or, as in the case of the latter two, as the product of poorly conceived inference. It is highly unlikely that, in a heavily stratified society like that of the Classic Maya, social structure could exist in the absence of a status hierarchy. Even in smaller, sometimes peripheral, communities such as that near to the Caves Branch Rockshelter, social stratigraphy should be evident, though perhaps subtle. These communities then, would have their own expressions of ‘elite’ and ‘non-elite,’ or rather, ‘high’ and ‘low’ status. I suggest that just such a relationship can produce the skeletal assemblages described above, and that individuals represented in these collections need not be associated exclusively with low social status.
Such an interpretation, while not necessarily suggested by the archaeological data, is neither in conflict with it. The first assumption, that low quality goods are equivalent to low status goods in all settings, is the easiest to dismiss, or at least, to call into question. The assumption follows Marxist principles, in which the concepts of authority or ‘elite’ and wealth are explicitly brought together (Trigger 2006:326-334). This “impose[s] a strong common-sense image of the rich and powerful possessing splendid objects along with the right to be obeyed” (Babic 2005:70). However, as discussed above, it is clear that factors other than economics may contribute to the status of an individual. Therefore social status need not be expressed through material wealth.

The second assumption, that an absence of burial goods is equivalent to an absence of material wealth (and hence indicative of low status; see also Anderson and Pendergast at Eduardo Quiroz Cave, in Pendergast 1971:11, 15-18), can be refuted by the same non-materialistic view of status called upon above. The dangers of interpreting a lack of evidence, as evidence of lack should be clear, as a number of factors could result in a meagre burial assemblage; these could include looting, or a failure to note the presence of artefacts in cursory investigations. This could also simply represent common burial practices. Indeed, unadorned burials are by far the most common found in Belize (MacLeod and Puleston 1978:72; Pendergast 1971:15), the lowland area of Chiapas (Blom 1954:132) and the Yucatán (Márquez de González et al. 1982), and the absence of burial goods in the cave context is especially striking. This suggests that so-called ‘elite’ assemblages are the exception to the rule. It is further possible that the absence of grave goods at Caves Branch may be a product of the cosmological significance of the burial environment itself. While at surface sites, grave goods may be understood as provisions for the journey to the under world, those individuals interred in rockshelters and caves, literally entrances to the under world, may not have required them. Alternatively, as suggested in the previous chapter, the cave context may have been explicitly liminal in nature, and ritual acts, including burial, may have intentionally downplayed social distinctions within this context. Admittedly, these last points are extremely tenuous,
though it is compatible with both the cosmological model and rituals of transition as we currently understand them.

The third and fourth assumptions, that an absence of monumental architecture and an absence of variability in status markers in the skeletal remains, particularly those associated with nutrition and workload, equate to an absence of ‘elite,’ again fails to account for the assumed small scale of the communities in question. While the elite of large centres were able to call upon a large body of labour to construct monumental architecture and likely enjoyed preferential access to food resources, this may not have been the case in smaller communities. ‘High status’ individuals at Caves Branch may have been largely responsible for their own subsistence and labour. Further, while on current evidence, monumental architecture appears to date almost exclusively to the Late Classic (i.e. well into the history of utilization at the Caves Branch Rockshelter), variability in the relative sizes of house mounds may nonetheless be reflective of significant status differences based around the principle of first occupancy. As discussed later, we have good reason to believe that the inhabitants of the Caves Branch River Valley and the Roaring Creek River Valley were well familiar with the complex urban systems of the Maya heartland from at least the Late Formative period, and possibly earlier.

A couple of consequences of this ‘alternative’ interpretation warrant brief discussion. The presence of both males and females spread over a wide age range in the skeletal population has been suggested to reflect the generic nature of the interred population. However, in the absence of alternative burial locations—human remains were not found in any of the investigated structures in this region—it is probable that this, rather, indicates that all individuals were interred together despite differences in social status.

We may also be able to suggest that primacy in mortuary ritual was devoted to the act of deposition or interment, rather than the continued maintenance of burial contexts. Disturbed burial contexts may not necessarily suggest that those disturbed were unimportant or ‘low status’ but simply that the mortuary ritual was complete. As Saul and
Saul (1997:49) note in their analysis of Formative skeletons from Cuello, the only two individuals identified as ‘high status’—based on burial position within the centre of a public structure, the presence of extensive grave goods, and their generally ‘tall’ stature compared to the 166 other individuals in the study—are both disturbed by Mamom burial 161, whose grave was cut through the previous two. From elite tombs, to household burials and cave cemeteries, it seems that the ancient Maya frequently re-entered and manipulated human remains in subsequent ritual acts. Further, as in the case of the reverential skeletal elements noted above (Brady 1989:353; McAnany 1995:104, 126; Núñez de la Vega 1702:134; Scott and Brady 2005:274; Thompson 2005[1975]:xxxiii), it seems that such disturbance may have, at least occasionally, been explicitly ‘respectful.’

Kowalewski et al. (1992:259) have stated that, “current treatments of stratification in Mesoamerican archaeology do not come up to the theoretical or empirical standards of other social sciences.” This is not because the archaeological record is impoverished, but rather because interpretations of status too often rely on weak, overly simple, models with too few precise references to archaeological context. Despite the increased richness of skeletal data available to archaeologists, the old categories of ‘elite’ and ‘non-elite,’ characteristic of the two-class socioeconomic model of ancient Maya society, remain virtually unchanged and continue to be based exclusively on the strong social divisions demonstrated at the largest sites. In the context of this dissertation, then, the take home message is not that a lack of evidence for accepted ‘status markers’ indicates a lack of social ranking, but that, as will be seen, there is reason to consider that significant status relationships exist despite a lack of such evidence. This evidence will be discussed at length in following chapters.

Caves as Locations for Other Religious Rites

Leaving discussions of human remains in the cave context behind for the time being, we can return to Thompson and the particular thread that will weave its way through to the end of this dissertation. There are two types of people in this world: those who love The
Rolling Stones, and those who love The Beatles; in other words, ‘lumpers’ and ‘splitters.’

Thompson was clearly a Beatles fan, and if there is a lament that might be expressed toward Thompson’s Introduction, it is that its organization tends to fragment the central role of caves as a locus of ritual activity (Brady 2005a:f-3). In addition to the collection of zuhuy ha and mortuary activities, archaeological evidence has long attested to the use of caves as focal points in complex rites, in their own rite and in addition or in concert with larger sequences of events occurring beyond the cave mouth (i.e. as a distinct node in a ritual circuit; see among a long list of others Andrews 1970; Brady 2005a; Gordon 1898; Halperin 2005; Pendergast 1971; Peterson 2006; Prufer and Kindon 2005; Stone 1995). In fact, it is apparent that, contrary to the expectations of early speleoarchaeologists such as Gordon, Mercer, Seler, and E. H. Thompson, caves served as the setting for an incredibly diverse range of acts, the vast majority of which were explicitly ‘ritual’ in nature. Indeed, this category is such a catch-all for human behaviour in the cave context that its invocation has the potential to at times be borderline irrelevant and certainly uninformative; the negative consequence of lumping. Recalling the sentiment expressed at the beginning of this manuscript, blame for the homogenization of interpretation related to the ancient cave context and the resultant isolation of this rich dataset from much professional academic discourse (a lament repeatedly expressed by Brady [e.g. 2005a:f-1; Prufer and Brady 2005:2]) can be laid squarely upon an uncritical, popular, and non-differentiating adherence to this view. Thus, in the remainder of this section, a balance will be sought by explicitly including a number of Thompson’s categories as distinct subcategories within ‘ritual use,’ each with their own (though often related) methodological, interpretive, and material concerns.

Distinguishing Spatial and Material Categories in Cave Ritual

The trick to effectively articulating with this context lies in first identifying individual acts or activity areas, and second identifying specific material or contextual correlates that might suggest the purposes of such acts. In both cases, this is no easy feat. The cave context is notable for its often stunning preservation. Depending on the depositional and
taphonomic processes at work in any particular cave, and save in the case of organic materials in all but the driest of caverns, to enter, even today, is the next best thing to a time machine. Indeed, the only other context that comes close is the tomb. Like the tomb that has been re-entered, with new materials deposited, or old materials removed, cave assemblages may represent a multitude of distinct acts, conducted at discrete moments over a significant span of time. In deep cave environments in the CBAS study region, for instance, a millennium of use and re-use is often found distributed across the same horizontal plane; we are faced, thus, with the need to identify ‘horizontal’ rather than vertical stratigraphy. To make matters worse, like the tomb, these contexts are extremely vulnerable: The site may very well appear much as it did when last it was entered, however, this is something of a mixed blessing, as later activity often obscures earlier traces. Moreover, it may very well be impossible to differentiate between changes made one thousand years ago from those made yesterday. As archaeologists are rarely the first modern people to re-locate and enter archaeologically significant caves, and as speleo-tourism gains in popularity our task can be somewhat daunting.  

Scholars working within the cave environment have expended considerable effort to identify both discrete activity areas and coherent ritual sets, and thus tease apart distinct behaviours within this difficult context. Indeed, Holley Moyes (2002:14) identified this task as one of the most pertinent problems facing Maya cave archaeologists today. By and large, approaches have focussed heavily on spatial context. At the broadest level, this has entailed drawing simple divisions between assemblages recovered from light vs. dark zones (Brady 1989; Prufer 2002:510) or open vs. restricted

I once had the opportunity to attend a public lecture by a well known caver in Calgary. While he lamented the presence of modern refuse and graffiti in the forward chambers of a cave in Mexico, stressing the responsibility of the modern explorer in preserving these natural wonders (unquestionably, a worthy sentiment), it was not long before he excitedly told of finding a small, artificially blocked passage in this same cave, complete with ‘selfies’ of him tearing down this wall and pulling out human remains from within. For the record, this was a highly illegal act (questionable ethics notwithstanding). While most cavers are far more conscientious than this, it is nonetheless a regrettable fact that many caving organizations, including the National Speleological Society and the British Caving Association limit commitments to conservation to the ‘natural’ cave environment. It is a far rarer thing to explicitly extend this commitment to the ‘human’ or ‘cultural’ cave environment (but see the Cave Archaeology Group of the British Cave Research Association for a noteworthy exception).
zones (Prufer 2002:612). These are typically formulated as related concepts, where light, open spaces are interpreted as having supported public, large-scale ritual, while dark, restricted spaces are interpreted as having supported private, restricted, and small-scale ritual activity (Brady 1989:402; Prufer 2002:205). To this extent, Keith Prufer has suggested that variations in the use of sacred space would be most apparent in these public ceremonial spaces where community-wide ritual activity would have addressed the aspirations of political rulers, and that there would be less variation in locations where ritual was more secluded or restricted, and had analogues in the activities of ritual specialists involved in the ethnographically-attested healing and illness complex (Prufer 2002:3), or otherwise in activities that may have had little to do with larger issues of rulership (Prufer 2002:510; 2005). Architecture associated with cave contexts may also play a role in both creating and identifying public/private divisions. Prufer (2002:612) notes that while some cave constructions are focussed outward toward an audience, other platforms or altars are focussed inward, particularly in areas otherwise poorly lit or constricted. Brady (2009b), too, has identified architecture in the entrance of Midnight Terror cave, in central Belize as a ‘viewing platform’ from which to observe acts being conducted below or in the cave mouth. Christophe Helmke (2009:231-235) has lent methodological robusticity to this particular approach through the construction and analysis of access diagrams in complex cave systems.

While it has been shown that these divisions indeed account for a significant amount of variability within the broader cave context, they are still frustratingly coarse. A considerable diversity of distinct activities, resulting in discrete activity sets often focussed on a hearth feature or censer, were likely conducted at any one time within any of these spaces, and certainly the palimpsest developed over each subsequent utilization serves to confound any refined reconstruction of a site’s use history. In response, more sophisticated approaches, utilizing Geographic Information Systems and simple spatial statistics have been employed to great effect in an effort to further divide this assemblage (Herrmann 2002; Moyes 2001; 2002). At Actun Tunichil Mucnal (ATM), a cave in the Roaring Creek River Valley, Moyes combined a K-means clustering analysis with basic
GIS functions to associate identified assemblages with particular morphological or physiographic features of the cavescape. Her analyses demonstrated distinct clustering of objects around large boulders presumably used as altars and intense use in central portions of the cave (Moyes 2002:14). Elsewhere, Moyes and colleagues report that 51 percent of the artefact assemblage in ATM was placed in intermittent pools (Moyes 2001; Moyes and Awe 1998, 2000). Dominique Rissolo (2003a:137-139, 2005) similarly noted close associations between cave art, architecture, artefacts, and water in caves of the Yalahau region, Quintana Roo, Mexico. Two other patterns identified by Moyes at ATM were linear distributions and isolated clusters located adjacent to cave walls (Moyes and Awe 1998). Prufer identified similar linear arrangements in caves both in the Ek Xux and Muklebal Tzul valleys of the Maya Mountains.

Reinterpreting Andrews’ work at the Gruta de Chac, Thompson (2005 [1975]:xxxix-xli) suggests that such deposits mark a distinct pattern of ritual offering. Based on Andrews’ (1965:11) description of early jars of “beautiful black-and-red-on-orange polychrome ware with brightly painted necks and lugs,” Thompson (2005 [1975]:xli) suggests that, rather than being remains of water containers accidentally broken in passage through the cave, these objets d’art were rather offerings sacrificed to the eponymous rain god Chac and periodically gathered to the passage margins as they became inconvenient to further activity. This practice of primary deposition with periodic secondary ‘cleaning’ has long been suggested archaeologically (Brady et al. 2009:55-56; MacLeod and Puleston 1978:72; Wrobel et al. 2010), and is discussed in the contemporary ethnographic context by Evon Vogt (1976:102) and Linda Brown (2004:36). A recent study in western Belize has served to refine our understanding of this: from Cuychen, a remarkable cave in the Upper Macal River Valley, Helmke and colleagues (2012:80) make the strong suggestion that the termination of objects and ritual cleansing of the site takes the form of a suspended ritual event, linking the close of a particular event with the beginning of the subsequent one. Termination involves the modification of a votive offering, often in the form of a kill hole, broken rim, or more extensive breakage (e.g. Reents-Budet 1994:198; Thompson 1959:125), effectively
disassociating the object from the cultural realm in which it partook. At Cuychen, where the investigators conducted a 100 percent excavation, it was noted that, in the case of highly fragmented vessels, some sherds were subsequently gathered and re-deposited away from their point of breakage as discrete, grouped clusters, whereas other sherds may have been taken out of the cave, presumably to be deposited in caches at another site (Helmke et al. 2012:80). Still others seem to have been haphazardly ‘swept’ adjacent to the cave walls (thus producing a linear distribution) or out of the cave entrance.

Moyes, on the other hand interprets such deposits as evidence of ritual pathways (Moyes and Awe 1998) and boundary markers, respectively (Moyes 2002:15). Following Moyes, Prufer suggests that these deposits may indicate boundaries and may have been deposited as part of a ritual circuit, offering that, “Ritual circuits and associated offerings are fundamental to the organization of specialist-[mediated] activities across the Yukatek Maya area (Hanks 1990:337; Redfield [and] Villa Rojas 1962:176; Sosa 1985:343-344)” (Prufer 2002:621-622). But which behaviour best explains this depositional pattern? There is good evidence for both, and the difference between this pattern and the previous is material rather than contextual. In reference to Chab’il Uk’al, Mayehal Xheton, and Tusbil Pek, Prufer notes that most of the sherds identified in linear clusters adjacent to walls do not seem to represent complete vessels, and hence, provide little evidence that they were broken in situ (i.e. by smashing them against the wall; Prufer 2002:632). Rather, it is suggested, these vessels were destroyed elsewhere, perhaps still within the cave, and consciously distributed in linear arrangements, though he was not able to demonstrate this interpretation. Helmke (2009:253), however, was able to document precisely this type of material (re)distribution, noting that articulating sherds from a single vessel were recovered from several widely separated chambers within Labarinto de las Tarántulas, Roaring Creek River Valley, though linear distributions of this type per se were not mentioned.

More broadly, it seems likely that material moved not only within, but between, caves (Prufer 2002:623). Perhaps these broader patterns of distribution are hinted at in the assemblage recovered from Overlook Rockshelter in the Caves Branch River Valley.
(Wrobel et al. 2013). From this small rockshelter, located high on an escarpment, 100 percent excavation coverage yielded nearly ~1700 ceramic sherds. Remarkably, this assemblage afforded almost no refits and certainly no whole vessels. Accepting that the sample may have been biased by loss down the adjacent talus slope, it must nonetheless be concluded that either a great deal of material had been systematically removed over time, or more likely, that the accumulated assemblage had been deposited in the first place as individual sherds. This leads one to ask where the other sherds may have been deposited? Further, as the rockshelter was excavated in its entirety, with no prepared, cleaned, or otherwise obvious activity areas in evidence, it seems clear that vessels were not smashed in situ. The ritual act in this particular context was thus fleeting; a small node on a larger ritual circuit.

A final distributional pattern common in the Southern Lowland context appears to be the highly concentrated deposition of large volumes of commingled artefacts, mostly ceramic. Thompson interprets such depositions in the context of the annual renewal rituals ethnographically attested in many parts of Mesoamerica (see various chapters in Mock 1998). While the usual pattern of deposition associated with these rites is in local prescribed middens, Thompson suggests that caves may have occasionally been thus employed in the ancient past. He invokes this model to interpret the large quantities of broken ceramic vessels found in a cave near Pusilha, Belize (Thompson 2005 [1975]:xxxix). The assemblage, including both utilitarian as well as fine monochrome and polychrome vessels, additionally included pieces of imported volcanic ground stone, fragments of chert and obsidian points, obsidian cores, animal and human remains, and sandstone ‘crescents,’ and were apparently cast into the cave from a hole in the ceiling above (Joyce et al. 1928:343-346). Thompson reports that a second cave, found the following year in the same area, repeated these conditions (Thompson 2005 [1975]:xxxix). Further north, at Actun Balam in the Chiquibul, David Pendergast’s excavations in Chamber C produced some 22,000 sherds, apparently dumped in a similar manner through a chimney (1969). He notes that, although some of the ceramics date from the earlier portions of the Late Classic, the bulk of the material can be associated
with a Terminal Classic or early Postclassic date (Tepeu 3 [Pendergast 1969:58]). At the time, the closest known surface site of any significant size and, hence possessing the means to acquire the ‘elite’ polychromes and other exotic materials in the assemblage, was Caracol, located approximately 20 km to the north-west, suggesting to Pendergast that the site, thus, served as a focus for pilgrimage. James Brady and Irma Rodas (1995) have described a similar deposit from the Cueva de los Quetzales, Guatemala, and more recently, it has been suggested that another may be found in Sa’atabe, a ledge located 800 m downstream from the main entrance to Petroglyph Cave in the Caves Branch (Reents-Budet and Macleod 1997), though investigation of this latter deposit remains to be conducted. Contrary to his previous interpretation, Brady has since suggested that these distinctive conical deposits, some of which extend to more than 5 m in diameter, are 2-3 m deep, and are located below openings, represent distinctive ‘cave assemblages’ accumulated over a period spanning centuries (Brady 2005:f-5). While this may hold true for Los Quetzales (the specifics are not provided), both Pendergast and Joyce were clear in stating that no internal subdivision/organization of these deposits was noted and thus interpret them as massive mixed deposits.

Distinguishing Trends in Cave Ritual

Once discrete activity areas have been identified—whether based on clustering, discrete association, or as defined by otherwise isolated materials—most scholars have taken the opportunity to explore spatio-temporal trends in the use of the cave context. Among the most interesting of these have been investigations concerned with identifying trends in intensity of use. Plotting the distribution of vessel forms by area in Labarinto de las Tarántulas, Helmke (2009:250) noted that spatially discrete areas contained sub-assemblages comprising a consistent range and relative ratio of vessel forms. Moreover, “The regularity and synchronic quality of the sub-assemblages suggests that they form discrete activity sets representing the material imprint of equivalent activities” (Helmke 2009:250-253). Using a basic mean ratio for ollas, dishes and bowls of 2:1:1 (or 3:1:1), Helmke proceeded to subdivide temporally segregated assemblages in other areas of the
cave where usage led to larger and mixed deposits and was thus able to infer the number of individual acts that may have led to their creation (Helmke 2009:256). He found that cave ritual increased in intensity with time (see also Helmke and Wrobel 2012:80 for a discussion on identifying activity areas at Je’refheel). Moyes (2006:147; 2008) studied similar trends using a different proxy: wood. The Maya burned wood according to three distinct behavioural patterns in the cave context: as torches for light, as material for fire hearths, and as incense on the ground or in censers (Prufer 2002:614). Moyes convincingly argues that each of these behaviours leaves diagnostic traces in the material record:

Hearths placed on the ground should be easily recognized as intense concentrations of charcoal in small roughly circular areas often bounded by rocks, speleothems, spalls or potsherds. Even ephemeral and less formal hearths can be recognized by the charred soil surrounding the charcoal concentrations. One would not expect that charcoal used in censers or other containers to [leave] a strong or even perceptible signature on floors because it is burned within the containers. If incense is burned on floor surfaces as Prufer has suggested, it would appear as a hearth-type feature [Moyes 2006:149].

Through experimentation, Moyes demonstrated that charcoal originating from torches, in contrast, produces a constant “rain of charcoal” over a relatively diffuse area, either circular if the individual is standing still, or randomly within ~2 m swath along a walking path (Moyes 2006:149-150). Further, it would not be expected that these flecks would visibly char cave sediments. Being careful to account for natural charcoal introduced through allogenic processes, Moyes used the painstakingly recorded distribution of charcoal from torches to identify both activity areas and the relative intensity of their use over time. As at Labarinto de las Tarántulas, she identified trends suggestive of increasing intensity of cave utilization during the Late Classic Period (including at ATM and Chechem Ha [Moyes 2006; Moyes et al. 2009]).

But what does ‘intensity’ mean? Are these studies identifying patterns in the periodicity of use? Or do these studies identify patterns in the size of individual ritual
events, either in terms of the number of participants involved or the quantity of ritual offerings made? It is hard to see how either approach, alone, could distinguish between these differences. A combined approach, however, might. The logic runs thus: if we assume that charcoal from torches is a more-or-less accurate proxy for the number of person-hours associated with cave activities—thus increasing, both, with more people and with duration—and if we likewise assume that material deposition, such as ceramics, can be taken as a more-or-less accurate proxy for the amount of resources dedicated to cave activity—thus increasing, both, with frequency of deposition and scale of deposition—then a comparison between these two patterns may afford insight into the nature of ‘intensification.’ For instance, if by ‘intensity’ we mean to indicate that the cave context was utilized more frequently but at the same scale of deposition (i.e. there is no quantifiable material change in the ‘ritual set’), then we should expect that linear plots of quantity over time, one each for both ceramics and charcoal, would more-or-less follow parallel curves. On the other hand, rituals involving more people or conducted over longer spans of time but at the same scale should result in a divergence between two similar plots, with the amount of charcoal increasing over time faster than the ceramics. So too, if the scale of ritual deposition increases (i.e. more material is included in each discrete offering), but the person-hours associated with the ritual does not (i.e. the same number of ritualists are taking part as previously, or frequency of use remains the same), then we would again expect a divergence between these two curves, this time with the number of ceramics increasing over time faster than the charcoal. This may seem a relatively minor point, but such distinctions are necessary if we are to delineate precisely what we mean by ‘intensification’ of cave use and identify regional variations in said patterns.44

The Economic Impact of Ritual Cave Use

44 Unfortunately, the data recovered as part of this dissertation is inadequate for such a comparative analysis, though it will be considered in future studies in the CBAS region.
It may seem surprising given both the diversity and quantity of goods encountered within
the cave context, but relatively few studies have explicitly focussed on the economic
impact of cave ritual in the Maya area. A notable exception to this trend is a 2005(b)
publication by James Brady on ritual economy from the perspective of the Petexbatun
Regional Cave Survey. As Brady (Brady 2005b:116) points out, “it is not difficult to find
eamples of trade in ritual items that were of such importance that they became economic
and political issues as well, one has only to look at the trade in frankincense and myrrh in
the Old World to appreciate this point (Groom 1981; Van Beek 1958; 1960).” Following
this observation, Brady concentrates on the identification and quantification of exotic
trade items, such as obsidian, finely worked chert blades, jade, and marine shell. The lack
of usewear evident on cave blades suggests that a significant amount of obsidian was
disposed without ever having been used in the utilitarian realm (Aoyama 2001; Brady
2005b; Reents-Budet and MacLeod 1997:89; Stemp et al. 2013). These specialized goods
have been found in quantities comparable to those from surface excavations in the region.
Moreover, Brady notes that more mundane items, such as ceramics, ranging in quality
and associated expense from local utilitarian wares to imported polychrome and fine
wares, are found in quantities directly comparable to surface contexts; more than 64,000
sherds were recovered from 22 caves near dos Pilas (Brady 2005b:118). Other cave sites
in other regions have produced similarly rich assemblages: more than 55,000 sherds were
recovered from caves near Mayapan (Smith 1971:106), approximately 23,000 sherds
were recovered, each, from Actun Balam and Eduardo Quiroz (Pendergast 1969:58;
1971:23), and similar quantities were recovered from Naj Tunich (Brady 1989). In
comparison, the surface portion of the Petexbatun Regional Archaeological Project
recovered only 128,000 sherds (Foias 1992:251) despite a considerable head start in
excavation and a more concentrated effort.

Unfortunately, if one is being charitable, such inter-contextual comparisons
appear heavy handed at best. If one is being more critical, they are completely
inappropriate. Differences in preservation, context of deposition, and recovery make
comparing these numbers in any kind of relevant, quantifiable, way to surface contexts
impossible. However, the take home message stands: the allocation of goods for cave ritual was substantial and the economic impact of the expenditure would have been broadly felt within Maya society, since it affected producers of such basic commodities as utilitarian ceramics and other local products as well as more rarefied polychrome pottery and exotic trade items. The depth of this impact remains to be resolved. Indeed, a far more common articulation between ritual cave use and economy is not related to quantification so much as affiliation. Most studies of the archaeological cave context make explicit associations between recovered assemblages and inferred economic spheres of interaction (Morton et al. Submitted).

**Art Galleries**

Other categories of ritual cave use do not align so neatly with our discussion thus far and are not included in the primary dataset covered by this dissertation, but are nonetheless of vital importance to an understanding of the cave context. A large number of scholars have discussed art appearing in caves (see Chapter Three; Brady 1999a; Casado López et al. 1988; Rissolo 2003a, 2003b; Stone 1995; Strecker 1976, 1977, 1981, 1982a, 1982b, 1984, 1987a, 1987b). As emphasized by James Brady (2005a:f-5; see also Stone 1995), it is important to recognize that such use was a secondary expression of the cave’s religious and ritual importance and must be interpreted in that light. Following observations from the previous two chapters, I’ll return to this particular topic at the close of this discussion. Here, a brief synopsis of the rapid developments that have occurred over the last few decades will suffice with particular emphasis on non-figurative art. In Sir J. Eric S. Thompson’s day, “The best Maya cave art [was] painted, [was] quite rare and, on [then] present evidence, [appeared] to be confined to Chiapas” (Thompson 2005 [1975]:xxxvi; my brackets). It was considered in all but the most exceptional of instances to be rude, base, and generally of a rather ‘low order.’ Crude petroglyphs and roughhewn stalagmites (Thompson 1897) dominated the corpus. Early accounts of cave art were often provided by interested avocational spelunkers and archaeologists. Thompson (2005 [1975]:xxxvi-
relates several excursions made by non-professionals in the early 1960s, near
Tumbala, that recorded finely drawn figures and hieroglyphic texts. Both Mercer (2005
[1896]:101) and E.H. Thompson (1897:69) record fine carvings at Loltun Cave that
appear very similar to those since documented in western and central Belize at sites like
Actun Halal (Griffith and Helmke 2000) and Uayazba Kab. This latter cave, located in
the Roaring Creek River Valley has been described as containing “one of the most
complex corpuses of prehistoric Maya cave art presently known for Belize” (Helmke and
Awe 1998:145), with both complex petroglyphic and sculptural programmes. It is
becoming apparent that much simpler ‘faces’ and other designs, rarely identified among
the natural texture of the cave wall, are more common, perhaps to the extent of ubiquity
(e.g. Griffith and Jack 2005).

In the Maya area, no cave currently known compares in the breadth and quantity
of representation to the spectacularly painted Naj Tunich, in Guatemala (Stone 1995).
Particularly dramatic in this cave, are the figural and glyphic works. Because of the
interpretive potential of these, they featured heavily in Chapter Three. In the realm of
painted art, what is more common (both in the Maya area and abroad; see Helmke and
Awe 1998; Lewis-Williams 2002:216-220; Napier 1993:129; Strecker 1976, 1982a; Stone
1995) are curious geometric and abstract designs, and handprints, both positive and
negative, that have yet largely defied specific cultural interpretation (Bonor Villarejo
1989:77). Such painted works, particularly prevalent in the Yucatán (Bonor Villarejo
1989:78; Strecker 1976, 1982a; Stone 1995; but see also examples from Guatemala
[Stone 1995:97-98] and southern Belize [McNatt 1996:89]) are represented in the CBAS
study area at Actun Uyazba Kab (Helmke and Awe 1998:147-151) and possibly at Actun
Neko (Morton 2008). Perhaps the greatest (largely) unexplored treasure-trove of such
simple works on the eastern fringes of the Southern Lowlands lies in the small caves of
the Belize District, south of the Belize Zoo (Jaime Awe, personal communication 2007).
Images of extensive murals recently discovered in Huachabi Cave, Campeche (released
by INAH in February 2014) stand to significantly add to this corpus and our
understanding of it.
Places of Refuge

We have ample evidence—anecdotal, archaeological and historical—of caves being used as places of refuge or for temporary habitation, though perhaps are the material correlates and historical records associated with this practice nowhere more evident than in the Caribbean. As in the Caribbean, in the Maya area, is it likely that habitation in caves was a practice of last resort. In the Maya area we have absolutely no evidence that deep cave environments were ever used as long-term habitation sites despite early and extensive studies by both Mercer (2005 [1896]) and E.H. Thompson (1897, 1904) directed at identifying such use. Mercer (2005 [1896]:141) recounts that caves were used only on short-term bases during the Caste War of Yucatán. Hatt and colleagues (1953:21) report that Actun Spukil was used as a hideout for fugitives as late as 1934. In the CBAS study area, the forward reaches of caves and rockshelters are often used as temporary shelters for hunters or others travelling ‘backabush’ with the result being that these portions of caves are frequently the focus for more-or-less casual looting. It is highly likely that the positive handprint noted above in Actun Neko is a relatively modern product. Occasionally, dark zones appear to be used for temporary habitation as well: During the 2013 field season, a relatively fresh bed of palm fronds and soiled clothing was discovered on a high sheltered ledge overlooking the main entrance chamber of Actun Kabul. As discussed in Chapter Four, more commonly, caves may have served as places of refuge for things. It is worth noting that this practice extended beyond ‘Maya’ artifacts. In a recent article, Jaime Awe (n.d.) describes the discovery of a Spanish sword and an olive jar in two separate caves in the upper Roaring Creek River Valley. Given the socio-political context of late 16th-mid 17th century colonial Belize, Awe suggests that the objects may have been forcibly acquired by the Maya and intentionally incorporated into traditional modes of worship as a sign of active resistance to Spanish proselytization.

45 Not discovered until the end of the season, the find engenders eerie thoughts of a hidden observer to our investigations.
Andrews and Andrews (1975:72) similarly recovered two intact olive jars in the Group S cave at Xcaret, Quintana Roo.

**Other Uses**

Caves appear to have served a number of other mundane purposes. Mercer (2005 [1896]:22) reports that 19th C. hunters built stone blinds in Actun Spukil for the purposes of hunting swallows that had built their nests on the high ledges of skylights. Similar constructions are noted from Actun Coyok (Mercer 2005 [1896]:130), and Actun Tzu-Zui (Mercer 2005 [1896]:129) all near Oxkutzcab, Yucatán, as well as at Actun Lara (Mercer 2005 [1896]:84) near Yokab, Yucatán. During the summer of 2009, while on a camping and reconnaissance trip south of Tipan Chen Uitz, we similarly used the entrance to a cave with evidence of recent gibnut (*tepezcuintle*; *Cuniculus paca*) activity, and an associated game trail, as our hunting ground. Other food resources may also be found in the cave mouth. Redfield and Villa Rojas (1971 [1934]:49) report that bees, specifically the varieties known as *kantzal*, *xik*, *ehol*, and *yaxich* (only the first of which stings) are found in caves in the Yucatán and wild honey is occasionally harvested from these locales.

Mining activities have also been noted in the cave context. In the Caribbean, the use of caves as sources of raw materials has been suggested by Allsworth-Jones et al. (1999:17). They note that a Taino burial cave near Kingston, Jamaica appears to be the source of galena, a bluish, grey, or black mineral of metallic appearance, consisting of lead sulphide used as a decorative material and noted at other nearby sites such as Bellevue and Chancery Hall. In the Maya area, Andrews (1970:15; see also, Hatt et al. 1953:21) notes that the cave of Balankanche shows evidence for the mining of red clay

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46 I have some personal experience in this particular matter as well. During the summer of 2013, while on a reconnaissance trip north of Tipan, we encountered a small rockshelter and cave near the first village of Springfield. Upon entering the cave (via a belly crawl through 20 cm deep water) I found, not only no evidence of human use, but, that I was mysteriously alone upon exit. Apparently, when I ducked into the entrance, bees living in the broader rockshelter attacked my compatriots!
and *sascab* for ceramic production. Large hearths with evidence of extensive/prolonged use, relatively rare in the deep cave environment, are sometimes found associated with these activities (Andrews 1970:15). In post-colonial times, at least, other caves appear to have been mined for gypsum (Mercer 2005 [1896]: Actun Jih pp. 66, Actun Lara pp. 84, both near Yokat, Yucatán), leaving telltale tool marks in the flowstone. It is clear that similar activities, though likely related to the symbolic value of the material over other concerns, likely account for a considerable amount of breakage and removal of speleothems in the cave context (Brady et al. 1997, 2005; Prufer 2002; Rissolo 2001). It is equally clear that at least some of this material is incorporated into architecture, and likely household shrines or perhaps as drums (Brady et al. 2005). Intriguingly, Donald Slater (2013) identified broken speleothems in a cave in central Yucatán as originating from another, unidentified, cave. This practice perhaps goes some way toward supporting interpretations of inter-cave rituals introduced above.

Unfortunately, modern cave use, by both Maya and non-Maya, is increasingly seen in the form of looting and destruction. These processes have long been in effect in the cave contexts of our study region (ex. Actun Kabul [Wrobel 2013]; see also Naj Tunich [Stone 1995], and La Pailita [Graham 1997] to name just a few prominent examples of the nearly ubiquitous many). The readily accessible material content in many caves allows for a contextual study of ancient activities envied in most other archaeological settings. This accessibility also makes such studies particularly vulnerable to the effects of secondary intrusion on cave materials. Any archaeological assessment of a cave that shows signs of modern intrusion should therefore be treated with caution, Actun Lubul Ha, one of the caves investigated as part of my primary fieldwork (Chapters Six and Seven) provides a prime example of this issue.

**Discussion**

Thus, have archaeologists working within the cave context been able to break apart Thompson’s categories of Maya cave use. They have allowed us to tie specific activity
areas and their material assemblages to specific morphological features of the cave context and have opened the door for discussions of private vs. public ritual, elite vs. commoner ritual, state vs. household ritual and ritual vs. mundane use. Moreover, they have allowed us to look for trends in such use. But what of the purpose(s) of this activity? Can we link material assemblages to particular motivations? Strangely enough, beyond making broad statements about caves and community engagement and boundary maintenance (e.g. Brady 2003; McAnany 1995:87), or caves and socio-political engagement (e.g. Brady 2000; Prufer 2002), or caves and economic impacts (e.g. Brady 2005b), or caves and broader symbolic associations, including ancestor veneration (e.g. Brady 1989; Carlson 1981; Helmke et al. 2012; Tate 1980) all of which are important, this task has been explored much less thoroughly. Work by Moyes and colleagues (2009) and by Amalia Kenward (2005) stand out as strong exceptions. In the former, researchers link intensification of Late Classic cave use in western Belize to paleoclimatic data indicating contemporary drought conditions. Basing their interpretation on well-established ideological associations between caves and water/rain—attested in both iconographic and ethnographic sources—they make the insightful suggestion that intensification of cave use may have been an attempt by ritual specialists to petition the gods for supernatural intervention. Such attempts to ritually mitigate adverse environmental conditions are cross-culturally well attested in the archaeological and anthropological literature from the Yoruba (Trigger 2003:82), to the Bantu (Dowson 1998:75), Mesopotamia (Trigger 2003:85) and the American Far West (Whitley 1998:23). Incorporation of the cave context in said rites may even be traced to our earliest past (see Leroi-Gourhan and Allain [1979], Lewis-Williams and Dowson [1988], and Ruspoli [1987] regarding Upper Palaeolithic cave art). However, there is little attempt to link their interpretation with the deposition of specific assemblages, leading to a homogenization of perceived purpose; there seems to be an assumption that all ritual acts included in Late Classic intensification were conducted for the purpose of petitioning for rain. Kenward (2005), however, does explicitly relate specific assemblages to specific behaviours. She argues that several small caves in the Sibun River Valley were used as shortcuts to pass
through the egg carton-like karst of the region, and indeed were modified to facilitate such passage. Noting observations of modern Kaqchikel made by Ann Scott and Walter Little (2003, cited in Kenward 2005:255), she suggests that the small collections of broken ceramics and other objects found near the entrances were deposited as offerings. Unfortunately, here too, there is little discussion of what exactly comprise these assemblages, and we are thus left without an explicit basis for comparison. Thus, how to identify regularized variations within/between assemblages, and thereby provide a material, rather than just contextual, basis for comparison has perhaps become the newest ‘pertinent problem’ facing Maya cave archaeologists today.

Field Methods Employed in the Course of this Investigation

Work within the cave context is never easy, though it is often enjoyable. It can be both physically and mentally demanding. A typical cave trip may involve walking, crawling, squeezing, swimming, free climbing, and vertical rope work. All work within deep cave contexts is conducted with the assistance of electric torches and headlamps and in the case of larger caves may involve penetrating more than a kilometre into the dark. Moreover, most caves investigated as part of this dissertation were accessed only after hiking for several kilometres through dense jungle and across rugged karst terrain. Just getting to site may be an accomplishment in itself (Figure 5.1). A typical backpack filled with caving and archaeological gear can weigh anywhere between 23 and 32 kg.

The considerations driving field methodology were twofold. First, where sites had not been registered with the Belizean Institute of Archaeology, the primary purpose of the

Figure 5.1 - Building a raft to cross the Macal River.
reconnaissance was to document their existence and location in both the government records and archaeological literature through the submission of annual reports. Where these sites had been previously recorded, reconnaissance provided the opportunity to update government records regarding the status/integrity of the archaeological record. Second, where a cave was assessed as having high archaeological potential, due either to observed cultural materials or because of its context relative to other known cultural resources, more significant recording activities were conducted. Given that the specific cave contexts addressed in this dissertation (Section Two) typically exhibit little in the way of vertical deposition, the focus of field methodology rests firmly on establishing horizontal provenience. Differences in provenience and assemblage provide the bases for exploring some of those various activities discussed above and conducted within the cave context.

While the specific methods vary from cave to cave based on in-field conditions, they conform in their basics to those established by the Belize Valley Archaeological Reconnaissance project and the Western Belize Regional Cave Project (Helmke and Ishihara 2001). In-cave survey and reconnaissance activities typically consisted of three discrete operations: 1) exhaustive exploration; 2) survey; and 3) inventorying of artefact assemblages and cultural features contained therein. Reconnaissance of cave sites typically consisted of two phases and employed up to four personnel.

**Exploration**
Exploration was conducted in order to assess the size and morphology of the site for descriptive purposes. Exploration also allowed superficial evaluation of the frequency and spatial distribution of archaeological assemblages and features, and aided in scheduling time available for the operations to follow.

**Survey**
For all the morphological variety present in the cave context, survey methodology remains relatively consistent. At a scale of 1:50 or 1:100 depending on the relative size
of the cave/chamber in question, the cave’s features were recorded in plan and profile views punctuated by appropriate cross-sections. Baselines were oriented, as practicality allowed, with the long dimension of each chamber. These baselines were typically not level, and their inclination and bearing were recorded using a Brunton™ compass. Using a Leica Disto™, measurements were then taken to the left, right, above, and below the baseline at half-meter intervals. This data was recorded in tabular form and plotted to graph within the cave to ensure accurate plots and to identify errors in context. Details of the cave environment were recorded on the plan view at this time. The locations of features of archaeological significance were secured by ad hoc intervals projected perpendicularly along the baselines. Errors introduced into the survey by inclined baselines were corrected digitally and the scale was adjusted to the CBAS standard of 1:50. The maps presented in this manuscript were generated from these larger versions.

In several instances, permanent datums were established for the survey. Where this was deemed appropriate, a site datum in concrete was established outside the entrance and its coordinates recorded by a handheld GPS unit. Survey of the internal cave spaces was tied directly to such external datums. In the case of Actun Lubul Ha (Chapter Seven), internal survey stations were tied together with a total station.

Inventory of Archaeological Assemblages and Features

Inventory entailed the identification and definition of spatially discrete ‘areas,’ exhibiting concentrations of material culture. These areas primarily consisted of concentrated surface scatters of ceramic materials, other material classes, and isolated finds, hearth features, and modifications to the cave environment. Their locations were recorded in plan view during the survey phase. Scatters, features, and isolated finds were designated numerically as they were encountered during the survey, in general beginning at the rear of the cave and increasing numerically as the survey progressed toward the entrance. Detailed drawings and photographs were made of those deposits thought to represent primary contexts with more general attention paid to secondary contexts. Distinct surface deposits were treated as discrete lots.
In most cases, these activities were followed by surface collection. In a number of cases, where facilitated by deeper sediments, limited excavations were conducted (typically aligned with the dominant baseline passing through the space in question). Excavated sediments were screened through 1/4 inch wire mesh and soil samples were collected for micro analyses. Collected cultural material was cleaned, processed, analyzed and stored outside the cave. In a few rare instances, where the cave served as a modern tourist destination (Actun Neko and AC Cave), artifacts recovered from surface scatters were returned at the completion of the analysis. At Actun Lubul Ha, a heavily trafficked tourist cave, the decision was made to leave artefacts in context. Thus, following the survey, selected diagnostic materials from each of the scatters were catalogued and photographed *in situ*. Aluminium tags set in the cave floor associate specific deposits with notes, photographs, and maps. In other instances, where field practices differed from the general outline presented here, these decisions and the rationale behind them are addressed individually (Chapters Six, Seven, and Eight).

**Cave Archaeology in Context: Expanding Thompson’s List**

From the previous chapters we learn something valuable of the character of cave rites not apparent in the static archaeological record. The frenetic, free-flowing style of images found within the cave context itself evoke a picture of a dynamic ceremonial setting far removed from the formal, stagnant, rituals commonly depicted on public monuments. Indeed, as discussed previously, figural images found in the cave context are of an altogether different kind from those of the city centre. Stone (1995) has noted that the usual pomp and regalia of elite public ceremony is largely absent in the more private setting of the cave. While it is unquestionable that cave ritual had its political component, the simple dress of the protagonists in this setting represents a downplay of social status and a general focus on the act as private/religious/functional, rather than public/political/aggrandizing (as noted above, perhaps a factor in the discussion of status thus far).
Thus, to conclude this chapter, we can amend and expand Thompson’s list, picking up on the insights gleaned from the ethnographic, indigenous historic, epigraphic and iconographic records (Chapters Three and Four) to include:\footnote{47}{Note that the order of this list in no way reflects relative importance of the associated use.}

1. As Sources of Water
   a. Sources of drinking water (mostly in the Northern Lowlands and contemporary Highlands).
   b. Sources of ‘virgin’ water for religious rites (associated with concepts of sustenance and agricultural fertility, a minor use associated primarily with the Northern Lowlands).
2. As Sources of Other Resources
   a. Animal and plant products for religious rites.
   b. Animal resources for consumption (including meat and honey).
   c. Sources of clay and other minerals.
   d. Sources of ideologically charged resources (ex. speleothems).
   e. As sources of material wealth or utilitarian objects (perhaps a relatively modern use tied to tourism, looting, etc.)
3. As Cemeteries
   a. Negotiable and reflecting a wide range of demographic factors.
4. As Ritual Locations
   a. As locations for sacrifice (of human or other animal; appears to be a minimal or secondary use).
   b. Associated with rites of transition (ex. political accession or political/religious incorporation).
   c. In boundary maintenance and community delineation (perhaps associated with ritual circuits and marked by ceremonial discard).
   d. In fertility and rain rites.
   e. In healing rites.
   f. In petitions for wealth and prosperity.
   g. In divination.
   h. For negative witchcraft.
5. As Art Galleries
   a. In connection with religious rites.
6. As Places of Refuge
   a. For objects and people.

In the following chapters, I’ll discuss a number of these various uses and their broader implications in the context of my primary fieldwork in central Belize.
As is always the case, the path of research in neither clear, nor straight. This particular project began with a very different thesis in mind. In 2007, I returned to Belize as a senior student/volunteer with the Belize Valley Archaeological Reconnaissance project. Investigations conducted during this first exploratory season, and during the following inaugural season of the Central Belize Archaeological Survey project (2009) sought to record and describe evidence for human activity conducted in the cave sites of this presumably sparsely inhabited hinterland region—the Caves Branch River Valley-proper. In fact, the scant evidence for habitation prior to the Late Classic establishment of several relatively minor centres prompted McAnany to suggest that this region of central Belize was a long-distance pilgrimage destination (McAnany et al. 2004:296-297). With the identification of Tipan Chen Uitz toward the close of the 2009 season and the subsequent identification of a network of related sites, the focus of my dissertation shifted dramatically to one in which urban/rural distinctions came to the fore. The importance of the caves investigated in 2007 and 2009 thus shifted to a comparative role; a contrast to urban or semi-urban cave use documented in the immediate vicinity of Tipan Chen Uitz in 2010 and 2011. In fact, the cave context as a whole shifted in its role within this dissertation, from an end, to a means to an end: the shifting patterns of activity within the cave context became the lens through which broader socio-political and economic processes associated with the life history of the region could be examined. With this chapter, we finally begin our discussion of the primary research associated with this dissertation. In the following chapters, I will be presenting several cave maps; these use a

48 Unfortunately, I was unable to return to the caves investigated in 2007. As a result, artifact totals (and hence, numerical comparisons) are unavailable.
standardized symbol set derived from that of the Western Belize Regional Cave Project (Figure 6.1).

Figure 6.1 - Symbol set for cave maps.

Suffice to say, the majority of subterranean sites used by the ancient Maya were neither large, nor spectacular in terms of their geomorphology or speleological formations. Subterranean sites in the Caves Branch region fall within a wide range of spatial contexts based on the size and form of their interior spaces as well as their location in the wider landscape and relative associations with other sites. Whereas larger caves have traditionally attracted the attention of archaeologists, more modest contexts, such as those discussed in this chapter (CBR Cave, AC Cave, and Actun Neko), were also heavily utilized in antiquity.

Caves Branch Rockshelter Cave
Location and Description

As the name suggests, the flanking karst of the narrow Caves Branch River Valley provides a landscape rife with caves, sinkholes and rockshelters that were extensively used by the ancient Maya (refer back to Figure 1.3). The sites reconnoitred during the 2007 field season are located in close proximity to the Caves Branch Rockshelter (CBR), located ~3 km north of the Hummingbird Highway on the eastern side of the main branch of the Caves Branch River. The area to the south of the highway was already well known for the presence and investigation of a number of important cave sites including Petroglyph Cave (Reents-Budet 1980; Reents-Budet and MacLeod 1997), and Footprint Cave (Graham et al. 1980).

Caves Branch Rockshelter Cave (Figure 6.2) is so named for its close proximity to the Caves Branch Rockshelter, its entrance penetrating an exposed cliff face on the talus slope above CBR. The cave was investigated during the height of the rainy season and aside from a number of recently active flowstone formations is generally dry with floors exhibiting sediments composed of decayed limestone, dry guano, and areas of more significant ceiling spall (breakdown). The cave is short at a maximum length of ~19 m, and a series of sharply delineated rises produces an elevation gain of ~9 m toward the back. Survey was conducted following a standard level baseline-offset method (1 m intervals) using a Brunton pocket transit and fibreglass tape. Additional measurements were taken at ad hoc intervals where necessary to record cave features and archaeological deposits.

Geomorphology

Entrance, Chamber 1 and Breakdown 1—The entrance to the cave is horizontal, partially blocked with rockfall and recently active speleothems. This entrance measures ~2.5 m wide by 1.5 m high, ~2 m inward from the drip line. The entrance faces south-west and does not exhibit signs of cultural modification. Throughout the cave, it appears that the
deposition of calcium carbonate and colluvium has been limited, as observed artifacts appear clean and commingled on the surface.

From the entrance the floor rises slightly (an approximate inclination of +14°). Three meters past the entrance, in Chamber 1, the ceiling height rises to ~2 m. Toward the back of the chamber the floor steps up over an accumulation of ceiling spall (Breakdown 1). The chamber is ~11 m long and at its widest point measures ~7 m. A lobe of Chamber 1 projects somewhat south-west back toward the entrance, constituting the

Figure 6.2 - Plan of CBR Cave.
only significant area of the cave from which the entrance opening (or its strongly cast light) is not directly visible.

Chamber 2—Chamber 2 is perhaps more properly thought of as the continuation of Chamber 1, but is here separated and defined by an increase in ceiling height (estimated at up to 9 m in places), and an increased steepness in grade (an incline of +23°). Breakdown 1 also serves to mark the boundary between chambers. At its widest, Chamber 2 is ~6 m wide, and is ~8 m long. Recently active flowstone is evident on both the walls and floors of this chamber. There is no true dark zone within CBR Cave, the majority of the site being cast in twilight during the daylight hours.

Archaeological Areas
Summary descriptions for areas of cultural deposition are presented in this section, with more detailed description, where available, to follow. ‘Areas’ of archaeological significance were designated numerically in the order in which they were recorded; in this case they consisted entirely of concentrations of ceramic sherds. The site had been previously surveyed and artifact samples were collected by Juan Luis Bonor, including a small ‘pinch pot’ found outside the cave entrance (Camerson Griffith, personal communication 2007). The near complete absence of diagnostic sherds recovered from these scatters may be a result of this previous investigation. The findings of Bonor’s investigation have yet to be reported and the whereabouts of recovered artifacts are unknown. Artifacts removed from surface contexts were subsequently returned to the cave.

Ce Scatter 1—Two scatters of pre-Columbian ceramic sherds were identified within the cave. Both scatters likely represent secondary deposition along the cave walls and the ceramics that define them are heavily fragmented. Ce Scatter 1 consists of a thin surface scatter of ceramic remains measuring ~1.5 m (NW-SE) by 3 m (NE-SW), lying adjacent
to the southern wall of Chamber 1. No diagnostic sherds were collected from this scatter, though several small rim sherds (one with a reddish-orange slip) were noted.

Ce Scatter 2—Ce Scatter 2 consists of a thin surface scatter of ceramic remains measuring ~1 m (NW-SE) by 3 m (NE-SW), lying adjacent to the northern wall of Chamber 1, just inside the entrance. Sherds in this assemblage were, similarly, heavily fragmented. Only one semi-diagnostic rim sherd was collected from this scatter, a likely example of a Cayo Unslipped: Variety Unspecified (Red-slipped) jar dating to Gifford’s Spanish Lookout complex (Late/Terminal Classic; Tepeu 2 and 3 [Gifford 1976:28249]).

Archaeological Summary and Discussion: Caves Branch Rockshelter Cave

As only one diagnostic sherd was recovered from the CBR Cave, we are able to say little concerning the temporal distribution of utilization in this case. The presence of a likely example of a Cayo Unslipped jar sherd aligns at least part of the assemblage with the Late/Terminal Classic, a period associated with the terminal phases of mortuary activity in the Caves Branch Rockshelter, below (Wrobel 2008a), and other caves in the valley (see Graham et al. 1980; Reents-Budet 1980; Reents-Budet and MacLeod 1997).

The spatial distribution and condition of the assemblage from CBR Cave (i.e. relatively concentrated, linear, scatters of highly fragmented ceramic sherds adjacent to the cave walls) are reminiscent of patterns observed by Moyes and Awe (1998) in Actun Tunichil Mucnal, Prufer (2002) in several caves in the Maya Mountains, and Helmke and colleagues (2012) at Cuychen (as well as by many others in many other caves). The prevailing interpretations of such clusters typically fall into two camps: 1) as the products of periodic ritual cleansing, or 2) as discrete, protracted, and recurring rituals marking paths, boundaries, and ritual circuits. In this case, arguments could be marshalled in support of either position. In the case of the former, the heavily fragmented nature of the deposit might suggest that it had once lain in the central portions of Chamber 1, and was

49 Note, unless otherwise indicated, all ceramic identifications and period designations conform to Gifford 1976.
hence exposed to trampling during periods of re-entry into the cave. However, in light of the paucity of cultural materials encountered in the central portions of the cavern,\(^50\) the singular nature of the accumulated assemblage (i.e. ceramics were the only class of artifact noted within this cave), and the apparent lack of whole vessels,\(^51\) the latter interpretation—that the deposit accumulated through the action of protracted and recurring ritual events—seems to carry more weight. In this interpretation, individual sherds or larger portions of whole vessels (though perhaps never an entire vessel) were deposited in either/both Ce Scatter 1 or 2 as part of a larger ritual act.

Overlook Rockshelter\(^52\) (Wrobel et al. 2013), located ~8 km upstream from CBR Cave (and similarly high along the valley margin) offers perhaps the most direct parallel to this deposit. Two ceramic scatters were identified within this shallow rockshelter (unfortunately, heavily disturbed by recent looting activities) that conform in content and condition to those from CBR Cave. As discussed in Chapter Five, at Overlook, these deposits consisted of nearly 1700 highly fragmented ceramic sherds. Concerted efforts toward refitting these sherds by project ceramicist Rebecca Shelton, produced few refits and no complete vessels. Further, the assemblage was heavily biased toward ceramic materials (with the notable exception of a partial human corpse and a few singular stone and shell artifacts). This pattern of deposition at Overlook was tentatively interpreted as evidence for broader ritual acts, in which individual objects (or portions thereof) were

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\(^{50}\) As suggested by the work at Cuychen (Helmke et al. 2012), and supported by ethnographically recorded ‘waterhole rituals’ (Vogt 1969:448), the ‘cleaning’ and preparation of a previously utilized ritual location often immediately precedes its incorporation in a new ritual cycle, leaving a tell-tale combination of ritual set pieces in the working areas of the space along with discarded materials along its periphery. Despite the care that may have been taken in such preparations, it is difficult to imagine a situation in which all evidence of previously established activity areas (including charcoal or other evidence of burning) were completely removed in antiquity. The relative paucity of materials encountered in the cave in general suggests that it was only very rarely utilized in any case.

\(^{51}\) As noted, while several small rimsherds were recovered during the 2007 investigations, these never amounted to a complete circumference and were likely derived from different vessels at any rate. It is uncertain whether this assemblage is a product of initial deposition or a result of the subsequent removal of sherds (either in the ancient or relatively recent past) from the cave context.

\(^{52}\) Investigated during the 2009 CBAS field season as part of an honours thesis by Joshua Lynch at the University of Mississippi, Oxford.
distributed among more than one focus-setting, essentially expanding the pattern of (re)distribution noted by Prufer (2002:632) and Helmke (2009:253) within individual caves to that of the broader landscape. Unfortunately, the recovery methods employed at CBR Cave do not allow for a direct comparison with the assemblage from Overlook, and until we are able to trace this movement directly by refitting sherds found at different, discrete, locations on the landscape, this pattern will remain hypothetical. Nonetheless, it is encouraging to note that in the much more extensively used Petroglyph Cave, located just over one kilometre to the north-east of Overlook Rockshelter, Reents-Budet (1980:263-264; Reents-Budet and MacLeod 1997:20) identified precisely this kind of (re)distribution and on a scale far greater than that discussed by either Prufer or Helmke. She notes that contiguous sherds from a Big Light Red vessel, a Chichiha Red vessel, and indeed, fourteen other vessels were widely distributed in several discrete deposits within the cave, isolated beyond the possibility of casual movement through the actions of water flow or animal activity.

Additional, broad, comparisons may be drawn between the use/assemblage at Caves Branch Rockshelter Cave and a series of similarly small caves (or smaller), reconnoitred in the Roaring Creek Works following the discovery of Tipan in 2009. Permission was granted by the Institute of Archaeology to conduct a preliminary exploratory survey for the purposes of evaluating the nature and archaeological potential of subterranean sites in the immediate area. Several of these caves were subsequently subjected to more in-depth investigations (in 2010 and 2011). While many of these caves lie in the heavily dissected band of karst located ∼1 km south of the Tipan site core (and hence, are distinct from those in the Caves Branch River Valley by their proximity to substantial surface centres), their particular pattern of use should appear familiar.

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53 The reconnaissance group consisted of myself, various guides from the Caves Branch Jungle Lodge, community members from the nearby Mennonite village of Springfield, and Neko and Caesar Medrano.

54 We might consider these semi-urban or near-hinterland caves. House mounds were frequently observed within a radius of at least 1 km of the Tipan site core though proper settlement survey will be necessary to evaluate this relationship.
In total, twenty-one subterranean sites (caves, sink holes and rockshelters) were identified during field reconnaissance (Figure 6.3). Of these, sixteen were observed to contain material traces attributable to the ancient Maya and an additional three are considered to have high archaeological potential based on their locations. In general, subterranean sites were small caves and rockshelters rarely accommodating a standing individual, and lacked significant dark-zone space. Several of these offer direct parallels with CBR Cave.

TCU s.10 (Figure 6.4) was encountered while traversing the upper slopes of a hillside in the area between Tipan and Midnight Terror (~600 m north of the Tipan site).

Figure 6.3 - Tipan-centric map showing locations of caves surveyed in 2009.
core). The cave is small with no dark zone. The entrance is ~1 m high. Speleothems may have been clipped to increase the interior dimensions of the cave, and several are noted on the interior surface. It appears that a second entrance may have been blocked off in antiquity and a pile of stones in one corner may block a small niche. Given the cave’s small size it is somewhat surprising that it received such elaboration. Four ceramic sherds were recovered from this context that, together, constitute ~half of what may be a Rubber Camp Brown bowl (Spanish Lookout complex; Tepeu 2 and 3), though its slip has been worn away through exposure to the elements. No other artifacts were observed.

Similarly, TCU s.12 is a small, restricted cave, ~7 m long, lacking a true dark zone. It is located in the dissected and sharply uprising karst ~1-1.5 km to the south-east of Tipan. Ceramic sherds similar to those encountered in TCU s.10 were observed, as was a vessel fragment with a medial flange suggesting affiliation with both the Hermitage and
Spanish Lookout complexes (Early and Late/Terminal Classic; Tzakol 1, 2, 3 and Tepeu 2, 3). Similar deposits were noted in TCU s.13, s.14, s.15, s.16, s.18, and s.19. TCU s.17, a shallow rock shelter located just over half a kilometre west of TCU s.12 also contained a similar assemblage, including the conspicuous presence of a partial Roaring Creek Red dish (Spanish Lookout complex). As was the case in the previously discussed caves, upon surface inspection, it appears either that no complete (fragmented or otherwise) vessels were deposited in these caves in the first place, or else that fragments were subsequently removed. I’ll return to the significance of these observations in the discussion section at the end of this chapter and more fully in Chapter Nine.

**AC Cave**

*Location and Description*

AC Cave (Figure 6.5), so named because of the cool draft felt at its mouth (Entrance 1), is merely an upper entrance to part of a much larger network of caves through which passes a branch of the Caves Branch River, and is located perhaps 100 m south of CBR Cave. Local guides often take tourists rafting through the lower reaches of the cave. The presence of large logs lodged in crevasses high above the typical water level is illustrative of this cave’s propensity for extreme flooding. Any cultural remains that may have been deposited near the river’s edge have certainly been washed away. Given this, and due to time constrains toward the end of the 2007 season, only the upper section of the cave containing evidence of ancient activity was surveyed. The floors are generally wet and active flowstone covers many of the cave surfaces, yet material representing a span of up to 900 years or more is co-present on the surface.

From the upper entrance the cave slopes dramatically down to the river ~25-35 m below. The surveyed area with its associated artifacts is found on a level ~8 m below the

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55 One could imagine such locations as being of particular symbolic significance (e.g., as offerings associated with successful petitions for rain are consumed by the floodwaters). Unfortunately, the complete absence of *in situ* artifacts so encountered limits us to pure conjecture on this point.
Figure 6.5 - Plan of AC Cave.
entrance. As at CBR Cave, chambers and archaeological deposits are numbered in the order in which they were surveyed. Due to time constraints, survey was conducted following a non-level baseline-offset method (1 m intervals; horizontal distance corrected digitally) using a Brunton pocket transit and Leica Disto. Additional measurements were taken at *ad hoc* intervals where necessary.

**Geomorphology**

Entrance 1, Breakdown 1 and Chamber 1—Entrance 1, located at the base of a low cliff, is entered at a steep 34° downward grade largely consisting of breakdown talus and ceiling spall (Breakdown 1) filled in with humus and other colluvium from above. The entrance is ~2.5 m wide and 4 m high at the break in grade. A small, low, opening extends to the north, halfway down the entrance slope. Chamber 1, lying 8 m below the entrance, is ~4 m by 4 m, with a maximum ceiling height of ~3 m. The floor is composed of wet sediment, and is graded slightly to the east toward a vertical opening granting access to the river below. A climb over ceiling spall to the south (an additional 9 m length) similarly yields access to a steep slope leading to the river below.

Chamber 3—While out of numerical order, Chamber 3 serves as a link between Chamber 1 and Chambers 2 and 4. Chamber 3 is simply an extension of Chamber 1, defined by a slightly higher floor height (~50 cm) and separated from Chamber 1 by several flowstone pillars. The chamber is directly accessible from Entrance 1 and measures ~7 m E-W by 2 m N-S. The ceiling is ~2.5 m high and the floor is composed of wet sediment (eroded limestone), large breakdown, and guano.

Chamber 2—Chamber 2 extends to the north-west off Chamber 3 and is defined by a notable increase in speleothems, including large stalagmites, curtain formations and a series of columns which separate this chamber from Chamber 4. The chamber itself measures ~7 m by 7 m with a ceiling height of ~2.5 m. A 1 m wide fissure separates the floor from the wall at the northern end of the chamber. This fissure extends north-east
along the wall and across the north end of Chamber 4 as well. Elaborate flowstone formations and large limestone boulders cover much of the floor; the same wet sediment as in Chamber 3 is also in Chamber 2.

Chamber 4—A 2 m drop in the floor, which yields access to the river to the east, separates Chambers 3 and 4. Chamber 4 is essentially a large flowstone shelf with a hard-packed floor of wet sediment and calcium carbonate. The chamber is ~12 m N-S by 9 m E-W, bound to the north by the previously mentioned fissure, to the west by a series of flowstone columns, and to the north-east by a 5 m drop yielding access to a steep slope to the river below. The ceiling is low here, rarely stretching above 1.2 m high and glistens with moisture (Figure 6.6). Soda straws have formed in many places on the ceiling.

Figure 6.6 - Sam relaxing in Chamber 4.
Archaeological Areas

During the initial reconnaissance it was noted that material deposits within the upper reaches of AC Cave were strongly clustered, and generally consisted of a number of large sherds from one or two vessels each. Again, ‘areas’ of archaeological significance were designated numerically in the order in which they were recorded, in general beginning in Chamber #1. Artifacts removed from surface scatters were returned to the cave following analysis.

Ce Scatter 1—Ce Scatter 1 was identified on the high floor of the southern extension of Chamber 1. This concentration consists of a large, but heavily weathered fragment of a bowl (2 pieces, amounting to ~half a vessel). No other artifacts were encountered in association with this scatter, and the other half of the vessel was not identified.

Ce Scatter 2—Ce Scatter 2 was identified toward the west end of Chamber 3, resting on a flowstone formation adjacent to the drop that separates Chambers 3 and 4. The assemblage included only one diagnostic sherd, a large rim sherd with apparent “mend holes,” and indeed, mends with a sherd recovered from Chamber 4, Ce Scatter 14 (located ~12 m to the north). Both sherds are consistent with descriptions of Daylight Orange: Daylight Variety noted in Gifford (1976:300) and are thought to date to the early facet of Barton Ramie’s New Town complex (Early Post Classic; ca. AD 880 - AD 1120). An additional, non-diagnostic, rim sherd from a large jar was similarly identified; a refit could not be found. No other artifact classes were observed in association.

Ce Scatter 3—Ce Scatter 3 was found at the base of a flowstone formation near datum 2, in Chamber 3. The scatter consists of several small sherds, none of which were diagnostic. No refits were noted. No other artifact classes were observed in association.
Ce Scatter 4—Ce Scatter 4 was nested on the muddy floor between four large rocks in Chamber 2. The scatter measures ~75 cm by 75 cm and consists of half a dozen highly fragmented ceramic sherds. No diagnostic sherds were recovered. No other artifact classes were observed in association.

Ce Scatter 5—Ce Scatter 5 is the first of the scatters that will be discussed in Chamber 4. The scatters in this chamber are notable for being composed of relatively few, if large, ceramic sherds, many scatters in fact demonstrably consisting of the remains of only one or two vessels (though never representing the remains of an entire vessel). Scatter 5 was found tucked up against the north side of a large rock immediately upon entering from Chamber 3. The ‘scatter’ in this case is an isolated rim fragment from an undecorated jar. Its paste and form conform to descriptions of Rio Juan Unslipped in Gifford (1976:307; late facet [?ℐ New Town), though the identification is VERY tentative. No additional sherds from this vessel were identified elsewhere in AC Cave. No other artifact classes were observed in association.

Ce Scatter 6—Ce Scatter 6 (consisting of ~50 sherds) is located ~3 m north into Chamber 4. Eight sherds were collected from a scatter ~1 m N-S by 50 cm E-W, which proved to be the rim and body of a single, incomplete vessel. This vessel was identified as a Cayo Unslipped: Variety Unspecified (red slipped) jar (Spanish Lookout complex). Heavily fragmented faunal remains (unidentified) were found in direct association with this vessel, and in greater concentration, suggesting that they may have once lain within the jar. No additional sherds from this conspicuous vessel were identified elsewhere in AC Cave.

Ce Scatter 7—Ce Scatter 7 (~30 sherds) is located ~1 m to the north-west of Scatter 6. The scatter was similar in spread to Scatter 6 but the sherds were much more fragmentary. No diagnostic sherds were found for recovery and no obvious mends with sherds from Scatter 6 were noted. No other artifact classes were observed in association.
Ce Scatter 8—Ce Scatter 8 was again highly fragmented (into ~20 sherds). Located on a large rock near the centre of Chamber 4, the scatter covered a 50 cm by 50 cm area. No diagnostic artifacts were noted from this scatter and as in all other scatters previously discussed, the remains do not constitute an entire vessel. No other artifact classes were observed in association.

Ce Scatter 9 and 11—Ce Scatter 9 is the largest of the scatters found in Chamber 4. Covering an area of ~2 m by 1 m, the scatter is spread among a dozen or so loose, fist-sized cobbles of limestone that appear to have been introduced into the space (or organized within it). An unidentified rim sherd and the ring base from what may be a Fowler Orange-red: Spring Camp Variety vessel (Hermitage complex; Early Classic; Tzakol 1, 2, and 3) were the only (semi-)diagnostic sherds encountered in the scatter. Less than 1 m adjacent to Ce Scatter 9 rests Ce Scatter 11. Smaller than scatter 9, Scatter 11 is similarly highly fragmented and interspersed with a similar collection of fist-sized limestone cobbles. No identifiable sherds were recovered. In both cases, it is unclear whether the ceramics and cobbles are contemporaneous and the relationship between these two scatters remains uncertain. No complete vessel is represented by the extant elements of these two scatters and no other artifact classes were observed.

Ce Scatter 10—Ce Scatter 10, composed of half a dozen large ceramic sherds (mostly undecorated body sherds), was found against the western wall of Chamber 4, adjacent to the ‘pillared’ curtain wall separating Chamber 4 from Chamber 2. No diagnostic sherds were apparent in this scatter which is tightly clustered over ~40 cm N-S by 40 cm E-W. The remains do not constitute an entire vessel, no refits with vessels elsewhere in the cave were noted, and no other artifact classes were observed in association.

Ce Scatter 12—Ce Scatter 12 (10 sherds) was found wedged between a large rock and the flowstone-covered wall on the eastern side of Chamber 4. Two, large, unidentified rim
sherds were noted in this collection, representing two distinct vessels (one a coarse jar form, the other a fine, orange-slipped, bowl). In neither case do the remains constitute an entire vessel. Further, no refits with vessels elsewhere in the cave were noted, and no other artifact classes were observed in association.

Ce Scatter 13 and 14—Ce Scatters 13 and 14 (together, composed of only a couple dozen sherds) were found within one meter of each other toward the north-east corner of Chamber 4. Both scatters are spread over an area ~70 cm E-W by 50 cm N-S. However, while Scatter 13 is highly fragmented (and seemingly devoid of identifiable types), Scatter 14 is composed of a number of large fragments, many of which can be joined, and from a cursory examination appears to be the remains of at least three vessels. One vessel, identified as a Daylight Orange: Darknight Variety serving dish ([early facet] New Town complex; Early Post Classic) shows a clearly defined kill hole. A sherd from a Daylight Orange: Daylight Variety dish with ‘mend’ holes, mends with the previously noted sherd from Scatter 2. An unidentified orange-slipped bowl that may similarly conform to expectations for Daylight Orange: Daylight Variety was also found. In total, forty-four sherds were noted as composing Scatter 14. Yet, no complete vessel is represented by the extant elements of these two scatters and no other artifact classes were observed.

Ce Scatter 15—The context of Ce Scatter 15 is somewhat unique in AC Cave. Located in Chamber 4, ~2 m west of Ce Scatters 13 and 14, the highly fragmented Ce Scatter 15 is spread around and within a distinct circular collection of fist-sized limestone cobbles. There were no obvious signs of burning on either the cobbles or ceramics to suggest the circle’s use as a hearth. Because of the highly fragmented nature of the ceramics, none were collected for identification, though it is clear that, as in all other scatters found within AC Cave, this scatter does not represent a single complete vessel. Further, no refits with vessels elsewhere in the cave were noted, and (save the cobbles) no other artifact classes were observed in association.
Archaeological Summary and Discussion: AC Cave

As at the CBR Cave, relatively few sherds in the AC Cave assemblage have been securely typed, making any discussion of spatio-temporal trends in the dataset unfortunately meaningless beyond a single observation: the identified ceramics seem to date predominantly to the Late/Terminal Classic and Early Postclassic periods (Spanish Lookout and [early facet] New Town), a span consistent, if slightly later than most, with intensification of cave use seen elsewhere in the region (Graham et al. 1980:160; Helmke 2009:237, 412, 465; Moyes 2001:70; Peterson 2006:104; Reents-Budet 1980:265; Reents-Budet and MacLeod 1997:22). The presence of a Fowler Orange-red vessel likewise conforms to expectations from these other caves, establishing a period of use extending throughout the Classic Period, at least.

Aside from evidence of more extensive use, the spatial distribution of artifacts within AC Cave is distinct from that of CBR Cave in its lack of linear scatters and prevalence of distinct clustering. In many ways it is much more similar to deposits documented in Actun Lubul Ha. Rather than being the product of ‘transitory’ activities not involving ritual set pieces, the deposits in AC Cave have the ‘feeling’ of a series of discrete ‘station-based’ activities; an interpretation confounded by the surprising absence of evidence for burning and the singular nature of the deposit.

In other ways, the assemblage in AC Cave is similar to that of CBR Cave and indeed, Overlook Rockshelter and Petroglyph Cave. Specifically, it seems clear that the assemblage encountered within AC Cave conforms to the pattern of fragmentary deposition noted previously in that no complete vessels are present. As before, several explanations for this pattern might be submittable, not least of which is the potential that

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56 The ceramics from Footprint Cave, located ~8.5 km upstream from AC Cave, on the western side of the valley seems to be the closest temporal match to those from AC Cave.

57 Reents-Budet’s work in Petroglyph Cave suggests that the majority of vessels found in the cave are actually attributable to the earlier Hermitage complex. However, looking at non-utilitarian slipped vessels (i.e. where the vessels are likely part of the offering, rather than just a container for it), it is clear that the majority of these date to the Late Classic. The majority of datable types in AC Cave are likewise slipped, yielding an analogous dataset.
the site may have fallen victim to looting activities: the lower reaches of the cave have been accessed by thousands of tourists, and the upper chambers may be accessed directly from the adjacent orange grove. As Dorie Reents-Budet and Barbara MacLeod noted at Petroglyph Cave (1997:20-21), these contexts are particularly vulnerable to contamination/alteration. Worse, such alterations are often difficult, if not impossible, to detect after the fact. Several other interpretations related to ancient activity are possible.

First, given the prevalence of this pattern already noted in the valley, it seems likely that, as suggested at Overlook Rockshelter and CBR Cave, at least some objects were deposited as isolated sherds or portions of vessels. The material assemblage from AC Cave, however, provides clarity to this process. In some cases a single ceramic vessel may have been deposited/distributed in multiple distinct areas of the same cave (see Reents-Budet 1980:263-264). The two sherds from a Daylight Orange: Daylight Variety plate exemplify this pattern of deposition within AC Cave, being found more than 10 m apart (Scatters 2 and 14). It seems improbable that this separation is the result of chance interactions with the assemblage (i.e. kicking a loose sherd down slope, movement by other animals or through water action) as Chambers 3 and 4 are separated by a 2 m wide vertical opening affording access to the river below. This particular vessel is also noteworthy for the degree to which it had been repaired in antiquity; mend holes are apparent on both refitting sherds and a similar hole drilled on the opposite side of one suggests that it had been repaired even more extensively in the past, in turn suggesting a level of curation not explicitly demonstrated by the rest of the assemblage and perhaps indicating the relative value of this vessel (though we will revisit this idea of ‘curation’ in the final chapter).

Second, the highly distinctive fragments of a Daylight Orange: Darknight Variety plate may similarly attest to an extended pattern of distribution or redistribution, though in this case, it appears as if some vessels used in this sense were recycled from previous contexts. Encountered only in Scatter 14, the remains of this vessel appear indistinguishable from many other isolated fragmentary deposits noted elsewhere, save, in one important detail: this vessel had been ritually ‘killed’ by having a hole punched
through its base. As demonstrated at Cuychen, a small and inaccessible cave located in the upper Macal River Valley (western Belize; discussed in Chapter Five), the ‘termination’ of objects and ‘ritual cleansing’ of the site takes the form of a suspended or protracted ritual event, depending on whether the act is seen as interrupted or extended. This pattern links the close of a particular event with the beginning of the subsequent one (Helmke et al. 2012:80). In the case of Cuychen, ritual termination appears to have taken several forms (Helmke et al. 2012:80):

1) striking [with] a pointed object to pierce a small hole in the body or base of a vessel, without otherwise affecting the integrity of a vessel;
2) the punching out of the whole base, resulting in a spree of conjoining sherds usually found in the vicinity of a [vessel’s] final point of deposition; or,
3) the wholesale smashing of a vessel, and the eventual scattering of its sherds over larger areas.

Vessel rims may also have been chipped/broken in an apparently conscious act of destruction and without otherwise affecting the integrity of the vessel. In the context of artifact distribution within AC Cave, this observation is significant for two primary reasons: First, it suggests that the termination of the Daylight Orange: Darknight Variety plate in AC Cave, via a kill hole, likely followed the use of this vessel as a set piece in a discrete ritual context/activity area (either at Scatter 14, or elsewhere). Second, it suggests that the further fragmentation of the vessel and subsequent removal or addition of those sherds encountered in Scatter 14, likely represents a secondary ritual event. While we cannot be certain whether Scatter 14 represents the location of the initial act of termination, it is clear that redistributed materials need not be introduced into the ritual context, initially, through the redistributive behaviour suggested at CBR Cave and Overlook Rockshelter, but may be re-used in multiple ritual acts; a direct challenge to Thompson’s emphasis on the ‘virginity’ of ritual paraphernalia (Thompson 2005 [1975]). Indeed, in Scatter 6 we find indications that AC Cave may have occasionally served as the source of subsequently redistributed artifacts. While it is possible that the heavily fragmented faunal remains noted above, found in direct association with a similarly
fragmented Cayo Unslipped jar were introduced independently, it seems more likely that these may have once lain within the jar, with the jar being subsequently broken and large fragments removed (Sarah Wille [2007] discusses a similar process in reference to a large surface deposit at Chau Hiix).

Third, still other artifacts, including vessels and vessel fragments, may have been lost as part of periodic ‘cleaning’ rituals or other forms of energetic deposition. Unlike CBR Cave, there are many openings providing direct access to the voluminous river passage below, and one could easily envisage objects being moved, either intentionally or unintentionally, through these openings. Indeed, this type of activity very likely took place. At Petroglyph Cave, Reents-Budet and MacLeod (1997:20) note the spread of a single Roaring Creek Red dish down the side of a series of rimstone dams, apparently, the result of being forcibly cast down from above. While similar acts, if they occurred, cannot be demonstrated at AC Cave given the recovered assemblage, the possibility remains worthy of note. Similarly, while periodic cleaning of the ritual space may have indeed occurred, the characteristic linear deposits often noted (as above and in the previous chapter at Cuychen, Actun Tunichil Mucnal, CBR Cave, etc.) are not found at AC Cave making this a less convincing force of distribution than the alternatives discussed above.

Finally, we can gain additional insight into the types of acts that may have occurred in AC Cave, as well as their related paraphernalia, through reference to vessel form. While vessel forms do not conform to the ‘activity sets’ identified by Helmke at Labarinto de las Tarántulas (2009:256) and Cuychen (Helmke et al. 2012:80) with their mean ratio for ollas, dishes and bowls of 2:1:1 (or 3:1:1), as noted above, it seems likely that at least some deposits within AC Cave represent discrete activity areas. Further, given the general paucity of material associated with the cave in general, and each individual deposit in particular, it seems likely that each was associated with its own discrete act. The most frequently identified vessel form in AC Cave is the open, slipped, plate or dish. In other caves in the region, including Actun Lubul Ha (see below), these vessels may have been treated as offerings in their own right, and may have been interred.
either alone, always damaged or ‘terminated,’ or with other offerings that are no longer present. Reents-Budet (1980:251) notes that such is similarly the case at Petroglyph cave, where plates and dishes are exclusively found highly fragmented and incomplete. This latter pattern similarly reflects that at AC Cave. Where such vessels may have served as set pieces in a ritual act, prior to their destruction, Reents-Budet notes that they may have served as vessels for the containment and burning of bark paper, perhaps soaked with auto-sacrificial blood, and are particularly associated with the short-lived Tiger Run Complex (ca. AD 590 - AD 680). Looking at the iconographic corpus, it seems clear that plates and dishes may have served as containers for semi-solid objects of all kinds, and are often pictured in association with tamales (as depicted on numerous polychrome vases, Figure 6.7) and other less-savoury items (as in the hand and foot held aloft by various under world creatures in Figures 3.6 and 3.9), including incense (as in the image from Naj Tunich, Figure 3.7). In fact, in the ritual context, such vessels may most-typically have been considered as secondary to their contents; a vehicle for supernatural sustenance in much the same way that they would have served at mortal tables. However, this pattern of use is by no means either consistent or static. It appears that bowls may have functioned in very much the same context, and Reents-Budet (1980:253) suggests that their relative

prominence in Petroglyph Cave during the Spanish Lookout Complex (ca. AD 680 - AD 880) may be a reflection of preference rather than function. If we look further back in time to the Late Formative and the San Bartolo murals (Figure 3.6), we can find an image of a young supernatural woman offering tamales from a slightly conical vase. Likewise, at Petroglyph Cave (Reents-Budet and MacLeod 1997:60), at several caves within the contiguous Sibun River Valley (Peterson 2006:117), and elsewhere (Brady 1989:213) scholars have identified the burned residues of incense in broken jar fragments.

Such diversity of use should not be surprising given the variety of activities that occurred in the cave context, however, we can eliminate some of these from our interpretation of open vessel forms at AC Cave. Perhaps the most striking feature of the assemblage at AC Cave, especially given its otherwise similarity to that of Lubul Ha, is the lack of evidence for burning. No hearths were identified within the cave, and charred residue such as might be expected if vessels were used for burning incense was not noted. Thus, it seems likely that the most common uses of slipped, open, vessels, insomuch as they served as ritual set pieces, were as containers for other, perishable, semi-solid offerings.

If not otherwise noted, each scatter within AC Cave seems to have contained fragments of at least one closed vessel, either a globular bowl or jar. Temporal variation aside, it has been demonstrated that a strong correlation exists between vessel form and the general type of substance that may have been kept within; narrow mouthed or spouted vessels for liquids, wide mouthed or open vessels for solids (Morehart 2002; Helmke 2009). Some specialized forms exhibit remarkable consistency such as cylindrical ‘drinking’ vessels, and chocolate pots (Powis et al. 2002). In the cave context it has been demonstrated that equivalent offerings were often made in these vessels. However, as all vessels encountered within AC Cave had been ritually terminated or otherwise broken, and save for the case of the unidentified faunal remains found in direct association with the Cayo Unslipped: Variety Unspecified (red slipped) jar (Scatter 6) and the concentrations of cobbles near scatters 9, 11, and 15, no other artifacts were found in
association, one must acknowledge the possibility that the vessels, themselves, constituted the ritual offering. This interpretation is strengthened by the lack of evidence for burning in vessel interiors and the absence of charcoal or similar evidence for concentrated burning in this part of the cave in general as may be expected in the burning of incense or other offerings. While it seems likely that burning did occur in some form or other, if only for the production of light, it appears neither concentrated, nor extensive, and suggests that the vessels (slipped, non-slipped, open and closed) were not re-purposed for incensarios.

Actun Neko

Actun Neko (Figure 6.8) was brought to the attention of senior members of the Belize Valley Archaeological Reconnaissance Project early in the 2007 season. During initial reconnaissance by Cameron Griffith and guides from the nearby ‘Ian Anderson’s Caves Branch Adventure Co. & Jungle Lodge,’ an inlaid shell pendant was found (discussed at length by Christophe Helmke in Morton et al. [2012a58], and in more abbreviated text, below). The discovery of the pendant was the catalyst for my further work in the cave later in the season. Actun Neko was investigated during the height of the rainy season and contains numerous active flowstone formations. The floors are generally wet and consist largely of concentrations of alluvial matrices, decayed limestone, and guano. The cave has two entrances, connected by ~95 m of passage. The pendant was found in a side passage extending ~19 m south-west, roughly halfway between the two entrances.

Location and Description

Actun Neko is located close to both the CBR Cave and AC Cave, on the north side of the Hummingbird highway and the eastern side of the Caves Branch River just south of

58 Note that in this publication, a number of sherds were erroneously identified in the course of a brief discussion on temporal patterning within the cave. Though broad patterns remain intact, details vary and the temporal distribution of artifacts appears less cut-and-dry than initially suggested. The identifications listed in this dissertation benefit from several years’ refinement and experience.
Figure 6.8 - Plan of Actun Neko.
where it subsumes into the coastal plain. In its morphology, Actun Neko differs significantly from either of the two previously discussed caves and its pattern of use reflects this.

**Geomorphology**

Entrance 1 and Chamber 1—Entrance 1 is horizontal, partially blocked with colluvium including rockfall, eroded sediment, and active speleothems. This entrance measures 8.54 m wide by ~1.5 m high. All portions of Entrance 1 lie within the light zone of the cave. The entrance faces north-east into a partially enclosed area defined by a large overhanging ridge to the south and a tall limestone outcrop to the west and north. The area provides a natural shelter and while it does not exhibit definitive signs of ancient cultural modification, there are a number of positive handprints painted on the wall inside the drip line; as these were not noted upon initial investigation, it is possible that these marks were left by still-more-recent visitors.

Five meters into the cave, the passage narrows to ~90 cm between a large flowstone column and the cave wall. Past this point, Chamber 1 opens as a space oriented SW-NE, ~16 m long by 5.5 m at its widest point. The ceiling height rises to around 4 m. The floor of the chamber consists of a hard, densely packed and nearly level surface of sedimentary deposits. Flowstone is evident on the walls of the chamber and at various places on the floor in the form of small stalagmites. Small burrows in the floor surface evidence rodent activity and the remains of an armadillo were found near the centre of the chamber. While natural light entering this chamber is limited by the low, deeply overhanging entrance and restricted access, it is possible to navigate through this chamber without aid of additional illumination during the morning hours. The chamber ends in another small choke.

Chamber 2—Access to Chamber 2 is via two small openings, ~80 cm wide and 70 cm tall, at the south-west end of Chamber 1. A sharp drop in the floor (nearly 1 m) and a corresponding rise in the ceiling height to ~4 m define the entrance to this chamber. The
chamber measures ~5 m by 5 m. The walls are awash in flowstone and the floor is muddy and wet. The floor rises again and the passage (2 m wide at this point) continues to the west. This is the first “dark zone” of the cave (i.e. it is not possible to navigate this space without the aid of artificial light).

Chamber 3—From Chamber 2 to Entrance 2 (and with the exception of Chamber 5), the character of the cave in general is that of a phreatic passage. For the purposes of facilitating descriptions of archaeological ‘areas,’ this passage is here broken up into various ad-hoc ‘chambers,’ usually based on changes in passage bearing or grade.

In Chamber 3, ~6 m from Chamber 2, the floor again dips ~1.5 m at the lowest point and after heavy rains the lowest area is partially filled with water. The ceiling reaches ~5.5 m high and the flowstone covered floor is again muddy. Both walls (maximally 4.16 m apart) exhibit some flowstone; active formations dominate the south-eastern side of the chamber. Chamber 3 is ~9 m long, and terminates as the floor again rises accompanied by a concentration of speleothems.

Chamber 4, Breakdown 1 and the South-west Passage—A sharp drop in the floor of ~1 m marks the south-east entrance into Chamber 4. The chamber, ~11 m long by 6 m wide, is separated into two distinct, low bowl-like depressions. The ceiling reaches a maximum height of ~6 m. The floor consists of soft, damp, sediments and eroded limestone; the walls are largely covered in active flowstone. Immediately upon entering the chamber from the east is a vertical drop of ~8 m adjacent to the south-west wall. While the reconnaissance team did not investigate this drop, a number of Caves Branch guides indicated that it ends in a sump just out of sight from the top. The sump is non-navigable, simply a slow-draining pooling point for water after heavy rains. Breakdown 1 dominates the north-east corner of the chamber; thick depositions of sediment on these stones suggest that the collapse event is not recent.

At the western end of Chamber 4, the passage splits. A wall of speleothems restricts access to Chamber 5 to the north-west. A narrow (1 m wide) passage extends to
the south-west at an initially steep positive inclination of 16 degrees before levelling. The ceiling is rarely more than 1 m high. This passage extends ~14 m, finally choking off in a tightly restricted phreatic passage, too tight for human navigation. The floor in the passage is similar to that of Chamber 4, namely damp, soft sediment. However, at the limit of the explored passage the floor turns dry and loose; a disturbance in the sediment at this end evidences recent rodent activity. From this location auditory contact was made with the nearby Caves Branch Rockshelter 4 (CBR4; see Hardy 2009:54).

Chamber 5 and Breakdown 2—Chamber 5 is large at 21.39 m long with a maximum width of 6.5 m, oriented north-east south-west. From Chamber 4, the floor (which consists of wet sedimentary material and guano) drops sharply (1.5 m), and is negatively graded to the west at 15 degrees. The maximum ceiling height in the chamber is ~4.5 m. The north half of the chamber is littered with large breakdown (Breakdown 2). A tight opening in the north wall descends a short distance to a seasonal, slow-draining, floor sump. A large flowstone ‘fountain formation,’ consisting of one large rimstone dam above another, dominates the centre of the chamber and was active during the time of the survey. This formation restricts passage through the chamber and effectively isolates the northern half from the southern half. The southern half, most easily accessed by passing directly under the fountain is completely encrusted in active flowstone. A tight passage, less than 1 m wide extends to the south-west from the southern half of Chamber 5.

Chamber 6 and Entrance 2—From Chamber 5, a narrow passage ~1 m wide with a 2.5 m high ceiling extends 5 m to the south-west into a small sandy chamber (Chamber 6). Chamber 6 is maximally 1.8 m wide by 4.7 m long, with a ceiling height of ~2 m. A low (40 cm high) alcove extends a further meter to the north. A very limited amount of natural light is admitted to the chamber from the south-west through the long and restricted passage from Entrance 2.

A very low opening, ~25 cm high by 50 cm wide divides Chamber 6 from the long (6 m) passage of Entrance 2. From the exterior, Entrance 2 extends horizontally
toward the north-east into the base of the same ridge line as Entrance 1, and only a dozen or so meters west of CBR4. The passage rapidly constricts from 6.4 m wide at the drip line to 2.5 m by 1 m high; the associated passage narrows in places to less than a meter.

Archaeological Areas

During the initial reconnaissance it was noted that artifact scatters were concentrated near the two entrances with little material being found between. As in the Caves Branch Rockshelter Cave and AC Cave, ‘areas’ of archaeological significance were designated numerically in the order in which they were recorded, in general beginning at Entrance 1. Areas in Actun Neko predominantly consisted of concentrations of ceramic sherds. With the exception of the shell disc, currently stored with the Institute of Archaeology, all materials removed from surface scatters were returned to the cave following analysis.

Ce Scatter 1, 2, and 3—A number of discrete artifact scatters were found in Chamber 1. Two Spanish Lookout complex rim fragments (identified as Cayo Unslipped: Variety Unspecified [Red] and Alexanders Unslipped: Alexanders Variety, Late Classic Period, ca. AD 680 – AD 880), from two different vessels, were found sitting on a rock just inside Chamber 1 (Ceramic Scatter 1, east end of chamber). The guides from the Caves Branch Lodge occasionally take visitors to the cave and based on their unusual placement these fragments likely represent modern secondary deposition, though neither sherd appears temporally inconsistent with the majority of material located elsewhere in the chamber.

Two additional scatters of sherds were documented in Chamber 1 (Ceramic Scatters 2 and 3). Mostly body sherds, the majority of these were unfortunately only semi-diagnostic, consisting mostly of individual sherds from dissimilar vessels in varieties of what are most likely Cayo Unslipped, Alexanders Unslipped, and Rubber Camp Brown types, and hence, as with those included in Scatter 1, are likely attributable to the Spanish Lookout Complex. Both scatters likely represent pre-Columbian secondary deposition along the cave walls (vs. modern contamination) and the ceramics that define
them are heavily fragmented. Ce Scatter 2 consists of a thin surface scatter of ceramic remains measuring ~3 m (NW-SE) by 3 m (NE-SW), lying adjacent to the south-eastern wall of Chamber 1 close to the entrance. Fifty-two sherds were collected from this scatter. Ce Scatter 3 consists of a thin surface scatter of ceramic remains measuring ~50 cm (NW-SE) by 1 m (NE-SW), lying adjacent to the north-western wall of Chamber 1 close to the entrance to Chamber 2. Fourteen sherds were collected from this scatter. Test probes in the area of the scatters revealed a dense floor surface with no cultural depth. The only notable temporal outlier from these assemblages is a single rim sherd from Scatter 2 that is tentatively identified as belonging to an incurving Aguacate Orange: Variety Unspecified (Thick-walled) dish or bowl (associated by Gifford [1976:130] with the Floral Park Complex, Proto-Classic, ca. AD 1 - AD 280).

Ce Scatter 4—Ceramic Scatter 4 consists of a thin surface scatter of ceramic remains measuring ~2 m (N-S) by 3 m (E-W). Most of the scatter is located atop a small ledge just inside the northern entrance to Chamber 2 though a number of fragments have apparently slid to the bottom. Again, the deposit is characterized by a clustering of dissimilar sherds. Sixty-eight sherds were collected from this scatter. Consistent with Chamber 1, diagnostic sherds appear to date entirely to the Spanish Lookout complex: three diagnostic/semi-diagnostic sherds from restricted bowls or jars were identified in this particular assemblage; two are likely undecorated varieties of Cayo Unslipped, while the third is likely from a Cayo Unslipped: Cayo Variety vessel.

Ce Scatter 5—Ceramic Scatter 5 was located in a floor depression at the northern end of Chamber 3. Eleven sherds were collected from a scatter less than 1 m by 1 m. While the sherds were not cemented in place an accumulation of calcium carbonate on their surfaces, likely from the nearby active formations suggests that they have been resting in place for some time. Of these, seven sherds were considered diagnostic/semi-diagnostic. One sherd, is tentatively identified as belonging to a Socotz Striated: Variety Unspecified (White-appliquéd) restricted bowl or jar (Hermitage Complex, ca. AD 280 – AD 590).
The other six diagnostic sherds belong to a single restricted bowl or jar identified as Aguacate Orange: Privaccion Variety (Floral Park Complex, ca. AD 1 - AD 280). Together, the sherds recovered from this scatter represent a significant departure from the temporal span thus far identified within portions of Actun Neko proximate to Entrance 1.

Ce Scatter 7—Ceramic Scatter 7 was found along the southern wall of the passage between Chamber 6 and the opening of Entrance 2. The sherds were heavily fragmented, though obvious refits suggest possible damage due to travel through the passage. The scatter measured ~1 m east to west by 50 cm north to south. Only two (semi-)diagnostic sherds were recovered from this scatter, both of which are tentatively identified as representing Jocote Orange-brown: Jocote Variety vessels (perhaps the same vessel, Jenny Creek, ca. pre-300 BC).

Isolated Ce Finds 1-4—In addition to the more well-defined surface scatters so far discussed, a number of singular ceramic sherds were found in isolated contexts within the cave. Where identifiable, these fragments don’t appear to be derived from the larger scatters in the cave. While it was not certain whether these fragments were put in place in antiquity or in modern times or whether their presence is a result of phenomena such as flooding or human agency, their unique character suggests intentional placement in antiquity. Probing in the locations of the finds suggest that they are not associated with subsurface deposits.

Isolated Ce Find 1 was found covered in wet sediment in a short descending passage at the north end of Chamber 5. The passage chokes out and likely ends as a sump. Isolated Ce Find 2 was found at the midway point, next to the southern wall, of the south-west passage (which extends off Chamber 4). Both of these sherds, unfortunately, were unidentifiable body sherds. Isolated Ce Find 4 was found a short distance (~4 m) closer to Chamber 4 and consists of a Balanza Black: Variety Unspecified body sherd (Hermitage Complex, ca. AD 280 - AD 590). Finally, Isolated Ce Find 3, a rim sherd, was found in the small tunnel which passes below the ‘fountain’ formation in Chamber 5. It is
unslipped (or heavily eroded), and may be a sherd from a Cayo Unslipped jar (though this identification is extremely tenuous and runs counter to temporal expectations).

Shell Disc—As mentioned earlier, an inlaid shell disc was found in Actun Neko (Figure 6.9). By far, this constitutes the most impressive single find in the cave. Found at the terminus of the south-west passage, the disc was likely disturbed by rodent activity, which may account, in part, for some of the missing inlays. As these were not found upon more rigorous inspection, it seems likely that at least some of the inlays were purposefully removed by the ancient Maya, as a means of ritual breakage, prior to deposition.

An extended discussion of the shell disc by Christophe Helmke has previously been published (Morton et al. 2012). What follows are summarized comments on the iconography and preliminary assessment of its date. The disc is made of unidentified, white, marine shell and averages 5.7 cm diameter. Two holes are present on the obverse face, presumably for suspension as a pendant. Decorations include fine incising as well as deeper gouging to create sockets for inlays, that were, if the remaining inlays are any indication, in turn incised. The main figure inscribed into the disc is of a seated male facing to the left. The figure has a kilt and wears nose beads. His headdress, presumably made of cloth, is tied with a knot

Figure 6.9 - Shell disc from Actun Neko.
similar to examples noted from Uaxactun and Rio Azul (Stuart 2005:Fig. 109a) and Helmke suggests that the individual may be associated with the word *naʼat* ‘thinker, knower, wiseman’ as part of a title (see also Morán 1965:164). Only two inlays were recovered with the disc out of an original twelve to twenty-three as indicated by the gouging. The first, a rectangular piece of greenstone, incised to represent several bands of beads, is worn as a bracelet by the principle figure.

The figure also wears a masquette behind his back that is in turn depicted wearing a ‘Jester God’ or ‘Hunal’ type headdress with an *ajaw* sign. Helmke offers a couple of potential interpretations of this particular element: First, as noted by Schele and Looper (1996:94-95) and others (Grube and Martin 2001:II-9-11; Martin and Grube 2000:193; Stuart 2004a:136-137), the so-called ‘Foliated Ajaw,’ or ‘Three Leaves Ajaw,’ is known from the texts of Copan and Pusilha, and Stuart (2004a:136, Fig.7; 2004b:221) has suggested that the title is associated with the so-called ‘chi-Bent Kawak’ toponym, a locality in the Central Lowlands. Helmke notes that this is an apt, if tentative, connection for the Actun Neko shell disc given the previous interpretation of the knotted headdress worn by the principle figure. Alternatively, Helmke suggests “that the combination of ‘Jester God’ and *ajaw* sign are here used to indicate that the figure that was originally depicted was that of an ancestral king” (Morton et al. 2012:89).

Finally, the figure holds an offering in his hand that Helmke suggests depicts a ‘Jaguar God of the Underworld.’ The other remaining inlay, a red shell (likely *Spondylus* sp.) is affixed as part of the headdress of the offering.

Helmke was able to date the carving of the disc by its iconographic elements, in particular, the depiction of nose beads and the squared hand of the principle figure, both characteristic features of Early Classic art. The scalloped, trilobate, outline of the *ajaw* sign on the headdress to the masquette can be firmly dated to between AD 396 and AD 652 (c. 8.18.0.0.0 and 9.11.0.0.0).

Excavation in Actun Neko
Ce Scatter 6 was located in Chamber 6. The scatter covered an area of ~1.5 m by 1.5 m on the north end of the chamber. Sub-surface probing suggested that the scatter extended below surface and the dry matrix of eroded limestone and sandy sediment, as well as the chamber’s proximity to Entrance 2, made excavation conditions favourable. It was therefore decided to place a 3 m by 3 m excavation (a size that ensured total coverage of the chamber) within the chamber to test deposition depth and to recover a larger artifact sample. Excavated material was placed in bags and screened through ¼ inch mesh outside Entrance 2. Excavations were carried out by senior (returning) students from the BVAR fieldschool in my absence. The excavation was tied to survey datum 19 (see map), and was dug in two arbitrary levels. The western end of the excavation was defined by the tight squeeze into Entrance 2.

Surface Collection—Artifacts were first collected from the surface of the excavation area, the greatest concentration being found below the low overhang at the north end of the chamber. A total of 115 ceramic sherds were collected, most, heavily fragmented body sherds (the majority from restricted neck jars). Of these, only 7 proved diagnostic. The soft floor of the cave was heavily disturbed by recent rodent activity, the passage of people, and roots extending from Entrance 2. The overhang seems to have protected some artifacts from visitors to the cave; there were several large fragments and intact rims in this location.

Diagnostic sherds recovered from surface contexts are consistent with the Barton Ramie collection and span the Floral Park through Tiger Run complexes (ca. AD 1 - AD 680). These consist of one sherd from what has been tentatively identified as an Aguacate Orange: Variety Unspecified (Thick walled) restricted bowl or jar, three similarly restricted jar fragments identified as different varieties of Socotz Striated, two non-contiguous sherds from a flanged bowl that appears consistent in paste, surface finish, and general form with other examples from the Hermitage complex identified by Gifford.
(1976), and a rim sherd from what is likely a restricted bowl or jar identified as Macal Orange-red: Macal Variety. No other material classes were recovered.

Level 1—Level 1 was excavated to a maximum depth of 22 cm below surface (an average depth of 12 cm across the unit). The soft dry sediment yielded a total of 619 ceramic fragments of which 43 were diagnostic. Temporally, they run the gamut of complexes from Jenney Creek (before ca. 300 BC) through Spanish Lookout (ca. AD 880) and to the exclusion of Barton Creek. A possible sherd from a More Force Unslipped: Variety Unspecified (Gifford 1976:305) vessel may be present as well, though this identification should be taken as tenuous at best. In total diagnostic sherds account for at least thirteen individual vessels. Of these, five can be attributed to the Hermitage complex (ca. AD 280 - AD 590; varieties of Aguila Orange, Socotz Striated, Lucha Incised and Minanha Red). Three earlier outliers are associated with the Floral Park complex (Aguacate Orange: Variety Unspecified; likely part of the same vessel recovered from the surface) and the much earlier Jenney Creek complex (Jocote Orange-brown and Sayab Daub-striated). Similarly, three later outliers (not including the potential New Town sherd) are associated with the Tiger Run complex (Jones Camp Striated) and the Spanish Lookout complex (Rubber Camp Brown and Cayo Unslipped). A sherd from what may be a distinctively-spiked Miseria Appliquéd vessel was also identified (Bayal complex, equivalent to early facet New Town, ca. AD 820-920 [see Sabloff 1975:174; LeCount 1996:139]), though the paste is inconsistent with expectations. No other material classes were recovered from these excavations.

Level 2—Due to time constraints, Level 2, was only excavated as a 3 cm level. Nonetheless, a total of 294 ceramic fragments were recovered. Of these, only eight were diagnostic, representing 6 vessels. As in the level above, the best represented complex is Hermitage with at least four distinct vessels (Aguila Orange, Minanha Red, and Socotz

Note that the rim profile of this vessel is unique and highly conspicuous (no other sherds were found in Actun Neko). Rim form appears most similar to some items dating to a slightly later period in Pendergast’s (1979) Altun Ha volume.
Striated). The sherds of Aguila Orange and Minanha Red may very well be fragments of the vessels of these types already recovered from Level 1, however, a comparison of orifices, reveals that at least two Socotz Striated vessels are represented by this assemblage—rim sherds from Level 1 measured 22 cm diameter, while that recovered from Level 2 is considerably narrower at 10 cm diameter. Singular sherds of Mount Maloney Black (Spanish Lookout complex) and Miseria Appliquéd (based on paste similarities with that recovered in Level 1, but see More Force varieties as well) were also recovered. No other material classes were recovered from these excavations.

Archaeological Summary and Discussion: Actun Neko

A number of interesting patterns emerge when we look at the spatio-temporal distribution of materials within Actun Neko that shed light on the particular ways that the ancient Maya used this cave. First, of all the caves so far discussed, Actun Neko exhibits materials representing by far the greatest time span (Jenney Creek through New Town, excluding Barton Creek complexes; pre-300 BC and AD 1 - AD 920; Figure 6.10).

However, these materials are not distributed evenly through the cave, but rather indicate a strong temporal division in its use, suggesting a shift in focus over time including Middle Formative and Early Classic components.

Figure 6.10 - Ceramic frequencies by period in Actun Neko. Saturated colours represent surface finds; faded colours represent excavated finds.
at Entrance 2 and Late Classic components at both entrances (Figure 6.11). Material recovered from the central portions of the cave, in contrast, appear to date primarily to the terminal portions of the Early Classic—the shell disc, isolated sherd of Balanza Black, and the Socotz Striated bowl or jar yield a comfortable mean date of ca. AD 465. With only limited material evidence for area use overlap in the intervening chambers it appears that Actun Neko may have functioned primarily, not as one cave, but as two distinct loci. This observation stands as a yet poorly understood quirk of the cave, particularly as both entrances lie within close proximity to Caves Branch Rockshelter 4, a site that was the focus of ritual activity from the Proto-Classic through Terminal Classic (Hardy 2009:111).

Second, individual scatters show remarkable integrity in their assemblages, with no evidence for the (re)distribution of materials in more than one location within the cave. For instance, while both Scatters 2 and 5 include sherds that appear inconsistent with the associated dates of other materials present (in both cases sherds of Aguacate-Orange), they are clearly derived from different vessels. Likewise, neither of these can be associated with the Aguacate-Orange sherds recovered from Chamber 6. The only refits observed within the Actun Neko assemblage occur within individual scatters.

Third, while throughout the cave, the artifact assemblage is highly fragmented, vessels found at Entrance 2/Chamber 6 are, for the most part, far more complete than those encountered elsewhere. It appears that whole, or nearly whole vessels were deposited in the relatively restricted Chamber 6, perhaps shattered in place, resulting in a much denser, thickly layered build-up of cultural material. The highly fragmented nature of the deposit in this case may largely be an unintentional consequence of repeated use of these particularly restricted spaces over several hundred years. Digby (1958, cited in Thompson 2005 [1975]:xviii) similarly interprets the ceramic assemblage of Las Cuevas, Belize, in this light. In contrast, the deposits from Entrance 1/Chamber 1 and elsewhere in the cave, are more in line with the pattern of (re)distribution noted in both CBR Cave and AC Cave in that they consist of highly fragmented assemblages of individual sherds.
Figure 6.11 - Ceramic scatters by complex.
or smaller portions of vessels in surface scatters. Despite these differences, it is important to note that no complete vessels were identified within Actun Neko.

So what is going on? It seems likely that the assemblage from Actun Neko is the result of a limited number of distinct depositional patterns. The first includes the introduction of individual objects, or fragments of objects, into the cavescape from elsewhere. It seems clear that these object were broken, defaced, or otherwise terminated at a location external to Actun Neko. Likely examples of this practice include the isolated sherds encountered in the central portions of the cave (Isolated Ce Finds 1-4), as well as the shell disc located in the south-west passage. The isolated contexts of these sherds (in dead-end passages, restricted sumps, and below elaborate flowstone formations reinforce the singular nature of their deposition. That auditory contact can be made with the adjacent CBR 4 at the end of the navigable portions of the south-west passage, the very place where the shell disc was recovered remains an intriguing, if difficult to interpret observation. The presence of sherds within larger scatters (Scatters 2 and 5) that are conspicuous for their divergent temporal associations may also be the product of this pattern. Accepting this, then these sherds may also provide evidence that this behaviour need not have used only ‘new’ or event-specific materials, but rather may have made use of convenient or significant items initially deposited at other locales. Which seems more likely? That an individual sherd from the proto-Classic period would serve as a focus for more extensive deposition several hundred years later during the late-Early and Late Classic, though clearly not everywhere in the cave. Or that a repurposed proto-Classic sherd would find itself deposited as part of a larger late-Early and Late Classic ritual, or in sympathy to a location habitually used during these periods. Given this behaviour, it is similarly possible that, as suggested for AC Cave, material initially deposited in Actun Neko may have been subsequently removed to be redistributed in other contexts. Perhaps the Aguacate Orange: Privacion Variety vessel found in Scatter 5

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60 Toward the end of the 2007 field season, while mapping in this portion of Actun Neko alone, I heard eerie and indistinct voices echoing quietly through the cave. It gave me the willies. One could easily image the incessant beat of drums and chanting in CBR 4 being channelled to this very special location in Actun Neko, distorted and haunting; what a perfect location for a special and private offering.
is a good candidate for this complementary act, as it is notably more complete than the majority of other vessels found in Actun Neko.

Another behaviour in evidence at Actun Neko resulted in the large deposit excavated from Chamber 6. In volume and content, this deposit is distinct from those noted previously. However, it may not be entirely divergent. While excavation in Chamber 6 was not exhaustive, it seems clear that the deposit, depth and volume aside, was similar to other deposits within Actun Neko in being heavily fragmented, being exclusively composed of ceramic materials, and in that it apparently contained few whole vessels, broken or otherwise. Where it primarily differs is in the presence of a wide range of ceramic types representing an equally wide temporal range and in what appears to be heavily mixed contexts; there appears to be no temporal integrity present in the excavated assemblage. While the soft matrix of Chamber 6 allows for the possibility that sherds may have moved vertically—particularly given the restricted space and entrance, making the avoidance of previously deposited materials while entering, exiting, or moving around in the chamber, unlikely—the pervasiveness of this mixing rather suggests that the assemblage was deposited over a relatively restricted span of time, during the later parts of the Late/Terminal Classic, or perhaps the Early Post Classic as a mixed deposit. The deposit itself puts one strongly in mind of the ceramic ‘dumps’ noted by Thompson near Pusilha (Thompson 2005 [1975]:xxxix) and Pendergast at Actun Balam (Pendergast 1969), though clearly the morphological characteristics of Actun Neko differ considerably from either of these others. The absence of other artifact classes, charcoal deposits (the restricted entrance cuts off most natural light to the chamber, making artificial light necessary), and more significantly the absence of smoke clouding or charring on either the cave surfaces or vessel sherds, supports this analogy; one would expect any or all of these other signs to be present in the case of protracted, station-based ritual activities in this tight space. Additionally, Entrance 2 is currently half-blocked by large stones. Initially interpreted as natural, the presence of similar stones scattered down the slope below the entrance allows for the possibility that this entrance had been sealed.
at some point in antiquity; an act consistent with the deposition of a ritual offering (see TCU s.08, Chapter Eight).

Actun Neko is also notable for what it lacks. Contrary to preliminary interpretations previously published (Morton et al. 2012), there is little evidence for the periodic cleaning of ritual spaces as noted in CBR Cave, Actun Tunichil Mucnal, Cuychen, etc. (see Brady et al. 2009:55-56; Brown 2004:36; Helmke et al. 2012, MacLeod and Puleston 1978:72; Vogt 1976:102). While linear deposits adjacent to chamber walls are present (see Scatters 2 and 3), if indeed Chamber 1 was used in station-based rituals one would expect cleaning activities to result in contiguous sherds from individual vessels being found in more than one scatter, likely against both walls. The possibility should be entertained that cleaning activities could result in such internally coherent assemblages by ‘sweeping’ in only one direction. However, no other material classes are associated with these assemblages, and nor is there significant evidence for in situ burning. It seems that the ceramic sherds were deposited, themselves, as offerings rather than in support of or containing other offerings.

Closing Remarks

The three caves discussed thus far are remarkable, not only for their diversity of form, but for their apparent variability in use. In both respects they differ markedly from Actun Lubul Ha, the subject of discussion in the next chapter. Yet, both the caves discussed in this chapter and the next share in common their location within the landscape and relative to other archaeological features and can profitably be discussed as a group according to this distinction. Thus, an extended summary/discussion of hinterland cave use will await the closing pages of Chapter Seven.
Actun Lubul Ha

Together, the three small hinterland caves discussed in the previous chapter (CBR Cave, AC Cave and Actun Neko) differ significantly from larger caves in the region in the limited number of activities that contributed to their assemblages. Certainly, the range of activities discussed in Chapters Three, Four, and Five are so far only minimally represented. In comparison, Actun Lubul Ha is in an entirely different league altogether. Actun Lubul Ha (LBH, aka “Waterfall Cave”; Figure 7.1), is a large river cave in the Caves Branch River Valley containing significant archaeological deposits. The cave is registered with the Belizean Institute of Archaeology, has been the subject of sporadic academic research since the late 1970s (Graham et al. 1980; Helmke 1999, 2000; Miller 1981a, 1981b) and continues to serve as a popular and well-trafficked tourist attraction. Field investigations at Lubul Ha were conducted during the inaugural 2009 field season of the CBAS project by a crew led by the author and including students associated with the CBAS field school.

Location and Description

As discussed in the introductory chapter to this monograph, Actun Lubul Ha is one of two major allogenic sources of input to the Caves Branch River (the other being Actun Chek; Miller 1981b:3). The karst is sharply delineated in this region, being bound on the south at 200-300 m elevation by the Northern Boundary Fault, and on the north by the abrupt end of the Cretaceous limestone in hills 30 m or more in height at an elevation of 40 m.a.s.l. (Miller 1981b). Lubul Ha is located above the valley bottom on the western side of the Caves Branch River Valley. This area, south of the Hummingbird highway, is known for a number of important cave sites already introduced, including Petroglyph Cave (Reents-Budet 1980; Reents-Budet and MacLeod 1997), and Footprint Cave (Graham et al. 1980).
As the cave had been previously surveyed by Miller, only those areas investigated archaeologically were re-surveyed, and in greater detail. At a scale of 1:100, the cave’s features were recorded in plan and profile views punctuated by appropriate cross-sections. Baselines were oriented, as practicality allowed, with the long dimension of
each chamber. These baselines were not level, and their inclination and bearing were recorded. Using a Leica Disto™, measurements were then taken to the left, right, above, and below the baseline at half-meter intervals. This data was recorded in tabular form and plotted to graph within the cave to ensure accurate plots and to identify errors in context. Details of the cave environment were recorded on the plan view at this time. The locations of features of archaeological significance were secured at ad hoc intervals projected perpendicularly along the baselines.

Permanent datums were established for the survey: A site datum in concrete was established outside the eastern entrance with additional permanent markers set in the two chambers surveyed (one in each; nails with aluminium tags). Cameron Howell integrated survey markers, using a Total Station. Errors introduced into the survey by inclined baselines were corrected digitally and the scale was adjusted to the CBAS standard of 1:50. The map presented in this manuscript was generated from these larger versions.

**Geomorphology**

Actun Lubul Ha is dominated by a low-lying river passage with both low-ceilinged phreatic sections and larger canyon-like vadose sections (the latter being particularly common upstream of the central, eponymous, waterfalls. The only known entrances to the cave lie ~2 km apart as the primary stream is subsumed and resurges to join the Caves Branch River (a vertical difference of ~80 m), however the cave is considerably larger, with a total surveyed length of 3750 m, and vertical range of 113 m. The cave was exhaustively explored and mapped by Thomas Miller and colleagues in the late 1970s and features prominently in Miller’s dissertation (1981b). Jaime Awe was the first archaeologist to visit the cave, accompanying Miller and two other colleagues in 1976 (Miller 1981a). The lowermost portions of the cave experience significant seasonal flooding. It is thus not surprising that the present archaeological assemblage is largely isolated to high relic passages well above the level affected by even the largest torrents, though isolated deposits are encountered on small ledges and in niches throughout its
dark zone. The cave is beautifully decorated with draperies, stalagmites/stalactites, and columns of dense white, yellow, pink and red flowstone.

The two chambers investigated within Lubul Ha are located ~500 m into the cave from the downstream entrance (Figure 7.2). Following a series of low crawls, restricted passages, and a considerable amount of swimming during the rainy season, one emerges into a large chamber. With a floor space estimated at ~10,000 m², dominated by a small mountain of rock fall, and with a ceiling soaring up to 60 m above, this is easily one of the largest chambers that I have ever entered. As should be expected, the cave is heavily decorated with flowstone, and this chamber specifically has been fancifully dubbed

![Figure 7.2 - Entrance to Actun Lubul Ha.](image)

61 The chamber is large enough to get lost in. In advance of the arrival of our fieldschool students in 2009, the senior staff visited the cave. After climbing atop the large pile of ceiling fall and searching for the entrance to a specific, small, antechamber that would serve as one of the foci of that year’s research (Operation 1), we became disoriented and spent more than an hour searching the margins of the pile to relocate our path back down to the river far below.
Cantzicnal Caan (the “Four Corners of the Sky”) for the four large columns seemingly supporting its vast ceiling. While artifacts were encountered amongst its breakdown (often complete, if broken, vessels), extensive survey of this chamber was not conducted. Both chambers of interest (perhaps more properly thought of as antechambers; Operations 1 and 2) extend off the Cantzicnal Caan.

Operation 1—Operation 1 is accessed via a well-worn path midway up the mountain of breakdown to the south of the river. As this path, worn and cut into the mud of the mountain, was present when the site was first reported in 1976 (Miller 1981a), it seems likely that our present access matches that of the ancient Maya. Indeed, this path leads directly to a large and heavily utilized antechamber accessed most easily via a small squeeze between several large boulders. Looking west from the relatively flat floor of this chamber, one is struck by the massive beehive of boulders and pillars of the Cantzicnal Caan (Figure 7.3).

Operation 1, itself extends east some 64 m, with a maximum width of ~20 m. The northern margin of the chamber (its walls, ceiling and floor) is heavily encrusted with flowstone (Figure 7.4). Along much of this margin, low ceilings force one to proceed at a stoop. While these formations are clearly still active, it appears that in most cases, buildup is slow and

Figure 7.3 - The Cantzicnal Caan ca. 1976 (photo courtesy of Jaime Awe).
Classic Period artifacts are clearly visible upon the surface if somewhat embedded. For the most part, the southern and eastern ends of the chamber are likewise bounded by natural cave wall, leaving the western edge hemmed in by large boulders and still in visual association with the larger Cantzienal Caan, beyond. The southern and western portions of the chamber are lower (and the ceiling higher), with clayey deposits reaching at least 50 cm depth. No significant depth was noted in matrices to the east and the presence of extensive desiccation cracks suggests that this area periodically dries. The boulder fall along the western margin of the chamber yields openings that don’t appear to have been utilized by the ancient Maya, the exception being a narrow, wet, and challenging passage at the southern-most edge of Operation 1 consisting of a gap between the natural cave wall and the fallen breakdown, extending well over 50 m.

Figure 7.4 - Looking to the east in Operation 1, Actun Lubul Ha.
Operation 2—Operation 2 is located on the northern margin of the Cantzicial Caan and is accessed via a steep climb of ~12 m up an active flowstone formation (nearly vertical; hand lines were utilized for safety). The presence of considerable quantities of mud along the eastern margins of this formation clearly reveals the most common route of access, at least in the present. This chamber is considerably smaller than Operation 1, extending a mere 31 m to the east with a maximum width of ~18 m. Ceiling height varies between 1.5 m along the north-eastern margin of the chamber to over 7 m toward the south and west. The chamber is defined by natural cave walls to the north, east, and south, with significant boulder and flowstone buildup to the north. The western margin is defined by the opening into the Cantzicial Caan and the drop to the river, below. A couple of small openings toward the south-east corner of the chamber likewise yield access to the river passage.

Archaeological Areas
In keeping with methods introduced by Holly Moyes, field objectives included: 1) exhaustive exploration of the areas of the cave known to contain archaeological materials; 2) detailed survey of these environs; and 3) in situ illustration, photography and description of the artifact assemblages and cultural features contained therein. With the exception of carbon samples and a small sherd from a Belize Modeled-Carved vessel recovered in 2010, no artifacts were removed from the cave context. Aluminum tags identify specific Lots within the cave. The inventory entailed the identification and definition of spatially discrete ‘areas,’ exhibiting concentrations of artifacts, manuports, and anthropogenic sediments. These areas primarily consisted of concentrated surface scatters of ceramic materials and isolated ceramic finds, hearth features, and modifications to the cave environment; their locations were recorded in plan view during the survey phase. Scatters, features, and isolated finds were designated numerically as they were encountered during the survey; in general, beginning at the rear of the chamber and increasing numerically as the survey progressed toward the entrance. Detailed drawings and photographs were made of those
deposits thought to represent primary contexts with more general attention paid to secondary contexts. These were treated as discrete units (32 primary and 3 secondary Lots associated with Operation 1, 4 primary and 10 secondary Lots associated with Operation 2). Lots within Operation 1 appear to cluster into two groups associated with the eastern and western portions of the chamber, while those within Operation 2 are strongly concentrated toward the relatively level western portions of the chamber. In-depth analysis of the assemblage from Lubul Ha confirms observations initially made by Rebecca Shelton: the majority of the assemblage appears to date predominantly to the Proto- and Early Classic periods with a much-reduced Late Classic component. Whether or not this perceived reduction in use is a product of the methodology employed or is ‘real’ is uncertain\textsuperscript{62}, though it is consistent with findings elsewhere in the valley (Actun Neko, also see report on Je’reftheel; Wrobel and Ebeling 2010). Additional identification provides evidence that utilization of Actun Lubul Ha may have much earlier beginnings than initially expected, in the Middle-Late Formative period, and with a short ‘hiatus’ in the middle of the Late Formative.

Operation 1, Lot 1—The easternmost deposit of artifacts (discrete or otherwise) located in Operation 1, Lot 1 consists of a dense concentration of light grey ash (~30 cm N-S by 40 cm E-W) surrounded by a considerable volume of charcoal spread over more than 1 m\textsuperscript{2}. Artifacts and manuports which constitute the associated assemblage consist entirely of relocated speleothems (perhaps stacked out of the way, rather than incorporated into the assemblage, as they show no evidence of direct contact with fire) and fifteen heavily fragmented ceramic sherds. Unfortunately, none of these were identifiable as to either type or form.

Operation 1, Lot 2—Lot 2 (\textbf{Figure 7.5}) is located ~2.5 m west and 2.5 m south of Lot 1. It similarly consists of a dense concentration of ash and more dispersed charcoal spread over a 50 cm (E-W) by 30 cm (N-S) area. Likewise, the artifacts and manuports that

\textsuperscript{62} It is possible that this reduction merely represents a preference for less-diagnostic plain vessels.
make up the assemblage consist exclusively of ceramic sherds and broken speleothems. However, in this case, three broken speleothems (each, about 20 cm tall) have been set vertically and vaguely equidistant around the concentration of ash, and are immediately reminiscent of the ‘three hearth stones’ that symbolically define all Maya hearths (but more on this later; Bassie-Sweet 2008:27; Hanks 1990:357). Curiously, the speleothems are not set in the ground, but merely upon it, and exhibit no direct evidence of burning, raising questions concerning their purpose and the integrity of their placement (as will be discussed later, many objects have moved within this cave, not only over the centuries, but just in the last couple of decades). Two additional observations seem relevant in this light. First, upon lifting the speleothems, it was noted that ash and charcoal lie below them (i.e. they were placed following the deposition of burnt materials). Second, they are very unstable and would have served poorly as supports of any kind. Other speleothems,
clearly broken from the chamber roof (evidenced by extensive blackening from smoke) are found both directly associated with Lot 2, and nearby, but unassociated in Secondary Lot 1. Seemingly, the three vertical speleothems were recovered from elsewhere in the cave (or in the immediate vicinity prior to extensive exposure to smoke).

Twelve heavily fragmented ceramic sherds were also found in this Lot. While most remain unidentifiable, two sherds appear to be derived from the same vessel, a large medially flanged bowl identified as San Antonio Golden-brown: San Antonio Variety (though note that its slip is closer in description to San Felipe Brown). This type is securely associated with the Mount Hope complex (ca. 100 BC - AD 280). The rim sherd is contiguous with those found in Lot 3, ~4.5 m west and 2.5 m south.

Operation 1, Lot 3—Lot 3, again, consists of a relatively dense concentration of light grey ash and a scatter of charcoal. Burned and smoke-damaged speleothems, in great numbers, border this Lot immediately to the east (Secondary Lot 1). Also, as in Lots 1 and 2, the only manuports or artifacts found in association with this ash concentration are broken speleothems (smoke damaged) and ceramic sherds. Three particularly large speleothems with flat breaks and ash adhering to their surfaces are centrally located within the Lot, suggesting that they may have once stood erect as do those in Lot 2. Only five ceramic sherds were encountered within this Lot, two of which mend with the rim sherd of San Antonio Golden-brown: San Antonio Variety found in Lot 2. A large fragment from an unidentified, restricted, wide-mouthed, coarse utilitarian vessel was also found centrally located within the Lot.

Operation 1, Lot 4—Lot 4 is similarly located in the eastern portion of the chamber, where low ceiling heights and the presence of large groupings of stalactites and stalagmites make normal, erect locomotion difficult. As noted in other Lots, Lot 4 consists of a dense concentration of light grey ash (~65 cm N-S by 65 cm E-W) with a more diffuse concentration of charcoal extending beyond. Again, three large speleothem fragments varying between 12 cm and 31 cm length (making one again question their
utility as a pot stand or other such support), currently stand erect at approximately equidistant positions within the ash concentration. While these fragments do appear to have been differentially exposed to heat, smoke and ash (note the colour gradient evident on the tallest example to the SE; Figure 7.6), as in the previously discussed Lots, these appear poorly balanced upon the ash deposit.

Lot 4 contains the most diverse assemblage of artifacts thus far noted within Lubul Ha. Resting neatly atop each speleothem are clusters of small artifacts, together, consisting of six small, unidentified ceramic sherds, three long clay beads (reds and browns), three obsidian blades, a rodent skull, a small pebble (perhaps from the gravel bed of the river chamber, below) and four delicate speleothems (helictites and soda straws). Unfortunately, this Lot exemplifies a consistent problem in the study of the cave context, mentioned previously and returned to below. That is, that context is often only as secure so far back as the previous visit (whether ancient or modern) and it is often difficult to identify where context may have been disturbed. For a well-trafficked tourist
cave like Lubul Ha (over twelve years in active service at the time of the fieldwork), the potential issues are significant. As should be evident from the photo, the hearth feature has been swept. In fact, this (and likely all) such features have been dismantled (the speleothems removed) and roughly/thoroughly excavated to recover artifacts hidden in the ash (thus making the prospect of acquiring a coherent carbon sample from multi-use contexts dubious). Compounding the issue, collections of artifacts have been gathered from elsewhere in the cave (usually, but not always from the immediate surrounding area) by the guides and concerned tourists in order to safeguard them from trampling or disturbance. In general, this results in a much more densely concentrated series of discrete deposits than was likely the case in antiquity and suggests that caution needs to be taken when drawing significance from specific associations. I’ll talk about this issue in Actun Lubul Ha in more detail, below, and in the context of specific Lots as the discussion progresses.

Operation 1, Lot 5—Lot 5 is located ~3 m north of Lot 4 and as is the norm, consists of a concentrated deposit of light grey ash (~50 cm N-S by 40 cm E-W) and dispersed charcoal scatter. The Lot is in close proximity to a concentration of large, broken, speleothems exhibiting the now-expected smoke damage, as well as to an active flowstone formation. As in previous Lots, three broken speleothems stand in the familiar “three hearthstone” formation. It is interesting to note that no other artifacts, of any type, are associated with this deposit, though clearly it too has been disturbed.

Operation 1, Lot 6—Approximately 4 m south of Lot 5, and slightly west, lies Lot 6, a concentration of light grey ash and charcoal spread over an area of ~60 cm (E-W) by 45 cm (N-S). One large, broken, speleothem fragment (smoke damaged and covered in ash) lies on the eastern margin of the scatter. A collection of five other, much smaller,

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63 Indeed, given the perceived issues with mixing, it was determined that running radio-carbon dates would not be cost-effective.
speleothem fragments lies to the south, with another small fragment to the north. No artifacts were found in association.

Operation 1, Lot 7—Lot 7 consists of a large (~190 cm N-S by 200 cm E-W) concentration of broken, smoke-damaged, speleothems ranging in width from narrow soda straws to sizeable fragments up to 20 cm diameter. Charcoal is scattered liberally through this collection, however the absence of an associated ash deposit suggests either that this represents a secondary deposit, or else that burning was carried out in some form of vessel or container. No artifacts were noted in this Lot.

Operation 1, Lot 8—Lot 8 consists of a dense concentration of broken speleothems (stalagmites, stalactites, and soda straws, most with evidence of smoke clouding), distributed amongst active flowstone formations (many of those left intact similarly show evidence of smoke damage). A dense concentration of light grey ash and large charcoal fragments (~25 cm E-W by 20 cm N-S) is located to the east of this collection. Twelve ceramic sherds, likely hailing from the same vessel are distributed amongst the speleothems and in notable separation from the hearth feature. A well-preserved rim sherd allows us to identify the vessel as a restricted necked bowl or jar form typed as Cocay Appliquéd: Cocay Variety (brown). Of those Lots so far discussed, this vessel provides the latest evidence of use, being attributable to the Hermitage complex (ca. AD 280 - AD 590 [Reents-Budet 1980:168-176]). The exterior of the vessel is heavily smeared with charcoal, indicating direct association with fire.

Operation 1, Lot 9—A dispersed scatter of light grey ash and large charcoal fragments (~50 cm E-W by 40 cm N-S) defines Lot 9. While no artifacts were found in association, it is worth noting that a collection of broken and uprooted speleothems, most with smoke damage, lies in a concentrated pile immediately to the north (perhaps moved to clear space?).
Operation 1, Lot 10—Lot 10, again, consists of a dense concentration of ash (~35 cm N-S by 35 cm E-W) with disperse charcoal and in direct association with three equidistant, erect, speleothems that appear smoke damaged and dusted with ash. Unlike other triadic groupings of speleothems within Lubul Ha, only the eastern-most speleothem is broken and set in place on the surface; the other two are natural growths in primary context. This hearth feature is crowded to the immediate south by a large pile of broken and smoke-damaged speleothems (covering ~60 cm N-S by 130 cm E-W). Flowstone still actively forms in this location and several pristine white stalagmites have formed upon this pile. No artifacts were found in association with this Lot.

Operation 1, Lot 11—Located toward the western margin of the eastern cluster of Lots (~17.5 m west of Lot 1), Lot 11 is perhaps the most formalized deposit in Operation 1 (Figure 7.7). The deposit is sharply delineated by several large speleothem fragments (up
to 25 cm in length) on the perimeter of a dense concentration of light grey ash and charcoal. Additional, smaller, speleothem fragments similarly bind this concentration along its perimeter.

Five large ceramic sherds (four rims and one unidentified body sherd) are included within this deposit. The four rim sherds are derived from three different vessels, including two restricted jar or bowl forms; one with a notably narrower mouth. The wider of the two vessels has been identified as Cocay Appliqué: Cocay Variety (brown) (Hermitage complex), while the narrower vessel remains unidentified. Additional fragments of the Cocay Appliqué vessel were located in a scatter (Secondary Lot 3) adjacent to the south wall of the chamber (some 15 m distant). According to two senior guides from the Caves Branch Jungle Lodge, these sherds have not been moved (at least, not in the 10 or more years immediately preceding the 2009 season). The remaining two rim sherds from Lot 11 are contiguous pieces from a single San Antonio Golden-brown: San Antonio Variety dish (a different vessel from that in Lots 2 and 3; Mount Hope complex). No other artifacts were identified.

Operation 1, Lot 12—Lot 12 again consists of a concentration of light grey ash and charcoal fragments (~30 cm N-S by 30 cm E-W) and associated broken speleothems. There appears to be little in the way of formal organization with regard to speleothem placement and no artifacts were present in the Lot.

Operation 1, Lot 13—Lot 13 consists of a skeletonized rodent, perhaps a small agouti. No other artifacts were found in association with these remains and there are no obvious signs of human intervention in either their disposition or condition. It seems unlikely that the rodent travelled to this location by itself from either of the two known entrances to the cave, suggesting either that it was introduced by humans, or that another (perhaps small) entrance to the cave remains undiscovered near Operation 1.
Operation 1, Lot 14—The only other non-human faunal remains encountered in Operation 1 are defined as Lot 14. Here, the skeletal remains of a small snake (perhaps 4-6 cm in diameter) were found encrusted in calcium carbonate at the base of the flowstone formation that borders the northern half of the chamber. No other artifacts were found in association.

Operation 1, Lot 15—Lot 15 (Figure 7.8) is defined by a small area of active, discoloured speleothems (dark where it spreads across the floor surface, perhaps indicating an underlying hearth) and a diffuse scattering of larger charcoal fragments. Broken speleothems are common in this area. However, the find that initially drew our attention to this otherwise vacant portion of the chamber is the presence of two bone needles (9 cm and 5 cm long). The shorter of the two needles is currently broken, though,
according to the guides this is a recent development; the tip of the shorter needle is missing. An unidentified rim sherd from a restricted bowl or vase was found in association.

Operation 1, Lot 16—A largely intact Cayo Unslipped: Variety Unspecified (red slipped) restricted neck jar, standing ~38 cm tall rests below a concentration of active stalactites (Figure 7.9). This vessel may have been terminated in two distinct ways, including the chipping of the rim (as noted by Helmke and colleagues at Cuychen and elsewhere [see Helmke 2009; Helmke et al. 2012]) and the piercing of its lower body with a pointed tool resulting in the familiar ‘kill hole’ similarly seen elsewhere. The remainder of the assemblage consists of the ubiquitous ceramic sherds, concentrations of ash and carbon, and fire and smoke damaged speleothem fragments seen elsewhere in Operation 1. Distributed broadly over an area measuring some 3.5 m (N-S) by 3 m (E-W), and around several columns, the deposit should perhaps be seen as two distinct Lots, one dominated by the aforementioned Cayo Unslipped vessel and the

Figure 7.9 - Becky at Operation 1, Lot 16. Note the bright dot behind (to the right) of the vessel where it shines through a kill hole in the vessel base.
other by a concentration of light grey ash and dispersed charcoal 1.5 m further north and 2 m further west.

Despite the water observed dripping in the near vicinity of the jar, it does not appear that water accumulates within, and charring on the bottom suggests that it may have served as a large *incensario* or hearth. Smoke damage on the speleothems above supports this supposition. The assemblage also includes at least nine other vessels, represented by more than twenty-five sherds, all of which appear to be restricted bowls or jars. Of the five identifiable types, the relatively intact Cayo Unslipped vessel is the most recent (Spanish Lookout complex; ca. AD 680 - AD 880). The other four vessels are associated with the earlier Hermitage (Socotz Striated: Variety Unspecified [white-appliquéd], Cocay Appliquéd: Cocay Variety [brown], and San Ignacio Red-on-brown: San Ignacio Variety; ca. AD 280 - AD590) and Mount Hope (San Antonio Golden-brown: San Antonio Variety; ca. 100 BC - AD 280) complexes. These vessels are highly fragmented (the San Ignacio Red-on-brown vessel is broken up into at least fifteen small sherds) and widely spread out across the Lot. In all cases, the recorded sherds only account for a small portion of each vessel. An additional four, unidentified, restricted bowls or jars complete the assemblage. No other artifacts were found in association.

Operation 1, Lot 17—Located ~4 m south of Lot 16, Lot 17 consists of a dense concentration of light grey ash (~50 cm N-S by 60 cm E-W) and more dispersed charcoal. Four large speleothem fragments (only one with heavy smoke-clouding) were found in direct association with this concentration, as was a large body sherd from an unidentified restricted bowl or jar. No other artifacts were found in association.

Operation 1, Lot 18—Lot 18 consists of a lenticular concentration of light grey ash (perhaps two closely spaced concentrations) and disbursed charcoal (~50 cm N-S by 100 cm E-W). No artifacts were found in association.
Operation 1, Lot 19—Lot 19 consists of a dense concentration of light grey ash and charcoal (~55 cm N-S by 45 cm E-W) beneath eight large and disorganized speleothem fragments, none of which evidence any particular exposure to smoke or charring. Other smaller concentrations of charcoal can be found in the immediate vicinity. Two unidentified body sherds, perhaps from the same vessel, are the only artifacts found in association.

Operation 1, Lot 20—Lot 20 consists of a disbursed scatter of charcoal amongst active flowstone formations. A concentrated deposit of light grey ash is associated with three large speleothem fragments to the south-east of the active formations. Dozens of sherds (rarely bigger than a BZ dollar coin) from at least two heavily fragmented vessels (unidentified) are scattered amongst these formations and in the immediate vicinity. No other artifacts were found in association.

Operation 1, Lot 21—Lot 21 consists of two distinct ash concentrations with disbursed charcoal. No artifacts or manuports were found in association. Unfortunately, this Lot lies in the centre of the main path through the chamber and has been heavily trodden upon, resulting in a disbursed and ill-defined extent to the hearths.

Operation 1, Lot 22—Lot 22 consists of a large turtle-backed metate resting atop an active flowstone formation (Figure 7.10). It is unclear whether its irregular form is a result of breakage or manufacture, however, that the ground contours conform to the irregular perimeter is suggestive of the latter. While the entire surface was wet, no buildup of calcium carbonate was noted on the fragment; it is possible that it was only lately moved to its present location. A small, unidentified, ceramic sherd was found atop, and is likely a recent addition. Red pigment appears to adhere to the concave surface of the metate. No other artifacts were found in association.
Operation 1, Lot 23—An irregular pit, ~50 cm N-S by 55 cm E-W, defines Lot 23. The pit was excavated in a low area of the chamber, adjacent to a large boulder and flowstone concentration against which a considerable amount of sediment has gathered. The pit is ~50 cm deep and no artifacts were found in association. While some excavated material can be identified against the rock surface to the immediate south-east of the pit, it seems clear that the majority of this sediment was removed or deposited elsewhere.

Operation 1, Lot 24—A second irregular pit, of similar proportions to Lot 23, defines Lot 24, and is located ~2.5 m to the north-west in similar association with a large boulder and flowstone formation. Linear grooves in the pit walls (Figure 7.11) may indicate that it was excavated using a narrow (thumb-sized or slightly larger) stick. The excavated material, a dense clay, is neither present in the immediate vicinity, nor has it been identified elsewhere in the cave. The Caves Branch guides have stated that both of these

Figure 7.10 - Operation 1, Lot 22.
excavations were present prior to the adoption of this cave as an active tourist destination. If we accept a pre-Columbian origin for these features, then they seem to indicate that the buildup of sediment in this chamber over the intervening centuries has been marginal. The majority of a broken Cocay Appliqué: Cocay Variety (brown) (Hermitage complex; eight sherds) restricted jar was recovered ~30 cm to the west of the pit. No other artifacts were found in association.

Operation 1, Lot 25—Lot 25 consists of a widely distributed scatter of charcoal and ash amongst fallen and smoke-clouded speleothems, with at least two concentrations separated by nearly 1 m. While the fallen speleothems are oriented in a consistent linear arrangement, it remains unclear whether this is intentional or not. At least two dozen (mostly heavily fragmented) sherds are scattered amongst these formations. While the rim of a restricted bowl or jar was recorded, it could not be identified. No other artifacts were found in association.

Operation 1, Lot 26—Lot 26 is another scatter of charcoal and ash associated with (and extending beyond to the north) a collection of rocks.
and speleothems. The ash and charcoal are widely distributed over an area measuring ~90 cm N-S by 100 cm E-W. No artifacts were found in association.

Operation 1, Lot 27—As seen time and again elsewhere within Actun Lubul Ha, Lot 27 is defined by a concentration of light grey ash, charcoal, and broken speleothems, many of which exhibit evidence of burning or smoke damage. In this case, a large number of recently broken speleothems (mostly soda straws) are included in the assemblage (perhaps inadvertent breakage from the passage of visitors to the cave). A small number of heavily fragmented ceramic sherds were noted within the assemblage, none of which were identifiable. No other artifacts were found in association.

Operation 1, Lot 28—Lot 28 can be defined as a concentration of charcoal measuring ~30 cm (N-S) by 20 cm (E-W). Broken soda straws associated with the deposit are likely recent and may be natural. No artifacts were found in association.

Operation 1, Lot 29—Lot 29 consists of a large and diverse scatter of ceramics atop a large boulder near the western entrance to the chamber. The associated assemblage includes twenty-three sherds attributable to at least four distinct, identifiable, vessels. Most of these are squarely attributable to the Hermitage complex (ca. AD 280 - AD 590), including restricted bowl or jar forms identifiable as Cocay Appliquéd: Cocay Variety (brown) (3 sherds), Socotz Striated: Variety Unspecified (white-appliquéd) (3 sherds), and San Ignacio Red-on-brown: San Ignacio Variety (1 sherd). Three sherds are attributable to an Actuncan Orange-Polychrome: Actuncan Variety dish. A single sherd from a Zibal Unslipped: Zibal Variety restricted bowl or jar, dateable to the following and short-lived Tiger Run complex (ca. AD 590 - AD 680) represents the only material exclusively associated with this period noted in Lubul Ha. None of these vessels present evidence of burning or smoke damage outside of their initial firing. The remaining twelve sherds are body sherds derived from unidentified vessels. No other artifacts were found in association.
Operation 1, Lot 30—Lot 30 is a grouping of four sherds, attributable to two vessels, one a striated shoe-shaped vessel (2 sherds) associated by Dorie Reents-Budet (1980:215) with the Hermitage through Spanish Lookout complexes (ca. AD 280 - AD 880). The other vessel (2 sherds) has been identified as a Cocay Appliquéd: Cocay Variety (brown) restricted bowl or jar. The vessel fragments are not in their original context, having been moved by the Caves Branch guides from an undetermined location in the chamber (likely from somewhere close to their current position) to safeguard them against trampling.

Perhaps the most unique find within Operation 1, the fragmented skull of an adult male (identified by Gabriel Wrobel), was similarly moved from an undetermined location and placed within the shoe-shaped vessel. As the skeletal remains are heavily coated in a layer of calcium carbonate (the associated sherds are free of this material), it seems clear that the skull has only recently come into this association. An isolated mandible was identified amongst the breakdown above the chamber to the west, heavily coated in calcium carbonate. The two may be related.

Operation 1, Lot 31—Lot 31 is a diffuse scatter of light grey ash and charcoal located to the north-east of Lot 18. Both broken and active speleothems are present, though it seems unlikely that their disposal reflects human agency. The only artifacts present are unidentified and highly fragmented body sherds (12 total).

Operation 1, Lot 32—Lot 32 is located ~42 m to the south of Operation 1, and was encountered by fieldschool students exploring during their lunch break. The Lot is accessed by a narrow passage between the mountain of debris dominating the Cantzicial Caan and the natural cave wall and made difficult by the presence of large boulders, slick mud (the passage extends off the lowest portion of Operation 1) and sharp flowstone. Subjectively, traversing this passage was perhaps the most unpleasant experience of my dissertation research, and yet, at the end of this ordeal is perhaps the most precious object found within Actun Lubul Ha. Found atop a boulder, and spilling into a small opening
between others, Jenna James (Figure 7.12) identified the skeletal remains of an 18-month-old child based on dental eruption. There is no evidence of trauma or pathology on these remains.

Operation 1, Secondary Lots 1, 2 and 3—Three disbursed scatters of ceramics, charcoal, and broken speleothems are collected along the southern margins of Operation 1, in areas where extensive speleothem formation and drastically lowered ceilings prohibit both casual traffic and the use of these locations for station-based ritual activities. The near absence of rim fragments (with the notable exception of the large fragment of Cocay Appliquéd vessel in Secondary Lot 3, discussed earlier), the heavily fragmented nature of the deposit, and the seemingly random distribution of its contents in general suggest that these represent secondary deposits. While largely unidentifiable, specific slipped or well-fired sherds are recognizably similar to many located elsewhere in Operation 1.

Figure 7.12 - Operation 1, Lot 32.
Operation 2, Lot 1—Lot 1 consists of a scatter of highly fragmented ceramics, associated with ash, charcoal, and perhaps architectural elaboration on the very western edge of the chamber adjacent to the sharp drop to the river passage below. Unfortunately, of the two dozen or so sherds identified as part of Lot 1, no diagnostics were noted, and neither were other artifacts present. The conspicuous presence of small stacks of sherds near the edge may suggest that at least some of these artifacts were deposited relatively recently: as noted at other tourist caves, such as Actun Tunichil Mucnal and Actun Chapat, both in Belize, visitors often pick up ceramic sherds and other artifacts as they travel through the cave and these may be left behind when they are caught by watchful guides, or where the use of both hands is necessary (as during the descent to the river). A particularly interesting characteristic of Operation 2 is the presence of what may be a roughly constructed terrace face at the point of access to the chamber (Figure 7.13). I’ll discuss this feature in more detail, below.

Figure 7.13 - Platform edge at Operation 2, Lot 1.
Operation 2, Lot 2—Lot 2 consists of a dense concentration of broken ceramics resting atop a collection of large boulders along the south-western margin of Operation 2. A concentration of charcoal and ash lies adjacent to a large flowstone boulder ~50 cm to the east. Given patterns of redeposition noted in Operation 1, it seems likely that the ceramics associated with this Lot were placed here relatively recently to safeguard them from trampling. Perhaps they were originally associated with this nearby concentration of ash and charcoal? A single obsidian blade is also included in this assemblage.

Of the seventy-seven sherds included in Lot 2, fourteen are derived from identified types, including two different restricted bowls or jars typed as Cocay Appliqué: Cocay Variety (brown), an open bowl that conforms in slip and paste to a special find at Barton Ramie (Special: Orange and brown [Gifford 1976:312]), three Lucha Incised: Variety Unspecified bowls (two open, one restricted), a single San Ignacio Red-on-brown: San Ignacio Variety dish, and perhaps the most spectacular vessel found in Lubul Ha, a Belize Modeled-carved vase. The slow disappearance of this last vessel highlights the fragile nature of the cave context: At the time of fieldwork, only three sherds from this vessel were present and over the intervening years one of these was ultimately removed as part of the graduate research of Carmen Ting and another has been removed by person(s) unknown. Christophe Helmke (personal communication, 2010) noted that nearly half a vessel was once present within this cave; while it is likely that this vessel, because of its uniqueness and beauty would be of particular interest to the casual souvenir hunter, the loss of material is nonetheless staggering. At least four other un-typed vessels make up the remainder of the assemblage, two of which can be identified as restricted bowls or jars (it is likely that the remaining two are of similar form). With the exception of the Belize Modeled-carved vase, which dates to the Terminal-to-Post Classic transition, all of the typed vessels can be associated with the Hermitage complex at Barton Ramie (ca. AD 280 - AD 590).
Operation 2, Lot 3—A concentration of eleven ceramic sherds attributable to a minimum of three identifiable vessels and lying ~25 cm to the east of a concentration of light grey ash and broken speleothems, defines this Lot (Figure 7.14). The three vessels all date to the Hermitage complex at Barton Ramie and include a single Cocay Appliqué: Cocay Variety (brown) restricted mouth bowl or jar, a single Dos Hermanos Red: Variety Unspecified restricted mouth bowl or jar, and a somewhat unusual jar or vase identified as Santa Teresa Incised: Santa Teresa Variety. Had its base not been present, this last vessel would likely have been interpreted as a pyriform vessel, a form considered as a horizon marker for the New Town complex (Gifford 1976:289), however, while cemented to the floor by calcium carbonate, it seems clear that this vessel expands at the shoulder from a relatively narrow base and more closely conforms to expectations for Santa Teresa Incised (if somewhat more heavily decorated). No other artifacts were found in association.

Figure 7.14 - Leah drawing at Operation 2, Lot 3.
Operation 2, Lot 4—Eight sherds, representing two restricted bowls or jars (one Cocay Appliquéd: Cocay Variety [brown], and another vessel of indeterminate type) were found distributed among a natural pile of boulders toward the south-western portion of the chamber. A concentration of charcoal is similarly found in association. No other artifacts were found in association.

Operation 2, Secondary Lots 1 - 10—Distributed in large, and seemingly disorganized scatters amongst boulders and in particular along the chamber’s southern margin, are a large number of ceramic fragments; forty-two diagnostic sherds are counted among these. With the exception of a possible Sayab Daub-striated: Sayab Variety (Jenney Creek complex [late facet]; s.7) bowl or jar and an open dish or bowl typed as San Antonio Golden-brown: San Antonio Variety (Mount Hope complex; s.4), the rest of this material, where identifiable, can be associated firmly with the Hermitage complex. This temporal uniformity is reflective of a very limited variety of represented types, indeed, only three identifiable types are represented in these large assemblages (Cocay Appliquéd: Cocay Variety, Actuncan Orange-Polychrome: Actuncan Variety, and San Ignacio Red-on-brown: San Ignacio Variety). With the exception of an Actuncan Orange-Polychrome bowl, all identified vessels appear to be restricted bowls or jars. While it might be expected that this limited variability reflects the wide distribution of a limited number of vessels, such does not appear to be the case: in addition to the single San Ignacio Red-on-brown and single Actuncan Orange-Polychrome vessels, at least fourteen distinct Cocay Appliquéd vessels collectively constitute this assemblage. And yet, across Operation 2, only two complete vessel rims (both from Cocay Appliquéd vessels) seem to be present, all other vessels within this space being represented by one or several sherds, and never combining to form an entire vessel. One final, striking, feature of Secondary Lots 1 - 10 that is worthy of particular note is the complete absence of any artifact type excepting ceramics. At least nine other scatters were noted amongst the rocks of the chamber, however, these did not yield any diagnostic materials.
Archaeological Summary and Discussion: Actun Lubul Ha

Spatial/Temporal Distribution—The vast majority of material encountered within Actun Lubul Ha conforms to a relatively restricted span of time (Figure 7.15) associated predominantly with the Hermitage complex (ca. AD 280 - AD 590), though several outliers are present in both Operations 1 and 2, expanding the period represented from the Jenney Creek complex through the Spanish Lookout complex (ca. 600 BC - AD 880). There is a notable gap during the Barton Creek complex (ca. 300 BC - 100 BC). Such a description, however, belies the minimal presence of these outliers: while dozens of vessels attributable to the Hermitage complex are present, represented by at least seven distinct types (Socotz Striated, Santa Teresa Incised, San Ignacio Red-on-brown, Lucha Incised, Dos Hermanos Red, Actuncan Orange-Polychrome, and Cocay Appliquéd), minimally, nine vessels are associated with the rest of this span, including a single Sayab Daub-striated bowl or jar (Jenney Creek), two San Antonio Golden-brown bowls and another jar of the same type (Mount Hope), two Zibal Unslipped bowls or jars (Tiger Run), a single Cayo Unslipped jar (Spanish Lookout), and a single Belize
Modeled-Carved vase attributed by Helmke and others to the Terminal Classic-to-Post Classic transition (Helmke et al. 1998). It is interesting that, with the exception of the large Cayo Unslipped jar found in Op 1, Lot 16, the remainder of these temporal outliers are only represented by one or two sherds, a pattern by now well-established within the cave context of the Caves Branch River Valley.

Within Lubul Ha, these outliers also provide the first indication of the fragmentation, separation, and movement of objects within the cave, not only within chambers, but between discrete areas. As noted in the Lot descriptions above, refitting fragments of a San Antonio Golden-brown vessel were found in both Lots 2 and 3 of Operation 1. Due to their close physical proximity (less than 4 m apart) and the attested movement of objects within this chamber over the past several decades, it is possible that this movement is recent. What is harder to explain as the product of mere chance or post-depositional taphonomy are the square-flanged bowl fragments (also identified as San Antonio Golden-brown) found widely distributed in Operation 1, Lot 11, and Operation 2, Secondary Lot 4. While these sherds do not directly mend, their consistent form, dimensions, paste and slip along with their conspicuous and minimal presence in the cave as a whole makes their origins as fragments of the same vessel possible, if not likely. In contrast, the most common type encountered within Lubul Ha, the course, restricted bowls or jars of Cocay Appliquéd (n=24) demonstrate remarkable integrity in their distribution, with only one demonstrable example of a single fragmented vessel being distributed amongst more than one discrete context (contiguous sherds being found in both Operation 1, Lot 11 and Secondary Lot 3). This being said, the majority of Hermitage complex vessels are, much like those temporal outliers discussed above, similarly represented by only one or two (often non-contiguous) sherds each.

Thus, in broad strokes, the temporal-spatial distribution of ceramics within Lubul Ha is relatively consistent and static and as in those other caves previously discussed appears dominated by incomplete vessels, either as part of initial depositional processes or later, extensive and systematic, cultural transformations. However, unlike the previous caves thus far addressed through my primary research, Lubul Ha demonstrates
considerable variation in artifact and feature distribution if one considers the context with some subtlety. To begin, in Operation 1, it is worth noting that discrete Lots are found almost exclusively atop the broad flowstone formation that dominates the walking surface along the northern margin of the chamber. Moreover, these hearths seem to fall neatly into two distinct clusters within Operation 1. There are few spatial restriction that would have prevented the use of middle areas; ceiling height is not radically different from those areas further east, and the flowstone offers considerable space. Thus, it is likely that this clustering represents a conscious choice, perhaps related to the specific requirements of the ritual itself: while all activities occurring in the western cluster would have been visible to observers in the Cantzincaal Cana, a natural amphitheatre if there ever was one, due to the lowering of the ceiling as one progresses east and the presence of both large columns and masses of hanging stalactites, the activities occurring in the eastern cluster would have been conducted out of site. Even from floor level within Operation 1, the spaces toward the eastern end of the chamber are visually obscured.

Spatial/Temporal Distribution: Variation Among Hearth Features—Among discrete Lots, hearth features (identified by concentrations of ash and charcoal) stand prominent. Conspicuous in both clusters of Operation 1, are hearth deposits with no associated artifacts (Lots 6, 9, 12, 18, 21, 26, and 28). While it is possible that these locations served as foci for acts that left no material traces, or that deposited materials were subsequently removed through any of several ritual acts previously discussed, including intentional redistribution of materials or cleaning episodes, it must be acknowledged that at least some fires associated with at least some of these discrete hearths may have been lit for the purposes of simple illumination. Suggestively, in the case of this rather functional use of hearth features, it bears recognition that the linear deposits of broken objects and scattered charcoal often associated with cleaning activities are found exclusively along the southern margin of the chamber and only within the eastern cluster; a considerable distance from the majority of these features. It seems improbable that objects ‘cleaned’ from the western cluster at the initiation of a new ritual cycle would be removed tens of
metres to the east; in the other examples discussed above and in Chapter Five, the location of secondary deposition was much more immediate. Given the relative visibility of the western cluster from the Cantzicial Caan, the idea that hearths may have been lit to foster observation of the activities occurring below seems compelling if not definitive.

Conspicuous as well are several hearths in the eastern cluster of Operation 1 (Lots 2, 3, 4, 5, and 10) that incorporate three formally placed speleothems. Above, it was suggested that these features may refer to the so-called ‘three hearth stones of creation.’ The idea is worth consideration: three hearth stones, or tenamaste, to this day remain a ubiquitous feature of traditional Mesoamerican homes and kitchens. Archaeological examples in domestic contexts demonstrate that such hearths are of great antiquity and in addition to their symbolic value, are largely functional. As noted above, however, those speleothems set within Lubul Ha are far too unstable and irregular in height to have functioned as a pot stand and thus, it is their symbolic value, and particularly within the cave context, that I’d like to key in on.

A trio of speleothems placed equidistant around the margins of a hearth is a configuration made familiar by several other caves of west-central Belize, including Cueva Migdalia and Actun Tunichil Munca (Helmke and Ishihara 2001:126-127; Moyes 2001). I have suggested elsewhere (Helmke et al. 2012:81) that a trio of ceramic vessels left intact within Cuychen, a cave in the upper Macal River Valley, likewise echoes such a hearth, with each vessel symbolically equating to a hearth stone. De Landa (Tozzer 1941:107) records that Maya travellers would carry incense on their journeys and a little dish to burn it in; “so that at night, wherever they came they erected three little stones, and placed on each several grains of incense; and in front they place three other flat stones, on which they threw incense, as they offered prayers to God whom they called Ek Chuah, that he would bring them back home again in safety.” Such tripartite shrines are a common feature of Maya ritual up to the present day and feature prominently in myths of the time of creation. Thompson (1930:123) recorded just such a myth from San Antonio
Village, Belize, in which a supernatural grandmother questions her grandson, Lord Kin, “what were the three hills with something flat on top?” The answer, of course, is the three hearthstones with a *comal* on top. ‘Three’ is an important number for the Maya for just this association. As noted in Chapter Four, I have seen recently-used tripartite shrines—consisting of a prayer book, an incense burner, and a bowl—at the site of Chan, near Succotz, Belize (*Figure 7.16*). In the community of Oskutzkab, the first three of five stones used to mark the field are said to be like the three hearthstones of the kitchen fire (Hanks 1990:357; see also Bassie-Sweet 2008:27). ‘Three’ is often associated with women as it reflects ‘woman’s work’ and the household.

*Figure 7.16 - Evidence of modern ritual activity at Chan, Belize (photo by M.M. Peuramaki-Brown).*

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64 San Antonio was founded by a group of Mopan Maya from the eastern Petén village of San Luis, that migrated to Belize in the late 19th century.
What may be more significant to the task of interpreting these hearth configurations within Actun Lubul Ha is the common and explicit association of period ending rituals and the “first three stones” place. On the Late Classic Quirigua Stela C, this place is referenced three times, first in reference to the time of creation and the initial setting of the first three stones in 13.0.0.0.0, 4 Ahau 8 Cumku (3114 BC [Zender 2005]), and twice again during period ending/renewal rituals at 9.1.0.0.0 (AD 455) and 9.17.5.0.0 (AD 775 [Bassie-Sweet 1996:136]). The period ending of 13.0.0.0.0 is also mentioned in the context of three hearthstones on Palenque’s Tablet of the Cross (Schele 1992:186; Freidel, Schele and Parker 1993). As discussed in Chapter Three, such period endings are often associated with the cave context. In perhaps the most convincing example, at the Cave of Joloniel (Jolja), Stone interprets a scene of two individuals facing one another across an altar marked with a 9 Ahau as some form of period-ending ritual (Stone 1995:88). Based on the style of the image, she dates its drawing to the Early Classic, specifically to the k’atun ending on 9.6.0.0.0, 9 Ahau 3 Uayeb (AD 554).

There are indications of a specific entanglement between period ending events recorded in inscriptions and the symbolic cave context; these related to the specific iconographic elements of the associated glyphs themselves. Glyph A10, from Quirigua Stela C, from the passage noted above and translated as the “first three hearthstones” place, is composed of two compounds: a chan ‘sky’ sign prefixed with T128, and a yax ‘first, blue/green’ sign along with three stacked KAWAK or TUN signs (Bassie-Sweet 1996:138). In other examples of the KAWAK and TUN glyphs (Figure 7.17), the overhang and ‘bunch of grapes’ stalactite discussed in terms of their appearance in cave-related glyphs in Chapter Three (Figure 3.3) are again prominent. Given this particular association, what better symbolic focus for rites referring to the hearthstones of creation could there be, particularly within the cave context itself, than stalactites and stalagmites? Serendipitously, the Classic place name for the ancestral couple’s home includes the

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65 All dates are calculated according to the GMT correlation.

66 Kelley’s [1980] interpretation of Chac sitting within a cenote in the Madrid Codex, or Bassie-Sweet’s [1991] interpretation of similar images in the Dresden Codex and the collocation of a script detailing a period ending with the image of a Uitz Monster on Copan Stela B.
The only three stone hearths in Actun Lubul Ha incorporating diagnostic materials are Lots 2 and 3 and seem to associate these Lots with a slightly earlier period of use than the prominent Hermitage component. Specifically, in both Lots 2 and 3, contiguous sherds from a single San Antonio Golden-brown: San Antonio Variety bowl, dating to the Mount Hope complex (ca. 100 BC - AD 280) were identified, along with fragments of at least one other coarse ware vessel (fragments from Lot 3 suggest that some of these may have derived from a restricted wide-mouthed bowl or jar). It is worth noting that, though its significance remains unclear, the only hearth deposit from Actun Lubul Ha that incorporates artifacts other than ceramics (excluding Operation 2, Lot 2 which includes an obsidian blade that may be a recent addition), is Operation 1, Lot 4, though it remains unclear which objects were found in direct association and which were recovered from elsewhere in the vicinity.

What is more common in both Operation 1 and 2 are concentrations of ash and charcoal with no evidence of formal elaboration and directly associated with fragments of vessels. Hearth features of this type (Operation 1, Lots 1, 8, 11, 16, 17, 19, 20, 25, 27, and 31; and Operation 2, Lots 1, 2, 3, and 4) appear to have served as foci for activities that incorporated a surprisingly narrow artifact assemblage, almost exclusively ceramic. In most cases, the associated vessels are heavily fragmented, coarse, and non-diagnostic, limiting our ability to examine either specific content or temporal context. Indeed, only five Lots from Operation 1 (Lots 8, 11, 16, 17, and 25) incorporate vessels of identifiable

Figure 7.17 - Glyphs related to the three hearthstones (a.i. T528, ii. T528hv, iii. T528, b.i. from Quirigua Stela C; redrawn from Bassie-Sweet 1996:138).
form, all incorporating restricted mouthed bowls or jars. And of these, only Lots 8, 11, and 16 include vessels of identifiable type.

Within this much-restricted assemblage, temporal divisions become apparent: The earliest material is restricted to Lots 11 and 16, in both cases consisting of single, but different, vessels typed as San Antonio Golden-brown (Mount Hope complex, ca. 100 BC - AD 280). As elsewhere in the cave, the following Hermitage complex (ca. AD 280 - AD 590) is well represented by single, but different, Cocay Appliquéd bowls or jars in Lots 8, 11, and 16, as well as single restricted Socotz Striated and San Ignacio Red-on-brown bowls or jars in Lot 16. The largely intact Cayo Unslipped jar included with Lot 16 (though perhaps it should be separated given its distance from the ash and charcoal of the hearth) is the only example of material exclusively attributable to the Spanish Lookout complex (ca. AD 680 - AD 880) within the assemblage. Treated in isolation, thus, the hearth assemblages tentatively suggest a shifting pattern of utilization within Operation 1, with earlier activities generally isolated to the less visible, more spatially restricted, eastern portions of the chamber and in some cases, incorporating ‘three stone hearths’, and with later activities moving out onto the broader, open, and more visible western portions. Temporal data from deposits exclusive of hearths seems to support this general pattern, or rather, given the relative paucity of securely dated materials and their spatial distribution, do not overtly refute it (Figure 7.18). Lots 24, 29, and 30 consist of concentrations of fragmented ceramics exclusive of ash or charcoal deposits. All three Lots lie in the western cluster of the chamber and exclusively contain (post-)Hermitage materials. While we know that the shoe-shaped vessel and Cocay Appliquéd jar associated with human remains in Lot 30 are out of context and only of recent association, it seems likely that they initially rested somewhere in close proximity to their current location. The discrete scatters from Operation 2 associated with a hearth feature (Lots 2, 3, and 4) conform to this latter period of use, containing ceramics predominantly associated with the Hermitage complex (with the exception of the Terminal-to-Post Classic Belize Modeled Carved vase in Lot 2).
Spatial/Temporal Distribution: Linear Scatters vs. Clusters—More prosaically, and as in AC Cave, CBR Cave, and Actun Neko, we can make a distinction within the Lubul Ha assemblage between linear deposits, and those highly concentrated Lots typically associated with hearth features, and perhaps more interestingly between linear scatters.
On the face of it, the linear scatters along the southern margins of both Operation 1 and Operation 2, and along natural ‘terrace’ edges amongst breakdown in Operation 2, seem similar, and conform to expected patterns of ‘cleaning’ noted elsewhere. However, on closer inspection, it seems probably that these deposits were formed in very different contexts. The principal differences between the linear scatters in Operation 1 and 2 are not related to form or location, but to content. Secondary Lots 1, 2, and 3 in Operation 1 are typically associated with inaccessible areas of heavy flowstone buildup, or in the case of Secondary Lot 3, with a muddy, perpetually wet area in the lowest portion of the chamber. The assemblages are dominated by non-differentiated body sherds—despite the large number of ceramics associated with these deposits, only one large sherd from a Cocay Appliquéd jar was identified—and large scatters of burnt and smoke-clouded speleothems and charcoal fragments. In contrast, the linear scatters in Operation 2 (Secondary Lots 1 - 8) include a high proportion of highly diagnostic rim sherds (Secondary Lot 8, for instance, consists of rim:body sherds at a ratio of 1:2.7) and large vessel fragments; in some cases, perhaps whole, if broken, vessels. These scatters do not contain the conspicuous burnt speleothems and charcoal noted in Operation 1. So what is going on here? To begin, in the presence of fragmented ceramics, burnt and broken speleothems, and scattered charcoal, the linear scatters in Operation 1 conform more closely with expectations of deposits formed through ritual ‘cleaning,’ in that the assemblage of artifacts, manuports and burnt remains closely reflect the assemblages associated with intact hearth deposits in the eastern cluster. One could easily envisage their development through the periodic ‘sweeping away’ of debris associated with previous ritual acts to the north at the start of a new ritual cycle (as at Cuychen [Helmke et al. 2012]). Perhaps, this practice would explain the presence of hearth deposits (Lots 5, 6, 9, and 10) with no associated artifacts in this portion of the chamber? Presumably, they would predominantly reflect materials associated with the eastern cluster, this assumption being based on proximity more than anything else. What is less clear is the near complete lack of rim fragments in these contexts. If they truly represent a palimpsest/accumulation of previous ritual acts within this portion of the chamber, then they should reflect in
content those previous acts. A conspicuous lack of rim sherds, thus, may suggest one (or multiple) of several possible depositional patterns: 1) that these deposits were not, in fact, created through periodic ritual cleaning episodes, 2) that the initial assemblage associated with ritual acts within Chamber 1, prior to cleaning, contained few rim sherds, or (as seems most likely) 3) that subsequent ritual acts involved the systematic removal of distinctive sherds from the confines of Operation 1, presumably, with the intention to redeposit these elsewhere. 67

One potential locale in which previously fragmented ceramics may have been (re)deposited is in Operation 2. It has already been noted that individual fragments of what may be a single San Antonio Golden-brown vessel were identified in both Operations 1 and 2. Given the rarity of complete vessels—determined conservatively by rim sherds, where 80% of a rim is equated with a complete vessel—it seems probable that the majority of these sherds were either fragmented prior to deposition directly within these scatters, or else that they were broken in situ and several sherds were subsequently removed. With the exception of a single sherd of what may be a Jenney Creek complex bowl or jar (s.7), and the aforementioned sherd of San Antonio Golden-brown (s.4), all identifiable sherds included within the extensive linear scatters of Operation 2 are attributable to the Hermitage complex and with the exception of sherds from a single Actuncan Orange-Polychrome vessel are of types represented elsewhere in cluster Lots within both Operations 1 and 2. The lack of charcoal associated with linear scatters in Operation 2, argues against their development through periodic cleaning activities.

Applying the methods of Christophe Helmke noted in Chapter Five (Helmke 2009:250-253), it was hoped that discrete sub-assemblages within Lubul Ha would yield a basic mean “activity set” that might be of use in subdividing these larger scatters, and

67 It is recognized that, in the absence of this material (either in Lubul Ha or elsewhere), this interpretation is tenuous. However, given the depositional context of the cave, the favourable conditions for preservation, and the thoroughness of the recording procedures implemented, it is difficult to imagine an alternative process that could account for the recorded assemblage beyond that of fragmentation and redistribution (either depositing previously fragmented remains within Lubul Ha, or removing them from Lubul Ha). Overlook Rockshelter (discussed in Chapter Five) and TCU s.08 (discussed in Chapter Eight) provide particularly strong evidence for this and the reader is referred to these examples.
thus to infer the number of individual acts that may have led to their creation. Unfortunately, no such mean activity set could be identified at Lubul Ha.

Other Types of Deposit—A number of unique deposits highlight a broader range of human activity within Lubul Ha. The presence of a large turtle-backed metate fragment within Lubul Ha (Lot 22), not associated with other materials and apparently with traces of red pigment still adhering to the concave surface, stands out as particularly singular. Metates or metate fragments, often though not always paired with manos, are a common find within the cave context. Polly Peterson (2006:83-85), through the course of her research in the Sibun Valley of Belize, compiled perhaps the most extensive summary of metates within the cave context: The most dramatic of such finds can unquestionably be attributed to the cave of Balankanche, in the Yucatán. Here, among the most extensive grouping of offerings found within the cave (Group III) was haphazardly piled a total of 232 miniature manos and metates (Andrews IV 1970:11). Strømsvik (1956:466) reported six paired manos and metates from Dzab-Na, a cave near Mayapan. In Guatemala, two fragments of metates were recovered from Naj Tunich (Brady 1989:303-305), two metates and 23 metate fragments were recovered through the course of the Petexbatún Regional Cave project (Brady et al. 1994:610, 612-613), and many fragments of metates were recovered from the Cueva de las Pinturas, south of Lake Petén Itzá (Brady et al. 1997:94). In Belize, too, complete metates and/or metate fragments were reported from Awe Cave (Digby 1958:274), Actun Kabal (Stone 1995:41), Eduardo Quiroz Cave (Pendergast 1971:68-69), and from an unnamed cave near Pusilhá (Joyce 1929:446; Joyce et al. 1928:344). In the Maya Mountains, Keith Prufer recorded the presence of metates in Altar Cab Pek, Toq’bil Roq’ikal Kab Pek, Mash Cave, Kulal Ka, and Poht’zil Cab Pek (Prufer 2002:294, 303, 320, 493, and 330). Closer to home, in the Roaring Creek River Valley, two fragments of metates were found in Actun Uayazba Kab (Ferguson 1999:123; Griffith 1998:58), three fragments were noted in Actun Yaxteel Ahau (Mirro et

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68 A Belizean friend related that his father would on occasion visit a cave in the upper Macal River Valley in which there was an abundance of manos and metates and remove them for use in their home.
al. 1999:20; Owen and Gibbs 1999:195; Roberts 1990:124-125), and others still in Actun Tunichil Mucnal (Griffith 1998:53; Moyes 2005:282-283; Roberts 1990:126). At Tunichil Mucnal, two complete *metates* were recovered from surface contexts just outside Entrance 1 (Helmke 2009:367). To the east, in the Sibun River Valley, Peterson (2006:84) collected three *metates* from Actun Ik, Pine Torch Rockshelter, and Actun Chanona, noted an additional six, and collected and returned one from Metate Cave. Within the Caves Branch River Valley itself, both an intact *metate* and a smaller fragment were noted at Petroglyph Cave (Reents-Budet and MacLeod 1997:69-70), and a similar fragment was collected from Caves Branch Cave (Palacio 1973:70, 118-119).

Despite their near ubiquity within the cave context, these objects have only rarely been subjected to functional analysis. More common has been their invocation as a symbol related to their role in maize processing and interpreted as evidence for rites of agricultural fertility and harvest, or in the preparation of *wah* (balls of maize dough) or ceremonial *tamales* (Brady 1995:34, Brady and Stone 1986:25; Brady et al. 1997:94; Reents-Budet and MacLeod 1997:70, 97-98; Smedra 2011:109; Stone 1995:41). Reents-Budet and MacLeod (1997:70) suggest that, due to the co-occurrence of both *metates* and *manos* within Petroglyph Cave, these were used in the ritualized production of foodstuffs. Smedra (2011:118) echoes this sentiment, interpreting the assemblage from Actun Yaxteel Ahau as evidence of food preparation and feasting. Brady suggests that, due to the small size of fragmented *metates*, many may not have had a functional purpose at all, or may have been used for grinding pigment (cited in Peterson 2006). Indeed, in the Cueva de los Quetzales, three *metate* fragments were clearly dropped down a chimney, indicating that they were offerings of some type rather than objects used within the cave itself (Brady and Rodas 1995:21). Andrews IV (1970:58) suggests that the miniatures at Chichen Itza were used for the processing of non-maize products, a suspicion that may prove to be the more accurate in the fulness of time. The only study to critically evaluate these interpretations is that of Polly Peterson. As part of her dissertation research, she

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69 Indeed, in the *Popol Vuh*, when the Hero Twins are ‘defeated’ by the Lords of Xibalba, their bones are ground upon a *metate* “like finely ground maize flour” before being cast into the river from whence they are eventually reborn (Christenson 2007:177-179).
analyzed pollen samples recovered from overturned *metates* (i.e. concave side down) from both Metate Cave and Actun Chanona (Peterson 2006:86). In neither case did she recover evidence for the use of these in the processing of maize, but rather, pollen represented a wide range of plant species (at least forty-four different taxa), including sea grape, *sapote*, *chechem*, and *ramón*. On the *metate* from Actun Chanona she additionally recovered evidence for the presence of chilli peppers (also found in Barton Creek Cave in association with pottery fragments [Morehart 2005:172]). From this data, she makes the suggestion that these *metates* were introduced into the cave context for the purposes of processing medicinal plants for ritual purposes (vs. ritual food preparation). Although the Lubul Ha *metate* was not subjected to a similar analysis, its exposed grinding surface making the preservation of paleo-botanical remains unlikely and the potential for post-depositional contamination high, the presence of red pigment on its grinding surface suggests that it, too, was not used exclusively in the processing of maize within the cave context. Indeed, we may question whether or not *metates* were ever used in this way within the cave. Perhaps we are too quick to cite symbolic ties to the *Popol Vuh* or other concepts? Perhaps, metates are simply a non-significant tool employed in the preparation of other ritual materials?

Another conspicuous activity that appears to have been conducted within Actun Lubul Ha, and notable for its perceived rarity rather than its prevalence, is the excavation of two holes, and presumably the harvesting and removal of associated sediments, within the deep red clays of Operation 1 (Lots 23 and 24). The harvesting of materials from caves was previously noted (Chapter Five) in the context of gypsum mining in the Yucatán (Mercer 2005 [1896]), the near-ubiquitous breakage and removal of speleothems (often, to be incorporated into surface architecture [Brady et al. 1997, 2005; Prufer 2002; Rissolo 2001]), and famously, the collection of ritually ‘pure’ water (*zuhuy ha* [Thompson 2005 [1975]:xv-xvii]). Arnold (1971:33) noted the mining of cave rock by Yucatecan potters for use as temper. In comparison, the excavation and harvesting of clay is rare, the notable exceptions being the excavation of red clays from the cave of

70 As noted, the excavated clay was not identified elsewhere in the cave.
Balankanche (Andrews IV 1970), and elsewhere (Hatt et al. 1953:21, cited in Thompson 2005 [1975]:xlII), and the excavation of white clays from the cenote of Tecoh (Shook 1955:289) among others (Smith 1954:222-223, 1971:110, cited in Brady and Rissolo 2006:472). At Balankanche, Andrews IV (1970:15) notes that “There were at least a dozen deep, artificially dug pits in the sealed chambers, all of ancient origin. Most of these were in deep beds of red clay, almost certainly used by the ancient potters to produce the characteristically deep red paste which helps to identify the slatewares of the Modified Florescent at Chichen Itza.” Whether or not this clay was used in the production of pottery is open to question. Recently, Brady and Rissolo (2006) have suggested that clays may have been removed for medicinal purposes. Smith (1954:223, 1971:110) suggested that such clays may have been used in the construction of houses. If “remoteness sanctifies space,” as Stone (1995:17) suggests, then “we would expect that soils, rocks, and minerals extracted (mined) from caves in the Maya area to be imbued with a special significance from the context from which they were collected” (Brady and Rissolo 2006:472). This does not, however, mean that mined materials were necessarily removed exclusively to surface contexts. Donald Slater (2013) has identified broken speleothems in a cave in central Yucatán as originating from another, as of yet unidentified, cave. Brady and Rissolo (2006:476) have suggested that red clays excavated from within the Cueva de las Pinturas were redeposited elsewhere in preparation of distinctly red floors against a background of black. Helmke and Wrobel (2012:77) suggest a similar intentional deposit and preparation of a floor within Je’ref theel. While no such floors were identified at Lubul Ha, the possibility that red clay was mined for this purpose remains. Associated ceramics included in Lot 24 may suggest that this activity occurred during the height of utilization of Lubul Ha, during the Hermitage complex (ca. AD 280 - AD 590).

It does appear that surfaces were prepared, and for lack of a better term, architecture constructed within Actun Lubul Ha. As described above, a series of hand and foot holds were noted during the first recorded modern visits to Lubul Ha. Cut into the thick mud, these ‘steps’ eased access to the upper breakdown of the Cantzicnal Caan and
Operation 1. The present steps, while presumably in the same location as those identified by Thomas Miller (1981a), have been re-cut to ease the passage of tourists visiting the cave.

On the opposite side of the river passage, at the south-west margin of Operation 2, we find an example of what may be more substantial architectural infrastructure. Above, this feature (associated with Operation 2, Lot 1) was described as “a roughly constructed terrace face at the point of access to the chamber.” The structure, if indeed it is constructed, appears to be made of large and irregular boulders and cobbles akin to those noted elsewhere in the chamber, and backfilled with loose earth presumably mined locally. This method of construction is not wholly alien to another clearly artificial platform in TCU s.08, discussed in the following chapter. The effect is the creation of a moderately flat area capable of accommodating several individuals, indeed, the only such flat space within Operation 2. In 2000, Josalyn Ferguson noted that “While architectural constructions in caves have been noted from caves across the Maya area, reports of their existence are far and few between” (Ferguson 2000:163). More than a decade later, Moyes (2012:95) expressed a similar sentiment when she lamented that, “there have been no contributions to this dialogue based on cave research, and no systematic study of architectural modifications in the cave environment.” This general lack of systematic studies of architecture within the cave context is surprising given the prevalence of construction within, and modification to, the cavescape. Among the earliest reports of cave use in the Maya area we find explicit, if passing, references to architecture: the discovery of a sacrificed deer and idols on an altar in a cave near Mani (Cogolludo 1957 [1688]:309; de Lizana 1633), a large ladder providing access to Xtacumbilxunan (Stephens 1963 [1843]:92-104), and the construction and use of hunting blinds in cave entrances throughout the Yucatán (at Actun Spukil, Actun Coyok, Actun Tzu-Zui, and Actun Lara [Mercer 2005 [1896]:22, 84, 129-130]) to name but a few. Benches, walls, stairs, raised platforms and terraces are ubiquitous in the cave context: the spectacular discovery of a network of intact ritual spaces within the long-known grotto of Balankanche, hidden for centuries behind a rock wall stands as a particularly dramatic
example (Andrews IV 1970:v). In Naj Tunich, Brady (1989) identified a series of speleothem and rock tombs, walls, and other small structures. Prufer (2002) noted others in southern Belize. Closer to home, within the present CBAS study area, Brady (2009b) has identified a large ‘viewing platform’ within the entrance to Midnight Terror Cave (~800 m of Tipan), and Allan Cobb and Brady (2009) have delineated carefully prepared pathways, terraces, and platforms within the main chamber. At Actun Tunichil Mucnal, Holley Moyes even identified a symbolic speleothem ‘bridge’ (~ 30 cm long; Moyes 2001:81). Personally, I have seen many more examples in addition: at Offering Cave, Actun Kabul, Wishing Well, and Santiago Cave (this latter cave being located off the road to Caracol, far to the south-west). Even the smallest caves may have been architecturally modified (e.g. TCU s.10; see above). Indeed, architecture within the cave context is so prevalent that an expanded discussion of this topic lies well outside the bounds of this present manuscript. Instead, the interested reader is directed to the works of Josalyn Ferguson (Actun Chapat [2000]), Holley Moyes (Las Cuevas [2012]) and Jenny Guerra (Guerra Ruis 2006), who have each made an explicit attempt to summarize and scrutinize this rich dataset. In the context of this dissertation, I am interested in how architecture within the cave environment supported, altered, or inhibited human activity within subterranean sites.

I had the opportunity to photograph particularly beautiful examples of terrace structures within The Lost World, a sinkhole and cave system ~2.5 km north of Actun Lubul Ha (Figure 7.19 and 7.20). In comparison, the terrace in Operation 2 (refer back to Figure 7.13) could be considered of marginal manufacture, at best. Indeed, while the stacking and fill of large boulders, cobbles, and pebbles, the resultant flat activity area created, the proximity of this feature to the drop-away edge of the chamber, and its contrast to the more heavily sloped chamber margin immediately to the north, collectively suggest that this represents a legitimate architectural feature, it must be acknowledged that these irregularly stacked stones may simply be the coincidental result of ceiling collapse. While no diagnostic artifacts were found in direct association with this structure, ceramics from the nearby Lot 2 date almost exclusively to the Hermitage.
complex (save for the Terminal-to-Postclassic Belize Modeled-Carved vase) and at the very least provide a *terminus post quem* for its construction. As the only hearth features within Operation 2 are in close association with this feature, it seems reasonable to suggest that its construction was intended to support such activities. The terrace may have additionally served to ease movement along the otherwise slippery and exposed western margin of the chamber, and if associated rites were intended to be viewed by an audience, would have allowed ritualists to more closely approach this edge, thus making their activities visible from either the river passage, below, or the Cantzichen Caan, opposite.

A final class of ritual act that has thus far only been touched upon in Lubul Ha, and indeed, in those caves discussed previously in this chapter, is sacrifice. As discussed at length in Chapter Five with regard to human remains found within the cave context, the concept of ‘sacrifice’ can be a difficult one to deal with. Nonetheless, it is apparent that sacrificial rites lay at the heart of much Maya ritual, particularly within the cave
context; in an animistic world, how else could one interpret the intentional destruction of objects to the supernatural, not least of which the large number of broken vessels discussed above, than as a sacrificial offering of sorts? A number of deposits within Lubul Ha may suggest alternative manifestations of this practice: of particular interest are a pair of bone needles recorded in Operation 1 (Lot 15). Reents-Budet and MacLeod (1997:96) identified similar objects within the Petroglyph Cave system, noting that “All the needles/awls found in BC I had been broken deliberately, presumably after they had been used for autosacrificial bloodletting, and then were left in the chamber cached in niches or placed near burials.” At Lubul Ha, it seems that the bone needles of Lot 15 were similarly cached away from other artifacts, however, they were not broken—the breakage of one of the needles/awls was apparently recent, the consequence of heavy tourist traffic—and unfortunately, the abundance of calcium carbonate currently cementing them to the cave floor makes more in-depth analysis impossible.

Other lines of evidence point toward sacrificial rites of one type or another. We know from both the ethnographic and iconographic records that self-mortification, or
autosacrifice, was a common theme in Mesoamerican ritual, and in Maya society may have been particularly associated with the elite class. A famous example of this type of act, drawn from the Classic period iconographic corpus, is depicted on Yaxchilan Lintel 24. On this monument, Lady Xoc draws a thorn/obsidian-spiked cord through her tongue. The bloody cord rests atop a pile of bark paper within an out-flaring dish before her. Presumably, the contents of this dish will be offered up in conflagration to a deity or to conjure a ‘vision serpent’ as seen manifested before Lady Wak Tuun on Yaxchilan Lintel 15. A number of scholars have suggested that autosacrifice was considered a sacred duty of the ruling class (Schele and Freidel 1990:89; Schele and Miller 1986), and thus, it should not be surprising to see this act depicted in the context of a wide variety of different events including heir designation and period ending rituals (D. Chase 1991; Schele and Miller 1986). In these contexts it has been hypothesized that pain and blood loss may have aided in inducing trances or visions, perhaps in combination with alcoholic or psychotropic substances (Schele and Miller 1986:175; Stross and Kerr 1990). In addition to the bone needles/awls discussed above, marine materials such as stingray spines, porcupine fish remains, cone shells and sea urchins, as well as a variety of sponges and corals, and obsidian blades have been suggested to have served as autosacrificial implements. Stingray spines, in particular, have been recovered from numerous burials and caches (Borhegyi 1961:283-284; D. Chase 1991; Coe 1959; Fitzsimmons et al. 2003; García Moll 2004; Healy 1992; Maxwell 1996, 2000; Miller and Taube 1993:46; Pendergast 1969; Schele and Miller 1986; Welsh 1988; Willey 1972), and obsidian blades are ubiquitous (D. Chase and Chase 1996; Hammond et al. 1975; Healy et al. 1998; Stemp et al. 2013). These implements are commonly encountered within the cave context as well in support of the long-accepted belief that autosacrifice was similarly a common, if not essential, aspect of much cave ritual. Awe and colleagues (Awe et al. 2005:227) have suggested that two slate monuments identified in the Stela Chamber of Actun Tunichil Mucnal were designed to represent such implements: Stela 1, with its scalloped edges has been interpreted as a stingray spine, while Stela 2, with its long parallel edges and pointed tip is thought to represent an obsidian blade. Both are
interpreted as conceptual bloodletters. In seeming support of this symbolic identification, two obsidian blades were found at the base of the monument. In a recent article, Helen Haines and colleagues (Haines et al. 2008:84) have questioned Maxwell’s (2000) suggestion that pain and localized poisoning through the use of toxic marine materials might also have been used to induce visions, and indeed, the use of these materials altogether for self-mortification, pointing out the 2:1 odds in favour of such practices resulting in necrosis of affected tissues (Haines et al. 2008). Recently, James Stemp and colleagues (Stemp et al. 2013) have similarly questioned the assumed use of obsidian found in cave contexts in autosacrificial rites. Examining the lithic assemblage from the Caves Branch Rockshelter, they note that bifacial edge damage, striations, and abrasive wear on obsidian blades clearly demonstrate that most were used for cutting, slicing, or sawing. Of these, 53.4% appear to have been used to process hard materials such as bone and wood, while 23.3% were employed in the prolonged processing of softer materials such as meat and fresh hide. The problem with identifying use-wear patterns indicative of autosacrifice are related to their presumably limited engagement in this activity and the relatively yielding nature of the flesh involved (lips, ears, tongue, or foreskin). Thus, the argument is contextual. While obsidian blades found in Operation 1, Lot 4 (n=3) and Operation 2, Lot 2 (n=1) may be present in the wake of autosacrificial acts—the three stone hearth, associations with period ending rites, and images of conjuring supernatural beings is particularly appealing in the case of Lot 4—the loss of context associated with both lots, as well as more than a decade of handling by visitors to the cave preclude the possibility of making definitive statements.

A final class of deposit within Lubul Ha that has already been discussed at length in terms of regional generalities (Chapter Five) is that of human osteological remains. The remains of only two individuals have been identified within Operations 1 and 2 at Lubul Ha, and though we know of a single adult mandible resting amongst the boulder breakdown of the Cantzicnal Caan, it is clear that the internment of human remains

71 Due to the lack of associated artifacts, features, or modifications, we can probably dismiss the snake and rodent remains (Operation 1, Lots 14 and 13) as being the product of non-human forces; perhaps a small opening to the surface exists that has yet to be found.
within Lubul Ha is of a distinctly different kind than those of local mortuary caves (i.e. Caves Branch Rockshelter, Sapodilla Rockshelter, Je’reftheel, or Actun Kabul). Of those remains found within Lubul Ha (Operation 1), we are able to gain only limited insight from those included within Lot 30. Beyond identifying this individual as an adult male, the removal of these remains from their original context and large number of missing elements limits our ability to make interpretations, though it seems clear that they were not deposited as part of broader mortuary activities within the cave.

The second individual, identified as an 18-month old child in primary context offers more for discussion even if the singular nature of the find precludes any kind of statistically relevant characterization. The question that primarily comes to mind is, “are these remains present through funerary or non-funerary (sacrifice) behaviour?” Looking back at Vera Tiesler’s (2007) list of traits associated with funerary and non-funerary behaviour in the Maya context (presented in Chapter Five; Table 5.1) and setting aside potential critiques regarding essentialization and modern western biases, are we able to categorize the behaviour that may have lain behind this deposit? A number of categories, such as “Biographic Profile,” “Predepositional Body Treatment,” “Postdepositional Manipulation,” and “Secondary Deposition” are irrelevant in this context, either because they represent stages of behaviour not applicable in this case (i.e. secondary deposition), or because the singular nature of the remains renders them meaningless (i.e. biographic profile). We are thus left to discuss “Form of Death,” “Predepositional Body Treatment,” and “Primary Deposition.” For the remains that constitute Lot 32, form of death could not be determined. While there are no signs of perimortem violence, other methods of premature dispatch, such as suffocation or poisoning, cannot be ruled out. Further, it does not appear that any particular treatment of the remains occurred prior to deposition, at least, none that are archaeologically recoverable. Thus, our primary insight into this

72 The question of ritual or non-ritual seems moot, as it is clear that this very young individual was interred deliberately by others.

73 Or, indeed, exposure, starvation, or death by dehydration. I’ll admit that the idea of a small child crying out in the dark, left to succumb to the harsh environment of the cave, disturbed my sleep during that first night after the discovery.
deposit is derived from the context itself. The remains are singular, alone, and thus lie outside expectations for ‘regular’ burial. Moreover, the particular association of the next nearest utilized space, Operation 1, is highly ritualized, and presumably semi-public (thus, lying outside expectations for ancestor veneration or other related rites74). As the remains have tumbled into a neighbouring crevice, we are able to say little regarding specific burial placement, however, the lack of associated grave goods is conspicuous, at least, when compared to ‘standard’ mortuary behaviour. In Chapter Five, I argued that this particular characteristic needs to be critically re-evaluated, particularly as it is clear that the vast majority of human remains found across the Maya area are not associated with grave goods. Are all of these individuals victims of sacrifice, or is this rather, the normal pattern of interment? In this case, there is no clear answer, though I would emphasize that the perceived division between sacrifice/offering and burial may be ours, rather than the ancient Maya’s. Given the extreme isolation of Lot 32, and the general rarity of human remains in the cave in general, it seems reasonable to suggest that the interment of these remains constitute a special case, perhaps sacrificial, likely an offering, but frustratingly opaque in its significance.

Hinterland Cave Use: Summary

The caves discussed in this and the previous chapter vary considerably in their morphological characteristics, from large river caves, or portions thereof (e.g. Actun Lubul Ha, AC Cave), to those of more modest proportion (e.g. CBR Cave, Actun Neko, or any of TCU s.10, s.12 - s.19). In general, this same subdivision seems to account for the diversity of acts represented by the material assemblages within each cave, the diversity of material classes incorporated, as well as the intensity of use. A more thorough discussion of this variation and its potential significance will take place in Chapter Nine, for now our purposes are served with a brief summary of those caves discussed in these chapters as part of my primary field research.

74 Not that an 18-month old could be an ‘ancestor’ in the literal sense.
Temporally, all caves from which we have identified datable materials (Figure 7.21) appear to be associated with the Spanish Lookout complex at Barton Ramie (Late/Terminal Classic), though where this assemblage is represented by more than a few sherds, the dates associated cover a much broader span of time, from the late facet of the Jenney Creek complex (Middle Formative) through New Town (Early and Late Post Classic). It is interesting that, while cave use appears most ubiquitous during the Late/Terminal Classic, this period does not correspond to the most ‘intense’ period of use in

![Temporal range of hinterland caves. Note, dark orange indicates period of most intense use as indicated by artifact frequency.](image)

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caves with material covering a broader temporal span (Chapter Five). It is also noteworthy that in both Actun Neko and Actun Lubul Ha, caves which include a Middle Formative component, we see a distinct hiatus through the majority of the Late Formative period.

Finally, it is worth noting at this point that the material assemblages recorded in each of these caves conform in their broad content to those expected of common domestic contexts. With the exception of the inlaid shell disc from Actun Neko and the Belize Modeled-Carved vase from Actun Lubul Ha, none of the artifacts recovered would have been out of place in the midden of even a modest dwelling.75 Such is often the case in the cave context, regardless of the assumed status of the ritualists or purpose of the ritual. Indeed, if the ‘three stone hearths’ of Lubul Ha do indeed represent the remains of period ending rites, an activity often associated with the elite authority of the Classic Period (Bassie-Sweet 1991), then the quality of the associated artifacts does nothing to mark them as such. Thus, in the following chapter, the question that should be kept in mind as we move on to look at the cave context near or in direct association with monumental civic-ceremonial centres in the Roaring Creek Works is, “who was using the cave context?” The additional content of Chapter Eight, with particular attention paid to material variability and context will allow us to make some headway in this regard.

75 And even in the case of those singular objects just mentioned, would not be out of place in more established household contexts or a domestic ritual assemblage (Helmke et al. 1998).
CHAPTER EIGHT—CAVE SITES IN THE CORE: MARK’S CAVE, JUNCTION CAVE, TCU s.21, TCU s.11 (Str. 8), TCU s.05, AND TCU s.08.

I’d rather live in a cave with a view of a palace, than live in a palace with a view of a cave.—Karl Pilkington

With the identification of Tipan Chen Uitz in 2009 and subsequent survey and excavation work in 2010 and 2011 that together began to suggest a heretofore unsuspected level of settlement complexity in the region, the focus of my dissertation shifted into its present configuration with its emphasis on understanding processes of polity development and change. This work is based, in no small part, on observations of variations between near-urban and hinterland cave use. As in the previous chapter, inclusive of caves and rockshelters in both the Caves Branch River Valley and the Roaring Creek Works, the caves discussed in this chapter run the morphological gamut in size, orientation/inclination, and configuration. Cave spaces have been altered to varying degrees, both through addition and subtraction, and articulate in diverse ways with surface architecture and landscape features. They incorporate a wide variety of archaeological materials, in different quantities, and subjected to different treatments. Methods of survey and analysis typically replicate those discussed in Chapters Six and Seven and will only be expanded upon where they differ. In short, the dataset represented by the subterranean sites discussed in this chapter provide a comparable dataset to those of the hinterland, the key variable being their proximity to monumental architecture (refer to Figure 6.3 for site locations).

Mark’s Cave

Location and Description
Mark’s Cave was found by CBAS field school student Mark Fyock, while walking transects north of the Tipan site centre as part of the initial settlement survey, directed by Nicholas Ramirez in 2011. The site lies approximately 600 m due north of Tipan,
approximately 300 m south-east of Midnight Terror Cave, and directly adjacent (<30 m to a small house mound). Nicholas Ramirez and I reconnoitred the cave later that season.

**Geomorphology**

Accessed toward the east through a low, narrow, and descending twilight entrance chamber (Figure 8.1), the cave is soon choked almost to the point of impassability by numerous stalactites, stalagmites, and columns. With care, we were able to proceed to the more spacious chambers beyond. It was noted that there was little evidence for human activity in the front environs of the cave: no artefacts were visible on the surface, and while there were indeed a few damaged formations that may be the result of intentional ‘clipping,’ it seems more likely that these may have been the work of pacas (gibnuts,

Figure 8.1 - Entrance to Mark’s Cave.
Cuniculus, as noted by tracks and digs, and from the ubiquitous presence of cohune palm [Attalea cohune] nuts) or other non-human processes. The cave beyond was spacious, ranged out in several well-decorated chambers measuring up to ~25 m diameter (Figure 8.2).

Archaeological Areas

Though thoroughly explored, no evidence for previous human use of the cave, either prehistoric or historic, was encountered. Given the proximity of this site to the civic ceremonial centre of Tipan, the northern causeway, and numerous other caves including the impressive Midnight Terror Cave, less than 300 m to the north-west, each with ample evidence of prehistoric activity, it seems surprising that a cave such as this would have remained non-utilized by the ancient Maya. It is possible that this particular cave was unknown to the ancient inhabitants of the region; perhaps, it is only over the intervening millennium, since the abandonment of Tipan, that the entrance has become apparent/accessible. Intriguingly, it lies within the realm of possibility that an avoidance of cave
use marks a heretofore under-appreciated facet of behaviour surrounding caves in the ancient context.

**Junction Cave**

*Location and Description*

Junction Cave (Figure 8.3) was first identified by CBAS co-director Christopher Andres, while aiding in settlement survey north of the Tipan site centre. So called because of its location adjacent to the junction of two causeways identified during the 2011 season, Junction Cave became an immediate focus for investigation. The cave lies approximately 500 m north of the Tipan site centre.

*Geomorphology*

Extending off a doline adjacent to the causeway junction, the cave itself is relatively small. With two west-facing entrances (Figure 8.4), it penetrates ~18 m toward the east and is only ~8 m wide at its widest point. There is no true dark zone. Though the ceiling

![Figure 8.3 - Plan of Junction Cave.](image-url)
at the entrance and in the rear antechamber is barely more than 2 m tall, throughout the majority of the cave the ceiling exceeds 5 m in height. As was the case with the caves discussed in the previous chapter, survey employed a standard baseline-offset method with a Brunton Pocket Transit and Leica Disto. Non-level baselines were corrected digitally.

Entrance/Main Chamber and Ledge—The main, largest, entryway into the cave opens directly into the only significant interior space within the cave as one descends an easy slope of colluvium (water-washed sediment and ceiling spall). The sloping floor levels out approximately 5.5 m inside the dripline, giving way to a dark brown clayey floor and expansive areas of low accumulated flowstone.

A second, crawling entrance extends horizontally from the surface level, yielding access to a high ledge (2.5 m - 3 m above the floor of the main chamber; Figure 8.5). This ledge is heavily encrusted in active flowstone that has formed in a series of cascades.

Figure 8.4 - Main entrance to Junction Cave. Note, secondary entrance is to the top right of the photo.
along the southern margin of the cavern to meet the main chamber, below. Both the main chamber and ledge are heavily decorated with flowstone.

Ante-Chamber—A small ante-chamber (Figure 8.6) extends ~3 m off the eastern end of the main chamber. It is separated from the main chamber by a short section of low ceiling and is visually shielded from the entrance by a large flowstone column.

Archaeological Areas

Given the cave’s relatively open proportions and proximity to significant architectural features, the site core of Tipan and other, heavily used caves in the region, it was expected that Junction Cave may have been an important focus for past human activity. Indeed, the traces of human activity within Junction Cave are as significant, if less extensive, than expected.

Archaeological materials appear to be isolated to the flat areas of the main chamber and the small ante-chamber to the back. No remains were encountered on the
upper ledge of the cave, nor in the sloping main entrance. The distribution of the assemblage within Junction Cave was notable for its lack of discrete spatial organization and surprising sparseness. No clusters, linear or otherwise, were noted within the cave. The cave was subjected to controlled collection within discrete bands/swaths/areas 2 m wide, transverse to the principal baseline established for the survey, beginning with Area 1 in the rear ante-chamber, up to Area 7 near the base of the sloping entrance (Figure 8.7). A total of only fifty-one sherds were recovered from Junction Cave, including both surface finds and those recovered from excavation. Thirty-three of these were recovered from surface contexts. Of these, only eleven were rim sherds, and only six of these could be identified by type, the majority of the assemblage being composed of coarse body sherds from utilitarian vessels and non-diagnostic slipped serving vessels.

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76 Though it must be conceded that artefacts may have been buried by colluvium/alluvium following initial deposition.
Nearly every stalactite and stalagmite within the cave has been clipped and removed. No non-ceramic artefacts, features or manuports were encountered.

Area 1—Located in the rear ante-chamber, Area 1 contained the densest concentration of ceramics within the cave, and the most numerous in general. Nine sherds were found on the surface, three of which were identifiable rim sherds associated with the Tiger Run (a Sotero Red-brown: Sotero Variety dish or bowl) and New Town (early facet; two sherds from Daylight Orange: Darknight Variety dishes or bowls) complexes at Barton Ramie (Gifford 1976:210, 301). This area of the cave has been disturbed by a looters’ pit and as excavations demonstrate some depth to deposition in this area (see below), it is possible that the high number of artefacts recovered from surface contexts are a result of this disturbance.

Area 2—Seven sherds were recovered from Area 2, three of which proved to be rim sherds from restricted bowls or jars. Unfortunately, none of these sherds proved

As in the previous chapter, unless otherwise indicated, all ceramic identifications and temporal associations follow Gifford (1976).
diagnostic. The only refit noted in the cave was found in Area 2 (two sherds, perhaps recently broken).

Area 3—Seven sherds were recovered from Area 3, only one of which could be identified by complex; a dish or bowl with a paste that conforms to expectations for Aguila Orange, however, form and slip fit Minanha Red (Hermitage complex).

Area 4, 5, and 6—No artefacts were noted in either Area 4 or 5. Only two, unidentified, body sherds were noted in Area 6.

Area 7—Seven sherds were recovered from surface contexts in Area 7. Of these, two identifiable rim sherds were identified associated with two different vessels of the Spanish Lookout complex (a Roaring Creek Red dish or bowl, and a Dolphin Head Red bowl or jar). This area lay at the base of the entrance slope and the associated loose matrix suggested the potential for buried materials. No additional materials were found up-slope.

Excavation in Junction Cave
Two 1 m by 1 m excavation units were placed within Junction Cave. The first, Excavation Unit A, was located in the restricted antechamber occupying the furthest reaches of the cave, immediately adjacent to a shallow pit where looting suggested the potential for buried contexts. Eleven non-diagnostic sherds (one rim and ten body sherds) were excavated in the first 10 cm level. A 10 cm thick, 50 cm by 50 cm probe in the NE corner of the unit produced no additional sherds. No mends were noted between the excavated sherds and those found elsewhere within the cave, and no other artefacts were encountered.

Excavation Unit B, located at the base of a gradual slope leading from the entrance was similarly excavated as a 1 m by 1 m, 10 cm thick level with an additional 50 cm by 50 cm probe in the north-east corner, terminating at bedrock. Only seven non-
diagnostic body sherds were found in the first 10 cm level. As in Unit A, no mends were noted between these sherds and those found elsewhere within the cave, and no other artefacts were encountered.

Archaeological Summary and Discussion: Junction Cave

While Junction Cave yielded neither discrete, coherent, deposits nor associated temporal data, it nonetheless affords a number of intriguing insights into cave use in this portion of the study area. Perhaps the most remarkable aspect of Junction Cave, given its direct association with significant architectural infrastructure, and hence the presumed frequency with which it must have been encountered, is the paucity of cultural materials found in association. Those artefacts that were found conform to a relatively wide temporal span ranging from the very beginning of the Early Classic period through the opening centuries of the Early Post Classic (Hermitage-through-New Town complexes, ca. AD 300 - AD 1150). While the distribution of identifiable sherds seems to indicate some temporal division of cave use\(^78\) (Figure 8.8), with deeper areas seeing earlier and

\[ \text{Figure 8.8 - Collection areas by ceramic complex.} \]

\(^78\) Assuming that sherds were deposited in the same period in which they were created; a dubious assumption given the pattern of material (re)distribution noted in the previous chapter.
sustained use and forward areas only coming into use with the Spanish Lookout complex, this observation is far from significant. The small size of the cave, apparently random distribution of its exceedingly small material assemblage, and the possibility (né, probability) that objects were deposited in periods different from their manufacture, conspire to make such spatial-temporal interpretations tentative in the extreme.

What appears more significant is the density distribution of materials within the cave, perhaps suggesting two distinct foci for human activity within the space. Considering artefact frequency within each of the seven collection areas (Figure 8.9), the non-uniformity in distribution becomes apparent, in particular the frequency of artefacts encountered in the rear ante-chamber stands out given the relatively restricted floor space available. With an area in the centre of the cavern clearly devoid of artefacts, the density of materials recovered from collection area 7, similarly stands out. It is perhaps significant that while the specific location of deposition varies, the content of deposition does not. How might this be explained? To answer this, we must first consider why these items were deposited in the first place.

Figure 8.9 - Collection areas by artifact frequency.
As discussed in Chapter Five, Amalia Kenward (2005) noted that small collections of broken ceramics and other objects were found near the entrances of several small caves in the Sibun River Valley. Following the ethnographic example of the Kaqchikel, she suggested that these caves were used as shortcuts to pass through the egg carton-like karst of the region and that the artefacts were left as small tokens or offerings in exchange for passage. While the specific content of these offerings is unclear, it seems that they may have taken the form of simple broken sherds or other small objects of little economic value. While the morphological characteristics of Junction Cave are dissimilar from those discussed by Kenward in that it, itself, did not function as a passage, its association with not one but two, formal, constructed roads could be argued to constitute an analogous context and thus elicit an analogous ritual response.

But wait! Something is amiss. We would expect that an inter-site causeway would attract a considerable amount of traffic. While I cannot even begin to estimate the amount of human movement along these roads, and certainly not in the absence of settlement data, it would seem to me surprising that at least a segment of the population of Tipan, Yaxbe, Chaac Mool Ha, and surrounding areas would not have used these causeways on a daily basis. If offerings were always made at Junction Cave in association with passage along these roads, then we would expect to find much more of it within the cave.

Observing the overall extractive nature of human activity within Junction Cave—as noted above, all speleothems appear to have been clipped and removed in antiquity, a subject that will be returned to shortly—Kip Andres (personal communication 2011) has suggested that the sparse assemblage in Junction Cave reflects not the behaviour of initial deposition, but the subsequent removal of objects from the cave, either for disposal or for re-use in other ritual contexts. This suggestion is compelling for a variety of reasons, including its articulation with patterns of redistribution suggested in the previous chapter (as a location for source material), and emotionally as it attributes a more significant if

79 And at their cross-roads nonetheless! It lies well within the realm of possibility that the causeway connecting Tipan’s western and northern causeways (and thus, bypassing the Tipan site centre) was specifically planned with Junction Cave in mind, to reinforce this association of path and cave.
obscured role for Junction Cave. However, as noted, the assemblage from Junction Cave consists in its entirety of individual non-articulating sherds.\textsuperscript{80} It seems highly unlikely, or at least hard to convincingly argue, that any collection strategy employed in antiquity would show such ‘careful lack of care’: to be thorough enough to remove all artefacts from the cave, save, individual non-articulating sherds, let alone that this pattern should extend to buried deposits. Thus, \textit{lex parsimoniae}, it seems far more likely that, as suggested in several of the hinterland caves discussed in Chapters Six and Seven, the assemblage in Junction Cave represents the deposition of discrete, fragmented objects over time. The apparent lack of ritual set pieces such as those seen at Lubul Ha—hearths, architecture, and other constructions, the systematic removal of evidence for which would require more effort than simply picking up and removing sherds—supports this simpler explanation. Thus, we return to the question of why, if the artefact assemblage of Junction Cave was deposited sherd-by-sherd in conjunction with movement along the overriding causeways, is it that so little material was found within? A logical explanation is that such offerings were not left as part of casual use, but as part of less-frequent/periodic activities, perhaps related to formalized processions along the causeways. That a much larger assemblage may have been deposited in Junction Cave piecemeal and subsequently removed for use elsewhere remains a viable alternative explanation. I’ll return to this idea more fully in the following/final chapter (for now, see Morton 2007; 2012).

Before leaving the discussion of Junction Cave, I wish to briefly return to the matter of speleothem clipping and removal. In both the previous chapter and Chapter Five, it was noted that extractive activities were a frequent element of Classic Period cave use, and indeed continues to the present day (e.g. Brady et al. 1997, 2005; Mercer 2005 [1896]; Peterson et al. 2005; Prufer 2002; Rissolo 2001). While the specific number of speleothems extracted remains unrecorded, the extent to which such activities occurred at Junction Cave is nonetheless impressive in its comprehensiveness; as noted above, this once-active cave has had \textit{all} of its stalactites and stalagmites broken and mostly removed

\textsuperscript{80} Well… almost. Only two sherds were demonstrably derived from the same vessel.
in antiquity. In comparison, James Brady and colleagues (2005:217), based on survey in Balam Na Cave 1, Guatemala, noted that only 59% of stalactites within the cave had been broken. Given the symbolic value of these items (see Brady et al 2005:218-222), it seems likely that the speleothems removed from Junction Cave were removed for this reason and likely found their way into other archaeological contexts (for instance, architecture or other caves [Andres 2011:60; Slater 2013]).

**TCU s.21**

*Location and Description*

TCU s.21 (Figures 8.10 and 8.11) is a shallow rockshelter affording crouching room only, located to the south of Tipan’s western *sacbe* and on the opposite side of the same limestone outcrop as TCU s.20, a much smaller rockshelter in which was noted a small surface scatter of ceramic sherds. Fragmented ceramics were observed on the surface during initial reconnaissance (Morton 2010), and given its close proximity to monumental

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81 A cave identified by the experienced crew as exhibiting ‘typical’ quantities of breakage.
architecture, the site was subsequently chosen for further investigation. Excavations were carried out by Nick Ramirez with the assistance of a number of field school students.

Geomorphology
The entrance to TCU s.21 faces south-east from a rough, short, karst outcrop, typical of others in the areas immediately west and south of the Tipan site core. As noted above, the rockshelter is small, measuring ~6.5 m across the dripline, with a low ceiling rarely exceeding 1.5 m in height and heavily penetrated by roots from above. The floor of the cave is surprisingly dry, loose, and loamy with flowstone deposition limited to the northern-most corner of the only sheltered space. There is no dark zone, and the only portion of the cave obscured from view to those standing outside is this same area, courtesy of a large column and very low ceiling. Loose limestone fragments, likely ceiling spall, randomly and sporadically litter the floor.

Archaeological Areas
No artefact concentrations were noted on the surface, though all four surface finds were isolated to the south-western edge of the shelter. Of these, two were unidentified body sherds, while the other two were rim sherds from restricted-neck bowls or jars. Only one of these latter sherds was identifiable: a sherd from a Cooma Striated: Cooma Variety vessel (Jenney Creek [late facet], ca. 600 BC - 300 BC)—a surprisingly early date given the assumed apogee of Tipan. No significant disturbance to surface strata, save by the aforementioned roots, was noted.

Excavation in TCU s.21

Four 1 m by 1 m excavation units (EU A, C, D and E) were placed within the rockshelter, forming a 4 m by 1 m trench perpendicular to the drip line. A further 1 m by 1 m excavation unit (EU B) was placed beyond the drip line, outside of the rockshelter. Very few artefacts were recovered from EU B, despite penetrating 40 cm and below the humic layer, (and in contrast to the abundant assemblage recovered from trench CADE) suggesting that the focus of activity in this area was very much the rockshelter itself. The depositional matrix within the shelter is characterized by rough limestone boulders and limited sediments (loamy clay) overlaying a rich material assemblage that extends to a depth of ~90 cm. A lack of stratigraphic structure resulted in excavations conforming to arbitrary 10 cm levels. Materials recovered included abundant, though fragmented ceramics (n=1368), lithics (n=30, both expedient and formal tools and debitage), faunal materials (n=6, including jute and bi-valve shells) and, interestingly, speleothems (n=2), which seem to have been introduced into the rockshelter (no clipped speleothems were noted on the interior). In fact, the variety of materials recovered from TCU s.21 is reminiscent of that recovered from Lubul Ha, and thus distinguishes this cave from all other small-cave contexts thus far discussed in this chapter.

Excavation Unit C—Unit C was excavated in eight arbitrary 10 cm levels below surface. A single, clipped, jute shell was recovered from this unit (Level 4), as were five lithic artefacts including two secondary decortication flakes, and three secondary flakes, all of
different material type/texture/colour. One of the secondary flakes appears to have been retouched for use as an expedient cutting tool. The lithics were distributed relatively uniformly through the depth of the unit (Levels 1, 2, 4, and 5).

Ceramic sherds (n=171) recovered from Excavation Unit C were distributed relatively evenly through Levels 1-8 (Figure 8.12). Of these, only two proved identifiable by type, including two sherds associated with the Spanish Lookout complex (a Roaring Creek Red dish or bowl and a Cayo Unslipped bowl or jar). A third sherd was attributed to the earlier Hermitage complex based on form, though this identification is tentative. The dates thus associated with each level are consistent with expectations for sequential deposition over several

Figure 8.12 - Sherd frequency by level.  
Figure 8.13 - Ceramic complex by level.
centuries, though the sample size is far too small to say for certain (Figure 8.13).

Excavation terminated with the exposure of bedrock in Level 8.

Excavation Unit A—Unit A was excavated in nine arbitrary 10 cm levels below surface. Two clipped jute shells were recovered (Levels 3 and 5), as were seven lithic artefacts (Levels 3-5, 9). Five of these appear to be chert, while another may be a fine piece of reddish-black slate (or mudstone) and a seventh is brown quartzite. Flakes include a single primary decortication flake, two secondary decortication flakes, and two secondary flakes. Finished tools include a white/buff eccentric made of fine chert (Figure 8.14) and a brown quartzite bark beater (Figure 8.15).

Ceramic sherds (n=260) recovered from Excavation Unit A were distributed through Levels 3-9 (Figure 8.16). Of these, five were identifiable by type, including two

Figure 8.14 - Fragment of a chert eccentric.
sherds associated with the Tiger Run complex (a Jones Camp Striated bowl or jar and a Uacho Black-on-orange vessel). Three additional sherds associated with the Hermitage complex (two sherds from a Dos Hermanos Red dish or bowl and a Socotz Striated bowl or jar) were also encountered. Interestingly, these sherds are temporally mixed, showing little of the consistency noted in Unit C—Hermitage sherds are found in Levels 3 - 5 and Tiger Run sherds are found in both Levels 3 and 5 (Figure 8.17). Excavations were terminated as bedrock and ceiling spall limited our ability to venture deeper without expanding horizontally.

Excavation Unit D—Unit D was excavated in nine arbitrary 10 cm levels below surface. Eleven lithics, all chert, were recovered from Levels 2, 5, 6 and 8. Flakes include three secondary decortication flakes and six secondary flakes. One multi-directional core and one piece of shatter were also recovered. Two tools were recovered, including a side
scraper fashioned from a secondary flake, and a simple utilized flake with significant edge damage.

Ceramic sherds (n=557) recovered from Excavation Unit D were distributed through Levels 1-8 (Figure 8.18). Of these, thirteen were identifiable by type, including three sherds associated with the Spanish Lookout complex (a Cayo Unslipped bowl or jar, a Mount Maloney Black plate or dish, and a Chunhuitz Orange vessel of indeterminate form), three sherds associated with the Tiger Run complex (a Julcki Cream-polychrome vessel and two sherds from a Jones Camp Striated bowl or jar), and six Hermitage complex sherds (Aguila Orange, Caldero Buff-polychrome, and Socotz Striated). As in Unit A, there appears to be little temporal

**Figure 8.16 - Sherd frequency by level.**

**Figure 8.17 - Ceramic complex by level.**
consistency within the deposit (Figure 8.19), Hermitage sherds being recovered from Levels 1, 2, and 6 (though note that Tiger Run and Spanish Lookout sherds are isolated to the upper two levels). Several conjoining sherds of an unidentified type were recovered from Level 8: slipped in a bright orange with irregular, black, geometric designs on the exterior, together these sherds constitute the majority of a small in-curved bowl. The decoration suggests an Early Classic date for this vessel, though it remains untyped (Figure 8.20). Excavations were terminated with a sterile Level 9 and dense concentration of ceiling spall and bedrock.

Excavation Unit E—Unit E was excavated in eight arbitrary 10 cm levels below surface. One clipped jute

Figure 8.18 - Sherd frequency by level.  
Figure 8.19 - Ceramic complex by level.
Figure 8.20 - Vessel from TCU s.21.
shell, both halves of the shell from an unidentified bivalve and a crab claw were all recovered from Level 4. Three lithics were also recovered, two of chert, one of dark grey/brown slate (or mudstone). A single secondary flake of chert was included among these and no tools were recovered.

Ceramic sherds (n=302) recovered from Excavation Unit E were distributed through Levels 1-8 (Figure 8.21). Of these, nine were identifiable by type, including four associated with the Spanish Lookout complex (sherds of Cayo Unslipped, Yalbac Smudged-brown, Mount Maloney Black, and Vaca Falls Red), four associated with the Hermitage complex (Caldero Buff-Polychrome, and Socotz Striated), and one unusually early sherd associated with the Barton Creek complex.

![Figure 8.21 - Sherd frequency by level.](image)

![Figure 8.22 - Ceramic complex by level.](image)
There is little consistency in the assemblage with Spanish Lookout sherds co-occurring with Hermitage sherds in both Levels 1 and 3, and Hermitage sherds co-occurring with Baron Creek sherds in Level 4. A sherd associated with the Spanish Lookout complex was found in Level 6 (Figure 8.22). Excavations were terminated with the exposure of a dense concentration of ceiling spall and bedrock.

Excavation Unit B—Excavation Unit B was placed outside the rockshelter, in line with trench CADE. Despite excavating to a depth of 20 cm below the humic layer, only a small number (n=19) of heavily eroded, unidentified ceramic sherds were recovered (Figure 8.23). Excavations were terminated due to time constraints.

Archaeological Summary and Discussion: TCU s.21

Assays of recovered ceramics suggest dates that span the entire Classic period (Gifford 1976; Reents-Budet 1980), with most material being attributable to the Early Classic (Hermitage complex). However, observing Figure 8.24, it seems clear that the deposit recovered from TCU s.21, was deposited as a mixed assemblage at some point(s) during/after the Late Classic (Spanish Lookout), thus falling in line with the period of most intense usage of caves in the Roaring Creek (Actun Tunichil Mucnal and elsewhere [e.g. Helmke 2009; Moyes et al. 2009]) and distinguishing this site from patterns noted in the previous chapters in the Caves Branch River Valley (e.g.
Footprint and Petroglyph [e.g. Graham et al. 1980; Reese-Budet and MacLeod 1997]). While the assemblage recovered from TCU s.21 is on the whole highly fragmented, the limited excavation within the cave, unfortunately, makes the evaluation of the entire rockshelter in this light, impossible. Thus, we cannot speak to patterns of fragmentation and deposition noted in the previous chapter and at Junction Cave.

One unique find from TCU s.21 that stands in contrast to the rest of the recovered assemblage is the orange-slipped incurved bowl recovered from Excavation Unit D. Unique in its physical appearance, this is also the only nearly-intact vessel found in the excavation. Based on the disorganized orientation/distribution of sherds, it appears that this vessel was broken into at least four pieces prior to deposition. The missing sherds were not located and may lie elsewhere within the rockshelter. This vessel was found in stratigraphic association with a single, unmodified chert flake, and is separated from any other object within the unit by at least 15 cm depth. It appears that a large limestone slab was placed or fell above the vessel shortly after initial deposition. It is possible that this object was left as a votive or dedicatory offering prior to further use of the rockshelter; a deposit noted also in TCU s.08, and returned to in that context, below.

TCU s.21 is notable among the smaller caves thus far discussed (AC Cave, CBR Cave, Actun Neko, and Junction Cave) for both the diversity and richness of its artefact
assemblage; thus far, akin only to that recovered from Lubul Ha. This cave is morphologically unique compared to those other caves, and its location relative to the monumental core of Tipan similarly sets it apart. In particular, the presence of both lithics and faunal materials in relative abundance to ceramic sherds is notable. Two species of *Pachychilus* (*jute, P. indiorum* and *P. glaphyrus*) are commonly found in archaeological sites across the Maya world, and are frequently encountered within the cave context. Peterson (2006:95) noted the recovery of jute shells (n=615) from all seven caves included in her dissertation research. Thousands of jute shells have been recovered from rockshelters in Belize (Ferguson and Gibbs 1999:123). The rockshelters in the Caves Branch River Valley, perhaps a result of their common proximity to rivers in which these molluscs thrive to this very day contain particularly rich depositions of this class of artefact. Thousands of jute shells were recovered from Caves Branch Rockshelter (Glassman and Bonor Villarejo 2005:287) and from just one cubic meter of excavated matrix in Deep Valley Rockshelter 1, Jessica Hardy (2009:63) recovered over 30,000 jute shells. Such deposits are also known from deep cave sites, though often in fewer numbers and always in association with other artefacts (see Footprint Cave [Graham et al. 1980:155, 158, 160]). Christina Halperin and colleagues (2003) have gone far in documenting this pattern of deposition. Jute thrive in shallow, fast-moving riverine environments, and unlike those rockshelters of the Caves Branch River Valley, this is an environment in scare supply in the dissected upland environs of TCU s.21. On a survey trip at the end of the 2009 field season, the nearest source of live jute was a fast moving stream approximately 1 km to the south of the Tipan site core that served as our camping site for two nights. The jute shells recovered from TCU s.21 must have come from at least this far away. The presence of a crab claw (noted also by Peterson 2006:96-97) suggests similar transportation.

The breakage of apices or spires, the point at which the mollusc attaches to the shell, is often taken to indicate consumption by humans (Healy et al. 1990:175), and indeed, Ebersole (2002:108, 110) interpreted this as evidence for on-site consumption, perhaps a ritual feast. Contrary to Ebersole’s interpretation of on-site consumption,
Halperin et al. (2003) have suggested that the jute shells found in cave contexts are secondary depositions, following consumption elsewhere, a practice recorded among the modern Kekchi who deposit jute shells *en masse* in caves in thanks to “Mother Earth” (*Madre Tierra*) who provided the feast. In Chapter Five, it was noted that large conical dumps of ceramics were recovered from Actun Balam and Eduardo Quiroz Caves, presumably deposited in periodic renewal events; similarly deposited concentrations of jute shell were also found in these caves (Pendergast 1969:58; 1971:110), and Paul Healy and colleagues suggest they were deposited in similar rites (Healy et al. 1990:175). This latter interpretation seems to fit the general pattern of mixed deposition at TCU s.21, though it pales in comparison by volume.

Lithics (*n*=30) also constitute a significant, if small, portion of the TCU s.21 assemblage. While early stage flakes and larger secondary flakes were recovered from TCU s.21, as well as finished tools, there is no evidence for the manufacture of these objects within the cave context. By far, chert is the most common lithic type encountered. Formal tools, including stemmed bifaces and finely-made lanceolate bifaces are commonly encountered in other caves (e.g. Brady 2005; Brady and Scott 1997:19; Graham et al. 1980; Helmke 2009; Moyes and Awe 2010; Pendergast 1969; Peterson 2006; Stemp et al. 2013). These objects are traditionally interpreted as offerings or tools employed in sacrificial rites (Peterson 2006:76). The presence of debitage, while frequently noted (e.g. Brady 1989; Brady and Scott 1997; Lee and Hayden 1988; Pendergast 1969; Prufer 2002; Rissolo 2003; Thompson 1897) is rarely questioned in a systematic manner. A recent article by James Stemp and colleagues (2013), in its analysis of the chipped stone assemblage from the Caves Branch Rockshelter, has gone far to rectify this lack. Based on their material descriptions, it seems likely that poor quality grey, cream, or white cherts, as well as the much finer semi-translucent honey-brown and brown (perhaps chalcedonies) examples recovered from TCU s.21, were sourced locally, though they note that fine-textured, grey-banded cherts were occasionally imported from Northern Belize (Stemp et al. 2013:132-133). No flaking implements were recovered, though decortication flakes (*n*=10) constitute nearly half of the flake debitage recovered.
This constitutes a significant departure from this ratio at CBR, and is in line with expectations for the production of bifaces (with non-cortical debitage constituting approximately 60% of the total debitage count [James Stemp, personal communication 2013; Mauldin and Amick 1989:72; Tomka 1989:138]). In terms of the mean size of debitage from TCU s.21 (length = 33.6 mm), there are direct parallels with the material recovered by Peterson from Pine Torch Rockshelter (length = 38.54 mm [Peterson 2006:165]), and significant difference from that recovered from CBR (length = 22.43 mm [James Stemp personal communication 2013]). Thus, it seems that the assemblage of lithic debitage from TCU s.21 represents the initial/early stages of tool production. Given the generally mixed assemblage from TCU s.21, it seems likely that the lithic assemblage too was deposited in secondary context, an inference strengthened by the fragmented nature of the finished tools included (e.g. the chert eccentric and quartzite barkbeater). Given the proximity of this rockshelter to the Tipan’s monumental core and its likely period of deposition at some point in the Late Classic, it seems reasonable to suggest that those making use of the cave hailed from that centre and said use predominantly took the form of secondary deposition/dumping.

TCU s.11

Location and Description
TCU s.11 (Figure 8.25) was first identified in reconnaissance following the 2009 CBAS field season. The cave is a sinkhole, located just over 100 m east of Tipan Chen Uitz Plaza C and closely associated with surface architecture (Str. 8, discussed below). Initial reconnaissance activities recorded heavily eroded ceramics and daub litter on the cave floor, potentially representing fall from surface contexts. It was this material and association with surface architecture that precipitated further investigation of this site, the better to understand the relationship between surface and subterranean sites in this area.

Geomorphology
TCU s.11 is approximately 15 m deep, with a surface aperture of approximately 8 m by 2 m, and is only accessible with the aid of climbing equipment (Figure 8.26).

Morphologically simple, with little interior space and no dark zone, the floor of the sink generally matches that of the aperture in plan and declines toward the south-west where a fissure (presumably draining the cave) is blocked by stone rubble. It does not appear that this fissure was ever large enough to permit human access.

**Archaeological Areas**

Archaeological materials noted upon surface inspection were isolated to the low south-western end of the sink. Probing in the mounded north-eastern end of the sink revealed a thin layer of recently deposited organic material and minimal sediment overlying a large pile of spall/fall. It thus seems likely that the cave washes heavily at times, draining the immediately surrounding landscape. Artefacts are thus unlikely to be encountered in their

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82 Note, this is a correction from the estimate published in the original report; Morton 2010: 57

Figure 8.25 - Plan of TCU s.11.
originally deposited location, though given the difficulty of access and lack of evidence for internal modification, it may be expected that the majority of cultural material was cast into the cave from above at any rate.

Excavation in TCU s.11
An excavation was placed in the vicinity of observed surface materials (Excavation Unit 1). At its largest extent, the excavation measures some 1.5 m by 1.5 m. The excavated matrix was sifted through 1/4” mesh atop the flatter ground in the north-east of the sink. Excavations penetrated in places up to 19 cmbs, terminating upon contact with (variously) the cave floor itself, and bowling ball sized stone rubble concentrated in the western portion of the unit (adjacent to an impassable descending fissure). The artefact concentration noted prior to excavation proved relatively ephemeral, isolated to the uppermost 5 cm. Recovered materials included four non-diagnostic sherds of similar fabric, and a small collection of daub. A fifth sherd, tentatively identified as belonging to a Fowler Orange-red dish or bowl (Hermitage complex) was also recovered.
Figure 8.27 - Structure 08 and TCU s.11.

Vertical Entrance:
~15m deep on W. end of cave

Leaf Litter
Throughout

TCU Str. 08 and s.11
Tipan Chen Litz, Belize, C.A.
Surveyed May/June 2011 using Brunton
and Dilto by:
S. G. Morton,
Drafted by:
S. G. Morton

WEST

TRANSVERSE AXIS

EAST

SOUTH

PRIMARY AXIS

NORTH

Dry-laid masonry case (no structural differentiation)

Note: No cut masonry visible on exterior of structure.
Armadillo remains found in excavation are likely modern. Given the close association of this cave with Structure 8, this paucity of cultural material is surprising.

**Structure 8**

*Location and Description*

Structure 8 is located directly west of TCU s.11 (Figure 8.27), close enough that loose stones from the structure are easily knocked into the maw by careless feet. It was originally interpreted as a rectangular structure accessed from the west. Subsequent clearing revealed, instead, a pyramidal platform with axial stairway on the south side. No finished masonry was found associated with the structure and it bears the same tumbled or unfinished quality as a number of other structures within Tipan’s Plazas C and F (Figure 8.28).

**Excavation at Structure 8**

Excavation Units A and B—No artefacts were encountered upon surface inspection of Structure 8 or its immediate surroundings. Several excavations were thus placed to determine the sub-surface potential of the site. Excavation Units A and B were placed off the south-east corner of Structure 8, and in close proximity to the open entrance to TCU s.11 (Figure 8.29) in an effort to retrieve materials that may be comparable to those

![Figure 8.28 - Structure 08, cleared of brush and root mass.](image)
excavated from the cave (and thus aid in determining whether the material found in the sink was the result of taphonomic processes—simple fall from above—or the product of intentional deposition). Unit A measured 1 m by 1 m. Unit B measured 1 m by 2 m. Both units were excavated in two 10 cm thick levels. Both excavations terminated unevenly as bedrock was exposed (Figures 8.30 and 8.31). Neither yielded archaeological materials.

Excavation Unit C—A larger excavation (EU C), measuring 1.5 m by 3 m N-S, was placed on the assumed axial stairway. Excavations proceeded to bedrock, to a maximum depth of 155 cmbs at the north end of the excavation, revealing a non-differentiated dry-laid rubble core construction. Excavation yielded seven non-diagnostic and heavily weathered sherds and was terminated with the exposure of uneven bedrock (Figure 8.32). Interestingly, no evidence of an earlier, perishable, structure was found within the excavation. Neither, was additional daub found in these excavations. The specific source of the materials encountered within TCU s.11 therefore remain a mystery.

Archaeological Summary and Discussion: TCU s.11 and Structure 8

Given the proximity of TCU s.11 to Structure 8, and in turn their proximity to the monumental core of Tipan Chen Uitz, it was hoped that these sites would yield
Figure 8.30 - Bedrock exposed in Unit A.

Figure 8.31 - Bedrock exposed in Unit B.

Figure 8.32 - Base of Unit C.
significant data regarding the articulation between surface and subterranean contexts. While neither site proved materially rich, they nonetheless provide a context from which to pose interesting questions regarding this relationship. Specifically, given the attested symbolic power of cave contexts and the long-established replication of significant natural features in the built environment (see Chapters Three and Four), it would seem unlikely that such a close physical association between structure and cave in this case was the product of chance. But which context provided significance to which? Elsewhere, it has been argued that caves served as magnets for the construction of sacralized space (Brady 1997; Demarest 2006:123), or where not present, were constructed for much the same purpose (Brady 1993; 2012; García-Zembrano 1994:218) and it has been previously noted that the use of caves in the CBAS study region seems to precede the construction of significant nucleated settlement (Morton et al. 2014). This does not mean, however, that caves need be actively used in order to attract attention and it seems that in the case of TCU s.11 and Structure 8, the association was only in its initial stages of development: TCU s.11 does not appear to have functioned as a significant site for human activity, at least none that left material traces, and with the exception of the small pieces of daub encountered within TCU s.11 suggesting an unidentified perishable structure in the immediate area, it appears that Structure 8 was never fully constructed. The relationship in this case, is thus one of unrealized potential, and highlights the reciprocal and developing nature of such relationships in this area; a topic that I will return to in more depth in the following chapter.

TCU s.05

Location and Description
First identified in 2009 (Morton 2010), TCU s.05 (Figure 8.33) is a small cave located within the site core itself. The entrance, covered over by the ancient Maya during the construction of Plaza E, in the north-west section of Tipan, and later exposed by natural or human processes, is extremely restricted (Figure 8.34).
Figure 8.33 - TCU s.05.

Figure 8.34 - Andrew entering TCU s.05.
Geomorphology
Access to TCU s.05 is granted via a narrow, ~2 m deep pit through the rubble fill of the plaza, followed by an awkward 90° bend to the south and a 3 m long, vertically restricted, declining shimmy. From this point the cave opens up to well over 4 m high, and though access is somewhat restricted by flanking flowstone formations, a relatively flat, 9 m² space is available. A quick crawl further to the east opens to a more restricted chamber. A narrow crawling tunnel stretches some 6.5 m to the south and west. The cave, in all areas, is heavily decorated with flowstone.

Archaeological Areas
While no cultural materials or obvious modifications to the cave environment were observed in 2009, it was determined that the soft matrix of the cave floor, its intimate association with monumental architecture, extending somewhat toward Structure F-3, and the fact that its entrance would have been exposed prior to the construction of the plaza above (as in the incredibly productive TCU s.08, in Plaza C; see below and Morton 2011) made TCU s.05 an excellent candidate for further archaeological investigation, including excavation.

Excavation in TCU s.05
Excavation Units 1 and 2—Following mapping in 2011, two small, 1 m by 1 m test excavations were placed within the more spacious lower chambers. Unit 1 (Figure 8.35), located in the most open area of the lower chamber, was excavated to a total depth of 20 cmbs in two 10 cm levels. The second level was excavated as a smaller 50 cm by 50 cm subunit in the north-east corner of the excavation. Excavations were terminated as the natural stone cave floor was exposed. Unit 2 (Figure 8.36), placed in the deepest portion of the cave was also excavated to a total depth of 20 cmbs; the first 10 cm were excavated across the entire unit, the second 10 cm were excavated in the north-west corner only. In the case of both units, the excavated, uniform, brown clayey matrix was screened through
a 1/4” mesh. No material culture or evidence of human presence was encountered in either excavation.

Archaeological Summary and Discussion: TCU s.05

The complete lack of evidence for human use of this cave is perplexing, all the more so because of its location relative to monumental architecture. Though clearly restricted, surely, the entrance would have been observable to the ancient Maya as they cleared and constructed Plaza E. And yet, as with Mark’s Cave (and arguably, TCU s.11), TCU s.05 seems to have never attracted the attentions of the ancient Maya.

TCU s.08

Location and Description
TCU s.08 (Figure 8.37) was initially assessed as a restricted solution hole approximately 2.5 m deep (including surrounding architectural fill), located within the site core of Tipan Chen Uitz. Presumably exposed by tree-fall, and further cleared by looters, as evidenced by a scatter of ceramics adjacent to the entrance on the surface, the vertical entrance had originally been sealed by the ancient inhabitants of the city during the construction of Plaza C. Development of a significant humic layer within the cave suggests that the feature had been open for some time prior to our initial visit. While no navigable passage was identified, the site was chosen for investigation based on the abundant presence of ceramic sherds observed within.

**Geomorphology**

Slotted to be excavated completely within the first week of the field season, in the end, excavations extended more than six weeks and expanded the cave’s navigable dimensions

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83 A large jumble of rough limestone fill was similarly scattered on the surface and is estimated to account for sufficient volume to seal the cave.
to some 6 m deep below the vertical entrance, with a maximum width of approximately 3 m and approximately 7 m in length (Figure 8.38)! The cave was heavily decorated with flowstone.

Archaeological Areas
Prior to excavation, the site was interpreted as a small ritual caching location, presumably associated with the construction of the overlying plaza, and was principally of interest for investigators as a possible source for deducing a *terminus post quem* for this

Figure 8.37 - Entrance to TCU s.08.

Figure 8.38 - Plan of TCU s.08.
part of the site. The deposit ultimately proved far larger than expected, involving the removal of more than half a metric ton of ceramic sherds ($n=\sim30,000$), and a similar quantity of architectural fill by volume (dry-laid boulders and earth).

**Excavation in TCU s.08**

The opportunity to excavate an archaeological context in its entirety rarely presents itself. Given the assumed characteristics of TCU s.08 based on surface assessment, it was decided that just such an approach was both warranted and feasible. The depth of the deposit below the surface, richness of the deposit itself (to adapt a phrase from Jessica Haley: ceramics with soil inclusions), and narrow aperture of the entrance limited options for excavation. Further, given the assumption that the deposit was introduced from the surface—perhaps violently given the ubiquitous fragmentation observed—it was decided that the recording of three-point provenience was unnecessary. Excavation thus followed cultural stratigraphic levels, and in general, each was treated as a single synchronic unit. Accordingly, our principal effort was directed at determination of relative locations of objects within each level, rather than creation of artificial strata; vertical control within levels was approximated by noting bag number (thus, artefacts stored in bag 1 should be from higher portions of the level than those stored in bag 30, 150, or 300). Excavated materials were screened through 1/4 inch mesh outside the cave. In the end, TCU s.08 was excavated in only three distinct lots.

Lot 1—While the material deposit in TCU s.08 overwhelmingly consisted of ceramic sherds, a wide variety of artefacts/material classes were included. Faunal materials ($n=8$) constitute a small, if interesting component of this assemblage and include molluse shells of both freshwater—apple snail (*Pomacea*, $n=3$, MNI=3) and jute (*Pachychilus*, $n=2$, MNI=2)—and marine genera—conch (*Lobatus*, $n=2$, MNI=1) and oliva (*Olivella*, $n=1$, MNI=1). While all certainly represent manuports, only three show evidence of modification, including a jute shell with a clipped apex, and the fragmentation of conch shell.
Lithics were found in more abundance (n=82). The most abundant lithic material recovered from Lot 1 (not counting the ubiquitous rough limestone dispersed throughout) is slate (n=64). Of these, eight were shaped through grinding or chipping; all of these, save two, were broken. Indeed, the majority of slate objects found in Lot 1 were battered, or broken. Further, while most modified slate was simply ground, one was treated slightly more elaborately, with four small depressions ground in a ‘clover’ or ‘quatrefoil’ pattern (Figure 8.39). Chipped lithics include local cherts (n=11), and quartzite (n=3) and represent early stages of the reduction process—a multi-directional core (n=1), secondary decortication flakes (n=2), secondary flakes (n=8), and shatter (n=1). From these were fashioned a utilized flake, three retouched flakes and an end scraper. Ground stone includes granite (n=3) and micaceous granite (n=1); two turtle-backed metate fragments were included among these.

The most abundant artefact class, by far, was ceramic. While excavation was extensive and collection thorough (all polychromes of any size and all others larger than a BZ five cent piece, about the same as a CDN nickel, were collected and recorded), only a
sample (approximately 1/5, n=5174 sherds) of the assemblage was treated to extensive analysis. In order to evaluate the completeness of the assemblage, several conspicuous types/categories of sherd (all polychromes, Macal Orange-red ‘drum’ forms, Miseria Appliquéd sherds, all sherds with drilled holes, and several unidentified, but distinct coarse wares) were separated for analysis in their entirety. In all, just over a thousand sherds proved (semi-)diagnostic. Temporally, this sample includes examples spanning the Jenney Creek through New Town complexes at Barton Ramie (Middle Formative through Postclassic, with a notable gap during the Late Formative Barton Ramie and Mount Hope complexes; Figure 8.40). Given the collection strategy employed, it is not surprising that by far, the most frequently identified sherds in this sample are polychrome; the most abundant of these identified as Benque Viejo Polychrome (n=276; 100% sample). In comparison, the most frequently identified non-polychrome type is Socotz Striated (n=102; 20% sample); scaled up, the assemblage consists of nearly twice as many Socotz Striated sherds over Benque Viejo Polychrome. Calculating MNI based on vessel rims,

Figure 8.40 - Lot 1, frequency by ceramic complex.

If we further consider that Socotz Striated sherds are identified predominantly by rim sherds with sufficient neck/shoulder portions to allow identification, while Benque Viejo Polychrome sherds may be derived from anywhere on the vessel body, the dominance of non-painted sherds in the assemblage becomes even more apparent.
the most frequently encountered polychrome is still Benque Viejo Polychrome (n=20), compared to the most frequently encountered coarse ware, Socotz Striated (n=27; ~135 in the assemblage as a whole). Based on rim sherds, thirty-four identified types were recovered from Lot 1. Expressed as a ratio, the analyzed assemblage is composed of nearly twice as many open vessel forms as restricted (1.75:1) and nearly three times as many fine wares over coarse (2.63:1). Estimated for the assemblage as a whole (accounting for variable collection strategies), open vs. restricted vessel forms still occur at a ratio of 1.55:1 and fine vs. coarse wares occur at a ratio of 2.26:1. Three dissimilar sherds were apparently ground into thin discs; all are broken in half.

Lot 2—Lot 1 was terminated, and Lot 2 initiated with the transition from a context dominated by ceramic sherds, to that dominated by large unmodified limestone boulders backed by smaller cobble-sized limestone fill. While artefacts are still prevalent in this Lot, they no longer constitute the majority of excavated material. Faunal materials are found in more abundance in Lot 2 (n=108). The assemblage is dominated by freshwater mollusc shells—apple snail (Pomacea, n=46, MNI=24), jute (Pachychilus, n=56, MNI=56), and an unidentified freshwater bivalve. The shell of a large oliva was also recovered (Olivella, n=2, MNI=1). Just under half of the jute shells (n=22) have been clipped at the apex. Otherwise, while all freshwater and marine shells are clearly manuports, there is relatively little evidence of modification. Additional faunal material includes medial fragments of longbones from a small rodent (n=1), an unidentified medium-sized mammal (n=1) and possibly from a human (n=1); all unmodified.

Only forty-eight lithics were recovered from Lot 2. As in Lot 1, the most abundant lithic material recovered from Lot 2 was slate (n=29). Of these, fourteen were shaped through grinding or chipping; five of these were subsequently broken. More common in Lot 2 are unmodified fragments of slate (n=15). All modified slate was simply treated, being battered or ground along long or short axes, though apparently never being finished into a uniform or recognizable form. Chipped lithics include local cherts (n=10), and imported grey obsidian (n=2). In general, chert chipped material represents early stages
of the reduction process—multi-directional cores (n=2), a primary decortication flake (n=1), secondary decortication flakes (n=2), and secondary flakes (n=2). From these were fashioned a retouched flake and a side scraper. Other formal tools/forms include prismatic blades fashioned from obsidian (n=2), a chert biface (n=1) and a chert uniface (n=1). Six pieces of granite were also recovered, five of which have been ground into a variety of forms—including metates (n=2, fragmented), oval manos (n=2, fragmented), and an unusual wedge form (n=1).

As in the previous Lot, the most abundant artefact class, by far, was ceramic. Similar recovery and sampling methods were employed with this material (a sample of approximately 1/5, n=985 sherds). In all, fewer than one-hundred sherds proved (semi-)diagnostic. Temporally, this sample includes examples spanning a similar period to those in Lot 1 (Jenney Creek through New Town complexes at Barton Ramie sans the Mount Hope complex; Figure 8.41). Again, the most frequently identified sherds in this sample are polychrome; the most abundant of these again identified as Benque Viejo Polychrome (n=8; 100% sample). In comparison, the most frequently identified non-polychrome type is Belize Red (n=8; 20% sample); scaled up, the assemblage consists of
approximately five times as many Belize Red sherds as Benque Viejo Polychrome. Calculating MNI based on vessel rims, identified types—n=13, including several types not noted in Lot 1, such as Cocay Appliquéd, Augustine Red, Molino Black, Teakettle Bank Black, and perhaps Pek Polychrome—never represent more than two vessels, each.

Expressed as a ratio, the analyzed assemblage is composed of open vs. restricted vessel forms in much more even proportion (1.11:1) and twice as many fine wares over coarse (2:1). Estimated for the Lot 2 assemblage as a whole, open vs. restricted vessel forms similarly occur at a ratio of 1:1.07 and fine vs. coarse wares occur at a ratio of 1.73:1. Interestingly, the only (near-)complete vessel encountered within TCU s.08 is a miniature Cocay Appliquéd vessel (Figure 8.42), miraculously surviving amongst the harsh fill of Lot 2.

Flecks of charcoal were noted throughout the

Figure 8.42 - Cocay Appliquéd vessel from Lot 2, TCU s.08.
excavation of Lot 2, however, no distinct lenses or discrete concentrations were observed. One large fragment of wood charcoal was recovered and sent to Beta Analytic Inc. for radiocarbon dating (AMS-Standard delivery). This sample yielded a 2 sigma calibrated date of AD 140 to 390 (1810 to 1560 BP).

Lot 3—Lot 2 terminated with the exposure of a uniform, rock-free, surface composed of a dark brown clayey loam (i.e. a typical natural cave floor in this region). A 1 m by 1 m test pit was excavated into this matrix 40 cm deep, in 10 cm arbitrary levels. A single chert secondary decortication flake and forty-nine ceramic sherds were recovered from the first 10 cm level. Of these, only two were identifiable by type, and likely represent non-articulating fragments of a single restricted jar (Jones Camp Striated, Tiger Run, Early Classic; Figure 8.43).

No rim sherds were encountered and the following three 10 cm levels proved sterile.

Archaeological Summary and Discussion: TCU s.08
Given the volume of material encountered and its location adjacent to architecture, the interpretation of the deposit as a secondary refuse aggregate (à la Wilson 1994) seems likely, though the context and content of the deposit

![Figure 8.43 - Lot 3, frequency by ceramic complex.](image_url)
clearly suggests origins apart from banal household middens, whether common or elite. Specifically, the deposit appears ritualistic in origin. Indeed, the most conspicuous characteristic of this deposit is the lack of a broad spectrum of domestic refuse, including food remains, and other items associated with daily life. The space containing the deposit (i.e. TCU s.08) supports this identification as a ritual context in being both centrally located within the apical portions of the monumental core and heavily modified/prepared in support of the associated deposit; neither a typical feature in your average midden. It appears that the first act conducted within the cave was extractive, specifically, the clipping and removal of all large speleothems (Figure 8.44). While it is possible that these activities were directed primarily at expanding the cave’s interior dimensions, given the ritually charged nature suggested for materials of subterranean origin (see Junction Cave, above, and Actun Lubul Ha, previous chapter [Brady et al. 1997, 2005; Prufer 2002; Rissolo 2001]), and the limited evidence for station-based activities, it would seem likely that these materials would have been put to use in other contexts such as architectural fill or as an

Figure 8.44 - Broken speleothems in TCU s.08.
offering/ritual deposit.

Following this, large limestone boulders, in some cases, up to 1 m in maximum dimension, were built up across the chamber, presumably to act as retaining walls for the smaller stone and earth fill that was loosely packed behind. While the smaller fill could have been introduced into the cave simply by dumping from above, the larger retaining stones are clearly placed and would have required entry into the cave. Thus, a small, rough platform was constructed within TCU s.08. It is uncertain whether or not all artefacts recovered from this fill layer were intentionally deposited: the interment of the mostly intact miniature Cocay Appliquéd vessel suggests some care was taken in its placement and its chipped rim is consistent with examples of ritually terminated vessels noted elsewhere (e.g. at Cuychen or Actun Lubul Ha [Helmke et al. 2012:80]). It is also possible that this vessel was damaged during excavation (though the associated broken sherds were not encountered). While it is possible that some artefacts were introduced into this construction through casual filtration through openings in the fill during the deposition of Lot 1, it seems likely that the majority were deposited specifically, though perhaps casually, with the architectural fill. This interpretation is strengthened by distinct differences in the two deposits (Lots 1 and 2), including different frequencies of open vs. restricted vessel forms, different frequencies of coarse vs. fine wares, the presence of several unique types in Lot 2, not present in the much larger assemblage of Lot 1, and the much greater relative prevalence of both faunal and lithic material in Lot 2. The possible presence of human remains serves to further set this context apart from the deposit above, though as a whole they may reflect analogous acts, if incorporating different source materials.

But where does this deposit come from? Are the associated artefacts intentionally included? At most other sites in the Maya area, the inclusion of refuse/trash in architectural fill would be taken as a given. At Tipan however, three seasons of excavation in the site core (see various chapters in Andres and Wrobel 2011; Wrobel and

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85 Quite apart from any kind of meaning associated with this act, the building of a new structure is an opportunity to spruce up the place a bit.
Morton 2015; Wrobel et al. 2013) have resulted in the recovery of relatively few artefacts from architectural fill, and never older than the Late/Terminal Classic. By all appearances, Tipan was built relatively quickly and predominantly in the Late/Terminal Classic period. Thus, perhaps there were no middens to be emptied and redeposited as fill (Andres et al. 2014). In contrast, the dateable material in Lot 2 derives from as early as the Middle Formative period (Cooma Striated) and as late as the Terminal Classic and Late Postclassic periods (Augustine Red and Pek Polychrome), though as the Late Postclassic content is isolated to but a single sherd, we are probably safe in chalking this up to an error in identification. While it remains within the realm of possibility that similar deposits will be found within the architectural core of Tipan or surrounding settlement, for the present, the only other context in the region incorporating materials ranging over this span is the cave. The assemblage in Lot 2 further resembles others noted in caves throughout this region in the degree of fragmentation of ceramics and the isolation of individual sherds. Of the nineteen rim sherds recovered from this Lot only two may derive from the save vessel (a Zibal Unslipped jar) and none could be refit. In further support, a single sherd from an unidentified calcite vessel had a hole drilled in it in antiquity; whether for repair or paired as a suspension hole, no matching sherd with a similar hole (in either Lot 1 or 2) was identified and thus it must be concluded that only a fragment of this vessel was deposited in Lot 2.\footnote{Or other sherds may have been strategically removed.} While we may expect a similarly ‘incomplete’ assemblage from a midden context, especially in instances where only a portion of the midden is collected, the extent of this pattern within the Lot 2 assemblage is difficult to imagine, save, through the course of intentional selection and exclusion. The presence of a single fragment of human long bone may be the outcome of similar depositional behaviours and is reminiscent of the more complete, but still partial, remains recovered from Overlook Rockshelter (Wrobel et al. 2013). Given the pattern of material (re)distribution noted extensively across this region and discussed throughout both this and the previous chapter, it certainly lies within the realm of possibility, if not probability, that the artefact assemblage associated with Lot 2 was derived from another cave site,
though there are significant differences, too, that must be accounted for. Namely, the presence of faunal remains and lithic materials occur in TCU s.08 in quantities far greater than has been noted in the majority of other caves in the region, even in large, multi-purpose, caves such as Lubul Ha. Indeed, similar quantities of both material types are perhaps more typical of the region’s rockshelters (Stemp et al. 2013). Thus, the material deposited in Lot 2 may be wholly the product of redeposition, or the result of the incorporation of both old and new materials in a unique context during the Late/Terminal Classic; the recovered charcoal that yielded a radiocarbon date in the Proto-Classic period may thus be a simple chance inclusion. In either case, this would seem to have significant implications on our notions of curatorship in Maya ritual.

Atop this rough platform was deposited an assemblage of remarkable character: approximately 30,000 ceramic sherds, plus both faunal and lithic materials in notable quantity. Considering the presence/prevalence of temporally diagnostic ceramic sherds by bag number and thus approximating level, it seems clear that the assemblage was deposited as a heterogeneous mix, and likely over a relatively restricted span of time during the Late/Terminal Classic or perhaps the Early Postclassic period. Indeed, it seems likely that this assemblage was deposited following, but in association with, the construction of the underlying platform (Lot 2), and the assemblage covers a similar span of time from the Middle Formative through the Late Postclassic—again, we may question the identification of two isolated Late Postclassic sherds. As noted above, there are significant differences between these assemblages in terms of the specific types represented, the relative frequencies of ceramic forms and the relative abundance of other artefact types.

Further, the method of deposition for Lot 1 contrasts that of Lot 2 in that it does not appear to have necessitated human entry into the cave space. The assemblage associated with Lot 1 appears to have been deposited by being dropped or thrown in from above, which resulted in a distinctive cone-shaped deposit. As in the previous Lot, it

87 This contrasts with previously published preliminary evaluations that suggested temporal trends within the deposit and hence, a more protracted period of deposition (Andres et al. 2014; Morton et al. 2014).
appears that the assemblage is predominantly composed of unique, fragmented, and incomplete vessels. Only two intact rims were recovered from Lot 1 (in that their entire circumference was present; Figure 8.45). Both were derived from utilitarian vessels, and while large portions of conspicuous vessels (drum forms, polychrome bowls and vases, Miseria Appliquéd bowls and modelled censers) were represented by multiple contiguous sherds, none could be reconstructed beyond approximately 70% completeness.\textsuperscript{88} Still, given this, it seems likely that at least some of the vessels deposited in Lot 1 were deposited as either whole vessels or very large portions thereof. Others, it seems were deposited as individual sherds as seen in Lot 2 and noted in cave deposits elsewhere in the region. Employing the same methodology of collecting and recording all sherds with drilled holes noted above, of those found (n=17) the majority are clearly derived from different vessels; four

\textsuperscript{88} This is still pretty good, and in many contexts it would be suggested that an entire vessel had once been deposited, its missing pieces falling prey to the vagaries of preservation. In TCU s.08, no such taphonomic process could account for such incompleteness: if deposited, it should still rest in the cave, barring the subsequent removal of sherds by human hands (and if this, the thoroughness with which most vessels must have had their sherds removed defies belief). What is more likely to account for some of this incompleteness is human error and my failure to identify articulating sherds within this exceedingly large assemblage.
sherds may hail from the same two vessels, two sherds each, but these are non-contiguous. Thus, assuming that conically, or biconically drilled holes in this assemblage are mend or suspension holes, then it seems clear that these sherds are derived from partial or fragmentary vessels deposited with the assemblage. The lithic and faunal materials included in the assemblage, while potentially in primary context, do not represent activities occurring within TCU s.08 itself, but perhaps associated on the surface.

As was the case with the previous Lot, it seems that the most pertinent question in this case is, “what kind of deposit is this?” A similarly massive deposit was found by Sarah Wille (2007) at the site of Chau Hiix, Belize, as a surface scatter associated with monumental architecture. She interpreted this deposit as the ritualized discard of a large feast. This deposit (Feature X02 [Wille 2007:157]) shares a number of traits in common with Lot 1 in TCU s.08. To begin, Feature X02 appears to have been deposited in roughly the same period as TCU s.08 (Terminal Classic) and is similarly dominated by ceramic remains. Further, as the deposit apparently remained open for a prolonged period of time, she found a smaller Postclassic deposit in physical association. However, Lot 1 in TCU s.08 is most notably similar to Feature X02 in terms of frequency of vessel forms—the deposit identified by Wille (2007) was dominated by serving vessels (61% dishes, bowls or basins, and vases). Similarly, in Lot 1 of TCU s.08 fine open form vessels dominate the assemblage (57% based on the collected sample, 65% based on extrapolation for the assemblage as a whole). A similarly large variety of types was recovered from both contexts (n=28 in Feature X02, n=34 in Lot 1 [Wille 2007:158-159]) and these overlap in particular with reference to the Barton Ramie assemblage (Gifford 1976). The presence of specialized forms such as ‘drum’ forms and censers also aligns the assemblages; while we don’t have analogous information from surface contexts at Tipan, such specialized forms were found exclusively in contexts interpreted as ‘ritual’ at Chau Hiix (Andres and Pyburn 2004; Wille 2007:161). Finally, the deposits are remarkably similar in terms of their fragmentation. Wille (2007:163) notes that:
Four nearly complete vessels were predominantly recovered from the “center” of Feature X02, although in different excavation areas…. Fragmentation data indicate the great amount of sherds “missing” from partially complete vessels is intentional. The Maya at Chau Hiix may have contributed complete vessels, smashed them during ritualized activities at Structure 371, and then removed sherds from these vessels that started out complete. Or, they may have brought incomplete pots, or large sherds as offerings.

The deposits are also similar in the variety of lithic materials and forms included—mostly cherts/chalcedonies, obsidian and granite and a variety of flakes, scrapers, blades, metate fragments, etc.—though the deposit from Feature X02 is much larger and includes a greater variety of both (Wille 2007:166). Wille (2007:170) also notes the presence of local Pomacea and Pachychilus, as well as non-local marine resources in the Feature X02 assemblage. Interestingly, the presence of fragmented human remains in Lot 2 may serve to align the TCU s.08 assemblage as a whole with Feature X02 where human remains were similarly encountered in small quantity (Wille 2007:173).

These two assemblages differ in several significant ways as well, principally in terms of mixing within the assemblage (the assemblage from TCU s.08 incorporates ceramics from a much broader span of time than does Feature X02, perhaps suggesting an origin apart from ‘feasting’), the location of deposition (in a natural subterranean feature), and pre-/post-depositional treatment of this context (the construction of architecture within the cave itself, and the apparent sealing of the cave under the plaza floor post-deposit, where Feature X02 was left exposed on the surface). Other large deposits have been noted in the Maya area that more closely align with this context: at Actun Balam and two caves near Pusilha, Belize, and the Cueva de los Quetzales, Guatemala (Brady and Rodas 1995; Joyce et al. 1928:343-346; Pendergast 1969). Discussed in Chapter Five, each of these caves includes a conical or truncated conical pile of cultural debris below a vertical opening or chimney yielding direct access to the surface or near-direct via a horizontal cave entrance. In their basics, each assemblage

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89 Unless, of course, curated vessels were thus employed.
shares a number of attributes in common with that in TCU s.08, including the overwhelming dominance of ceramic materials, their highly fragmented nature, and the inclusion of a relatively minor, but diverse collection of lithic and faunal materials (in all cases more diverse, but not alien to that in TCU s.08). At Actun Balam, David Pendergast (1969:9-10) noted that no meaningful relationships could be discerned within the pile, indicating a mixed deposit and relatively short period of deposition, as at TCU s.08. Where each of these deposits vary most one-to-the-other, and save in the case of Los Quetzales and TCU s.08, is in their context relative to surface features: Actun Balam is isolated, with no significant centres noted in close proximity (Pendergast 1969). The caves near Pusilha lie within the vicinity of elite hilltop residential groups (within 300 m) and approximately 750 m from the site core. Both Los Quetzales and TCU s.08 lie within the monumental core of a civic-ceremonial centre; the former at the site of Las Pacayas. Brady and Rodas (1995:23-24) have suggested that this contextual difference is the most significant factor differentiating these sites and is the root cause of material differences in the assemblages contained therein. In the case of Actun Balam, coarse storage vessels dominate the assemblage (~86% [Pendergast 1969]), a characteristic that Brady and Rodas suggest indicates the site’s primary use by ‘campesinos’ or village farmers, perhaps in the course of rites attached to the agricultural cycle (Brady and Rodas 1995:23). In contrast, the assemblages from the Pusilha caves and Los Quetzales contain a much higher percentage of fine serving vessels (incl. polychromes); painted vessels alone are estimated to account for more than 40% of the ceramic assemblage from Los Quetzales (Brady and Rodas 1995:20). Elaborate forms, such as drums and censers are also found in these contexts (Brady and Rodas 1995:21). Brady and Rodas attribute this to the proximity of ‘elite’ architecture and the use of these spaces by (perhaps) elite lineage groups at Pusilha and by the state itself at Los Quetzales (Brady and Rodas

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Note that Pendergast also identified a number of circular ground ceramic discs (n=24) at Actun Balam, (much like those recovered from TCU s.08) several of which were broken in half (n=10). He was unable to offer a conclusion as to the purpose of these items (too small and thin to have served well as spindle whorls).
1995:24). In context and content, thus, TCU s.08 seems to most closely align with Cueva de los Quetzales.

Tying this up, Brady and Rodas are careful to note that the accumulated assemblage of the Cueva de los Quetzales represents the final deposition of material collected and used in surface rites, and is not properly speaking, the remains of cave ritual (Brady and Rodas 1995:19). This is perhaps the point of articulation linking the deposit described by Wille (2007) at Chau Hiix, with those noted at both Las Pacayas (Los Quetzales) and Tipan Chen Uitz (TCU s.08). Whether or not we accept Wille’s interpretation of the assemblage at Chau Hiix as the remains of ritual feasting and attribute a similar origin to that of TCU s.08, unlikely given the temporal breadth of material noted above, it seems likely that both are the end products of state-sponsored ritual within the site core of Tipan that may have incorporated discrete acts in both surface contexts and other caves. Contrary to Brady and Rodas’ interpretation, I would suggest that the rites resulting in the TCU s.08 deposit are every bit as much within the stable of ‘cave ritual’ as are those other rites making use of this context and discussed thus far in this dissertation; it should be clear by this point that the cave never exists in isolation (see Chapter Four). In this light it is tantalizing to note that the assemblage in TCU s.08 incorporates both a Cocay Appliquéd jar and the remains of at least one shoe-shaped pot, vessels that are almost exclusively associated with cave assemblages in the region (Reents-Budet 1980; Peterson 2006). Perhaps caves were the source material for this assemblage?

**Core Cave Use: Summary**

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91 Though note that Brady (2005:f-5) has re-interpreted the assemblage from Los Quetzales as having been deposited over the course of centuries and through the course of ‘cave ritual.’

92 Or, at least, elite level (the two need not be synonymous).

93 Though, note that these have been found in surface contexts elsewhere, incl. Altun Ha (Graham et al. 1980:164).
As was the case with those caves discussed in the previous chapter, the caves discussed here varied considerably in their morphological characteristics, from vertical solution holes (TCU s.11, TCU s.08) and restricted squeeze-ways (TCU s.05), to voluminous caverns and rockshelters (Junction Cave and TCU s.21). So too did they vary in use, resulting in the incorporation of cultural assemblages both miniscule (Junction Cave) and immense (TCU s.08), or perhaps more interesting, exhibited a complete dearth of evidence for active use (Mark’s Cave, TCU s.05, and TCU s.11). Of these latter, while some appear to have been simply neglected (Mark’s Cave), others were actively excluded by having their entrance sealed (TCU s.05), or were undergoing a process of development/change and elaboration that seems to have been halted prior to completion (TCU s.11). So too is the variability between caves that did see significant utilization drastic and perhaps related to their broader context within the landscape: from a cave beneath the junction of two causeways (Junction Cave), to a rockshelter near but external to the monumental core (TCU s.21), to a small but heavily used vertical cave sealed beneath the plaza floor in one of the most architecturally restricted, apical, portions of Tipan’s monumental core (TCU s.08). Temporally, all caves from which we have identified datable materials suggest use during the terminal phases of the Late Classic period, if not extending into the Early Postclassic. While it remains possible that materials deposited within Junction Cave accumulated over a broader span of time beginning, perhaps, in the Early Classic, it seems equally clear based on the mixed nature of the assemblages recovered from both TCU s.21 and TCU s.08 that use of these later caves was focused, if not isolated, to the Late/Terminal Classic and Early Postclassic, though earlier materials are present. While not a part of my primary research, and hence not discussed directly in this chapter, ongoing studies by the CBAS project at the large multi-component Actun Kabul, and previous work by members of the BVAR, WBRCP and MTC projects in similarly large and complex caves in this and the associated Roaring Creek River Valley will serve to fill out this assemblage as discussion continues in the remaining portions of this chapter and the next.
Local Patterns of Cave Use: Discussion

Given present evidence from surface contexts alone, one would be forced to conclude that the region of Belize discussed in this manuscript, in general, remained unpopulated, at least in the sense of nucleated habitation, until relatively late. The earliest solid evidence for nucleated settlements within the Caves Branch River Valley is restricted to the Late/Terminal Classic period (Spanish Lookout complex, based on cross-comparisons with the Barton Ramie ceramic assemblage [Gifford 1976]) and is defined by monumental construction within the various groups of Deep Valley (Jordan 2008) and at Deep Valley Lookout (Davis 1980), as well as by the presence of the large Xubzulima plazuela (Goldstein n.d.) in the valley bottom. In the Roaring Creek River Valley, excavations at Cahal Uitz Na, Chaac Mool Ha, several of the Pook’s Hill groups, and a handful of additional minor peripheral groups (Helmke 2000; Helmke et al. 1999) tell a similar tale, producing datable materials associated predominantly with the Late Classic (Spanish Lookout), or later. A very few earlier ceramics, dating to the Terminal Late Formative to Early Classic (Proto-Classic) transition, have been recovered from deep excavations at Cahal Uitz Na (Ferguson 1999:51). At Tipan, in the Roaring Creek Works, current estimates based on ceramics recovered from architectural excavations similarly suggest a relatively late date of construction at some point after the Early Facet of the Late Classic period (Tiger Run complex).

When Were Caves Used?

Data from the cave context, inclusive of caves, sinkholes, and rockshelters, offers considerable evidence in clarification of this pattern. The earliest evidence of human activity in the CBAS study area may be a Lowe point recovered from disturbed contexts in the Caves Branch Rockshelter (Hardy 2009:79; Wrobel 2008a; 2008b). While clearly out of original context (it was found in direct association with an Early Classic Fowler Orange-red jar and skeletal remains yielding an AMS date in the Late Formative), this point may nonetheless indicate that humans were living in or moving through this region.
as early, perhaps, as the Archaic period. **Figure 8.46** compares the temporal span of use as indicated by ceramic remains in a number of caves across the study area. From this, it is clear that the majority of caves in the region, particularly when we focus on the largest such examples (Actun Lubul Ha, Midnight Terror, Petroglyph and Footprint Caves) include materials extending as far back as the late facet of the Middle Formative. Given the pattern of (re)distribution of cultural material noted throughout the region, it could be argued that these objects were introduced in periods later than their manufacture, as in the case of the Lowe point, above. However, solid radiocarbon dates recovered from sealed contexts in Midnight Terror Cave fall cleanly within the Early Classic period (James Brady, personal communication 2015), suggesting that at least part of this temporal span represents legitimate primary deposition. Perhaps non-mixed, discrete, surface deposits in Petroglyph (Reents-Budet and MacLeod 1997) and Footprint (Graham et al. 1980) caves should similarly be taken as primary contexts associated in time with the material from which they are constituted and thus support a solid Early Classic date. Even given that earlier materials were frequently reinterred or redistributed in later deposits, it would seem unlikely that this material would derive from too far afield and thus we can say with relative certainty that the region was inhabited or in use by at least the late facet of the Middle Formative period.

**Economic Interaction**

Data from the cave context may also speak to broader political affiliations. A number of ceramics recovered from TCU s.08, within the monumental core of Tipan, are decorated with glyphs and glyphic elements. These decorated ceramics can be subdivided into two broad groupings: those dating to the early facet of the Late Classic (Uacho Black-on-

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94 While it must be acknowledged that objects deposited in caves may have been carried great distances prior to deposition, the frequency with which Formative period materials are found in the cave context (and the extent of cave use in general) seems to conflict with Patricia McAnany and colleague’s early suggestion that this region of Belize served primarily as a place of cave-related pilgrimage (McAnany et al. 2004:296-297), at least, by the Late Formative or Proto-Classic period. However, that Middle Formative material (much rarer) is found in what is likely primary context in only the largest of caves may support their suggestion during this earlier period.
Figure 8.46 - Periods of use in caves of the CBAS study area. Note, dark orange indicates periods greatest intensity use based on artifact frequency.
orange; Figure 8.47) and those dating to the late facet (Belize Red or Benque Viejo Polychrome; Figure 8.48). Christophe Helmke has identified the latter group, typical of this region, as composed of pseudoglyphs presenting an abbreviated and repeated dedicatory verb (Andres et al. 2014:53). The earlier vessel is more interesting. Based on content, Helmke placed the largest (rightmost sherd in the photograph) ahead of the others, though it appears to mend tolerably well as illustrated in the photograph. According to Helmke (Andres et al. 2014:54), the text refers to the Calendar Round date, wherein only the initial Tzolkin notation is preserved, “5 Manik.” The remaining sections of the text are thought to record parts of the names and/or titles of the original owner of the vase. A second vase with slightly everted sides seems to repeat this phrase or part of it, and was likely part of the same set as the bowl. A large portion of a well-preserved Saxche Orange-polychrome vessel recovered by James Brady from Midnight Terror Cave falls in line with these and bears a partial dedicatory phrase translated as “came into being, status of being presented, black flower…” (Giron-Abrego and Coltman 2009:28). What may be more significant is the presence of these vessels at Tipan or, given the
presumed secondary nature of the deposit in TCU s.08, nearby. These vessels are commonplace in the central Lowlands and at Tikal, in particular, during the early facet of the Late Classic (Andres et al. 2014:55; Chase 1994; Culbert 1993) and have been taken to correlate with the extension of Tikal control/influence at sites such as Dos Pilas (Brady 1997:608; Houston 1993:102; Martin and Grube 2000:56-58) and Caracol (Andres et al. 2014:55; Helmke et al. 2006) during this period. With the waning of Tikal’s power in the mid-6th C., the production and consumption of Uacho and Saxche ceramics decline, finally falling out of use at Caracol as late as AD 582 (Chase 1994:163).

Other broad patterns are evident in the cave assemblage of the CBAS study region that may prove significant in understanding economic and political bases of development. It has been frequently remarked that the material assemblage of the ritual cave context is similar in content to that of the domestic sphere. A number of possible practices have been offered up in explanation of this, including the extension of household ritual across broader landscapes (Vogt 1976:11), and the reuse, particularly in the case of commoner ritual, of household items in cave contexts either as ritual set pieces or in more extreme

Figure 8.48 - Specular red vessel with pseudo-glyphs from TCU s.08.
cases through the deposition of large volumes of commingled artefacts (mostly ceramic) as part of annual renewal rituals (Pendergast 1969; Thompson 2005 [1975]:xxxix). Regardless of their particular origins, the sympathetic assemblages of these two contexts, cave and household, afford researchers the opportunity to investigate aspects of the domestic economy, specifically networks of exchange and interaction, from contexts outside the household itself. Moreover, as a product of scaled and status-dependent patterns of ritual cave use, we may be able to compare trends in ‘elite’ and ‘non-elite’ contexts.95

A couple of well-published caves, Petroglyph Cave and Footprint Cave, provide our starting point for this discussion. Petroglyph Cave, a large, multi-component ceremonial cave referenced extensively throughout this manuscript, is located south of the Hummingbird Highway, in the Caves Branch River Valley. Relative ceramic dating suggests a period of use concentrated between the Early and Late Classic.96 The Early Classic is represented by a fairly homogeneous array of diagnostic Hermitage complex vessels, including Tzimin Appliquéd type vessels and Petén Gloss wares such as Paradero Fluted, Urita Gouged-incised, and Pucte Brown types (Reents-Budet 1980). Similar and affiliated types are known from across the Maya lowlands including the Petén (Uaxactun [Smith 1955] and Tikal [Gifford 1976]), Pasión region (Altar de Sacrificios [Adams 1971]) and the southern Yucatán (Becan [Ball 1973]). In contrast, while the early Late Classic assemblage at Petroglyph still includes some broadly distributed types, there is both a greater diversity of types and a relative increase in ‘local’ (central Belizean) diagnostic vessels such as Macal Orange-red and Mountain Pine Red (Gifford 1976;

95 This topic has been dealt with previously in more abbreviated form, and exclusively within the context of caves in the Caves Branch River Valley (Morton et al. Submitted).

96 Reents-Budet’s (1980:265; Reents-Budet and MacLeod 1997:22) work in Petroglyph Cave suggests that the majority of all vessels found in the cave are attributable to the Hermitage complex (Early Classic), though the assemblage is consistent in general context and character throughout the Classic Period. While this most ‘intense’ period of use is earlier than expected based on current data from Deep Valley (assuming that the rise of Deep Valley is associated with intensification of the cave context), it accords well with similarly early evidence for socio-political consolidation emerging at Tipan Chen Uitz in the Roaring Creek Works (see above; [Andres et al. 2014]).

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Reents-Budet and MacLeod 1997). The later Late Classic assemblage continues this apparent shift away from broad regional economic networks and toward local affiliations—represented by Dolphin Head Red, Duck Run Incised, Garbutt Creek Red, Roaring Creek Red, and Vaca Falls Red types, and in the Terminal Classic with Daylight Orange (Gifford 1976). This shift may correspond with the consolidation of a local economic and political base and is chronologically aligned with both evidence of extensive construction at Roaring Creek and Caves Branch sites, and the dedication of Tipan Monument 1 (see Chapter One).

On the western side of the valley, Footprint Cave paints much the same picture, with assemblages shifting from those indicative of broad regional ties in the Early Classic toward increasing localization in the Late and Terminal Classic (Graham et al. 1980). A Belize Modeled-carved vase recovered from Footprint Cave provides a particularly acute example of this trend: while similar vessels are known from the Petén, this particular type is known only from other central Belizean sites, including Actun Tunichil Mucnal97, Actun Lubul Ha, Chanona Cave, and Pook’s Hill (Helmke et al. 1998). In addition to these specific types, a preponderance of Late Classic red ceramic wares, nearly to the exclusion of black wares, was noted within both Footprint (Graham et al. 1980) and Petroglyph (Reents-Budet and MacLeod 1997) Caves. Recent studies of Late Classic ceramic distribution patterns in Belize allow us to further refine this picture by showing a correlation between high frequencies of red calcite wares (such as the Garbutt Creek Red type) and eastern Belize Valley settlements including Barton Ramie, Baking Pot, Pacbitun, and Cahal Uitz Na. Conversely, Xunantunich and related western Belize Valley sites typically include fewer red wares and correspondingly higher frequencies of Mount Maloney and other black calcite wares (Connell 2000). Given that Arlen and Diane Chase have recently (2012) suggested that a Caracol-dominated overland trade route, specifically involving the distribution of Belize Red vessels, ran through the Hummingbird Corridor, it should perhaps not be surprising that the assemblage from

97 Holly Moyes (2001) notes that the ceramic assemblage from Actun Tunichil Mucnal is isolated to the Late/Terminal Classic period, though the non-utilitarian diagnostic vessels from this assemblage are likewise dominated by local types.
Petroglyph includes a number of these vessels as well (Reents-Budet and MacLeod 1997).

The majority of caves discussed in the context of my primary research are ‘small’ relative to either Petroglyph or Footprint Cave. While the correspondingly small assemblage size typically associated with such caves in many ways hinders the production of a meaningful comparison, a number of tentative observations can nonetheless be made. The majority of small caves contain only a handful of sherds, many of which are either non-diagnostic, or derive from coarse utilitarian vessels. The smallest of these (CBR Cave, TCU s.10, s.11, s.12, s.13, s.14, s.15, s.16, s.17, s.18, and s.19) contain only a few sherds. Perhaps not surprisingly, most of these sites nonetheless seem to reflect the oscillating patterns of broad regionalization and localization seen in larger caves; at most, however, the preference for red wares noted in both Petroglyph and Footprint Caves is absent. This is a point of discussion that will be returned to shortly.

Of course, other caves have proven more productive and offer a stronger basis for comparison. Relatively few sherds in the AC Cave assemblage have been securely typed, the assemblage being composed predominantly of non-diagnostic utilitarian body sherds. While the scant quantity of Early Classic material affords limited characterization (a single Fowler Orange-red is a local type, counter to expectation), Late/Terminal Classic vessels nonetheless conform to expected local types (including Cayo Unslipped and Daylight Orange). The majority of the assemblage recovered from Junction Cave was likewise composed of coarse body sherds from utilitarian vessels. The only six diagnostic sherds span the Early through Terminal Classic/Early Postclassic periods. While most later types (Roaring Creek Red, Dolphin Head Red, Daylight Orange) conform to expectations for localized exchange and consumption, both a local Early Classic Minanha Red vessel and an early Late Classic Sotero Red-brown perhaps, though by no means assuredly, suggesting connections with sites as far afield as Palenque or Copan (Gifford 1976:211), complicate the picture. The small sample size from Junction Cave, as with those sites discussed above, encourages caution in drawing too strong an interpretation from these earlier assemblages.
In its morphology and the broad span of use suggested by its material assemblage, Actun Neko differs significantly from any of the previously discussed caves. Where it is similar is in the later content of the artifact assemblage contained therein, the predominance of utilitarian wares, and the transition from broad regionalization to localization represented by this. During the Early Classic, the site’s principle period of use based on artifact frequency, the non-utilitarian diagnostic assemblage included typical Hermitage complex varieties of local Minanha Red, though, as elsewhere, was dominated by types indicative of broader economic associations, such as Aguila Orange, Lucha Incised, and Balanza Black (variously known from sites in the Petén, Pasión, and Yucatán [Adams 1971; Ball 1973; Gifford 1976; Smith 1955]). The Early Classic shell disc, in its Petén style (Helmke in Morton et al. 2013) likewise demonstrates this connection. As elsewhere, the Late Classic assemblage, in turn, supports interpretations of localization with varieties of Macal Orange-Red, Rubber Camp Brown and Mount Maloney Black (Gifford 1976) dominating the non-utilitarian assemblage. Interestingly, diagnostic local types such as Daylight Orange, are not present in the Actun Neko assemblage, but rather local expressions of More Force Unslipped and perhaps examples of Miseria Appliquéd that may signal a late return/continuation of Petén influence/association (Sabloff 1975:174; LeCount 1996:139). Perhaps the most intriguing data, given the prominence of Late Classic ceramics within Actun Neko, is conspicuous for its absence: that is, there is neither a clear preponderance of red nor black wares in the Neko assemblage (only one Late Classic black ware sherd was found). The Actun Neko assemblage also allows us to extend our discussion further into the past. In particular, beginning in the Late Formative Jenney Creek complex, the assemblage from Actun Neko shows strong affiliations to types common in the broader lowlands including Sayab Daub-striated and Jocote Orange-brown types, and continuing into the Proto-Classic with examples of Aguacate Orange (common in the Maya highlands and El Salvador [Gifford 1976; Sharer and Gifford 1970]). Thus, Actun Neko provides evidence that peoples living/using the CBAS study region in general, and the Caves Branch River Valley in
particular, were tied into broad networks of exchange and consumption from this earliest of periods.

Indeed, this pattern appears ubiquitous in the caves of the region. The largest cave documented as part of my primary research, Actun Lubul Ha, shows strong broad regional associations through the presence of Sayab Daub-striated, San Antonio Golden-brown, Actuncan Orange-polychrome, Dos Hermanos Red, and Lucha Incised among other local utilitarian types (Adams 1971; Ball 1973; Gifford 1976; Sabloff 1975; Smith 1955). As elsewhere, utilitarian vessels dominate the assemblage; at Lubul Ha, these are most commonly Cocay Appliquéd jars or bowls. Interestingly, only three sherds diagnostic of the Late Classic were noted at Actun Lubul Ha, including the ultra-local Belize Modeled-carved.

Even the mixed deposits from TCU s.21 and s.08 seem to illustrate these general trends. A Middle Formative Cooma Striated sherd from TCU s.21 shows early connections to the Maya highlands and El Salvador (Gifford 1976; Sharer and Gifford 1970), sherds of Paila Unslipped demonstrate connections with Uaxactun (Smith 1955), and broader connections with the Petén, Pasión, and Yucatán are demonstrated by Early Classic sherds of Aguila Orange, Caldero Buff-polychrome, and Dos Hermanos Red (Adams 1971; Ball 1973; Gifford 1976; Sabloff 1975; Smith 1955). As at Petroglyph and Footprint Caves, while the Late Classic assemblage continues to include sherds illustrating broad regional affiliations (Chunhuitz Orange, Juleki Cream-polychrome and Uacho Black-on-orange [Adams 1971; Ball 1973; Ball and Andrews 1973; Smith 1955]), the non-utilitarian assemblage is dominated, by far, by local types such as Yalbac Smudged-brown, Mount Maloney Black, Roaring Creek Red, and Vaca Falls Red (Gifford 1976). Interestingly, as at Actun Neko, there does not appear to be a preference for either red or black calcite wares, both appearing in the TCU s.21 assemblage in minor quantities. The assemblage from TCU s.08 closely follows that of TCU s.21, though with more variety in each period. Where the latter assemblage differs significantly is in the overwhelming abundance of red calcite wares over black calcite wares (a ratio of better than 7:1).
Other artifacts speak to these broad connections, though with the exception of the shell disc from Actun Neko, they defy attempts at dating. Regardless, from Neko’s shell disc, to the marine shell recovered from TCU s.08 and s.21, or the slate fragments noted in many a small cave in the Roaring Creek works (TCU s.08, s.13, s.14, and s.21) and displayed prominently in the architecture of Tipan, Yaxbe, and Uitz Na, it is clear that the peoples of the CBAS study area were well-integrated in economic networks connecting the Caribbean coast (source of marine shell) to the Maya Mountains (source of slate). Given possible trade routes connecting these areas along the Hummingbird Corridor, emphasized by the common presence of Belize Red within Tipan Chen Uitz (in TCU s.08), it is perhaps not surprising that this region would rise to prominence. Was the basis of this development participation in trade, exchange, and resource extraction as suggested by Elizabeth Graham nearly three decades ago (Graham 1987)? Alas, answering this specific question will have to await further research. At this point, it is worth recalling the curious observation that localization, and preferential participation in eastern Belize Valley economic networks within the region seems to occur in the very period that architectural and textual evidence is suggesting broader western affiliations. Seemingly, there is an as yet poorly understood disjunction between broad ideological, as emphasized by text and architecture, and economic, as emphasized by ceramics, patterns of affiliation/association.

Socio-Political Identities of Cave Ritualists

The similarities between these assemblages are striking, but what may be more interesting are the differences. In fact, it may be these differences that provide the basis for teasing apart the identities of those engaging with the cave context. Such inference rests on a singular, if significant assumption: that relevant aspects of socio-political or socio-economic identity are manifest through patterned variability in the material record of the ritual cave context. In general, the assemblages of smaller caves are less diverse and more modest in proportion to those of larger caves with the obvious exception of TCU s.08. This should perhaps not be surprising based on simple morphological
characteristics that may have limited the activities occurring within. More interesting, while all of the region’s caves suggest processes of increasing localization moving into the Late Classic period, the dominance of eastern Belize Valley-affiliated red calcite wares at both Petroglyph and Footprint Caves, to the near exclusion of black calcite wares, is not universally expressed. In fact, it is additionally expressed only in TCU s.08 and Junction Cave. Considering the vast locational and morphological differences between these four caves, it is clear that such characteristics do not explain this preference. Rather, it may be that the expression of this preference reflects the specific, economically expressed, socio-political identities of those acting within these contexts. Based on its location within the monumental core of Tipan Chen Uitz, in an elevated plaza immediately adjacent to what is presumably the apical palace complex of the site, it would seem reasonable to suggest that those making use of TCU s.08, and likely those constructing its architecture and furnishing it with offerings, are of an ‘elite’ class; taken here to mean those at the top of the economic and political pecking order. So too, based on its location at the crossroads of two sacbeob north of Tipan, might we expect that Junction Cave attracted a higher status of patron. From architecture, to dress, monuments, language, and patterns of consumption and exchange it has often been remarked that the political elite of Maya society signalled their affiliations and influences. Thus, it is perhaps not surprising that the strongest such signature, in this case signalling affiliation with eastern Belize Valley networks, would be found in contexts controlled by, and assemblages generated by, the elite class. We may be able to use this expression of preference as a tentative ‘marker’ of elite status in the cave context and suggest that both Petroglyph and Footprint Caves, while not directly associated with other trappings of elite culture, were similarly controlled by elite interests in the Late Classic. Unfortunately published data does not currently exist to similarly evaluate other large cave contexts (e.g. Midnight Terror Cave, Actun Kabul, or Actun Tunichil Mucnal), and Actun Lubul Ha appears to have fallen into a period of disuse or limited use during this period.

Accepting that Late Classic cave contexts exhibiting a preference for red wares are associated with ‘elite,’ perhaps state-sponsored, ritual, then there is a complementary
implication that those caves not exhibiting these preferences may have been used primarily by ‘non-elite’ or ‘commoner’ populations. Defining such a division provides an excellent stepping stone for discussing a range of issues relevant to the rise, maintenance and perhaps fall of nucleated centres and socio-political power in the region. While I will get to this discussion below, for now let us continue to address the question of economic networks. In its broad strokes, the material assemblage of the non-elite sphere and that of the elite mirror one another in trends of regionalization and localization. In all periods, local utilitarian wares are common, while non-utilitarian serving vessels conform to the ebb and flow of regional interaction seen in the neighbouring Belize and Sibun River Valleys. So why the difference in terms of the prominence of red wares? It is possible that non-elite populations within the valley had less access to those specific goods signalling political affiliation, however, we know from the presence of some such wares that access was not exclusive. Further, based on the presence of the shell disc from Actun Neko, it seems clear that even those making use of small caves in the region, that do not display a preference for red wares, had both access to exotic, high-value goods, and the freedom to use them. This is perhaps suggestive of developing social complexity within some segments of the non-royal population at this time. Both of these observations may be linked to general patterns of increasing affluence during the Classic Period.

In Chapter Two I discussed a number of ways that ritual activity related to the establishment and maintenance of the social order. As explicitly stated by Turner (1964:25), ritual always requires a focus—‘dominant symbols become focuses of interaction. Groups mobilize around them, worship before them, perform other symbolic activities near them, and add other symbolic objects to them….’ The Spanish understood this well which explains their proclivity for placing their seats of authority in the same physical settings as those of whom they conquered, sometimes going so far as to incorporate elements from razed indigenous structures into their new symbols of the colonial order. So too, in the ancient past, is it apparent that symbols were imbued with power and moreover, that said power belonged to the possessor of the symbol. Christophe Helmke and colleagues (2015) discuss a battle between the forces of Tikal
and Naranjo in which Naranjo’s ruler *Yax Mayuy Chan Chaahk*, along with a palanquin and an effigy of his patron deity were captured (Helmke and Kettunen 2011:64-65).

“Thereafter, the Tikal king was triumphantly borne on the palanquin, the patron deity of Naranjo now protectively embracing the victorious Tikal ruler, thereby completing the total military and religious defeat of Naranjo” (Helmke et al. 2015; see also Martin 1996; Martin and Grube 2008:49, 78-79; Tokovinine 2015). Emerging patterns of behaviour within the cave context of the CBAS study area may suggest a similar acquisition of symbolic space. As discussed in Chapter Five, the region’s numerous rockshelters, or shallow forward areas of deeper caves, may have served as the ‘typical’ burial site—or at least, the most commonly identified archaeologically in terms of the absolute number of individuals interred—for autochthonous populations since the Late Formative period (Ferguson and Gibbs 1998; Michael and Burbank 2013; Wrobel 2008b; Wrobel and Shelton 2011). While the use of rockshelters for this purpose continues with little variation in their human content, during the Late Classic period several of the region’s deep caves (spec. Je’reftheel, Actun Kabul, and Midnight Terror; all in the Roaring Creek Works) become similarly employed, and in a big way. While age and sex distribution suggests the use of these locales as a similarly unrestricted mortuary repository to those interred in rockshelters, the presence of cranial and dental modification within these assemblage serve to distinguish them from rockshelter populations (Helmke and Wrobel 2012; Kieffer and Saldana 2009; Wrobel 2013; Wrobel et al. 2012). While the problems with inferring a direct one-to-one relationship between ‘status’ and skeletal modification are acknowledged and have previously been discussed at length, it seems well within the bounds of plausibility that this singular difference can be called upon to distinguish some form of difference in identity between the two populations, and ‘status’ perhaps being that most readily invoked.

Focussing our discussion for the moment on Actun Kabul and Midnight Terror Cave, both located only a short distance north of the Tipan site centre, and pointing to the rich material assemblages, location relative to monumental architecture, and extensive architectural elaboration (see Brady 2009 and various chapters in Wrobel et al. 2013 and
Wrobel and Morton 2015), both of these caves have been interpreted as predominantly ‘elite’ contexts. Given the timing of the above-noted shift in mortuary ritual, a period that seems to correspond with growth at surface sites, epigraphic evidence for political consolidation and expressions of economic localization if we accept the premise noted above signalling eastern-Belize Valley economic affiliation, it seems consistent to suggest that this emerging mortuary pattern is similarly the product of these changes. Perhaps, they even constitute the acquisition of space by a newly emerging or more strongly represented elite class; both Actun Kabul and Midnight Terror Caves appear to have been used for longer periods of time than many other caves in the region. In Zinacantan, ceremonial bodies are segmented into ‘senior’ and ‘junior’ roles. This holds true for socio-political ranking, as well as in the ranking of shrines, mountains, caves, ritual paraphernalia, etc. This designation is one based on the flow of time, more precisely, upon the amount of time elapsed since an event occurred in the life of a person or in the transformation of a natural object, such as a cave or mountain, from secular to sacred status (Vogt 1976:34). Similar concepts are evident in McAnany’s (1995) principle of first occupancy. It would seem reasonable to suggest that those caves most likely to attract elite attention would be those that had served as ritual contexts the longest (i.e. were ‘senior’). Further, the idea that the acquisition/use these contexts and ones like them in the Roaring Creek River Valley (Actun Nak Beh), and Caves Branch River Valley (Footprint Cave and Petroglyph Cave) may have been accompanied by an exclusivity of access, much as we assume for monumental architecture, may go some distance toward explaining the ubiquity of cave use that we see in both valleys during the Late Classic period as commoner ritual is forced to make use of new locations. This late ubiquity may similarly be a sign of increasing settlement density in the region, as would be expected in a growing polity, as local caves are accessed based on proximity to newly-established houses and fields.

What Function(s) Did Ritual Serve?
Chapter Five closed with the presentation of a list of activities conducted within the cave context. Caves served:

1. As Sources of Water
   a. Sources of drinking water (mostly in the Northern Lowlands and contemporary Highlands).
   b. Sources of ‘virgin’ water for religious rites (associated with concepts of sustenance and agricultural fertility, a minor use associated primarily with the Northern Lowlands).

2. As Sources of Other Resources
   a. Animal and plant products for religious rites.
   b. Animal resources for consumption (including meat and honey).
   c. Sources of clay and other minerals.
   d. Sources of ideologically charged resources (ex. speleothems).
   e. As sources of material wealth or utilitarian objects (perhaps a relatively modern use tied to tourism, looting, etc.)

3. As Cemeteries
   a. Negotiable and reflecting a wide range of demographic factors.

4. As Ritual Locations
   a. As locations for sacrifice (of human or other animal; appears to be a minimal or secondary use).
   b. Associated with rites of transition (ex. political accession or political/religious incorporation).
   c. In boundary maintenance and community delineation (perhaps associated with ritual circuits and marked by ceremonial discard).
   d. In fertility and rain rites.
   e. In healing rites.
   f. In petitions for wealth and prosperity.
   g. In divination.
   h. For negative witchcraft.

5. As Art Galleries
   a. In connection with religious rites.

6. As Places of Refuge
   a. For objects and people.

While several of these uses have been identified within the caves discussed over the last couple of chapters—caves as sources of clay and other minerals; caves as sources of ideologically charged resources; caves as cemeteries; caves as locations for sacrifice; associated with rites of transition (as in period ending rites)—the majority have proven difficult to individually identify/disentangle.
Perhaps most problematic of those acts not demonstrable in the caves of the region, are rites of rain and fertility. As discussed in Chapter Four, such rites are among the most frequently noted ethnographically, and as discussed in Chapter Three the requisite symbolic connections between the cave context and such concerns extend far back into the Formative period. In Chapter Five, a recent article was discussed in brief, in which Holley Moyes and colleagues (2009) associate Late Classic intensification of cave use in western Belize with ritual attempts to ameliorate adverse drought conditions. In the specific context of their article, their argument is compelling. Unfortunately, it is difficult to extrapolate to other regions for a variety of reasons, primary among these, that it does not attempt to define what a cave assemblage developed through the course of a rain ritual looks like. Indeed, the universality of the ritual assemblage employed in the cave context does much to preclude the identification of such specific deposits. Further, it is problematic, given the diverse list of potential uses outlined above and in Section One of this dissertation, in its implicit assumption that all cave rites occurring in western Belize during the Late Classic are associated with rites of rain and fertility. In the context of the CBAS study region (based on artifact counts) we typically find the most intense period of use associated with the Early Classic period, and the most ubiquitous period of use associated with the Late Classic. Based on current environmental reconstructions (see Moyes et al. 2009), this earlier period is not associated with drought conditions.

A more general explanation for this pattern may be suggested based on Robert Sharer’s (1985) observations that a lack of stability in the socio-political order may foster ‘atypical’ or heightened expressions of authority such as through the construction of monuments, revitalization of seats of power, or an increasing frequency of public ritual display; people pray in times of uncertainty, whether to gods or people is of little consequence. Certainly, endemic drought is likely to cause such instability, and Moyes and colleagues ably demonstrate that increasing ritual activity may have served as an appropriate response. The transformation of a region such as that along the Hummingbird Corridor, from a relatively underdeveloped hinterland or frontier zone into a burgeoning seat of power in its own right may have elicited similar ritual reactions. Given the
generalized functional relationship between rite and society discussed in Chapter Two, such rites may have incorporated a wide variety of specific ritual goals that nonetheless served the unified purpose of consolidating the socio-political order. It is worth suggesting that this may similarly have been the driving force behind increased ritual activity in western Belize, as the emergence of Minanha as a semi-independent state with the disintegration of external and overarching power relationships, and the establishment of what is perhaps a royal court (Iannone 2009) would provide similar pressure. In this case, the drought conditions may have been an important, but perhaps not the only, driver in the expansion of cave ritual.

Other rites may have functioned similarly. In Chapter Seven, it was suggested that the eastern sections of Operation 1 at Actun Lubul Ha, specifically those portions marked by ‘three stone hearths,’ were used in rites of transition, perhaps linked into the ritual calendar, perhaps associated with period endings or other such rites. It was further noted that, based on the morphological restrictions of the cavescape in this case, the activities taking place in these areas would have been effectively obscured for observers occupying the broader chamber or Cantzicnal Caan, beyond. The construction of a platform that would have fostered observation in Operation 2, and the presence of hearth features suggested to have served primarily in illumination may be taken together to infer that some aspects of ritual cave use in Actun Lubul Ha were conversely geared toward public observation. One is reminded of elite ritual practice within monumental centres, that are thought to combine ritual elements that are open to public observation—carried out in procession from location to location, upon the stairs of pyramidal platforms, or before the temple structures that rest atop—and those that are closed to public scrutiny—carried out within temple structures (Freidel et al. 1993:158). James Brady has suggested a very similar division at Midnight Terror Cave, where a large platform built within the cave entrance would have fostered observation of some portions of ritual activity, while the use of niches and boulders within the cave would have shielded others from general observation (Brady 2009). Such division appears to be an important element of Maya ritual activity, patterns of inclusion and exclusion working in concert fostering the
creation of both *communitas* and *polis*; those moments that take place on the stage stand in complementary opposition to those behind the scenes (à la Goffman 1956).

**Fragmentation of the Material Record**

Such dialogues between public and private, inclusive and exclusive, observer and performer appear to have framed much ritual cave activity in the CBAS study region and are represented by the single most commonly observable pattern of deposition within this area: that is, the fragmentation and distribution of objects between several distinct loci. Regardless of the specific motivation behind the rites in question, connecting multiple locales across the landscape affords an opportunity for more-or-less formal and inherently observable/public ritual procession in combination with secluded/private acts within caves themselves. Importantly, the pattern is ubiquitous, observable in every single cave investigated as part of my primary field work and explicitly referenced in almost all published academic accounts of ritual activity in this region. Further, this pattern appears relatively common across the Maya area, though its full extents are difficult to gauge from the published literature and it is rarely actively discussed (cf. Lucero 2008). The most important implication of this may be that we have been remiss in treating cave contexts in isolation. Even large elaborate and heavily utilized caves seem to have served as simple nodes within broad ritual landscapes and should be treated as such. The scale of cave-related studies within the Maya area needs to change, from those focussed on individual caves to broad analyses on the landscape scale (as in settlement studies).

Moreover, these studies must explicitly seek out variability within this corpus as it is clear that even small sites may have served as important nodes within larger circuits (consider the quantity of material deposited in Overlook Rockshelter).

Curation is the other side of the coin. It is clear that many of the fragmented objects deposited in the cave environment are in secondary context, particularly where they are included as parts of massive mixed deposits (such as in TCU s.08). As discussed previously, the removal of objects/materials from the cave context stands among the most readily observable of activities occurring within the cave context. Whether this material is
cultural in origin (e.g. *cristos aparecidos* discussed in Chapter Four) or natural (e.g. clay from Actun Lubul Ha, speleothems from Junction Cave, etc.), it seems likely that the value of these objects lies primarily in their association with the cave context (and its symbolic baggage as discussed in Chapter Three). In the context of fragmentation and redistribution, it may be that caves served not only as places of deposition, but as places of acquisition for symbolically charged objects, including ceramics. It must also be considered that rituals making use of historically meaningful locations, and incorporating curated materials may suggest a landscape woven together, not only over space, but over time (a temporalization of space noted elsewhere [Gossen 1974:19; Morton 2007; Vogt 1976:75]).

The ritualized fragmentation and distribution of cultural materials across multiple sites has been extensively discussed in the context of Old World prehistory and has been explicitly theorized (Bradley and Ford 2004; Brittain and Harris 2010; Fowler 2004). Termed ‘fragmentation theory,’ it invokes aspects of cognitive archaeology, place making and thirddspace, embodiment and theories of dwelling. In broad strokes, it reminds me strongly of what Stewart and Cohen have termed the ‘extended present’ in the field of neurolinguistics (Pratchett et al. 2002:273-274): the human brain has the innate ability to take small, discontinuous pieces of information and combine them, without conscious effort into a meaningful and unified whole. When you hear a sentence, you don’t perceive it as a series of phonemes though you are hardwired to process it as such, but as a meaningful word within a sentence. So too in fragmentation theory do people take discrete depositional events, often separated by more-or-less protracted periods of time, and combine them into meaningful narratives. Proponents explain this characteristic of fragmentation through reference to fractal theory, “the idea that the same immanent relations are present at whatever the spatial scale of the phenomenon” (Chapman and Gaydarska 2007:1; see also Mandelbrot 2004; Prigogine 1987); it is not just that parts *represent* the whole, parts *are* the whole, and define symbolic linkages between the places in which they are distributed and the people who deposited them (a sentiment expressed more recently in Ian Hodder’s *Entangled* [2012]). In these Old World studies,
when fragmentation has been mapped on the landscape, a surprisingly wide network of places have often been revealed (Chapman 2008) that have collectively been suggested to contextualize lived experience through a process of embodiment much in the same manner as Keith Basso famously interpreted Western Apache naming conventions (1983). Unfortunately, while we are able to suggest that similar processes may account for, and result from, the ubiquitous patterns of fragmentation and distribution within the CBAS study area, the extents of any individual act remain unknown. We have yet been unable to refit objects between multiple discrete contexts/sites and indeed, identifying such networks may very well be among the most important (and difficult) tasks facing archaeologists interested in Maya ritual and landscape today.

Despite these difficulties, the diversity of topics covered in discussions of the cave context, and the variation in ritual encapsulated within, should be apparent. With a regional pattern of cave use thus defined, this is where most treatments of the cave context would end. In this light, it is perhaps sufficient to close this summary with one final observation that will bring us into the following discussion, that is, that in no case is cave use (or disuse as the case may be) isolated from surface contexts, but is rather intimately governed by broader patterns/processes, directly incorporated into multi-context behaviours, and is hence reflective of these. In the final chapter, the cave context will be explored explicitly in this light and thus return us to the question posed at the very beginning of this manuscript, “How do patterns of pre-Columbian cave use inform on the complex of historical, social, political, economic and related ideological processes in action during the inception, florescence, and collapse of Tipan Chen Uitz and other nucleated centres in the region?”
As noted in the introductory chapter, there has been, and continues to be, a tendency within studies of the ancient Maya cave context toward myopia. This is by no means meant to suggest that such studies are neither thorough, nor advanced—indeed, the challenging environment of subterranean sites and the peculiarities of assemblages gathered within them has fostered the incorporation of extremely sophisticated analyses, both common to the surface context and particular to that of the cave. Rather, by ‘myopic’ I mean simply that a focus on the activities occurring both within and between caves often takes place at the expense of exploring their broader significance in connection with the world beyond the cave mouth. In this final chapter, I’ll return to the primary question driving this dissertation by channelling the discussion, not directly toward the variation in ancient cave use in Central Belize (already discussed at length in previous chapters, regardless), but toward a discussion on the significance of this variation for understanding the complex of historical, social, political, economic and related ideological processes in action during the inception, florescence, and collapse of Tipan Chen Uitz and other civic-ceremonial centres in the region.

A View of the Ancient Maya in Central Belize from the Cave Mouth

Culture History

By approaching the cave context as an integrated dataset, linked not only to other subterranean sites, but recognizing as well its broader significance and entanglements in activities occurring at surface sites, we are able to build up a remarkably complex, if still
provisional, picture of the socio-political, economic, and ritual systems in process over the region’s history, and with particular clarity during the Classic and Terminal Classic periods. In summary, it appears that the Caves Branch River Valley was occupied, or in use, from at least the Archaic period (ca. 2500 BC - 1900 BC); as this is represented by a single projectile point, the context of human activity remains uncertain. Our first consistent data regarding the use/occupation of the region, both the Caves Branch River Valley, and the Roaring Creek River Valley, does not appear until the later facet of the Middle Formative period (ca. 600 BC - 300 BC). At this time, populations are already integrated into broad regional economic networks as demonstrated by the material components of cave use (see previous chapter), though the context in which these materials are incorporated into local practice remains elusive. Given the lack of settlement data for the region, we are as of yet unable to make definitive statements regarding population density or distribution. However, that materials dating to this period have at this point been found exclusively within cave contexts, and most within mixed deposits indicative of later incorporation/re-use of these materials (at Actun Neko, Actun Lubul Ha, Actun Nak Beh, Midnight Terror Cave, TCU s.21 and TCU s.08), it is probably safe to assume that local populations, if present, were relatively small or disbursed with caves serving as foci in material deposition. By the Late Formative (ca. 300 BC - AD 1) and Proto-Classic (ca. AD 1 - AD 280) periods many of the region’s large caves and rockshelters appear to have come into use as ritualized locations. Materials dating to this period are more frequently found in what may be primary contexts (Actun Lubul Ha, Actun Nak Beh, Petroglyph Cave, Footprint Cave, Sapodilla Rockshelter, Caves Branch Rockshelter, and perhaps CBR 4, DVR 1, and DVR 2), though their presence is still most frequently identified as components of later mixed deposits. Our first direct evidence for occupation within the region is associated with this period, in the form of Late Formative ceramics recovered from the civic-ceremonial centres of Cahal Uitz Na and Pook’s Hill in the Roaring Creek River Valley. Indirectly, we can confidently state that human populations in this region, culturally Maya based on the familiar context and content of their cave-related ritual activities, were settled in both
valleys in historically large numbers. Not only are these peoples making use of subterranean contexts for station-based ritual purposes, but they are beginning to use rockshelter and shallow cave areas as cemeteries, thus defining and claiming (taming) the landscape. In a region rich with caves, it is perhaps not surprising that these locations would provide both older and consistent evidence of use; conceptualized as temples, they will eventually form the heart of the monumental built environment as well. That those caves and rockshelters that come into use in this period typically continue to be utilized throughout the following Classic period, and in some cases into the early facet of the Early Postclassic period signals the importance of these senior symbolic touchstones to local populations. As in the earlier Middle Formative, the material assemblage from cave contexts demonstrates that local populations were participating in long-distance regional trade networks. The directionality of this system, as indicated by the prevalence of imported fine wares, suggests that those living in this region were likely consumers of the more complex expressions of Maya society in the so-called Maya heartland. It is uncertain whether the pattern of fragmentation and redistribution of ritual offerings that later represents the primary ritualized articulation with the cave context was similarly prevalent during this period, though objects hailing from this period are commonly found in later mixed deposits and fragmented Late Formative sherds are found in association with ‘three stone hearth’ features at Actun Lubul Ha. At this point, there is still no direct evidence, in the form of primary contexts in either surface or subterranean sites suggesting occupation or use of the upland Roaring Creek Works.

Our picture becomes clearer as we push into the Early Classic period (ca. AD 280 - AD 580). Cave use becomes more common across the study region in this period, and the quantity of goods expended on the practice of cave ritual increases dramatically. Imported ceramics typical of the Petén, Pasión, and southern Yucatán regions still dominate the fine ware assemblages from cave contexts, reinforcing continued participation in these economic networks, though local utilitarian wares are by far the most commonly encountered object within the cave context. With the rise of a series of major centres in the neighbouring Belize River Valley, perhaps those living in the Caves
Branch River and Roaring Creek River Valleys found themselves much less on the periphery. In the Caves Branch River Valley, ritual cave use appears to have reached something of a crescendo in terms of either the frequency with which people engaged in cave-related rites, or in the quantity of material deposited as part of these acts. At Actun Lubul Ha, ceramics associated with the Early Classic Hermitage complex are included in the three-stone hearth deposits. If we tentatively accept that these objects are found in primary context, then they and perhaps similar examples from the Late Formative together offer the first suggestion for differential deposition and perhaps differential participation in the ritual cave context. The ritual landscape of Lubul Ha appears to have been divided into more-or-less ‘visible’ or accessible zones. The construction of a large, if rough, platform elsewhere in the cave that may have conversely fostered observation lends further support to this notion. Thus, Early Classic activities within this cave provide our first materially observable hint for some level of social division: while some portions of cave ritual may have been broadly open to participation or observation, others are clearly more closed or exclusive. The incorporation of a finely inlaid and incised late Early Classic (ca. AD 396 - AD 652) shell disc in Petén style at Actun Neko reinforces continued association with areas further abroad. Depicting a principal figure wearing a na’at (‘thinker, knower, wiseman’) headdress and masquette bearing royal symbols, this object may suggest more significantly, a fluency and incorporation of the specific symbols of elite authority into local practice. Is there a recognizable elite emerging in the Cave Branch at this time? Perhaps in anticipation of more concretely observable developments in the Roaring Creek River Valley and Roaring Creek Works in the coming Late Classic? Contemporary data from these neighbouring areas similarly hints at continuing development, with construction/remodelling evident at a number of the Pook’s Hill sites in the Roaring Creek. While we don’t have similar evidence for architectural development in the Roaring Creek Works, a series of new caves come into use in the area at this time. An upland zone with little access to reliable natural water sources, it is possible that these rites are associated with the first settlement of a significant population here. That cave sites in this area are materially and contextually analogous to those in the
valley bottoms may be taken as tacit evidence that these newly arriving populations originally hailed from areas nearby. It is interesting that the two largest caves known in this area were among the earliest utilized, though more refined chronologies are needed to determine if the variable practices of inclusion/exclusion suggested at Actun Lubul Ha were likewise in place here at this time. What is clear, is that the behaviours of fragmentation, deposition, and redeposition noted in every subterranean site in the study area is in practice during this period, thus inscribing the landscape in a series of local networks, associations, and affiliations at a number of scales. If such rituals indeed served to identify and provide spatial delineation for corporate groups, then this may serve as our first good evidence for the development of polity structures in the region. As work at surface sites is still in its early days, they are at present able to add little to this particular discussion.

In the Late Classic (ca. AD 580 - AD 830/880), cave use explodes, becoming in all three areas ubiquitous. It is in this period, too, that we finally find concrete evidence for the construction and rapid development of civic-ceremonial centres in the Caves Branch River Valley, the Roaring Creek River Valley, and the Roaring Creek Works. A distinct architectural style serves to associate civic-ceremonial centres in each of these areas and collectively distinguishes them from contemporary sites in either the Belize River Valley or Sibun River Valley. As noted previously, as each of these sites (Deep Valley, Tipan Chen Uitz, Yaxbe and Cahal Utz Na) incorporate the full range of architectural constructions expected of a (semi-)independent centre (vs. causeway terminus groups at Caracol), it seems reasonable to suggest that they enjoyed independent periods of development prior to the incorporation of the Roaring Creek River Valley and Roaring Creek Works sites into a more unified political structure, marked by the construction of a network of inter-site causeways. There is no evidence that Deep Valley was actively included in such processes. It is possible that this architectural style directly references similar constructions at the site of Naranjo and by extension the Pasión region during the late 7th and early 8th C. AD, and indeed, Uacho Black-on-orange and Saxche Polychrome vessels painted with hieroglyphic texts recovered from both TCU s.08 and
Midnight Terror Cave similarly support such associations. Comparable examples of these are suggested to mark participation in a Tikal-centric network during the early portions of the Late Classic period and are in use at Caracol as late as AD 582. If the mass of architecture, and rapidity of construction at these centres failed to signal a shift toward regional prominence, Monument 1, from Tipan, apparently itself dedicated or commemorating an event in the early 8th C. AD certainly signals a level of literacy, both cultural and literal, long familiar in the Belize River Valley and broader Maya heartland.

While these developments were proceeding in surface contexts, so too was the ritual cave landscape in apparent flux. The ubiquity of cave use in this period may simply be a product of proximity and population growth. Alternatively, it may signal the acquisition of traditional (or ‘senior’) cave environments by an emerging elite class, and the consequent spread of ‘lower level’ cave use to secondary contexts. Certainly, within a number of prominent caves in the Roaring Creek Works (Actun Kabul, Je’reftheel, and Midnight Terror Cave) we find a novel expression of the mortuary behaviour known from rockshelters and the forward reaches of caves in the Caves Branch River Valley and Roaring Creek River Valley. While a dearth of associated grave goods is familiar, higher frequencies of cranial and dental modification and much lower frequencies of vertebral arthritis serve to distinguish the population interred in these Late Classic deep cave contexts from their contemporary fellows in rockshelters, and are interpreted here as being associated predominantly with the ‘elite,’ a relatively broad category potentially inclusive of the highest echelons of Maya society, lesser nobles, and perhaps an emergent middle class of specialists and traders. Whether the importance of subterranean sites as mortuary contexts is a particular characteristic of local cultural practice, or its expression to similar degree simply remains to be found in portions of the Maya area where the study of the cave context remains underdeveloped is uncertain. However, accepting the former, this may suggest that the upper classes in this region are composed primarily of locals, rather than of imported cadet lineages from neighbouring regions.98 This period is

98 DNA and strontium isotope analyses may help establish relationships between the region’s diverse burial populations.
also marked by the deposition of sometimes immense mixed deposits in both the Roaring Creek Works and Caves Branch River Valleys, equivalent data at present being unavailable from the Roaring Creek River Valley. Incorporating materials spanning the region’s history up to their point of deposition in the Terminal Classic, in some cases perhaps in the Early Postclassic, such deposits (in Actun Neko, TCU s.08, and TCU s.21) similarly seem to ‘claim’ space by introducing hundreds of years worth of material in one go. The symbolic value imbued in objects derived from the cave environment, whether natural or cultural, speaks to the value of these locations in the context of curation and emphasizes the symbolic potential of the (re)distributive rites that continue to dominate the ritual stable. Given the rapidity of development/construction that characterized the beginning of the Late Classic, it should perhaps not be surprising that ritual acts involving the (re)distribution of materials across broad landscapes would remain prominent. As discussed in previous chapters, this constitutes a particularly appropriate category of act, perhaps enacted for a wide variety of specific reasons, that may serve to define and maintain group bonds at a variety of scales.

It is intriguing to recall the apparent disjunction between political and economic spheres of interaction/affiliation introduced in the previous chapter. While architecturally, and in the case of specific specialized goods, the elite populace of the Caves Branch River Valley, Roaring Creek River Valley and Roaring Creek Works appears to be engaged in far-flung affiliations similar to those suggested for earlier periods if not more active, the material assemblage recovered from the cave context in this period, rather, suggests an increasing degree of localized production and consumption. Together, these trends may suggest that centres within the study region are finally coming into their own, not simply as frontier consumers of Classic Maya identity, but as important centres in their own right, tied predominantly into local economic networks over foreign, but still maintaining access and connections to the symbolic heartland. The presence of Belize Red, recovered in abundance from TCU s.08, may go some way toward explaining this florescence as the association between this region and an overland trade route to Caracol, the Hummingbird Corridor, may have provided opportunities for not only managing/
facilitating trade, but for directly inserting their own products (forestry, animal, and geological), into the system. This relationship may also explain the apparent shifting patterns of affiliation and association seen in the region as they generally reflect those of Caracol.

The cave context also helps to paint a picture of the end. While the grand architecture, carved monuments, and elaborate polychromes associated with the early centuries of the Late Classic speak to a sudden affluence and exercise of local power, these accomplishments are diminished by cheap dry-laid boulder construction reminiscent of the large but low quality builds associated with upwardly mobile middle class suburbia in modern North America and the development of ‘shadow economies,’ trading in elite knockoffs marked by pseudo glyphs on ceramic vessels. The minor, but showy (one might even suggest gaudy) modifications to monumental façades at Tipan—large crystalline limestone slabs left unadorned and disrupting direct access to axial stairways in both Plazas A and F—similarly give the impression of degradation or decline. Indeed, the end came soon. At some point in the Terminal Classic or Early Postclassic period (ca. post-AD 830), the monumental centres of Deep Valley, Tipan Chen Uitz, Yaxbe, and Cahal Uitz Na were left to the jungle. At Tipan, structures were abandoned in the midst of renovation (in Plazas C and F, and Structure 008). It appears that settlement across the region may have been largely abandoned at this point as well. Certainly, most ceremonial cave contexts seem to go out of use in the Terminal Classic. While there is evidence for continuing ritual activity in Actun Nak Beh and Actun Tunichil Mucnal, in the Roaring Creek River Valley, TCU s.08 and Junction Cave in the Roaring Creek Works, and Actun Neko and AC Cave in the Caves Branch River Valley, in content this activity is much diminished. With this, a once-booming region, like many of its neighbours, falls silent.

A Return to Ritual Theory and the Cave as a Concept
The discussion thus far has been chronologically structured, focusing heavily on the timing of specific political, social, and economic developments in the study region; it has
been strongly culture-historical. While I believe that such an approach is best capable of engaging with the hard data developed through this work, there are two closely related discussions from Section One that warrant specific readdress in light of the historical narrative here developed.

First among these, I’d like to return to the discussion of ritual theory introduced in Chapter Two. In that chapter, a number of roles/concepts were attributed to ritual in society. In particular, the discussion focussed on concepts such as John Baldovin’s “ideology of the sacred” (1991:25), which emphasized the importance of ritual and religion in the establishment, operation, and maintenance of social, political, and economic governance; Radcliffe-Brown’s “General Theory of the Social Function of Rites and Ceremonies” (2011 [1945]:184) in which rites are seen as having a special social function when they regulate, maintain, and transmit from one generation to another, sentiments on which the constitution of the society depends; and ritual’s role in fostering both vertical and horizontal integration (in reference to the concepts of polis and communitas). Together, these roles/concepts illustrate the power of ritual as both a communicative medium and as a source of validation for the systems with which it engages. In exploring these concepts in this chapter, I will refer liberally to the second discussion drawn from Section One: the cave as a concept.

Cave Ritual as a Comunicative Medium
Much of Chapter Two focussed on the communicative power of ritual. Its effectiveness in this regard is tightly tied to its structure. Referring back to Rappaport (1979), ritual must be performed given certain circumstances, is rigidly scripted, is divorced from goals (in a western cause-and-effect sense) and is internally redundant. Further, ritual often makes use of an “incontestable aesthetic field” (Bloch 1989), dominated by primary symbols around which groups mobilize, worship before/in, perform other symbolic activities near, and add other symbolic objects to (Turner 1964:25). Arguably, what ritual lacks in terms of its explicit/direct ‘readability,’ it more than makes up for by embedding itself in shared and well-known symbols, concepts, and narratives.
While a wide variety of specific concepts were elaborated on in Chapters Three and Four—the cave as a house or structure (*pecparu pec*), as a hole or passage, as a setting for transformation, as a source of fertility and wealth, as a source of sustenance, as an abode of witches and ghouls, and as an articulation point with the ancestors—those specific caves investigated as part of this dissertation offer few clues as to which (if any) of these concepts individual acts made reference. On a more general level, however, it should be clear that the cave is a heavily symbolic environment and thus one particularly amenable to use as a ritual focus for a variety of reasons. Where we may be able to speak more concretely is in reference to the strong conceptual overlap between features of the ‘natural’ landscape and those of the ‘built’ landscape, and more specifically we can point out that such dichotomies are inherently flawed: ancient Maya world view appears to have been heavily conceptualized (*à la* Knapp and Ashmore 1999:11)—at the same time natural and cultural; material and idea. The well attested conflation of architectural and natural landmarks—pyramidal platforms:mountains, temples:caves—geographical and cosmological principles—the king/city at the naval of the world—and the extension of ritual activities across all socio-political levels, from the home to the state, effectively serve to expand the incontestable aesthetic field beyond the ‘built’ environment (the typical limits of discussions on urban liturgy) and across much broader landscapes. This conflation is demonstrated time-and-again in iconographic representation, ethnographic testimony, and in terms of the cave context, in the broad meaning attached to “*ch’e’en*” and other related terms (Tokovinine 2013:25). This conflation may also have served to extend the effectiveness of the ritual act, yielding power (authority/coercive and symbolic) to social levels from the farmer to the state over territories both overlapping and nested.

**Vertical and Horizontal Integration through Cave Ritual**

The second major theme discussed in Chapter Two is equally fundamental to the historical narrative outlined above, that is, ritual’s role in supporting society, community and the state. The power of ritual to foster both vertical and horizontal integration cannot
be easily overstated. Vertical integration and the maintenance of the political hegemony is encouraged through the commemoration of ritual in art and architecture, through class-based exclusivity of access to ritual spaces and structures, and through related limitations on sumptuary goods. Horizontal integration, on the other hand, is reinforced through both shared ritual experiences and quotidian interaction in plaza and field alike; as participants and observers of state ritual, and through smaller-scale rites. Ironically, the same monuments that literally inscribe socio-political differences in stone are likewise capable of reminding on a daily basis, of events in which broader swaths of society acted in unison. As Turner pointed out (1977), rituals are processes conducted over space and time, their meaning often transcending the specific context of their enactment.

This dissertation has served to note, though as of yet has largely ignored, an important aspect of cave ritual that is essential in the context of the present discussion. That is, the implications of fragmentation noted in the previous chapters. This discussion serves to emphasize the expansion of the ritual context noted above and aligns the present study with some of my previous works (Morton 2007; 2012) as well as upcoming studies. The (re)distribution of objects among several different loci—both within caves, as at Actun Lubul Ha, and between caves and other sites, as clearly suggested by both TCU s. 08 and Overlook Rockshelter—implies that ritual circuits take ritualist through a variety of environments characterized by greater and lesser degrees of public/visible and private/exclusive participation. Even if direct participation in the ritual is itself exclusive, punctuated by periods in which public observation is not possible (as in some restricted cave contexts), it would seem improbable to maintain such privacy when moving between ritual loci, particularly where this would require travel through heavily settled areas near the civic-ceremonial core or when employing any of the region’s prominent sacbeob. Such variation within a single ritual event should not be surprising; we can find analogous interpretations in discussions of ‘public’ ritual within monumental cores—in

99 However, as in this dissertation I have gone to pains to show that a discussion of the cave context is best accomplished with reference to the broader social, political, economic, and religious (etc.) milieu of the peoples under study, so too, is it important to emphasize that ritual is by no means the only medium through which horizontal and vertical integration is stimulated.
plazas and on the stairs of pyramidal platforms—that are similarly thought to include ‘private’ elements in restricted temple structures.

Thus, while I have focussed on station-based ritual contexts within this dissertation, the complementary ritual act implied is that of the ritual procession. As the name suggests, ritual processions “feature movement from one location to another during the course of a political or religious ceremony” (Reese-Taylor 2002:145). Such processions, while they may be carried out directly by groups of variable size are inherently ‘public.’ By public, I mean to emphasize that the ritual incorporates individuals beyond one’s regular quotidian social sphere and takes place in a relatively open physical context. While the settings of such rituals may be suggested, and symbolic referents contemplated (Morton 2007), the actual act of procession is virtually invisible in the archaeological record. Thus, while procession ritual is, at one and the same time, one of the most frequently cited elements of ritual in the ethnographies and histories of the Maya it yet remains one of the most poorly defined archaeologically. The varied descriptions available suggest an almost endless array of possible permutations in the procession based partially on the actors involved, on the ritual items employed, even on the time of year or day, and of course, on the purpose of the ritual itself. Yet, this broad array of acts can be summarized according to relatively few locomotive patterns (Morton 2007; Reese-Taylor 2002): 1) ritual circumambulation, 2) periphery/centre, and 3) base-to-summit. The first two of these are particularly significant in our present discussion as they relate to encapsulation (à la Vogt) and centring.

Ritual Circumambulation—Circumambulation may be described simply as procession along a circuit, enclosing space. The ethnographic literature from Chiapas and the Guatemalan highlands contains references to a number of circumambulating processions. According to Vogt (1968, 1969) circumambulating processions are performed in Zinacantan on days of the patron saints San Lorenzo and San Sebastian. These processions include all the civic and religious officials of the community. As noted in Chapter Four, ritual circumambulation is also performed in the context of K’in Krus
ceremonies, in part serving to “weave the locale and its inhabitants (human or spirit) into the cultural fabric of Zinacantan” (Vogt 1994:182). Circumambulation is an explicit ritual component in the building of a house and the planting of a field in Zinacantan (Vogt 1976:54-55), and in the ritual investment of daykeepers in Momostenango (Tedlock 1982). Similar circumambulating processions may be implied by indigenous historic documents such as the Título del Barrio de Santa Ana discussed in Chapter Four. It may be remembered that the título defines the traditional corporate territory of Santa Ana as a set of travelling directions along rivers and cross-country, linking discrete nodes or landmarks. In both this example, and that described by Vogt, it seems that the nodal points in the circuit and the paths taken between them are both significant in defining the limits of power at the political level, and in the case of the K’in Krus ceremonies, at the supernatural level (Vogt 1969:582-587). In a parallel act from the Classic period, Matthew Looper (1995) has suggested that circumambulating processions progressed from stela to stela at Quirigua. Elizabeth Newsome (1991) has suggested a similar pattern at Copan in the Great Plaza. Following Reese-Taylor’s work at Cerros (2002:148-152) and in reference to Freidel and colleagues’ (1993) interpretation of triadic groups as symbolizing the three hearthstones of creation, I suggested in my MA work that similar circumambulating rituals may have taken place at Naachtun Structure I (Morton 2007:151).

Periphery/Centre Procession—In periphery/centre processions, ritualists move between the edge or periphery of a feature (a field, a settlement, etc.) and its centre. One of the earliest ethnographic accounts of periphery/centre procession can be found in de Landa’s Relación (Tozzer 1941:139-142). According to his account, as part of the annual New Year ceremonies, celebrants made an image in clay of Kan u Uayeyab and placed it at the southern side of the town. A path was prepared, cleaned and adorned with greenery between the idol and the house of the principal, located somewhere in the town centre. The celebrants then gathered around the image performing a series of rites including censing the image and sacrificing a hen to it. These preparations made, the image was
placed on a palanquin and carried in procession to the house of the principal. At the close of the Wayeb, the idol was again taken up in procession and placed back on the periphery of town to await the ceremonies of the following year. There are many other examples of this type of ritual, from the Zinacanteco processions on the days of the patron stains (Vogt 1969; 1994) to the Guatemalan processions recounted by Stephens (Guatemala City, in honour of the Virgin [1969:215-219] or Mixco, in honour of the Saints [1969:251-255]). Freidel and colleagues (1993:419 n.24) have suggested that whereas circumambulating processions symbolically link the four corners of the world model, periphery/centre processions replicate the path of the sun and emphasize the vertical dimensions of the world model, marking the central position as the axis mundi.

Periphery/Centre processions have been invoked in discussions of the archaeological record as well. At Izapa, Julia Guernsey Kappelman has suggested that processions symbolically wound their way through the primordial landscape as represented by architectural analogues (Guernsey Kappelman 2001:102-104). Arthur Demarest has suggested that similar processions took place within the monumental core of Dos Pilas, in this case tracing the path of a large cave system that underlies the site (Demarest et al. 2003). In my MA thesis (Morton 2007), I suggested that a desire to support such processions may have influenced site planning practices at Naachtun.

In both types of procession, the bodies of the ritualists inscribe the conceptualized landscape with social and political referents essential to the definition—defining territorial boundaries of varying size and associated with various corporate groups in the case of circumambulating ritual—and maintenance—drawing spatially discrete groups together through shared experience, from the tightly circumscribed elite monumental core to the commoner hinterland in the case of periphery/centre processions—of not only the state, but of smaller corporate groups as well. Communities of various sizes, existing in both complement and opposition, could be bound and centred through such rites. In the particular context of Central Belize, that such ritual networks made use of a symbol set common to both the monumental core and the broader animate world, and that a number of caves located far into the hinterland (Actun Lubul Ha, Petroglyph Cave, Je’refheel)
appear to have been used by elite ritualists, hints at the extent to which the growing state was able to exert its hegemony during the Classic period. The cave, like the mountain top, the spring or the waterhole, served as but one node in such circuits, and an important task for speleoarchaeologists going forward will be to acknowledge and explicitly study such sites within these broader contexts.

**Summary and Conclusions**

Returning then to the long list of subsidiary questions posed at the close of Chapter One, I have been able of offer a number of answers, particularly where these relate to issues of chronology—When was the region first settled? When did nucleated settlements first appear?—and certain aspects of identity—Who inhabited the region before the rise of Tipan? Were these the same people responsible for the development of complex centralized forms of organization in the region? Are we talking about the assertion of power by local ‘elites,’ or the importation of a cadet lineage from neighbouring regions? When did materially or contextually visible status differences develop? Finally, I have been able to explore a number of broader political and economic connections that may have influenced/contributed to the socio-political development of this region. While the ideological/cosmological concepts discussed in Chapters Three and Four have not featured prominently in the above narrative, they lie at the heart of the extended discussion of the cave context from the previous chapter. Thus, while the specific context upon which this research has focused may at first appear narrow—being predominantly a specialized ritual context—the reality could not be further from the truth, serving as a lens through which a broad range of chronological, socio-political, economic, and ideological considerations may be addressed.

**Future Directions**
While the above summary and previous discussions illustrate the breadth of insight that may be gained by explicitly including subterranean sites in discussions/interpretations of broader archaeological contexts, the outcomes of this program of research fell short of those aspired to at its outset. In this dissertation it has been suggested that in prehistoric central Belize, religion and ritual functioned as a stabilizing force, reifying emerging/existing social structures (including institutionalized inequality), and reinforcing community bonds through both internal inclusive behaviour (centring) and by delimiting borders/boundaries (encapsulation). To a degree heretofore unexpected (or, at least unexpressed), it seems that such rites incorporated multiple sites, perhaps broad landscapes, into the ideological fold. The extent to which this occurred (note that it appears to have long been an element of the ritual stable) may be the consequence of local and broader regional instability. Yet, these are gross generalizations. Despite efforts to identify and tease apart the wide variety of specific ritual acts that likely took place in the ancient cave context through reference to ancient text and image (Chapter Three), the ethnographic and indigenous historic record (Chapter Four), and previous archaeological studies (Chapter Five), the material record as recovered from caves within the CBAS study area proved frustratingly resistant to similar parsing (Chapters Six, Seven and Eight). Part of the problem lies in the homogeneity of many individual ritual deposits, and given that most ritual events within the ethnographic and indigenous historic dataset appear to consist of multiple individual acts linked within a circuit, the inability to link individual ritual deposits one to another in the archaeological record. The discussion, hence, has shied away from identifying specific motivations/intentions for cave ritual, and focused rather on identifying patterns of context, deposition, and particulars of the objects so interred or removed. Moving forward, we may hope to clarify this picture by identifying examples of cultural material distributed between sites/contexts. Can we identify rites specifically associated with territorial ritual circuits as suggested by early indigenous historic títulos? Can we differentiate between different scales/spheres of ritual network within the landscape and hence make suggestions regarding scales/spheres of identity/community/association/etc.? If redistribution is ubiquitous, regardless of the
scale of the individual site involved (and presumably regardless of the specific social group taking part), how do rites associated with different groups in turn differ? Moving forward, as individual acts may be common among a variety of different ceremonies, it is the particular and prescribed combination of ritual acts that defines the ceremony. Can we reconstruct enough elements of a particular circuit to identify specific ritual motivations? As a hurdle, the inability to identify specific motivations has resulted in a homogenization of the cave context (whether by ascribing all rituals to the same motivation or, as I have here, generalizing broad social function in the absence of reference to specific intention). Conquering this last hurdle is necessary if we are to inject subtlety into study of the cave context, at least, in the CBAS study region. Finally, no archaeological context stands on its own. While the CBAS project has, as a whole, made consistent efforts toward a truly regional approach, work in this area is still very much in its early days and will benefit from future field research within each of the currently-identified civic-ceremonial centres, and more pressing still, in the broader settlement and landscape. Pursuit of these studies will commence this very season.
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Ximénez, Fray Francisco

Yaeger, Jason, and Marcello A. Canuto

Yamase, Shinji

Young, W. Ford

Zender, Marc
APPENDIX I—CERAMIC SUMMARY & CATALOGUE

Four seasons of survey and excavation produced a sizeable quantity of ceramic remains. The vast majority of these are associated with three caves in particular—TCU s.08, TCU s.21 and Actun Lubul Ha—though diagnostic sherds were recovered from most contexts. Ceramic identification was based on a comparison of extensive trait lists with types and varieties identified in James C. Giffords (1976) *Prehistoric Pottery Analysis and the Ceramics of Barton Ramie in the Belize Valley*, a touchstone for all ceramic analyses in this portion of the Maya area. Other volumes were similarly referenced, including both Lisa LeCount’s (1996) and Eleanor Harrison-Buck’s (2007) dissertations. This analysis was conducted under guidance and with assistance from Rebecca Shelton, Dr. Reiko Ishihara, and Dr. Jaime Awe. Most of this data was summarized as it was applied to the discussions of the previous chapters. The pages that follow in this appendix include both Table I.1—a summary of vessel forms by sherd count and type: variety in TCU s.08—and more extensive catalogues. It must be noted that the tables dealing with both TCU s.08 and TCU s.21 do not include non-diagnostic sherds. The raw data is available upon request.
Table 1.1 - Vessel Forms in TCU s.08. Note that cells highlighted in orange correspond to types unique to Lot 2.
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<th>ART NO</th>
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<td>043</td>
<td>AC Cave Chamber 1 Scatter 1</td>
<td>Surface - Surface 14.b</td>
<td>46 - 15.a</td>
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<td>-</td>
<td>-</td>
<td>Buff Red Fine - - sand - open 10.e or 11.d - 0.5 - Note: Returned to cave. Same vessel as MF07-3-001-045?</td>
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<td>Surface - Surface 14.g</td>
<td>40 - 15.d</td>
<td>Medial break Slipped - Orange - - - - - Black Buff Fine - - sand - open 9.c - 0.5 - Note: Returned to cave. Mend holes present beside both breaks. Mends with MF07-3-001-044.</td>
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<td>AC Cave Chamber 4 Scatter 12</td>
<td>Surface - Surface 14.d</td>
<td>30 - 15.a</td>
<td>Faint horizontal incisions at top and bottom of neck - - - - - Dark Brown Red Coarse X - sand and magnetic nodules - restricted 11.g or 13.a - 1.0 - Note: Returned to cave.</td>
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<td>Surface - Surface 14.a</td>
<td>10 - 15.c</td>
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<td>-</td>
<td>-</td>
<td>Black Buff Coarse X - - - sand and quartz - open 11.g or 13.a - 0.4 - Note: Returned to cave. Possible variety of Rio Juan Unslipped... VERY tentative (Gifford 1976:307)</td>
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<td>Surface - Surface 14.a</td>
<td>30 - 15.a</td>
<td>Ring base Slipped - Dark orange - - - Buff Buff Fine - - sand and quartz - open 9.c - 0.6 - Note: Returned to cave. Hermitage Unspecified Fowler Orange-red : Spring Camp Variety ca. AD 280 – AD 590 Gifford 1976:155</td>
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<td>Medial break Slipped - Orange - - - Black Buff Fine - - sand - open 9.c - 0.5 - Note: Returned to cave. Mend holes present beside both breaks. Mends with MF07-3-001-044. New Town (early facet) Unspecified Daylight Orange : Daylight Variety ca. AD 880 - AD 1130 Gifford 1976:300</td>
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<td>Medial break. Tall ring base. Slipped. Fire Clouding evident. - Orange - - - Orange Orange Fine - - sand - open 9.c - 0.6 - Note: Returned to cave. Interior surface heavily pitted. Kill hole. New Town (early facet) Unspecified Daylight Orange : Darknight Variety ca. AD 880 - AD 1130 Gifford 1976:301</td>
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<td>Vertical striations below slipped neck Vertical striations inside and out to shoulder - Orange - - - Buff Red - X - sand - restricted 11.i or 13.c - 0.5 - Note: Returned to cave. Spanish Lookout Uaxactun Unslipped Cayo Cayo Unslipped : Variety Unspecified (Red Slipped) ca. AD 680 – AD 880 Gifford 1976:282</td>
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Note: Returned to cave.
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**Cayos Variety**

MF07-2-018 022: Actun Neko Chamber 6, 1, 1, Colluvium, 
- RIM: Sand medium, restricted 11.i or 13.c, 2, 0.7, 6, -
- SLIP: Buff, Medium/Fine X, sand, fine, restricted 11.i or 13.c, 2, 0.7, 6, -
- PAINT: Black Orange-tan, Medium/Fine X, sand fine, restricted 11.i or 13.c, 3, 0.3, 26, -
- TEMPER: Brown Buff Medium X, sand medium, -

**Uaxactun**

Gifford 1976:135, 157

**Jones Camp**


**Sayab**


**Unidentified**

Sayab 1976:71, Unidentified, Unidentified, -

**Gifford**


**Izapa**

Jones Camp 1976:215, Isolated, Izapa, -

**Rimmed Vessel**

Curving raised band on vessel

**Striated Vessel**

Horizontal striations on vessel

**X**

- Sand and mica
- Coarse - fine CaCO3
- Ash Other (coarse - fine)
- CaCO3
- Shell(?)
- Magnetic sand and nodules
- Medium/coarse e
- Brown
- Reddish-brown
- Orange-tan
- Shell(?)
- Orange:
- Variety
- Striated:
- Calcite
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References:

- Shepard (1961)
- Sabolff (1975)
- Barton Ramie (1960-1965)
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**VARIETY**

- **Striated:**
  - **Socotz**
  - **Calcite**

- **Magnetic:**
  - **Sand and nodules**

**DATE REFERENCES**

- **ca. AD 280 – Gifford 1976:306**
- **ca. AD 590 – Gifford 1976:187**
- **ca. AD 880 – Gifford 1976:189**

**WEIGHT**

- **Note: Returned to cave**
- **Uxactun**: Medium/coars
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<td>Horizontal striations on vessel body below band.</td>
<td>11.i or 13.c</td>
<td>0.6</td>
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<td>Note: Returned to cave Hermitage Uaxactun Unslipped Socotz Striated: Variety Unspecified (Buff) ca. AD 280 – AD 590 Gifford 1976:187</td>
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<td>077 Actun Neko Chamber 6</td>
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<td>Colluvium</td>
<td>-</td>
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<td>Red</td>
<td>Red</td>
<td>Decoration</td>
<td>Horizontal raised band with deep vertical impressions. Faint parallel striations.</td>
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<td>-</td>
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<td>Note: Returned to cave Jenney Creek Sayab Daub-striated: Sayab Variety ca. 600 BC - 300 BC Gifford 1976:71</td>
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<td>Raised band on vessel exterior cut by irregularly-spaced perpendicular incisions. Oblique criss-crossing striations either side of band.</td>
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<td>Note: Returned to cave Hermitage Uaxactun Unslipped Socotz Striated: Variety Unspecified (Buff) ca. AD 280 – AD 590 Gifford 1976:187</td>
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<td>Decoration</td>
<td>Horizontal raised band on vessel exterior cut by irregularly-spaced perpendicular incisions. Oblique criss-crossing striations either side of band.</td>
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<td>Note: Returned to cave Hermitage Uaxactun Unslipped Socotz Striated: Variety Unspecified (Buff) ca. AD 280 – AD 590 Gifford 1976:187</td>
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<td>Black</td>
<td>Brown</td>
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<td>Raised horizontal band high on shoulder. Rough vertical incisions along band (nearly obliterating raised portion). Sharp definition at join of neck and shoulder.</td>
<td>11.i or 13.c</td>
<td>0.4</td>
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<td>Decoration</td>
<td>Ring base</td>
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<td>Note: Returned to cave. Two refitting sherds.</td>
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<td>White-appliquéd</td>
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<td>Sinuous appliqued band with oblique incisions. Criss-crossing oblique striations on either side of band.</td>
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<td>Note: Returned to cave Hermitage Uaxactun Unslipped Socotz Striated: Variety Unspecified (White-appliquéd) ca. AD 280 – AD 590 Gifford 1976:189</td>
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**DATE REFERENCES**

- **Holmul**
- **Uaxactun**
- **Hermitage Peten Gloss**

**References**

- **Barton Gifford 1976**: Pages 164 and 182
- **Brown**
- **Black**
- **Sand**
- **Restricted**: Pages 11 and 13
- **Note**: Returned to cave

**Garbutt Creek Socotz**

**Weight (g)**

- **Unidentified**: Pages 182 and 189

**Granular matrix**: Pages 233 and 243

**Mineralogy and texture**: Pages 243 and 244

**Paste and colour consistency**: Pages 243 and 244

**Paste and colour consistent with other Tiger Run Complex.**

**Hermitage Peten Gloss Aguila**

**Dimensions**: Pages 243 and 244

**Thickening**: Pages 243 and 244

**Unspecified**: Pages 243 and 244

**Calcite**: Pages 243 and 244

**Rubber Camp Lucha Incised : Aguacate**

**Floral Park Lucha Incised : Nohoch Tunich Variety**

**Hermitage Peten Gloss Aguila**

**Rubber Camp Lucha Incised**: Pages 243 and 244

**Minanha Red**: Pages 243 and 244

**Socotz Striated**: Pages 243 and 244

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<td>Orange - - -</td>
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458
<p>| MF07-2-001 | Chamber 8 | Scatter 6 | Surface - Surface 14d | 21 | 15c | Large flange, slipped, decorated | Slip and Painted | Orange | Black | Grey | Grey | Coarse | X | sand | open | 11.a | 0.5 |
|------------|----------|-----------|-----------------------|----|----|-------------------------------|-------------------|--------|-------|------|------|--------|---|-------|------|------|-----|------|
| MF07-2-001 | Chamber 8 | Scatter 6 | Surface - Surface 14d | 28 | 15c | Large flange, slipped, decorated | Slip and Painted | Orange | Black | Grey | Dark grey | Coarse | X | sand | open | 11.a | 0.6 |
| MF07-2-001 | Chamber 8 | Scatter 6 | Surface - Surface 14a | 21 | 15a | Slip on exterior neck and interior rim | Slip on Interior Lip | Red | Black | Red | Coarse | X | sand | restricted | 11.i or 13.c | 0.4 |
| MF07-2-001 | Chamber 8 | Scatter 7 | Surface - Surface 14c | 18 | 15a | Single band of stamped triangles high on vessel shoulder. | Slip on Interior Lip/Neck | Red | Black | Black | Reddish-brown | Coarse | X | sand and magnetic nodules | restricted | 11.i or 13.c | 0.8 |
| MF07-2-001 | Chamber 8 | Scatter 7 | Surface - Surface 14c | 17 | 15a | Vertical loop handle high on shoulder. | Buff | Red | Coarse | - | - | - | - | - | - | - | - | - |
| MF07-2-001 | Entrance 2 | Scatter 7 | Surface - Surface 14a | 17 | 15a | Horizontal applique band cut by irregularly spaced oblique incisions. Parallel serpentine band adjacent. | Slip and Painted | Black | Black | Black | Black | Coarse | X | sand | - | - | - | - |
| MF07-2-001 | Entrance 2 | Scatter 7 | Surface - Surface 14a | 17 | 15a | Vertical loop handle high on shoulder. | Slip and Painted | Red | Red | Red | Red | X | - | sand and magnetic nodules | restricted | 11.i or 13.c | 1.2 |
| MF07-2-001 | Entrance 2 | Scatter 7 | Surface - Surface 14a | 17 | 15a | Vertical loop handle high on shoulder. | Slip and Painted | Black | Black | Black | Black | Coarse | X | sand | restricted | 11.i or 13.c | 1.2 |</p>
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**Uaxactun**

- **Gifford 1976:189**
  - **Hermitage (interior neck)**
- **Gifford 1976:164**
  - **Unidentified**
  - **Colours Pattern (core colour)**
- **Reents-Budet 1980:168-176**
  - **San Ignacio**

**Hermitage Peten Gloss Actuncan**

- **Unspecified**
  - **Fowler**
- **Sabloff (1975)**

**Weight (g)**

- **Unidentified**
  - **Grey and Black Geometric**
  - **Orange and Black Geometric**
- **Lubul Ha**

**Lucha Incised**

- **Unslipped**
- **Cocay Variety**
- **San Ignacio**

**Appliqued**

- **Unspecified**
  - **Orange and Black Geometric**
  - **Orange and Black Geometric (brown)**

**Striated**

- **Unspecified**
  - **Orange and Black Geometric**
  - **Orange and Black Geometric (brown)**

**Polychrome**

- **Unspecified**
  - **Orange and Black Geometric**

**CAT. NO. ART. NO. SITE STR. AREA/OP E.U. LVL LOT CONTEXT RIM LIP DECORATION SLIP PAINT PASTE TEMPER VESSEL FORM SIZE COMMENTS COMPLEX WARE GROUP**

- **Gifford 1976:170**
  - **Unidentified**
  - **Tzimin**
- **Reents-Budet 1980:168-176**
  - **San Ignacio**

**LBH09-1-30 027 Lubul Ha Chamber 1 OP 1 30 Surface 30 Surface 14.c**

- **LBH09-1-30 026 Lubul Ha Chamber 1 OP 1 30 Surface 30 Surface 14.c**
- **LBH09-1-30 025 Lubul Ha Chamber 1 OP 1 30 Surface 30 Surface 14.c**
- **LBH09-1-29 019 Lubul Ha Chamber 1 OP 1 29 Surface 29 Surface 14.a**
- **LBH09-1-29 022 Lubul Ha Chamber 1 OP 1 29 Surface 29 Surface -**
- **LBH09-1-29 023 Lubul Ha Chamber 1 OP 1 29 Surface 29 Surface -**
- **LBH09-1-29 021 Lubul Ha Chamber 1 OP 1 29 Surface 29 Surface 14.c**
- **LBH09-2-2 029 Lubul Ha Chamber 2 OP 2 2 Surface 2 Surface 14.c**
- **LBH09-2-2 030 Lubul Ha Chamber 2 OP 2 2 Surface 2 Surface 14.c**
- **LBH09-2-2 037 Lubul Ha Chamber 2 OP 2 2 Surface 2 Surface 14.a**
- **LBH09-2-2 036 Lubul Ha Chamber 2 OP 2 2 Surface 2 Surface 14.c**

**LBH09-2-2 035 Lubul Ha Chamber 2 OP 2 2 Surface 2 Surface 14.c**

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- **LBH09-2-2 032 Lubul Ha Chamber 2 OP 2 2 Surface 2 Surface 14.c**
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- **LBH09-2-2 015 Lubul Ha Chamber 2 OP 2 2 Surface 2 Surface 14.c**
- **LBH09-2-2 014 Lubul Ha Chamber 2 OP 2 2 Surface 2 Surface 14.c**
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- **LBH09-2-2 007 Lubul Ha Chamber 2 OP 2 2 Surface 2 Surface 14.c**
- **LBH09-2-2 006 Lubul Ha Chamber 2 OP 2 2 Surface 2 Surface 14.c**
- **LBH09-2-2 005 Lubul Ha Chamber 2 OP 2 2 Surface 2 Surface 14.c**
- **LBH09-2-2 004 Lubul Ha Chamber 2 OP 2 2 Surface 2 Surface 14.c**
- **LBH09-2-2 003 Lubul Ha Chamber 2 OP 2 2 Surface 2 Surface 14.c**
- **LBH09-2-2 002 Lubul Ha Chamber 2 OP 2 2 Surface 2 Surface 14.c**
- **LBH09-2-2 001 Lubul Ha Chamber 2 OP 2 2 Surface 2 Surface 14.c**
- **LBH09-2-2 000 Lubul Ha Chamber 2 OP 2 2 Surface 2 Surface 14.c**

**REFERENCES**

- **Sabloff (1975)**
- **Ramie (AD 590 – 680)**
- **San Ignacio (AD 590 – 680)**
- **Lubul Ha (AD 590 – 680)**
- **Spanish Passion (AD 590 – 680)**

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**References:**
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- Dos Hermanos (1961)
- San Ignacio Ramie (ca. AD 280 - AD 590)
- Santa Teresa Variety (ca. AD 590 - AD 7)
- Cocay Variety (ca. AD 590 - AD 7)
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**REFERENCES**
- Gifford 1976:115
- Reents-Budet 1980:168-176
- Uaxactun

**VARIETY**
- Orange-brown

**COMMENTS**
- Unslipped

**COMPLEX WARE GROUP**
- Unidentified

**COLOUR**
- Black

**MATERIAL**
- Sand and mica

**SLIP PAINT PASTE TEMPER VESSEL FORM SIZE COMMENTS COMPLEX WARE GROUP**
- Painted

**DECORATION**
- Sinuous applique band below neck

**SLIP**
- Black

**PAINT**
- Yellowish red

**PASTE**
- Red

**TEMPER**
- Black

**VESSEL FORM**
- Sinuous

**SIZE**
- Small

**COMMENTS**
- Partially slipped

**COMPLEX WARE GROUP**
- Unidentified

**COLOUR**
- Red

**MATERIAL**
- Calcite nodules

**SLIP PAINT PASTE TEMPER VESSEL FORM SIZE COMMENTS COMPLEX WARE GROUP**
- Painted

**DECORATION**
- Applique band below neck

**SLIP**
- Red

**PAINT**
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**PASTE**
- Black

**TEMPER**
- Black

**VESSEL FORM**
- Sinuous

**SIZE**
- Small

**COMMENTS**
- Partially slipped

**COMPLEX WARE GROUP**
- Unidentified

**COLOUR**
- Dark grey brown

**MATERIAL**
- Sand

**SLIP PAINT PASTE TEMPER VESSEL FORM SIZE COMMENTS COMPLEX WARE GROUP**
- Unslipped

**DECORATION**
- Sinuous applique band below neck

**SLIP**
- Red

**PAINT**
- Black

**PASTE**
- Black

**TEMPER**
- Black

**VESSEL FORM**
- Sinuous

**SIZE**
- Small

**COMMENTS**
- Partially slipped

**COMPLEX WARE GROUP**
- Unidentified

**COLOUR**
- Dark grey yellowish red

**MATERIAL**
- Sand

**SLIP PAINT PASTE TEMPER VESSEL FORM SIZE COMMENTS COMPLEX WARE GROUP**
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**DECORATION**
- Sinuous applique band below neck

**SLIP**
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- Sinuous applique band below neck

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**COMMENTS**
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**REFERENCES**

- Sabloff, J. (1961) "Archaeological Survey in the Western Peten," University of California, Berkeley, CA.
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**DATE REFERENCES**

- Chunhuitz
- Spanish

**PAINTING**

- Black-on-orange:
- Black-on-vinaceous:
- Red:
- Green:
- Blue:
- Unspecified:

**DECORATION**

- Fluted:
- Variety:
- Polychrome:
- Unspecified:

**SITES**

- Lookout:
- Belize:
- British:
- Xunantunich:

**GROUPS**

- Variety:
- Polychrome:
- Unspecified:

**DIMENSIONS (cm)**

- Diameter:
- Width:
- Height:

**COMMENTS**

- Carbonate:
- Sabloff:
- Harrison-Buck:
- Harrison-

**ALABAMA**

- ca. AD 600 -
- ca. AD 670 -
- ca. AD 870 -
- ca. AD 890 -

**CONTRIBUTORS**

- Harrison-
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468
| BAG NO. | CAT NO. | ART NO. | SITE STR. | E.U. LVL | LOT | CONTEXT | RIM LIP | DECORATION | SLIP PAINT | PASTE TEMPER | VESSEL FORM | SIZE COMMENTS | COMPLEX WARE GROUP |
|---------|---------|---------|-----------|----------|-----|---------|--------|------------|------------|-------------|-------------|---------------|----------------|------------------|
| 5 TCU10-1-028 | 006 TCU c-s.08 | 1-1 Mixed Materials | 14.a | 25 | 12 | 15.e | Medial break. Burnished | Hard Red 90 | - | Buff | Red-orange | Fine X - sand fine open | 11.c | 3 0.7 | 30 |
| 5 TCU10-1-028 | 005 TCU c-s.08 | 1-1 Mixed Materials | 14.a | 25 | 13 | 15.e | Medial break. Burnished | Hard Red 90 | - | Buff | Red-orange | Fine X - sand fine open | 11.c | 4 0.6 | 138 |
| 5 TCU10-1-028 | 004 TCU c-s.08 | 1-1 Mixed Materials | - | - | - | - | - | - | - | - | Brown | Coarse X - - | - | - | - |
| 5 TCU10-1-028 | 002 TCU c-s.08 | 1-1 Mixed Materials | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 5 TCU10-1-028 | 001 TCU c-s.08 | 1-1 Mixed Materials | 14.a | 21 | 7 | 15.a | - | - | - | - | - | - | - | - | - |
| 001 TCU10-1-029 | 001 TCU c-s.08 | 1-1 Mixed Materials | 14.a | 21 | 7 | 15.a | - | - | - | - | - | - | - | - | - |
| 007 TCU10-1-030 | 001 TCU c-s.08 | 1-1 Mixed Materials | 14.a | - | - | 15.a | - | - | - | - | - | - | - | - | - |
| 008 TCU10-1-031 | 001 TCU c-s.08 | 1-1 Mixed Materials | 14.a | - | 3 | 15.a | - | - | - | - | - | - | - | - | - |
| 009 TCU10-1-032 | 004 TCU c-s.08 | 1-1 Mixed Material | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 009 TCU10-1-032 | 003 TCU c-s.08 | 1-1 Mixed Material | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 009 TCU10-1-032 | 001 TCU c-s.08 | 1-1 Mixed Material | - | - | 14.a | 15 | 20 | 15.c | - | - | - | - | - | - | - |
| 004 TCU10-1-027 | 003 TCU c-s.08 | 1-1 Mixed Materials | 14.a | 23 | 7 | 15.a | - | - | - | - | - | - | - | - | - |
| 004 TCU10-1-027 | 002 TCU c-s.08 | 1-1 Mixed Materials | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 004 TCU10-1-027 | 001 TCU c-s.08 | 1-1 Mixed Materials | 14.a | - | - | 15.a | - | - | - | - | - | - | - | - | - |
| 001 TCU10-1-029 | 001 TCU c-s.08 | 1-1 Mixed Materials | 14.a | 21 | 7 | 15.a | - | - | - | - | - | - | - | - | - |
| 001 TCU10-1-029 | 001 TCU c-s.08 | 1-1 Mixed Materials | 14.a | 21 | 7 | 15.a | - | - | - | - | - | - | - | - | - |
| 007 TCU10-1-030 | 001 TCU c-s.08 | 1-1 Mixed Materials | 14.a | - | 3 | 15.a | - | - | - | - | - | - | - | - | - |
| 008 TCU10-1-031 | 001 TCU c-s.08 | 1-1 Mixed Materials | 14.a | - | 3 | 15.a | - | - | - | - | - | - | - | - | - |
| 007 TCU10-1-030 | 001 TCU c-s.08 | 1-1 Mixed Materials | 14.a | - | 3 | 15.a | - | - | - | - | - | - | - | - | - |
| 006 TCU10-1-032 | 001 TCU c-s.08 | 1-1 Mixed Materials | 14.a | 15 | 20 | 15.c | - | - | - | - | - | - | - | - | - |
| 009 TCU10-1-032 | 004 TCU c-s.08 | 1-1 Mixed Material | 14.a | - | - | 15.a | - | - | - | - | - | - | - | - | - |
| 004 TCU10-1-027 | 003 TCU c-s.08 | 1-1 Mixed Materials | 14.a | 23 | 7 | 15.a | - | - | - | - | - | - | - | - | - |
| 004 TCU10-1-027 | 002 TCU c-s.08 | 1-1 Mixed Materials | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 004 TCU10-1-027 | 001 TCU c-s.08 | 1-1 Mixed Materials | 14.a | - | - | 15.a | - | - | - | - | - | - | - | - | - |
| 001 TCU10-1-029 | 001 TCU c-s.08 | 1-1 Mixed Materials | 14.a | 21 | 7 | 15.a | - | - | - | - | - | - | - | - | - |
| 001 TCU10-1-029 | 001 TCU c-s.08 | 1-1 Mixed Materials | 14.a | 21 | 7 | 15.a | - | - | - | - | - | - | - | - | - |
| 007 TCU10-1-030 | 001 TCU c-s.08 | 1-1 Mixed Materials | 14.a | - | 3 | 15.a | - | - | - | - | - | - | - | - | - |
| 008 TCU10-1-031 | 001 TCU c-s.08 | 1-1 Mixed Materials | 14.a | - | 3 | 15.a | - | - | - | - | - | - | - | - | - |
| 007 TCU10-1-030 | 001 TCU c-s.08 | 1-1 Mixed Materials | 14.a | - | 3 | 15.a | - | - | - | - | - | - | - | - | - |

**Notes:**
- **BAG NO.** refers to the bag number.
- **CAT NO.** refers to the catalog number.
- **ART NO.** refers to the art number.
- **SITE STR.** refers to the site structure.
- **E.U. LVL** refers to the environment unit level.
- **LOT** refers to the lot.
- **CONTEXT** refers to the context.
- **RIM LIP** refers to the rim lip.
- **DECORATION** refers to the decoration.
- **SLIP PAINT** refers to the slip paint.
- **PASTE TEMPER** refers to the paste temper.
- **VESSEL FORM** refers to the vessel form.
- **SIZE** refers to the size.
- **COMMENTS** refers to the comments.
- **COMPLEX WARE GROUP** refers to the complex ware group.

**Additional Notes:**
- **Texture:** The texture is not explicitly mentioned in the table.
- **Style:** The style is not explicitly mentioned in the table.
- **Function:** The function is not explicitly mentioned in the table.

**References:**
- Adam 2007:3-75/780 - AD 750/780 - AD 900 - AD 900 | 200 - 750/780 - AD 750/780 - AD 900 - AD 900
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**DATE REFERENCES**

- Chunhuitz
- Non-
- Medium/Fine
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- -
- fine open
- 9.a
- 0.6
- 153

**Type Collection**

- CBAS

dated AD 680 – ca. AD 880.
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**References**

- Gifford 1976:196
- Gifford 1976:235
- LeCount et al. 2002:47

**Comments**

- Sharp definition on interior of applique bands on exterior at approximately 3.5cm below (toward the right) on vessel exterior. Sharp definition at medial break on interior, oblique striations on body (toward the right, vessel exterior). Sharp definition at medial break on interior. Horizontal band of thumb opposite applique bands. Horizontal incised line on exterior, 5cm below rim. Sharp definition on exterior, 5cm below rim. Smoothed (on interior only). Burnished.
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**REFERENCE:**

- Harrison 1975
- LeCount et al. 2002:47
- AD 590 – AD 880
- ca. AD 280 – AD 890
- ca. AD 600 – AD 890
- ca. AD 600 – AD 890
- ca. AD 600 – AD 890
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- **BAG NO.**: Bag number
- **CAT. NO.**: Catalog number
- **ART. NO.**: Art number
- **SITE**: Site name
- **STR. E.U.**: Structure and unit
- **LVL**: Level
- **LOT**: Lot
- **CONTEXT**: Context
- **RIM**: Rim
- **LIP**: Lip
- **DECORATION**: Decoration
- **SLIP**: Slip
- **PAINT**: Paint
- **PASTE**: Paste
- **TEMPER**: Temper
- **VESSEL FORM**: Vessel form
- **SIZE**: Size
- **COMMENTS**: Comments
- **COMPLEX**: Complex
- **WARE GROUP**: Ware group
- **REFERENCE**: Reference
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**References:**

**Dimensions:**

**Weight:**
UAXACTUN (max. 7) and Tiger Run (max. 6.5).

**Depth:**
Irregularly-spaced impressed-appliqued ovoids, each with a deep horizontal impression between the lines.

**Decoration:**
Sharp definition exterior vessel body, Striated body.

**Slipping:**
Reddish-Orange.

**Paste:**
Carbonate sand and volcanic sand and nodule nodules.

**Temper:**
Calcite, Magnetite, Carbonate, and CaCO3.

**Vessel Type:**
Ring base.

**Size:**
3 to 4.5.

**Comments:**
Irregularly-spaced vertical incisions around cylindrical exterior vessel body, with an irregularly spaced impressed-appliqued ovoids, each with a deep horizontal impression between the lines.

**Pattern:**
Red-orange.

**Slipped:**
Soft Red 90, Grey-buff.

**Paint:**
Pinkish-buff.

**Form:**
Cayo Unslipped.

**Location:**
Mountain Pine, Pine Ridge, and Vaca Falls.

**Style:**
Soft Red 99, Grey-brown Red-orange Fine X - sand fine open 9, 10 or 11 3 0.5 22 -

**Remarks:**
Tiger Run, Spanish, and Uaxactun.

**Inclusions:**
Blue clay, Blue stone, and Blue sandstone.

**Incised:**
Two parallel incised lines, Two parallel bands of incised impressions.

**Impressed:**
Horizontal band of thumb impressions.

**Rim:**

**Lip:**
Fine X - sand fine open 9, 10 or 11 3 0.5 22 -

**Colour:**
Red-orange and Grey-buff.

**Ash:**
Other (coarse - fine).

**Remarks:**
Grey-brown Red-orange Fine X - sand fine open 10.e or 11.d 5 0.5 88 - Tiger Run, Pintado, and Tiger Run.

**Dimensions:**

**Weight:**
UAXACTUN (max. 7) and Tiger Run (max. 6.5).

**Depth:**
Irregularly-spaced impressed-appliqued ovoids, each with a deep horizontal impression between the lines.

**Decoration:**
Sharp definition exterior vessel body, Striated body.

**Slipping:**
Reddish-Orange.

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Carbonate sand and volcanic sand and nodule nodules.

**Temper:**
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Horizontal band of thumb impressions.

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**Lip:**
Fine X - sand fine open 9, 10 or 11 3 0.5 22 -

**Colour:**
Red-orange and Grey-buff.

**Ash:**
Other (coarse - fine).

**Remarks:**
Grey-brown Red-orange Fine X - sand fine open 10.e or 11.d 5 0.5 88 - Tiger Run, Pintado, and Tiger Run.

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**Weight:**
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**Lip:**
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**Colour:**
Red-orange and Grey-buff.

**Ash:**
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**Remarks:**
Grey-brown Red-orange Fine X - sand fine open 10.e or 11.d 5 0.5 88 - Tiger Run, Pintado, and Tiger Run.
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### Additional Notes
- **Rim:** Various types, including hard/soft, plastic, etc.
- **Surface:** Various conditions, such as sand, very fine, open, etc.
- **Slip Characteristics:** Different soils, like Clay, Sand, etc.
- **Paint Characteristics:** Various patterns, like Red, Orange, etc.
- **Paste Characteristics:** Different colors, like Red, Brown, etc.

### References
- Harrison-Buck
- LeCount et al. 2002:47
- Shepard

### Additional Information
- **Material Varieties:** Diverse types, including carbonate, magnetic nodules, etc.
- **Color Patterns:** Various hues, like Red, Orange, Brown, etc.

---

**Table Data:**

1. **Socotz:** Unidentified, Type: Fine, Open, Color: Reddish-

2. **Uaxactun:** Reddish-

3. **Belize Red:** Spanish, Hard, Color: Red-orange, Type: Very Fine, Restricted, Size: Very Fine, Open

4. **Spanish:** Red-orange, Type: Orange-brown, Color: Orange-brown, Size: Very Fine, Open

5. **Spanish:** Red-orange, Type: Red-orange, Color: Very Fine, Open

6. **Spanish:** Red-orange, Type: Red-orange, Size: Very Fine, Open

7. **Spanish:** Buffalo, Type: Buffalo, Color: Orange, Size: Very Fine, Open

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**Table Rows:**

- **Inventory:** 119 TCU10-1-089
- **Cat. No.:** TCU10-1-089
- **Site:** TCU
- **Type:** Mixed Materials
- **Subject:** Clay, Sand
- **Complex:** 1
- **Date:** 1976
- **STR.:** 10, 11
- **E.U.:** 1
- **LVL.:** 1
- **LOT.:** 1
- **Context:** Mixed Materials
- **RIM:** 14, 17
- **DECORATION:** 15, 16, 17
- **SLIP:** 12, 13
- **PAINT:** 12, 13
- **PASTE:** 12, 13
- **TEMPER:** 12, 13
- **VESSEL:** Mixed Materials
- **SIZE:** 2, 3

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**Note:** The table data includes various types of pottery with specific characteristics, such as colors, patterns, and types of slip and paint used. Refer to the detailed table for complete information.
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- **Non-Slipped and Slipped**
- **Spanish**
- **Soft**
- **Dolphin Head**
- **Hard Orange**

Note: For each entry, the table provides detailed information about the vessel, including dimensions, decorative elements, and material composition. The table also references specific dates and archaeological contexts.
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**DATE REFERENCES**

Spanish ca. AD 590 – 880

**VARIETY**

- Reddish-black Medium/Fine X - sand fine open 9, 10 or 11 2 0.6 13 - Tiger Run Peten Gloss Tasital - - Gifford 1976:200
- Reddish-black Medium/Fine X - - medium/fine restricted 11.i or 13.c 3 0.4 34 - Hermitage (1961)
- Reddish-buff Black Very Fine X - very fine - - 1 0.4 5 - Slip is harder than expected.
- Reddish-black Medium/Fine X - sand fine open 9, 10 or 11 2 0.6 13 - Tiger Run Peten Gloss Tasital - - Gifford 1976:200
- Reddish-black Medium/Fine X - sand fine open 9, 10 or 11 2 0.6 13 - Tiger Run Peten Gloss Tasital - - Gifford 1976:200

**COMMENTS**

- Slip is harder than expected.
- Perhaps Kaway Impressed, though paste is redder than expected. Surface treatment is rough.
- Lookout (late 7th century) dimensions: 1-1/4" x 1 1/4" high on shoulder. Horizontal band of thumb impression (toward the right) on exterior. Sharp definition on interior opposite exterior vessel body at medial vertical impressions.
- Horizontal band of thumb impression (toward the right) on vessel body (heavily eroded). Sharp definition on interior opposite exterior vessel body at medial vertical impressions.
- Horizontal applique band on exterior segmented by sharp external band.
- Horizontal applique band on exterior (toward the right) on vessel body (heavily eroded). Sharp definition on interior opposite exterior vessel body at medial vertical impressions.
- Horizontal applique band on exterior (toward the right) on vessel body (heavily eroded). Sharp definition on interior opposite exterior vessel body at medial vertical impressions.
- Raised band or flange on exterior segmented by sharp external band.

840
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**INSCRIPTIONS**

- Tiger Run Peten Gloss Tasital
- Hard Red 90 - - Black Black Fine X - - fine open
- Tiger Run Mountain Pine Gifford 1976:269; LeCount et al.
- Hard Red 50 - - Red Brown Fine X - sand fine open
- Garbutt Creek Chunhuitz Hard Slipped and Shepard (exterior Fine - - 2 0.8 5 -
- Weight (g) (Gifford) (Gifford) (Gifford) (Gifford) (Gifford)
- Soft Dark Red 99 - - Light brown Light brown Fine X -
- Spanish Non-Slipped and Spanish Spanish 9.d, 10.e or - - Gifford 1976:200
- Belize Red : Garbutt Creek Dark Red 9.d, 10.e or - -
- Carbonate
- Non-magnetic
- 2 0.7 6 -
- Garbutt Creek Dark Red 9.d, 10.e or - - Gifford 1976:269; LeCount et al.
- Spanish Non-Slipped and Spanish Spanish Slipped and Garbutt Creek Spanish 9.d, 10.e or - - Gifford 1976:269; LeCount et al.
- Belize Red : Garbutt Creek Dark Red 9.d, 10.e or - -
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**Dates:**
- Tiger Run: ca. AD 590 - AD 880
- Lookout (early): ca. AD 670 - AD 750/780
- Lookout (late): ca. AD 890 - AD 900
- Spanish: ca. AD 280 - AD 680
- Honduras: ca. AD 680 - AD 890

**Summary of Types:**
- Platon Variety, but 'clinky'
- Impressed: Vaca Falls
- Punctated-incised: Pine Ridge
- Striation: Ash
- Unslipped: Unspecified
- Incised: Unspecified
- Impressed-appliqued: Unspecified

**Magnetic nodules:**
- medium/coars

For more detailed information, please refer to the original sources:
- Gifford 1976:189
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<td>1 - 1 Mixed Materials</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>062 TCU10-1-110</td>
<td>002 TCU c-s.08</td>
<td>1 - 1 Mixed Materials</td>
<td>14.a</td>
<td>52</td>
<td>9</td>
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<tr>
<td>062 TCU10-1-110</td>
<td>001 TCU c-s.08</td>
<td>1 - 1 Mixed Materials</td>
<td>-</td>
<td>-</td>
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<tr>
<td>027 TCU10-1-108</td>
<td>001 TCU c-s.08</td>
<td>1 - 1 Mixed Materials</td>
<td>-</td>
<td>-</td>
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<tr>
<td>022 TCU10-1-107</td>
<td>001 TCU c-s.08</td>
<td>1 - 1 Mixed Materials</td>
<td>14.a</td>
<td>21</td>
<td>20</td>
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<tr>
<td>004 TCU10-1-104</td>
<td>001 TCU c-s.08</td>
<td>1 - 1 Mixed Materials</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Remarks:**
- **Type-Hard Reddish-black**
- **Colour:** Tan
- **Porcelain:** Geometric Buff
- **Texture:** Very Fine
- **Decoration:** X
- **Rim:** sand very fine open
- **Slipped:** 9, 10 or 11

**Reference:**
| TUMAC BAG NO. | ART NO. | CAT. NO. | ART. NO. | SITE STR. | E.U. LVL | LOT CONTEXT | RIM LIP | DECORATION | SLIP PAINT | PASTE TEMPER | VESSEL FORM | SIZE COMMENTS | COMPLEX WARE GROUP | REFERENCES |
|--------------|--------|---------|---------|-----------|----------|-------------|--------|------------|------------|-------------|-------------|----------------|----------------|----------------|-----------|
| TCU10-1-116  | 001    | TCU     | c-s.08  | 1 - 1    | Mixed Materials | -        | -        | -        | -          | -          | -             | -              | -              | -          |
| TCU10-1-113  | 016    | TCU     | c-s.08  | 1 - 1    | Mixed Materials | 14.a     | 15       | 7        | 15.a       | -          | Hard Red 20   | -              | -              | -          |
| TCU10-1-113  | 011    | TCU     | c-s.08  | 1 - 1    | Mixed Materials | 14.b     | 35       | 4        | 15.a       | -          | Pinkish-buff 20 | -              | -              | -          |
| TCU10-1-113  | 007    | TCU     | c-s.08  | 1 - 1    | Mixed Materials | -        | -        | -        | -          | -          | -             | -              | -              | -          |
| TCU10-1-113  | 001    | TCU     | c-s.08  | 1 - 1    | Mixed Materials | -        | -        | -        | -          | -          | -             | -              | -              | -          |
| TCU10-1-110  | 020    | TCU     | c-s.08  | 1 - 1    | Mixed Material | 14.a     | 21       | 5        | 15.a       | -          | Pinkish-buff 20 | -              | -              | -          |
| TCU10-1-110  | 019    | TCU     | c-s.08  | 1 - 1    | Mixed Material | -        | -        | -        | -          | -          | -             | -              | -              | -          |
| TCU10-1-110  | 017    | TCU     | c-s.08  | 1 - 1    | Mixed Material | -        | -        | -        | -          | -          | -             | -              | -              | -          |
| TCU10-1-110  | 016    | TCU     | c-s.08  | 1 - 1    | Mixed Material | -        | -        | -        | -          | -          | -             | -              | -              | -          |
| TCU10-1-121  | 008    | TCU     | c-s.08  | 1 - 1    | Mixed Materials | -        | -        | -        | -          | -          | -             | -              | -              | -          |
| TCU10-1-121  | 005    | TCU     | c-s.08  | 1 - 1    | Mixed Materials | -        | -        | -        | -          | -          | -             | -              | -              | -          |
| TCU10-1-121  | 001    | TCU     | c-s.08  | 1 - 1    | Mixed Materials | -        | -        | -        | -          | -          | -             | -              | -              | -          |
| TCU10-1-121  | 007    | TCU     | c-s.08  | 1 - 1    | Mixed Materials | -        | -        | -        | -          | -          | -             | -              | -              | -          |
| TCU10-1-121  | 005    | TCU     | c-s.08  | 1 - 1    | Mixed Materials | -        | -        | -        | -          | -          | -             | -              | -              | -          |
| TCU10-1-121  | 001    | TCU     | c-s.08  | 1 - 1    | Mixed Materials | -        | -        | -        | -          | -          | -             | -              | -              | -          |
BAG NO.

CAT. NO.

ART. NO.

SITE

STR.

E.U.

LVL

LOT

CONTEXT

RIM

LIP

(style)

(ext.
diameter cm)

(% of rim)

DECORATION

TCU10-1-121

010

TCU

c-s.08

1

-

1

Mixed Materials

14.b

25

5

15.a

31

TCU10-1-121

017

TCU

c-s.08

1

-

1

Mixed Materials

-

-

-

-

126

TCU10-1-122

001

TCU

c-s.08

1

-

1

Mixed Materials

14.a

21

6

15.a

PAINT

PASTE

TEMPER

(surface)

(hard/soft)

(Munsell)

(%
remaining)

-

Hard

Red

70

-

-

Light grey

Pinkish-buff

Fine

-

-

-

-

-

-

Tan

Tan

-

Slipped and
Painted

Hard

Orange

99

Black, Red

Geometric

Buff

Buff

Hard

Orange

2

Black, Red

NonGeometric

Buff

Buff

Fine

Orange

99

Black, Red

Geometric

Buff

Buff

99

Red

-

Buff

Buff

(plastic)

31

SLIP

Horizontal excised line on
exterior vessel approximately
3cm below rim.
Horizontal band of thumb
impressed-appliqued ovoids
(toward the right; vessel
upright) high on shoulder.

Colours

Pattern

(core colour)

(exterior
colour)

VESSEL FORM

SIZE

COMMENTS

Sabloff
(1975)

(max.
dimension: 17)

Thickness
(cm)

Weight (g)

COMPLEX

WARE

GROUP

TYPEVARIETY

DATE

(Gifford)

(Gifford)

(Gifford)

(Gifford)

(Gifford)

(LeCount et
al.)

(HarrisonBuck)

ca. AD 590 –
AD 680

-

-

Gifford 1976:196

ca. AD 280 –
AD 590

-

-

Gifford 1976:187

ca. AD 680 –
AD 880

ca. AD 600 AD 890

-

Gifford 1976:269; LeCount et
al. 2002:47

ca. AD 680 –
AD 880

ca. AD 600 AD 890

-

Gifford 1976:269; LeCount et
al. 2002:47

ca. AD 680 –
AD 880

ca. AD 600 AD 890

-

Gifford 1976:269; LeCount et
al. 2002:47

ca. AD 680 –
AD 880

ca. AD 600 AD 890

-

Gifford 1976:269; LeCount et
al. 2002:47

ca. AD 680 –
AD 880

ca. AD 600 AD 890

-

Gifford 1976:269; LeCount et
al. 2002:47

Ash

Other

(coarse - fine)

Shepard
(1961)

X

-

sand and
magnetic
nodules

fine

open

10.e or 11.d

2

0.5

24

-

Tiger Run

Pine Ridge
Carbonate

Mountain Pine

Very Fine

X

-

-

very fine

restricted

11.i or 13.c

2

0.4

11

Finer paste than expected.

Hermitage

Uaxactun
Unslipped

Socotz

Fine

-

x

NonCarbonate

Fine

-

-

4

0.7

45

-

Spanish
Lookout

Vinaceous
Tawny

Chunhuitz

-

x

NonCarbonate

Fine

-

-

4

0.5

56

-

Spanish
Lookout

Vinaceous
Tawny

Chunhuitz

Fine

-

x

NonCarbonate

Fine

-

-

2

0.8

8

-

Spanish
Lookout

Vinaceous
Tawny

Chunhuitz

Fine

-

x

NonCarbonate

Fine

Open

9.c or 10.c

3

0.8

22

-

Spanish
Lookout

Vinaceous
Tawny

Chunhuitz

Fine

Open

10.c, 11.c or
12.c

2

0.6

5

-

Spanish
Lookout

Vinaceous
Tawny

(coarse - fine) CaCO3

126

TCU10-1-122

002

TCU

c-s.08

1

-

1

Mixed Materials

-

-

-

-

-

Slipped and
Painted

065

TCU10-1-123

001

TCU

c-s.08

1

-

1

Mixed Materials

14.a

-

-

15.a

-

Slipped and
Painted

Hard

086

TCU10-1-124

001

TCU

c-s.08

1

-

1

Mixed Materials

14.a

-

-

15.a

-

Slipped and
Painted

Hard

Orange

Hard

Orange,
Cream

99

Black, Red

Figural

Buff

Buff

Fine

-

x

NonCarbonate

Red

80

-

-

Red

Red

Fine

X

-

sand

fine

open

9, 10 or 11

3

0.5

11

Bi-conically drilled “mend
hole”.

-

-

-

99

Black, Red

Geometric

Buff

Buff

Fine

-

x

NonCarbonate

Fine

Open

10.c, 11.c or
12.c

2

0.6

11

-

Spanish
Lookout

Vinaceous
Tawny

Chunhuitz

99

-

-

Buff

Tan

Very Fine

X

x

sand

very fine

Open

10.a, 11.a or
12.a

1

0.7

2

Specular Red; Appears in
much greater quantitiy than
reported by either Gifford
(1976) or Thompson (1940).

Spanish
Lookout

Vinaceous
Tawny

Chunhuitz

2

0.7

13

Specular Red; Appears in
much greater quantitiy than
reported by either Gifford
(1976) or Thompson (1940).
In larger sherds, vessel shape
seems to be more variable
than is typical of Benque Viejo
Polychrome.

Spanish
Lookout

Vinaceous
Tawny

Chunhuitz

086

TCU10-1-124

002

TCU

c-s.08

1

-

1

Mixed Materials

-

-

-

-

-

Slipped and
Painted

086

TCU10-1-124

003

TCU

c-s.08

1

-

1

Mixed Materials

-

-

-

-

-

Slipped
Interior

Hard

086

TCU10-1-124

004

TCU

c-s.08

1

-

1

Mixed Materials

14.a

21

6

15.a

-

Slipped and
Painted

Hard

086

TCU10-1-124

005

TCU

c-s.08

1

-

1

Mixed Materials

14.a

-

-

15.a

-

Slipped

Hard

Orange,
Cream
Dark Red
Exterior,
Strong Brown
Interior

Hard

Dark Red
Exterior,
Strong Brown
Interior

99

Black

Glyphs

Buff

Tan

Very Fine

X

x

sand

very fine

Open

10.a, 11.a or
12.a

Chunhuitz

Rosario
Incised :
Rosario Variety
Socotz
Striated :
Variety
Unspecified
Benque
Viejo
Polychrome :
Variety
Unspecified
Benque
Viejo
Polychrome :
Variety
Unspecified
Benque
Viejo
Polychrome :
Variety
Unspecified
Benque
Viejo
Polychrome :
Variety
Unspecified
Benque
Viejo
Polychrome :
Variety
Unspecified
Unidentified
Calcite
Benque Viejo
Polychrome :
Variety
Unspecified
Benque
Viejo
Polychrome :
Variety
Unspecified

Benque Viejo
Polychrome :
Variety
Unspecified

REFERENCES

-

-

-

-

ca. AD 680 –
AD 880

ca. AD 600 AD 890

-

Gifford 1976:269; LeCount et
al. 2002:47

ca. AD 680 AD 880

ca. AD 600 AD 890

-

Gifford 1976:269; LeCount et
al. 2002:47

ca. AD 680 AD 880

ca. AD 600 AD 890

-

Gifford 1976:269; LeCount et
al. 2002:47

ca. AD 680 –
AD 880

ca. AD 600 AD 670

-

Gifford 1976:269; LeCount et
al 2002:47

-

ca. AD 780 AD 890

-

Sabloff 1975:174; LeCount
1996:139; LeCount et al
2002:47; see also Gifford
1976:305 (More Force
Unslipped : More Force Variety

086

TCU10-1-124

006

TCU

c-s.08

1

-

1

Mixed Materials

14.a

21

5

15.a

-

Slipped and
Painted

058

TCU10-1-125

001

TCU

c-s.08

1

-

1

Mixed Materials

-

-

-

-

“Nubbin” foot

Slipped and
Painted

Hard

Orange

99

Black

Geometric

Buff

Buff

Fine

-

x

NonCarbonate

Fine

-

-

4

0.7

72

-

Spanish
Lookout

Vinaceous
Tawny

Chunhuitz

058

TCU10-1-125

002

TCU

c-s.08

1

-

1

Mixed Materials

14.c

18

4

15.a

Randomly-spaced applique
“spikes” on exterior.

-

-

-

-

-

-

Brown

Brown

Medium/Fine

X

-

sand

Coarse

-

Censer (?)

2

0.6

13

-

Bayal

Uaxactun
Unslipped

Cambio

116

TCU10-1-127

001

TCU

c-s.08

1

-

1

Mixed Materials

-

-

-

-

“Nubbin” foot

Slipped

Hard

Orange

99

-

-

Buff

Buff

Fine

-

x

NonCarbonate

Fine

Open

10, 11 or 12

4

0.5

45

-

Spanish
Lookout

Vinaceous
Tawny

Chunhuitz

-

ca. AD 680 AD 880

-

-

Gifford 1976:267-273

116

TCU10-1-127

002

TCU

c-s.08

1

-

1

Mixed Materials

-

-

-

-

-

Slipped and
Painted

Hard

Orange

99

Red

Geometric

Buff

Buff

Fine

-

x

NonCarbonate

Fine

Open

-

2

0.3

3

Discoloured

Spanish
Lookout

Vinaceous
Tawny

Chunhuitz

Benque Viejo
Polychrome :
Variety
Unspecified

ca. AD 680 –
AD 880

ca. AD 600 AD 890

-

Gifford 1976:269; LeCount et
al. 2002:47

077

TCU10-1-128

001

TCU

c-s.08

1

-

1

Mixed Materials

-

-

-

-

-

Slipped and
Painted

Hard

Orange

80

Black, Red

Geometric

Buff

Buff

Fine

-

x

NonCarbonate

Fine

-

-

1

0.4

3

-

Spanish
Lookout

Vinaceous
Tawny

Chunhuitz

Benque Viejo
Polychrome :
Variety
Unspecified

ca. AD 680 –
AD 880

ca. AD 600 AD 890

-

Gifford 1976:269; LeCount et
al. 2002:47

-

Slipped and
Painted

Hard

Dark Red
Exterior, Dark
Brown and
Light Orange
Yellow Interior
below lip

90

Black

Glyphs

Buff

Tan

Very Fine

X

x

sand

very fine

Open

10.a, 11.a or
12.a

2

0.6

10

Specular Red; Appears in
much greater quantitiy than
reported by either Gifford
(1976) or Thompson (1940).
In larger sherds, vessel shape
seems to be more variable
than is typical of Benque Viejo
Polychrome.

Spanish
Lookout

Vinaceous
Tawny

Chunhuitz

Benque Viejo
Polychrome :
Variety
Unspecified

ca. AD 680 AD 880

ca. AD 600 AD 890

-

Gifford 1976:269; LeCount et
al. 2002:47

-

-

-

-

-

Dark redbrown

Brown

Coarse

X

-

sand

coarse

restricted

13.c

7

0.4

230

CBAS Type Collection

Hermitage

Uaxactun
Unslipped

Socotz

ca. AD 280 –
AD 590

-

-

Gifford 1976:186

-

quartz and
magnetic
nodules

Tiger Run

Peten Gloss

Tasital

ca. AD 590 –
AD 680

-

-

Gifford 1976:200


077

TCU10-1-128

002

TCU

c-s.08

1

-

1

Mixed Materials

-

-

-

-

42

TCU10-1-129

001

TCU

c-s.08

1

-

1

Mixed Material

14.a

21

31

15.a

42

TCU10-1-129

002

TCU

c-s.08

1

-

1

Mixed Material

14.a

30

14

15.c

Horizontal band of thumb
impressed-appliqued ovoids
(toward the left; vessel
upright) on shoulder near
juncture with neck. Thick
Horizontal band of thumb
Burnishing;
impressed-appliqued ovoids
slipped to
(toward the right; vessel
medial break.
upright) at medial break.
An encircling groove occurs
Slipped
just below the lip and
exterior
pendant to it is an inverted
tau-shaped element.

Hard

Hard

Dark reddishbrown

70

-

-

Red

99

-

-

Tan

Orange-brown Medium/Fine

fine

open

11.d

X

-

sand and
quartz

coarse

open

10.d or 11.e

X

-

quartz and
magnetic
nodules

fine

open

10.c

Fine

X

-

sand and
magnetic
nodules

fine

open

Red

Fine

X

-

sand and
magnetic
nodules

fine

Buff

Orange-buff

Coarse

X

-

sand and
magnetic
nodules

Red-orange

Red-orange

Fine

X

-

sand

Grey

Reddishbrown

X

73

TCU10-1-131

001

TCU

c-s.08

1

-

1

Mixed Material

14.c

34

7.5

15.a

73

TCU10-1-131

002

TCU

c-s.08

1

-

1

Mixed Material

14.a

32

12.5

15.c

Horizontal band of thumb
Burnishing;
impressed-appliqued ovoids
slipped to
(toward the right; vessel
medial break.
upright) at medial break.

Hard

Red

99

-

-

107

TCU10-1-132

001

TCU

c-s.08

1

-

1

Mixed Materials

14.c

31

14

15.c

Horizontal band of thumb
impressed-appliqued ovoids
(toward the right; vessel
upright) approximately 6.5cm
below rim. Thick incised line
on interior, opposite band.

-

Soft

Red

70

-

-

Tan

Tan

107

TCU10-1-132

002

TCU

c-s.08

1

-

1

Mixed Materials

14.c

31

6

15.c

Horizontal band of thumb
impressed-appliqued ovoids
(toward the right; vessel
upright) approximately 6.5cm
below rim. Thick incised line
on interior, opposite band.

-

Soft

Dark Red

95

-

-

Red

107

TCU10-1-132

003

TCU

c-s.08

1

-

1

Mixed Materials

-

-

-

-

Undulating fine line incision
on shoulder

-

-

-

-

-

-

107

TCU10-1-132

004

TCU

c-s.08

1

-

1

Mixed Materials

-

-

-

-

Two horizontal bands of
thumb impressed-appliqued
ovoids (toward the right;
vessel upright). Sharp excised
line on vessel interior
opposite appliqued bands.
Ring base.

-

Hard

Dark Red

99

-

-

Coarse

Orange-brown Orange-brown Medium/Fine

485

6

0.6

191

May be a regional variant of
Dolphin Head Red… Check
context
CBAS Type Collection; Note,
Gifford (1976:257), under
Platon Punctated-incised :
Platon Variety, references 'One
dish with outcurved sides...

Xunantunich
Black-onorange :
Variety
Unspecified
Miseria
Appliqued :
Variety
Unspecified

Socotz
Striated :
Variety
Unspecified
(Dark Brown)
Gloria
Impressed :
Variety
Unspecified

Spanish
Lookout

Unspecified

Belize

-

ca. AD 680 –
AD 880

-

ca. AD
750/780 - AD
900

May be a regional variant of
Dolphin Head Red… Check
context

Tiger Run

Peten Gloss

Tasital

Gloria
Impressed :
Variety
Unspecified

ca. AD 590 –
AD 680

-

-

Gifford 1976:200

159

-

Tiger Run

Peten Gloss

Tasital

Gloria
Impressed :
Variety
Unspecified

ca. AD 590 –
AD 680

-

-

Gifford 1976:200

0.6

127

-

Tiger Run

Peten Gloss

Tasital

Gloria
Impressed :
Variety
Unspecified

ca. AD 590 –
AD 680

-

-

Gifford 1976:200

6

0.6

158

Fresh break mends with
TCU10-1-132-006

Floral Park

Tumbac
Unslipped

Chan Pond

Negroman
Punctatedincised :
Negroman
Variety

ca. AD 0 – AD
280

-

-

Gifford 1976:151

7

0.8

221

-

Tiger Run

Peten Gloss

Tasital

Gloria
Impressed :
Variety
Unspecified

ca. AD 590 –
AD 680

-

-

Gifford 1976:200

0.7

136

6

0.6

145

9.c or 10.c

6

0.7

open

9.c or 10.c

5

coarse

restricted

11.i or 13.c

fine

open

9.c or 10.c


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<th>ART. NO.</th>
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<th>STR.</th>
<th>E.U.</th>
<th>LVL</th>
<th>LOT</th>
<th>CONTEXT</th>
<th>RIM</th>
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<th>PASTE</th>
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<th>COMMENTS</th>
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<td>001</td>
<td>TCU</td>
<td>c-s.08</td>
<td>1</td>
<td>1</td>
<td>Mixed Materials</td>
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**Additional Information**

- **Dimension**: 1-
- **Thickness**: 7
- **Color**: Red-orange
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- **Remarks**: Mixed Materials
- **Complex**: Mixed Materials
- **Ware Group**: Mixed Materials
- **Period**: Mixed Materials
- **Style**: Mixed Materials
- **Condition**: Mixed Materials
- **Brow**: Mixed Materials
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- **Spout**: Mixed Materials
- **Handle**: Mixed Materials
- **Comments**: Mixed Materials

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**Table Notes**

- **Vessel Form**: Mixed Materials
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**BAG NO.**: Identification number for each bag of sherds.
**CAT. NO.**: Catalog number for each sherd.
**ART. NO.**: Art number for each sherd.
**SITE**: Site number where the sherd was found.
**STR.**: Street number where the sherd was found.
**E.U.**: Elevation unit number where the sherd was found.
**LVL**: Level number where the sherd was found.
**LOT**: Lot number where the sherd was found.
**CONTEXT**: Context number where the sherd was found.
**RIM LIP DECORATION**: Description of the decoration on the rim lip.
**SLIP**: Description of the slip on the sherd.
**PAINT**: Description of the paint on the sherd.
**PASTE**: Description of the paste on the sherd.
**TEMPER**: Description of the temper on the sherd.
**VESSEL FORM**: Description of the vessel form.
**SIZE**: Description of the size of the sherd.
**COMMENTS**: Additional information about the sherd.
**WARE GROUP**: Group of similar sherd types.
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**DATE REFERENCES**

- Gifford 1976:214
- LeCount et al 2002:47
- Garbutt Creek Red : Paslow
- Pine Ridge 10.c, 11.c or 13.4:623

**VESSEL FORM**

- Sand and nodules
- Reddish-orange
- Hard/soft
- Geometric
- Red

**DECORATION**

- Single row of small, closely spaced indentations with incised lines (dashed and unbroken)
- Single row of small, closely spaced indentations with incised lines (dashed and unbroken)
- Horizontal applique band on shoulder. Thin, horizontal incised line above.
- Horizontal applique band on shoulder. Thin, horizontal incised line above.
- Horizontal applique band on shoulder. Thin, horizontal incised line below.

**SLIP**

- Painted red : Macal
- Polychrome : Macal
- Red : Paslow
- Red : Macal
- Pleasant red : Macal

**PAINT**

- Light orange
- Light orange
- Light orange
- Light orange
- Light orange

**PASTE**

- Hard Red 100
- Soft Red 90
- Hard Red 99
- Soft Red 95
- Red-orange

**TEMPER**

- Carbonate
- Tawny
- Macal Orange
- Vinaceous
- Macal Orange

**SAXCHE**

- Polychrome
- Unspecified

**TIGER RUN LOOKOUT**

- Macal
- Unspecified

**CA. AD 590 – 680**

- ca. AD 590 – 680
- ca. AD 590 – 680
- ca. AD 600 – 680
- ca. AD 590 – 670
- ca. AD 680 – 790
- ca. AD 590 – 790
- ca. AD 590 – 680
- ca. AD 590 – 600

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**DATE**

- Benque Viejo: ca. AD 680 – AD 880
- Hermitage Peten: ca. AD 280 – AD 680
- Polychrome: ca. AD 600 – AD 890

**Temper**

- Carbonate
- Ash
- Other (coarse - fine)

**Complex Ware Group**

- Http://
- Al.

**Vessel Form**

- Open
- Medium
- Very Fine

**Slip**

- Reddish-
- Dark Red
- Orange:
- Medium X
- Fine Open

**Paint**

- Medium X
- Medium
- Very Fine

**Paste**

- Sand very fine

**Comments**

- Looks like a Drum? 5 0.6 13

**Referências**

- Harrison-al. 2002:47
- Thompson (1940).
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<th>No.</th>
<th>Cat. No.</th>
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<th>Str.</th>
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<td>Randomly placed applique spikes on exterior.</td>
<td>Tan Tan Coarse X sand coarse open</td>
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<td>Restricted &quot;Shoe Pot&quot; 7 0.9 488 CBAS Type Collection Hermitage - Spanish Lookout Uaxactun Unslipped Unknown Brown Striated Ware (Shoe-shaped vessels) ca. AD 280 - AD 880 -</td>
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<td>Tan Coarse X sand very fine - - 3 0.7 89 Pedestal base approx. 3.5cm below base. -</td>
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<td>0.6 80 - Costa Rica - Caribbean - -</td>
<td>Gifford 1976:269; LeCount et al. 2002:47</td>
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<td>Undulating fine line incision on shoulder, exterior &quot;break&quot; at base of neck</td>
<td>Buff Pinkish-orange Medium/Coarse X - quartz and sand, with fine micaceous like golden flecks on surface fine restricted</td>
<td>13.a</td>
<td>7</td>
<td>0.4 297 CBAS Type Collection Floral Park Tumbac Unslipped : Negroman Punctated-incessed : Negroman Variety ca. AD 0 – AD 280 -</td>
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<td>Horizontal band of thumb impressed-appliqued ovoids (toward the right; vessel upright) on shoulder near juncture with neck. Lightly striated below</td>
<td>Brown Brown Medium/Coarse X - - coarse restricted</td>
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<td>0.6 434 CBAS Type Collection Spanish Lookout Uaxactun Unslipped : Cayo Variety ca. AD 680 - AD 880 -</td>
<td>Gifford 1976:276; Harrison-Buck 2007:213-214</td>
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<td>- 15 Bi-conically drilled &quot;mend hole&quot;. - -</td>
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490
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**Comments:**
- **Gifford 1976:** Various references are listed for different dates and sites:
  - Gifford 1976:193, 235, 240
  - Gifford 1976:269; LeCount et al. 2002:47

**Additional Notes:**
-mention of sherds from different sites and time periods.

**Reference:**
LeCount et al. 2002:47
Harrison-Buck 2007:213-214
Gifford 1976:193, 235, 240
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**DATE REFERENCES**

- Belize Red:
  - Dated to ca. AD 280 – 492 (LeCount et al. 2002:47)
  - Dated to ca. AD 600 – 750/780 – AD 890 (LeCount et al. 2002:47)
  - Dated to ca. AD 600 – 750/780 – AD 890 (Harrison-Buck 2007:213-214)
  - Dated to ca. AD 600 – 750/780 – AD 890 (Buck 2007:213-214)
  - Dated to ca. AD 600 – 750/780 – AD 890 (Sabloff 1975)
  - Dated to ca. AD 600 – 750/780 – AD 890 (LeCount et al. 2002:47)
  - Dated to ca. AD 600 – 750/780 – AD 890 (Buck 2007:213-214)
  - Dated to ca. AD 600 – 750/780 – AD 890 (Sabloff 1975)
  - Dated to ca. AD 600 – 750/780 – AD 890 (Buck 2007:213-214)
  - Dated to ca. AD 600 – 750/780 – AD 890 (Sabloff 1975)
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**Note:** The table above contains information on the artifacts, including their BAG NO., STR., E.U., LVL, LOCATION, and COMMENTS. The table is organized to provide a clear view of the data collected.
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<td>1.5cm below rim. Slight thickening below band. Horizontal excised line on body below band.</td>
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**Notes:**
- **Context:** Various sites and contexts
- **Decoration:** Various styles and techniques
- **Slip:** Different types and applications
- **Paint:** Various colors and materials
- **Paste:** Different compositions and textures
- **Temper:** Mixtures of various materials

**References:**
- Gifford (1976)
- LeCount et al. (2002)
- Maloney (2002)
- Other sources as indicated
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**DATE REFERENCES**
- Gifford 1976:73-74
- LeCount et al. 1961
- LeCount et al. 1975

**RESERVOIR**
- Gifford 1976:269
- LeCount et al. 1961
- LeCount et al. 1975

**REFERENCES**
- Gifford 1976:246
- Harrison-Buck 2007:213-214
- LeCount et al. 2002:47

**VARIEGATED**
- Harrison-Buck 2007:213-214
- LeCount et al. 2002:47

**WEIGHT (g)**
- Gifford 1976:269
- LeCount et al. 1961
- LeCount et al. 1975
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- **Dimensions:**
  - Diameter: 6-7 cm
  - Thickness: 1-2 cm

- **Notes:**
  - Rim: 14.a, 15.a
  - Comments: Mixed Materials
  - Complex: Capsule

- **Type:**
  - Tempura

- **Production:**
  - Harrison-Buck

- **Context:**
  - Harrison-Buck, More Force, Xunantunich

- **Temper:**
  - Calcite

- **Decoration:**
  - Painted

- **Slip:**
  - Unslipped

- **Color:**
  - Orange

- **Thickness:**
  - 1-2 cm

- **Dimensions:**
  - Diameter: 6-7 cm

- **Location:**
  - Harrison-Buck, More Force, Xunantunich
| BAG NO. | CAT. NO. | ART. NO. | SITE | STR. | E.U. | LVL | LOT | CONTEXT | COMMON WARE | COMMENTS | HOBD | HOBB | DATED | DATED | DATED | DATED | DATED | DATED | DATED | DATED |
|---------|----------|----------|------|------|------|-----|-----|---------|-------------|-----------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
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| 138     | TCU10-1-225 | 005     | TCU  | c-s.08 | 1   | 1   | Mixed Materials | - | - | | | | | | | | | | | | |
| 138     | TCU10-1-225 | 002     | TCU  | c-s.08 | 1   | 1   | Mixed Materials | - | - | | | | | | | | | | | | |
| 142     | TCU10-1-223 | 003     | TCU  | c-s.08 | 1   | 1   | Mixed Materials | - | - | | | | | | | | | | | | |
| 142     | TCU10-1-223 | 002     | TCU  | c-s.08 | 1   | 1   | Mixed Materials | - | - | | | | | | | | | | | | |

**Notes:**
- Dimension: 1-
- Weight (g) (Gifford): 3 0.5 26
- Diameter cm:
- Rim: Sharp definition at medial exterior approx. 5.8cm below rim.
- Horizontal band of appliqued small, horizontally elongated irregularly spaced ovoid impressions on band. Sharp definition at medial exterior 5.5cm below rim.
- Horizontal applique band on exterior at medial break with impressions on band. Sharp definition at medial exterior 6cm below rim.
- Horizontal band of thumb impressions on band. Sharp definition at medial exterior.

**Date References:**
- ca. AD 280 – 680
- ca. AD 590 – 680
- ca. AD 750/780 – 890
- ca. AD 590 – 680
- ca. AD 600 – 750
- ca. AD 750/780 – 890

**References:**
- Shepard 1979:68; LeCount et al. 2002:47
- Hornung, Dressler, and Blanton 2006:151
- Garbutt by V. R. Garbutt 1961
- Garbutt by V. R. Garbutt 1975
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**Horizontal applique band in interior.**

**Symbols "hanging" from rim.**

**Tiger Run**

**Reddish-Orange**

**Non-slipped and non-painted**

**Hard Red 99**

**Black, Red Geometric**

**Pinkish-brown**

**Medium**

**Fine Open**

**Geometric Buff**

**Sand**

**Censer**

**Unspecified**

**Daylight Orange**

**Reddish**

**Carbonate**

**Carbonate magnetic sand and nodules**

**Medium restricted**

**Striated**

**Black-on-orange**

**Carbonate magnetic**

**Polychrome**

**Unslipped**

**Vinaceous Tawny**

**Polychrome**

**Brown**

**Vinaceous**

**Sand and Nodules**

**Brown Medium/Fine**

**Green Carbonate magnetic**

**Mixing Vegetation**

**Orange**

**White, non-carbonated**

**Orange**

**Non-carbonated**

**Blue**

**Reddish-Orange**

**Non-carbonated**

**Orange**

**Sand and Nodules**

**Reddish**

**Sand and Nodules**

**Sand and Nodules**

**Non-carbonated**

**Morro Plateau**

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**References:**


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**Notes:**

- Dates are approximate and may be subject to revision.
- The table includes a variety of data points such as dimensions, materials, and decorative styles.
- The site names and contexts provide additional context for the objects listed.
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- ca. AD 590 – AD 680
- ca. AD 0 – AD 100
- ca. AD 590 – AD 890
- ca. AD 600 – AD 880
- ca. AD 670 – AD 880
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</table>

### Reference
- Gifford 1976:189
- Gifford 1976:187
- Gifford 1976:200
- Gifford 1976:193
- Buck 2007:213-214
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<tr>
<th>No.</th>
<th>CAT NO.</th>
<th>ART NO.</th>
<th>STR. E.U.</th>
<th>CONTEXT</th>
<th>FORM</th>
<th>SIZE</th>
<th>COMMENTS</th>
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</thead>
<tbody>
<tr>
<td>199</td>
<td>TCU10-1-247</td>
<td>001 TCU c-s.08 1 - 1</td>
<td>Mixed Materials</td>
<td>14.a - - 15.a - -</td>
<td>Hard</td>
<td>0.6 8</td>
<td>- Painted</td>
</tr>
<tr>
<td>200</td>
<td>TCU10-1-247</td>
<td>004 TCU c-s.08 1 - 1</td>
<td>Mixed Materials</td>
<td>- - - - - -</td>
<td>Very Fine</td>
<td>X x</td>
<td>- Glazed and impressed</td>
</tr>
<tr>
<td>249</td>
<td>TCU10-1-245</td>
<td>017 TCU c-s.08 1 - 1</td>
<td>Mixed Materials</td>
<td>- - - - - -</td>
<td>Hard</td>
<td>0.5 19</td>
<td>- Slip and Painted</td>
</tr>
<tr>
<td>250</td>
<td>TCU10-1-245</td>
<td>019 TCU c-s.08 1 - 1</td>
<td>Mixed Materials</td>
<td>- - - - - -</td>
<td>Very Fine</td>
<td>X x</td>
<td>- Glazed and impressed</td>
</tr>
<tr>
<td>251</td>
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<td>005 TCU c-s.08 1 - 1</td>
<td>Mixed Materials</td>
<td>- - - - - -</td>
<td>Very Fine</td>
<td>X x</td>
<td>- Glazed and impressed</td>
</tr>
<tr>
<td>252</td>
<td>TCU10-1-245</td>
<td>018 TCU c-s.08 1 - 1</td>
<td>Mixed Materials</td>
<td>- - - - - -</td>
<td>Very Fine</td>
<td>X x</td>
<td>- Glazed and impressed</td>
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<tr>
<td>253</td>
<td>TCU10-1-245</td>
<td>016 TCU c-s.08 1 - 1</td>
<td>Mixed Materials</td>
<td>- - - - - -</td>
<td>Very Fine</td>
<td>X x</td>
<td>- Glazed and impressed</td>
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<tr>
<td>254</td>
<td>TCU10-1-245</td>
<td>015 TCU c-s.08 1 - 1</td>
<td>Mixed Materials</td>
<td>- - - - - -</td>
<td>Very Fine</td>
<td>X x</td>
<td>- Glazed and impressed</td>
</tr>
<tr>
<td>255</td>
<td>TCU10-1-245</td>
<td>014 TCU c-s.08 1 - 1</td>
<td>Mixed Materials</td>
<td>- - - - - -</td>
<td>Very Fine</td>
<td>X x</td>
<td>- Glazed and impressed</td>
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<tr>
<td>256</td>
<td>TCU10-1-245</td>
<td>013 TCU c-s.08 1 - 1</td>
<td>Mixed Materials</td>
<td>- - - - - -</td>
<td>Very Fine</td>
<td>X x</td>
<td>- Glazed and impressed</td>
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<td>012 TCU c-s.08 1 - 1</td>
<td>Mixed Materials</td>
<td>- - - - - -</td>
<td>Very Fine</td>
<td>X x</td>
<td>- Glazed and impressed</td>
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<td>011 TCU c-s.08 1 - 1</td>
<td>Mixed Materials</td>
<td>- - - - - -</td>
<td>Very Fine</td>
<td>X x</td>
<td>- Glazed and impressed</td>
</tr>
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<td>259</td>
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<td>010 TCU c-s.08 1 - 1</td>
<td>Mixed Materials</td>
<td>- - - - - -</td>
<td>Very Fine</td>
<td>X x</td>
<td>- Glazed and impressed</td>
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<tr>
<td>260</td>
<td>TCU10-1-245</td>
<td>009 TCU c-s.08 1 - 1</td>
<td>Mixed Materials</td>
<td>- - - - - -</td>
<td>Very Fine</td>
<td>X x</td>
<td>- Glazed and impressed</td>
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<td>261</td>
<td>TCU10-1-245</td>
<td>008 TCU c-s.08 1 - 1</td>
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<td>- - - - - -</td>
<td>Very Fine</td>
<td>X x</td>
<td>- Glazed and impressed</td>
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<tr>
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<td>007 TCU c-s.08 1 - 1</td>
<td>Mixed Materials</td>
<td>- - - - - -</td>
<td>Very Fine</td>
<td>X x</td>
<td>- Glazed and impressed</td>
</tr>
<tr>
<td>263</td>
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<td>006 TCU c-s.08 1 - 1</td>
<td>Mixed Materials</td>
<td>- - - - - -</td>
<td>Very Fine</td>
<td>X x</td>
<td>- Glazed and impressed</td>
</tr>
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<td>005 TCU c-s.08 1 - 1</td>
<td>Mixed Materials</td>
<td>- - - - - -</td>
<td>Very Fine</td>
<td>X x</td>
<td>- Glazed and impressed</td>
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<td>004 TCU c-s.08 1 - 1</td>
<td>Mixed Materials</td>
<td>- - - - - -</td>
<td>Very Fine</td>
<td>X x</td>
<td>- Glazed and impressed</td>
</tr>
</tbody>
</table>
BAG NO.

CAT. NO.

ART. NO.

SITE

STR.

E.U.

LVL

LOT

CONTEXT

RIM

LIP

(style)

(ext.
diameter cm)

(% of rim)

DECORATION

SLIP

PAINT

(plastic)

(surface)

(hard/soft)

(Munsell)

(%
remaining)

PASTE

TEMPER

Colours

Pattern

(core colour)

(exterior
colour)

(coarse - fine) CaCO3

VESSEL FORM
Ash

Other

(coarse - fine)

Shepard
(1961)

SIZE

COMMENTS

Sabloff
(1975)

(max.
dimension: 17)

Thickness
(cm)

Weight (g)

COMPLEX

WARE

GROUP

TYPEVARIETY

DATE

(Gifford)

(Gifford)

(Gifford)

(Gifford)

(Gifford)

199/224

TCU10-1249/374

011

TCU

c-s.08

1

-

1

Mixed Materials

-

-

-

-

Raised band or flange on
exterior vessel body.

-

-

-

-

-

-

Grey-buff

Pinkish-buff

Medium

X

-

sand and
magnetic
nodules

medium/coars
e

-

-

2

0.8

15

-

Tiger Run

Pine Ridge
Carbonate

Mountain Pine

199/224

TCU10-1249/374

015

TCU

c-s.08

1

-

1

Mixed Materials

14.c

12

33

15.a

-

-

-

-

-

-

-

Orange-buff

Orange-buff

Very Fine

X

X

-

very fine

restricted

11.i or 13.c

4

0.8

65

-

Spanish
Lookout

-

-

199/224

TCU10-1249/374

018

TCU

c-s.08

1

-

1

Mixed Materials

-

-

-

-

-

-

-

-

-

-

Light brown

Light brown

Fine

X

-

sand and
magnetic
nodules

medium

restricted

11.i or 13.c

4

0.6

56

-

Hermitage

Uaxactun
Unslipped

Socotz

Medium

Restricted

11.i or 13.c

4

0.4

46

No slip evident, but appliquéd
Spanish
decoration is reminiscent of Lookout (late
that on Vaca Falls Red
facet)

Pine Ridge
Carbonate

Vaca Falls

No slip evident, but appliquéd
Spanish
decoration is reminiscent of Lookout (late
that on Vaca Falls Red
facet)

Pine Ridge
Carbonate

Vaca Falls

Horizontal band of thumb
impressed-appliqued ovoids
(toward the left, vessel
upright) high on shoulder.
Horizontal band of thumbimpressed appliqued ovoids
(pushed to the left) with
appliqued/impressed “faces”
below. Striated
Horizontal
band ofbody.
thumbimpressed appliqued ovoids
(pushed to the left) with
appliqued/impressed “faces”
below.
Striatedband
body.of
High
horizontal
thumb-impressed appliqued
ovoids (pushed to the left)
with deep impressions on
each ovoid, high on shoulder.

(HarrisonBuck)

-

ca. AD
750/780 - AD
900


ca. AD 680 –
AD 880

-

-

Gifford 1976:255, 272

ca. AD 280 –
AD 590

-

-

Gifford 1976:187

ca. AD 680 AD 880

ca. AD 670 AD 890

-

Gifford 1976:235; LeCount et
al 2002:47

ca. AD 680 AD 880

ca. AD 670 AD 890

-

Gifford 1976:235; LeCount et
al 2002:47

ca. AD 680 AD 880

ca. AD 600 AD 890

ca. AD
750/780 - AD
900

et al. 2002:47

ca. AD 680 –
AD 880

ca. AD 600 AD 890

-

Gifford 1976:269; LeCount et
al. 2002:47

ca. AD 680 –
AD 880

ca. AD 600 AD 670

-

Gifford 1976:269; LeCount et
al 2002:47

Mountain Pine
ca. AD 590 –
Red :
AD 680
Mountain Pine
Variety

Unidentified
Ash

Socotz
Striated :
Variety
Unspecified
(Buff )
Vaca Falls Red
: Vaca Falls
Variety

REFERENCES
(LeCount et
al.)

-

-

-

-

-

-

Grey

Buff

Medium/Fine

X

-

sand and
magnetic
nodules

-

-

-

-

-

-

Grey

Buff

Medium/Fine

X

-

sand and
magnetic
nodules

Medium

Restricted

11.i or 13.c

4

0.4

52

-

-

-

-

-

-

Red

Red

Medium/Fine

X

-

sand

Medium

-

-

4

0.9

18

Paste is finer than expected

Spanish
Lookout

Uaxactun
Unslipped

Cayo

-

Slipped and
Painted

Hard

Orange

99

Black, Red

Geometric

Buff

Buff

Fine

-

x

NonCarbonate

Fine

Open

10.c or 11.c

2

0.6

9

-

Spanish
Lookout

Vinaceous
Tawny

Chunhuitz

-

-

Slipped and
Painted

Hard

Orange

99

Black

Geometric

Buff

Buff

Fine

-

x

NonCarbonate

Fine

Open

10.c, 11.c or
12.c

2

0.8

14

-

Spanish
Lookout

Vinaceous
Tawny

Chunhuitz

15.e

Geometric Pattern of
irregularly-spaced
impressions on vessel exterior

Slipped

Hard

Orange

99

-

-

Buff

Buff

Fine

-

x

-

Fine

Open

9.c or 10.c

3

0.7

31

-

Jenney Creek Barton Creek

-

-

Unidentified
Ash

ca. >600 BC 100 BC

-

-

-

ca. AD 680 –
AD 880

ca. AD 600 AD 890

-

Gifford 1976:269; LeCount et
al. 2002:47

199/224

TCU10-1249/374

021

TCU

c-s.08

1

-

1

Mixed Materials

-

-

-

-

199/224

TCU10-1249/374

022

TCU

c-s.08

1

-

1

Mixed Materials

-

-

-

-

168

TCU10-1-252

001

TCU

c-s.08

1

-

1

Mixed Materials

-

-

-

-

168

TCU10-1-252

002

TCU

c-s.08

1

-

1

Mixed Materials

14.a

-

-

15.a

172

TCU10-1-253

001

TCU

c-s.08

1

-

1

Mixed Materials

-

-

-

140

TCU10-1-254

001

TCU

c-s.08

1

-

1

Mixed Materials

14.a

23

5

Vaca Falls Red
: Vaca Falls
Variety
Cayo
Unslipped :
Variety
Unspecified
(Red)
Benque Viejo
Polychrome :
Variety
Unspecified
Xunantunich
Black-onorange :
Variety
Unspecified

140

TCU10-1-254

002

TCU

c-s.08

1

-

1

Mixed Materials

-

-

-

-

-

Slipped and
Painted

Hard

Orange

99

Black, Red

Geometric

Buff

Buff

Fine

-

x

NonCarbonate

Fine

Open

10.c, 11.c or
12.c

2

0.7

6

-

Spanish
Lookout

Vinaceous
Tawny

Chunhuitz

Benque Viejo
Polychrome :
Variety
Unspecified

140

TCU10-1-254

003

TCU

c-s.08

1

-

1

Mixed Materials

-

-

-

-

“Tau”-shaped foot

Slipped

Hard

Black

99

-

-

Brown

Orange

Fine

X

x

-

Fine

-

10.c, 11.c or
12.c

2

0.5

15

-

-

-

-

Unidentified
Ash

-

-

-

-

170

TCU10-1-256

001

TCU

c-s.08

1

-

1

Mixed Materials

14.c

-

-

15.a

-

Burnished

Hard

Red

99

-

-

Light grey

Light grey

Very Fine

X

-

-

very fine

open

9.c, 10.c or
11.c

3

0.6

24

Mend hole drilled from
exterior.

-

-

-

Unidentified
Calcite

-

-

-

-

ca. AD 680 –
AD 880

ca. AD 600 AD 890

-

Gifford 1976:269; LeCount et
al. 2002:47

ca. AD 680 –
AD 880

ca. AD 600 AD 890

-

Gifford 1976:269; LeCount et
al. 2002:47

170

TCU10-1-256

002

TCU

c-s.08

1

-

1

Mixed Materials

-

-

-

-

-

Slipped and
Painted

Hard

Orange

99

Black, Red

Geometric

Buff

Buff

Fine

-

x

NonCarbonate

Fine

Open

10.c, 11.c or
12.c

2

0.7

13

-

Spanish
Lookout

Vinaceous
Tawny

Chunhuitz

Benque Viejo
Polychrome :
Variety
Unspecified

188

TCU10-1-259

001

TCU

c-s.08

1

-

1

Mixed Materials

14.a

-

-

15.a

-

Slipped and
Painted

Hard

Orange

99

Black, Red

Geometric

Buff

Buff

Fine

-

x

NonCarbonate

Fine

Open

10.c, 11.c or
12.c

3

0.6

26

-

Spanish
Lookout

Vinaceous
Tawny

Chunhuitz

Benque Viejo
Polychrome :
Variety
Unspecified

194

TCU10-1-263

001

TCU

c-s.08

1

-

1

Mixed Materials

-

-

-

-

Alternating raised and
depressed horizontal bands
on exterior.

Slipped

Hard

Black

99

-

-

Orange

Orange

Fine

X

-

-

Fine

-

-

3

0.4

18

DOES NOT mend with, but
same vessel as TCU10-1-263004.

Spanish
Lookout

Peten Gloss

Achote

Cubeta Incised
ca. AD 680 : Variety
AD 880
Unspecified

-

-

Gifford 1976:248

194

TCU10-1-263

002

TCU

c-s.08

1

-

1

Mixed Materials

-

-

-

-

Horizontal and vertical
excised pattern; “panel” style.

Slipped

Hard

Red, Black

99

-

-

Orange

Orange

Fine

X

-

-

Fine

Open

11.b or 12.b

2

0.4

8

-

Hermitage

Peten Gloss

Pucte

Chorro Fluted : ca. AD 280 –
Chorro Variety
AD 590

-

-

Gifford 1976:170

ca. AD 600 AD 890

-

Gifford 1976:269; LeCount et
al. 2002:47

-

-

Gifford 1976:248

Benque Viejo
Polychrome :
Variety
Unspecified

194

TCU10-1-263

003

TCU

c-s.08

1

-

1

Mixed Materials

14.a

-

-

15.a

-

Slipped and
Painted

Hard

Orange

99

Black, Red

Geometric

Buff

Buff

Fine

-

x

NonCarbonate

Fine

Open

10.c, 11.c or
12.c

2

0.7

6

-

Spanish
Lookout

Vinaceous
Tawny

Chunhuitz

194

TCU10-1-263

004

TCU

c-s.08

1

-

1

Mixed Materials

-

-

-

-

Alternating raised and
depressed horizontal bands
on exterior.

Slipped

Hard

Black

99

-

-

Orange

Orange

Fine

X

-

-

Fine

-

-

1

0.4

1

DOES NOT mend with, but
same vessel as TCU10-1-263001.

Spanish
Lookout

Peten Gloss

Achote

175

TCU10-1-264

001

TCU

c-s.08

1

-

1

Mixed Materials

-

-

-

-

-

-

-

-

-

Buff

Buff

Medium/Fine

X

-

sand

Medium

-

-

4

0.7

45

-

Hermitage

Uaxactun
Unslipped

Socotz

Socotz
Striated :
Variety
Unspecified
(White-

ca. AD 280 –
AD 590

-

-

Gifford 1976:189

195

TCU10-1-265

001

TCU

c-s.08

1

-

1

Mixed Materials

14.a

33

8

15.c

Soft

Red

80

-

-

PinkishOrange

PinkishOrange

Fine

X

-

sand

Fine

Open

11.d

4

0.7

80

-

-

-

-

Unidentified
Calcite

-

-

-

-

-

-

-

Unidentified
Calcite

-

-

-

-

Tiger Run

Peten Gloss

Tasital

Gloria
Impressed :
Variety
Unspecified

ca. AD 590 –
AD 680

-

-

Gifford 1976:200

195

TCU10-1-265

002

TCU

c-s.08

1

-

1

Mixed Materials

14.c

37

9

15.c

165

TCU10-1-266

001

TCU

c-s.08

1

-

1

Mixed Material

-

-

-

-

Irregularly spaced
punctations in organic
pattern on exterior of vessel.
Thickened at rim with sharp
definition on exterior.
Slipped
Horizontal band of thumbimpressed appliqued ovoids
(pushed
to the
left)ofwith
deep
Horizontal
band
thumbimpressed appliqued ovoids Slipped above
applique
(pushed to the right) with
band.
deep impressions on each
ovoid.

Two horizontal bands of
thumb impressed-appliqued
ovoids (toward the right;
vessel upright). Sharp excised
line on vessel interior
opposite appliqued bands.

Slipped
Interior

Hard

BrownishOrange

90

-

-

ReddishOrange

PinkishOrange

Medium/Fine

X

-

sand and
magnetic
nodules

Medium

Restricted

11.f

7

0.8

353

CBAS Type Collection;
strongly incurved 'tecomate'
shape typical of proto Classic
or earlier; similar weight and
paste to TCU10-1-035-004,

Hard

Dark Red

99

-

-

Light brown

Reddishbrown

Fine

X

-

sand

fine

open

9 or 10

2

0.5

10

-

506

ca. AD 680 –
AD 880

Cubeta Incised
ca. AD 680 : Variety
AD 880
Unspecified


<table>
<thead>
<tr>
<th>NO.</th>
<th>Bag</th>
<th>CAT. NO.</th>
<th>Art. No.</th>
<th>Site Str.</th>
<th>E.U.</th>
<th>LVL</th>
<th>Lot</th>
<th>Context</th>
<th>Reference(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>165</td>
<td>TCU10-1-266</td>
<td>023</td>
<td>TCU c-s.08</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>Mixed Material</td>
<td>Very fine open</td>
<td>Slipped Tiger Run Peten Gloss Tasital</td>
</tr>
<tr>
<td>165</td>
<td>TCU10-1-266</td>
<td>021</td>
<td>TCU c-s.08</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>Mixed Material</td>
<td>Very fine open</td>
<td>Slipped Tiger Run Peten Gloss Tasital</td>
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<tr>
<td>165</td>
<td>TCU10-1-266</td>
<td>020</td>
<td>TCU c-s.08</td>
<td>1</td>
<td>-</td>
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<td>Very fine open</td>
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<tr>
<td>165</td>
<td>TCU10-1-266</td>
<td>018</td>
<td>TCU c-s.08</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>Mixed Material</td>
<td>Very fine open</td>
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<td>165</td>
<td>TCU10-1-266</td>
<td>011</td>
<td>TCU c-s.08</td>
<td>1</td>
<td>-</td>
<td>1</td>
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**Notes:**
- **Diameter (cm):** The diameter of the vessel is given in centimeters.
- **Impressions on parallel raised bands:** This indicates that the vessel has impressions running parallel to each other, likely made by a tool.
- **Impressed-appliqued ovoids:** These are ovoid shapes that appear to be impressed or applied onto the vessel's surface.
- **Shoulder:** This refers to the upper part of the vessel where the neck meets the body.
- **Definition at medial break:** This describes the clarity or prominence of the break line in the vessel's structure.
- **Two parallel incised lines:** These are lines that are drawn parallel to each other, possibly for decorative purposes.
- **Horizontal band of thumb impressions:** These are impressions made by the thumb, typically horizontal in nature.
- **Definition on interior at horizontal band:** This indicates the significance of the band on the interior of the vessel.
- **Horizontal band of short definition:** This refers to a horizontal band where the definition is shorter.
- **Oblique striations:** These are lines that are angled, often used for decorative or functional purposes.
- **Medial break on interior:** This is a break line that runs along the center of the vessel's interior.
- **Raised band or flange on shoulder:** This is a raised area around the shoulder part of the vessel.
- **Break:** This indicates a fracture or split in the vessel.

**References:**
- **Buck 2007:213-214:** This refers to a publication by Buck from 2007, pages 213-214.
- **LeCount et al. 2002:47:** This refers to a publication by LeCount et al. in 2002, page 47.
- **Gifford 1976:193, 235, 240:** This refers to a publication by Gifford from 1976, pages 193, 235, 240.
- **Gifford 1976:227, 230, 257:** This refers to a publication by Gifford from 1976, pages 227, 230, 257.
- **Gifford 1976:230, 257:** This refers to a publication by Gifford from 1976, pages 230, 257.
- **Gifford 1976:257:** This refers to a publication by Gifford from 1976, page 257.
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**DATE REFERENCES**

- Gifford 1976:189
- Gifford 1976:200
- Gifford 1976:214
- Gifford 1976:215
- Gifford 1976:269; LeCount et al. 2002:47
- Harrison-Buck 2007:213-214
- Sabloff 1975:213

**SLIP & PAINT**

- Painted
- Unslipped
- Striated
- Incised
- Appliqued

**DECORATION**

- Vertical impressions (toward the right, vessel upright) on exterior. Sharp definition at base. Oblique striations below band. Horizontal band of thumb impressions medial - 3
- Two parallel horizontal bands (direction uncertain), high on shoulder. Interior stripes on exterior. Sharp definition at medial break on interior, high on shoulder (vessel upright). Oblique striations below band. Horizontal band of thumb impressions medial - 3
- Impressed-appliqued ovoids (direction uncertain). Flat impressed-appliqued ovoids (direction uncertain). Impressed-appliqued ovoids exterior. Sharp definition at high on shoulder (vessel upright) on exterior. Impressed-appliqued ovoids exterior. Sharp definition at high on shoulder (vessel upright) on exterior. Oblique striations below band. Horizontal band of thumb impressions medial - 3
- Impressed-appliqued ovoids exterior. Sharp definition at high on shoulder (vessel upright) on exterior. Impressed-appliqued ovoids exterior. Sharp definition at high on shoulder (vessel upright) on exterior. Oblique striations below band. Horizontal band of thumb impressions medial - 3

**DIMENSION**

- 1 - 2 - 3

**MATERIAL**

- Mixed Materials
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- Mixed Material

**COMMENTS**

- Carbonate sand and nodules. Medium - 3
- Carbonate sand and nodules. Medium - 3
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- Carbonate sand and nodules. Medium - 3
- Carbonate sand and nodules. Medium - 3
- Carbonate sand and nodules. Medium - 3
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- Carbonate sand and nodules. Medium - 3
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**REFERENCE**

- Harrison-Buck 2007:213-214
- Sabloff 1975:213
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**DATE REFERENCES**

Gifford 1976:269; LeCount et al. 2002:47

**DIMENSIONS**

(1961)

**ARTIFACTS**

- Unslipped:
  - Polychrome:
    - Black-on-Orange:
      - Roaring Creek Variety
      - Red:
        - Dolphin Head Variety
      - Unspecified
    - Carbonate:
      - Medium.Restricted
      - Medium
      - Tawny
      - Maloney Black
    - Dental:
      - Dental:
      - Unspecified
    - Impressed:
      - Appliqued:
        - Unspecified
      - Unslipped:
        - Appliqued:
          - Unspecified
        - Impressed:
          - Unspecified
    - Painted:
      - Interior:
      - Unspecified
    - Glazed:
      - Unspecified
    - Medium/Fine Restricted

**WEIGHT (g)**

(LeCount et al. 2002:47)

**REFERENCES**

Gifford 1976:189

**CERAMIC CHARACTERISTICS**

- Slip:
  - Burnished: "Burnished" is marked in blue.
  - Slipped: "Slipped" is marked in green.
- Paint: "Painted" is marked in green.
- Paste: "Pasted" is marked in green.
- Tempering: "Tempered" is marked in green.
- Vessel Form: "Vessel" is marked in green.
- Size: "Size" is marked in green.
- Complex Ware Group: "Group" is marked in green.
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**References:**
- Maloney 2002:47
- Buck 2007:213-214
- Sabloff 1975
- Lookout (early, ca. AD 280 – 590) 
- Spanish Facet Variety 
- Mount Benque Viejo Variety 
- Impressed : 
- Painted Polychrome : 
- Red : Old Jim
- Red : Dolphin Head Variety
- Carbonate
- Calcite
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**DATE REFERENCES**

- **Gifford 1976**: Various dates referenced throughout the text
- **Buck 2007**: AD 590 – 680
- **Harrison-al. 2002**: AD 590 – 680
- **Adams 2002**: AD 750/780 – AD 900

**Notes**

- Various slip and paint types are mentioned.
- Different vessel forms, such as Gloss and Polychrome, are discussed.
- Decorative styles include appliqued, impressed, and incised designs.
- Tempers include ash, calcite, and sand.

**References**

- Gifford 1976:217
- Adams 2002:148-149
- Harrison-al. 2002:47
- BMAS 1961:111
- BMAS 1962:107-109
- BMAS 1963:25-28
- BMAS 1964:148-149
- BMAS 1965:23-25
- BMAS 1966:23-25
- BMAS 1967:23-25
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**Impressions** (on vessel body): Light brown sand and nodules (heavily worn). Unidentified:

- Diameter: 15.0 (cm)
- Thickness:

**Raised bands**: Light brown sand and nodules (heavily worn). Unidentified:

- Diameter: 15.0 (cm)
- Thickness:

**Slipped**:

- Diameter: 15.0 (cm)
- Thickness:

**Unslipped**:

- Diameter: 15.0 (cm)
- Thickness:

**Impressed**:

- Diameter: 15.0 (cm)
- Thickness:

**Inscribed**:

- Diameter: 15.0 (cm)
- Thickness:
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**DESCRIPTION**

- **Type**: A classification of the type of artifact.
- **Complex Ware Group**: A grouping of similar artifacts.
- **Site**: The location where the artifact was found.
- **Stratigraphic Unit**: The specific layer or context within a site.
- **Level**: The height or position within a stratigraphic context.
- **Lot**: A unique identifier for an artifact.
- **Context**: The specific context in which the artifact was recovered.
- **Rim**: The edge of the vessel.
- **Lip**: The lip of the vessel.
- **Decoration**: The decorative elements on the vessel.
- **Slip**: The slip material applied to the vessel.
- **Paint**: The painted material on the vessel.
- **Temper**: The material used to temper the clay.
- **Vessel Form**: The general shape of the vessel.
- **Size**: The size of the vessel.
- **Comments**: Additional notes or observations about the artifact.

**Additional Information**

- **Bottom Diameter**: The diameter of the vessel at its base.
- **Height**: The height of the vessel from its base to its rim.
- **Weight**: The weight of the vessel.
- **Thickness**: The thickness of the vessel.
- **Dimension**: The dimensions of the vessel.
- **Dimension (max. approx. 7 cm)**: The maximum dimension of the vessel, approximated as 7 cm.
- **Definition on Interior**: The definition of the interior of the vessel.
- **Definition on Exterior**: The definition of the exterior of the vessel.
- **Thumb Impressed-Appliqued**: Thumb impressed-appliqued on the vessel body below the band.
- **Oblique Striations**: Oblique striations on the shoulder.
- **Horizontal Band**: Horizontal band of thumb impressed-appliqued on the vessel body below the band.
- **Vessel Upright**: Vessel upright high on the shoulder.
- **Sand Imprint**: Sand imprint on the vessel body below the band.
- **Crisscrossing Oblique Striations**: Crisscrossing oblique striations on the exterior of the vessel.
- **Horizontal Band of Spike**: Horizontal band of spike on the exterior of the vessel.
- **Vertical Band**: Vertical band on the exterior of the vessel.
- **Carbonate Nodule**: Carbonate nodule on the exterior of the vessel.
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<th>CAT. NO.</th>
<th>ART. NO.</th>
<th>SITE</th>
<th>STR.</th>
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| 259     | TCU10-1-357 | 010     | TCU c-s.08 | 1     | 1    | Mixed Materials | - - | Slipped Exterior | Soft Dark Red 50 | Light grey Buff Very Fine | X | very fine | - | 2 | 0.6 | 5%

---

**DATE REFERENCES**

- Chunhuitz
- Garbutt Creek
- Uaxactun
- Socotz
- Shepard

---

**TYPE**

- Uaxactun
- Gifford 1976:269; LeCount et al.

---

**Diameter (cm)**

- Horizontal striations below

---

**Thickness (al.)**

- Pinkish-orange
- Tan Buff Coarse X - sand fine restricted 11.i or 13.c
- Tawny
- Carbonate
- Ht. $68 -$

---

**Color**

- Orange
- Slip: Specular red slip. Fresh break 010/3. Old break mends with TCU10-1-357-012 Lookout Spanish Variety Unslipped:
- Specular red slip. Old break mends with TCU10-1-357-012 Lookout Spanish Variety Unspecifie
| Site | Cat No. | Art No. | Str. | E.U. | RIM LIP DECORATION SLIP PAINT PASTE TEMPER VESSEL FORM SIZE COMMENTS COMPLEX WARE GROUP |
|------|--------|---------|------|------|----------------------------------|-----------------|---------------------------------|-----------------|-----------------|-----------------|-----------------|---------------------|------------------|---------------------|------------------|------------------|
| Uaxactun | 264 TCU10-1-363 018 TCU c-s.08 1 - 1 | Mixed Materials | 14.a | 25 | 4 | - | - | - | - | - | Very Fine | Very Fine | Very Fine | Very Fine | Very Fine | Black Tan Coarse X | Black Tan Coarse X | Black Tan Coarse X | Black Tan Coarse X |
| Uaxactun | 264 TCU10-1-363 014 TCU c-s.08 1 - 1 | Mixed Materials | 14.a | 25 | 4 | - | - | - | - | - | Very Fine | Very Fine | Very Fine | Very Fine | Very Fine | Black Tan Coarse X | Black Tan Coarse X | Black Tan Coarse X | Black Tan Coarse X |
| Uaxactun | 264 TCU10-1-363 013 TCU c-s.08 1 - 1 | Mixed Materials | 14.a | 25 | 4 | - | - | - | - | - | Very Fine | Very Fine | Very Fine | Very Fine | Very Fine | Black Tan Coarse X | Black Tan Coarse X | Black Tan Coarse X | Black Tan Coarse X |
| Uaxactun | 264 TCU10-1-363 012 TCU c-s.08 1 - 1 | Mixed Materials | 14.a | 25 | 4 | - | - | - | - | - | Very Fine | Very Fine | Very Fine | Very Fine | Very Fine | Black Tan Coarse X | Black Tan Coarse X | Black Tan Coarse X | Black Tan Coarse X |
| Uaxactun | 264 TCU10-1-363 009 TCU c-s.08 1 - 1 | Mixed Materials | 14.a | 25 | 4 | - | - | - | - | - | Very Fine | Very Fine | Very Fine | Very Fine | Very Fine | Black Tan Coarse X | Black Tan Coarse X | Black Tan Coarse X | Black Tan Coarse X |
| Uaxactun | 264 TCU10-1-363 007 TCU c-s.08 1 - 1 | Mixed Materials | 14.a | 25 | 4 | - | - | - | - | - | Very Fine | Very Fine | Very Fine | Very Fine | Very Fine | Black Tan Coarse X | Black Tan Coarse X | Black Tan Coarse X | Black Tan Coarse X |
| Uaxactun | 264 TCU10-1-363 006 TCU c-s.08 1 - 1 | Mixed Materials | 14.a | 25 | 4 | - | - | - | - | - | Very Fine | Very Fine | Very Fine | Very Fine | Very Fine | Black Tan Coarse X | Black Tan Coarse X | Black Tan Coarse X | Black Tan Coarse X |
| Uaxactun | 264 TCU10-1-363 005 TCU c-s.08 1 - 1 | Mixed Materials | 14.a | 25 | 4 | - | - | - | - | - | Very Fine | Very Fine | Very Fine | Very Fine | Very Fine | Black Tan Coarse X | Black Tan Coarse X | Black Tan Coarse X | Black Tan Coarse X |
| Uaxactun | 278 TCU10-1-362 001 TCU c-s.08 1 - 1 | Mixed Materials | 14.a | 25 | 4 | - | - | - | - | - | Very Fine | Very Fine | Very Fine | Very Fine | Very Fine | Black Tan Coarse X | Black Tan Coarse X | Black Tan Coarse X | Black Tan Coarse X |
| Uaxactun | 297 TCU10-1-359 001 TCU c-s.08 1 - 1 | Mixed Materials | 14.a | 25 | 4 | - | - | - | - | - | Very Fine | Very Fine | Very Fine | Very Fine | Very Fine | Black Tan Coarse X | Black Tan Coarse X | Black Tan Coarse X | Black Tan Coarse X |
| Uaxactun | 259 TCU10-1-357 016 TCU c-s.08 1 - 1 | Mixed Materials | 14.a | 25 | 4 | - | - | - | - | - | Very Fine | Very Fine | Very Fine | Very Fine | Very Fine | Black Tan Coarse X | Black Tan Coarse X | Black Tan Coarse X | Black Tan Coarse X |

**Comments:**
- **Site:** Geographical location of the artifact.
- **Cat No.:** Catalog number.
- **Art No.:** Art number.
- **Str.:** String number.
- **E.U.:** Estimated unit.
- **RIM LIP DECORATION SLIP PAINT PASTE TEMPER VESSEL FORM SIZE COMMENTS COMPLEX WARE GROUP:**
  - **RIM:** Rim type.
  - **LIP:** Lip type.
  - **DECORATION:** Decoration type.
  - **SLIP:** Slip type.
  - **PAINT:** Paint type.
  - **PASTE:** Paste type.
  - **TEMPER:** Temper type.
  - **VESSEL FORM:** Vessel form.
  - **SIZE:** Size category.
  - **COMMENTS:** Additional comments.
  - **COMPLEX WARE GROUP:** Complex ware group.

**Additional Notes:**
- **BAG NO.:** Bag number.
- **CAT. NO.:** Catalog number.
- **ART. NO.:** Art number.
- **SITE:** Site name.
- **STR.:** String number.
- **E.U.:** Estimated unit.
- **LVL:** Level.
- **LOT:** Lot.
- **CONTEXT:** Context.
- **REFERENCE:** Reference number.

**References:**
- LeCount et al. (1961).

**Dates:**
- **AD 590 – AD 680**
- **AD 590 – AD 680**
- **AD 280 – AD 590**
- **AD 280 – AD 590**
- **AD 890**
- **AD 880 – AD 890**
- **AD 590 – AD 680**
- **AD 680 – AD 590**
- **AD 680 – AD 590**
- **AD 680 – AD 590**
- **AD 600 – AD 750**
- **AD 750/780 – AD 900**
- **AD 750/780 – AD 900**
- **AD 900 – AD 900**
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- **AD 900 – AD 900**
- **AD 900 – AD 900**
- **AD 900 – AD 900**
- **AD 900 – AD 900**
- **AD 900 – AD 900**
- **AD 900 – AD 900**

**Color and Material:**
- **Black Tan Coarse X:** Black, tan, coarse.
- **Tan Black Coarse X:** Tan, black, coarse.
- **Tan Dark brown Coarse X:** Tan, dark brown, coarse.
- **Grey Buff Coarse X:** Grey, buff, coarse.
- **Carbonate magnetic nodules:** Carbonate, magnetic nodules.
- **Carbonate magnetic:** Carbonate, magnetic.
- **Volcanic Ash:** Volcanic ash.
- **Unslipped:** Unslipped.
- **Impressed:** Impressed.
- **Striated:** Striated.
- **Unspecified Variety:** Unspecified variety.
- **Unslipped:** Unslipped.
- **Polychrome:** Polychrome.
- **Weeks:** Weeks.
- **Saturday Creek Variety:** Saturday Creek variety.
- **Lookout:** Lookout.
- **Cayo Variety:** Cayo variety.
- **Gloria Variety:** Gloria variety.
- **Benque Viejo Variety:** Benque Viejo variety.
- **Unslipped:** Unslipped.
- **Impressed:** Impressed.
- **Striated:** Striated.
- **Unspecified Variety:** Unspecified variety.
- **Unslipped:** Unslipped.
- **Polychrome:** Polychrome.
- **Saturday Creek Variety:** Saturday Creek variety.
- **Lookout:** Lookout.
- **Cayo Variety:** Cayo variety.
- **Gloria Variety:** Gloria variety.
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**References:**

Gifford 1976:200

Sabloff (1961)

LeCount et al. 2002:47

Harrison-Buck 2007:213-214


Harrison-Buck et al. 2002:47

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**Table Notes**:
- **BAG NO.**: Bag number
- **CAT NO.**: Catalog number
- **ART NO.**: Art number
- **SITE**: Site name
- **STR. E.U.**: Structure and unit number
- **LVL**: Level
- **LOT**: Lot
- **CONTEXT**: Context
- **COMPLEX**: Complex
- **WARE GROUP**: Ware group

**Table Text**:

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- **TYPE-** Unidentified
- **Non-** Gifford 1976:269; LeCount et
- **Belize Red :** Fine - - 2 0.7 5 Mends with TCU10-1-403
- **Soft Red** 10 - - Grey-buff Grey-buff Very Fine X X - Very fine open 9, 10 or 11 2 0.5 3 -
- **Chunhuitz** Slipped and
- **Hard Orange** 90 Black Geometric Buff Buff Fine - X
- **Shepard** Soft Red 10 - - Grey-buff Grey-buff Very Fine X X - Very fine open 9, 10 or 11 2 0.5 3 -

- **ca. AD 780 -** Hard Orange 99 Black, Red
- **Spanish**

- **Hard Orange** 99 Black, Red
- **Medium/Coars** Randomly-spaced applique 3 0.4 14 -
- **Hard Orange** 99 Black, Red
- **fine open** 10.c or 11.c 2 0.7 8 -
- **Slipped and** Spanish

- **Hard Orange** 99 Black, Red
- **10.c, 11.c** or

- **Spanish**

- **Hard Orange** 99 Black, Red
- **10.c, 11.c** or

- **Spanish**

- **Spanish**

- **Slipped** Spanish

- **Spanish**

- **Slipped and** Spanish

- **Spanish**

- **Non-** Gifford 1976:269; LeCount et
- **Unidentified** Slipped and
- **Non-** Gifford 1976:269; LeCount et
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**Diameter (cm):**
- Approximately 9cm below rim.
- Light horizontal striations on exterior of vessel.
- Sharp definition of rim, on vessel exterior.
- Sharp definition of rim, on vessel exterior.
- Sharp definition of rim, on vessel exterior.

**Weight (g):**
- Gifford 1976:200
- Gifford 1976:199
- Gifford 1976:79

**Comments:**
- "buttons" and incisions/linear markings on exterior of vessel.
- Light horizontal striations on exterior at medial break with impressions on band.
- Sharp definition of rim, on vessel exterior. Raised band approximately 3.5cm below body.
- Sharp definition of rim, on vessel exterior. Raised band approximately 3.5cm below body.
- Sharp definition of rim, on vessel exterior. Raised band approximately 3.5cm below body.

**Vessel Form:**

**Complex Ware Group:**
- Gifford 1976:269; LeCount et al. 2002:47
- Gifford 1976:269; LeCount et al. 2002:47
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- TCU10-1-424-016: Orange-
- TCU10-1-424-014: Orange-
- TCU10-1-424-022: Orange-
- TCU10-1-424-003: Orange-

**SLIP**

- TCU10-1-426-004: Slip Red-
- TCU10-1-426-001: Slip Red-
- TCU10-1-424-023: Slip Red-
- TCU10-1-424-020: Slip Red-
- TCU10-1-424-019: Slip Red-
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**Painted**

- TCU10-1-426-004: Painted-
- TCU10-1-426-001: Painted-
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**Paste colour**

- TCU10-1-426-004: Paste colour is a little
- TCU10-1-426-001: Paste colour is a little
- TCU10-1-424-023: Paste colour is a little
- TCU10-1-424-020: Paste colour is a little
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- TCU10-1-424-014: Paste colour is a little
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- TCU10-1-424-003: Paste colour is a little

**Dimensions**

- TCU10-1-426-004: Exterior, approximately 2.5 cm
- TCU10-1-426-001: Exterior, approximately 2.5 cm
- TCU10-1-424-023: Exterior, approximately 2.5 cm
- TCU10-1-424-020: Exterior, approximately 2.5 cm
- TCU10-1-424-019: Exterior, approximately 2.5 cm
- TCU10-1-424-016: Exterior, approximately 2.5 cm
- TCU10-1-424-014: Exterior, approximately 2.5 cm
- TCU10-1-424-022: Exterior, approximately 2.5 cm
- TCU10-1-424-003: Exterior, approximately 2.5 cm

**Comments**

- TCU10-1-426-004: Sharp excised thumb impressed-appliqued ovoids
- TCU10-1-426-001: Sharp excised thumb impressed-appliqued ovoids
- TCU10-1-424-023: Sharp excised thumb impressed-appliqued ovoids
- TCU10-1-424-020: Sharp excised thumb impressed-appliqued ovoids
- TCU10-1-424-019: Sharp excised thumb impressed-appliqued ovoids
- TCU10-1-424-016: Sharp excised thumb impressed-appliqued ovoids
- TCU10-1-424-014: Sharp excised thumb impressed-appliqued ovoids
- TCU10-1-424-022: Sharp excised thumb impressed-appliqued ovoids
- TCU10-1-424-003: Sharp excised thumb impressed-appliqued ovoids

**References**

- Harrison-al. 2002:47
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**Notes:**
- All items are from the Tiger Run site, AD 590 - 890.
- Dates are approximate, with the exception of specific dates provided.
- Colors and materials are based on Gifford 1976, with additional notes from LeCount et al. 2002.

**Sites:**
- TCU10-1-431: Chunhuitz
- TCU10-1-428: Mountain Pine
- TCU10-1-427: Vaca Falls

**Magnetic Sand and Nodules:**
- Gloria: AD 590 – 680
- Garbutt Creek: AD 680 – 890
- Mountain Pine: AD 590 – 680
- Tawny: AD 880

**Types of Thrown:**
- Vase: AD 590 – 680
- Jar: AD 590 – 680
- Bowl: AD 590 – 680

**Types of Lime:**
- Hard: AD 590 – 680
- Medium: AD 590 – 680
- Soft: AD 590 – 680

**Types of Temper:**
- Plastic: AD 590 – 680
- Surface: AD 590 – 680
- Hard: AD 590 – 680
- Soft: AD 590 – 680
- Munsell: AD 590 – 680

**Types of Slip:**
- Sotero Red: AD 590 – 680
- Hard Red: AD 590 – 680
- Medium Red: AD 590 – 680
- Light Brown: AD 590 – 680

**Types of Paint:**
- Medium: AD 590 – 680
- Medium Brown: AD 590 – 680
- Medium Orange: AD 590 – 680
- Medium Red: AD 590 – 680

**Types of Paste:**
- Medium: AD 590 – 680
- Medium Brown: AD 590 – 680
- Medium Orange: AD 590 – 680
- Medium Red: AD 590 – 680

**Types of Decorations:**
- Slipped: AD 590 – 680
- Medium: AD 590 – 680
- Medium Brown: AD 590 – 680
- Medium Orange: AD 590 – 680
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**Types of Vessels:**
- Medium: AD 590 – 680
- Medium Brown: AD 590 – 680
- Medium Orange: AD 590 – 680
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**DATE REFERENCES**

- Gifford 1976:269; LeCount et al. 2002:47
- Vaca Falls -
- Reddish-buff Buff Buff Fine - x
- Slipped and raised band or flange on exterior of vessel (medium restricted)
- Painted impressions on band made by approximately 3 cm below the horizontal band of thumbprint (toward the right; vessel well-formed ring base).
- Painted impressions on band made by horizontal band of thumbprint (heavily worn) high on shoulder.
- Painted impressions on band made by horizontal band of thumbprint (toward the right; vessel well-formed ring base).
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**Additional Notes:**

- Diameter (cm)
- Ovoid. Mediabreak lower on shoulder.
- Marks evident on exterior; possible hole drilled in body remaining (1961)
- Possible hole drilled in body remaining (1961)
- Interior slipped hard orange 80 - - pinkish-buff fine x sand fine open 9.d or 10.e 2 0.5 8 -
- Tiger Run: AD 680 – 880
- Possible hole drilled in body remaining (1961)
- Interior slipped hard orange 80 - - pinkish-buff fine x sand fine open 9.d or 10.e 2 0.5 8 -
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**In larger sherds, vessel shape seems to be more variable much greater quantity than reported by either Gifford (1976) or Thompson (1940).**

*Saturday Creek Variety (1976) or Thompson (1940).*

*Carbonate buildup toward carbonation of sherds, most brown.Vinaceous Carbonate.

*Saturday Creek Variety (1976) or Thompson (1940).*
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**Contextual Notes:**

- **Slipped:** Slip is finer than expected
- **Painted:** Painted varieties are common, especially in later periods.
- **Temper:** Volcanic ash is a common tempering material, providing a uniform red-brown color.
- **Vessel Form:** Vessels are typically open, with a few closed forms.
- **Size:** Sizes vary widely, with most falling within the range of 1-3 liters.
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- **SITE**: Locations include Uaxactun, Chunhuitz, and others.
- **VOLUME**: Details about the project and volume number.
- **NUMBER**: Unique identification number for each artifact.
- **CAT. NO.**: Catalog number assigned to the artifact.
- **TYPE**: Type of artifact, such as vessels or figurines.
- **FABRIC**: Fabric composition details.
- **SURFACE**: Surface condition of the artifact.
- **FORM**: Form of the artifact.
- **DECOR**: Decoration applied to the artifact.
- **SLIP**: Slip used in the manufacturing process.
- **PAINT**: Paint used in the manufacturing process.
- **PASTE**: Paste used in the manufacturing process.
- **TEMPER**: Temper used in the manufacturing process.
- **VESSEL**: Vessel form.
- **SIZE**: Size of the artifact.
- **COMMENTS**: Additional comments or notes about the artifact.

The table above includes various columns detailing the characteristics and categorization of artifacts from different projects and sites. For instance, Project TCU10-1-658 includes artifacts from Site TCU, with one catalog number assigned (002). The entries for each column provide specific details such as fabric type, form, and slip used, among others. The table is a comprehensive record of findings from archaeological excavations, offering insights into the material culture and methods used in the study of ancient artifacts.
| TCU10-1-659 | 038 | TCU c-s.08 | 1 - 1 Mixed Materials | 14.c | - - | Pinkish-buff | Pinkish-buff | Very Fine | X | - | very fine | - | 1 | 0.7 | 2 |
| TCU10-1-659 | 037 | TCU c-s.08 | 1 - 1 Mixed Materials | 14.a | - - | - | - | - | - | - | - | - | - | - | - |
| TCU10-1-659 | 036 | TCU c-s.08 | 1 - 1 Mixed Materials | 14.a | - - | - | - | - | - | - | - | - | - | - | - |
| TCU10-1-659 | 031 | TCU c-s.08 | 1 - 1 Mixed Materials | - | - | - | - | - | - | - | - | - | - | - | - |
| TCU10-1-659 | 024 | TCU c-s.08 | 1 - 1 Mixed Materials | - | - | - | - | - | - | - | - | - | - | - | - |
| TCU10-1-659 | 023 | TCU c-s.08 | 1 - 1 Mixed Materials | - | - | - | - | - | - | - | - | - | - | - | - |
| TCU10-1-659 | 012 | TCU c-s.08 | 1 - 1 Mixed Materials | 14.b | - - | 15.a | - | - | - | - | - | - | - | - | - |
| TCU10-1-659 | 006 | TCU c-s.08 | 1 - 1 Mixed Materials | - | - | - | - | - | - | - | - | - | - | - | - |
| TCU10-1-659 | 003 | TCU c-s.08 | 1 - 1 Mixed Materials | 14.d | 13 | 12 | 15.c | - | - | - | - | - | - | - | - |
| TCU10-1-659 | 002 | TCU c-s.08 | 1 - 1 Mixed Material | 14.a | 40 | 8 | 15.a | - | - | - | - | - | - | - | - |
| TCU10-1-659 | 001 | TCU c-s.08 | 1 - 1 Mixed Material | 14.c | 35 | 9 | 15.a | - | - | - | - | - | - | - | - |
| TCU10-1-659 | 038 | TCU c-s.08 | 1 - 1 Mixed Materials | - | - | - | - | - | - | - | - | - | - | - | - |
| TCU10-1-659-038 | 038 | TCU c-s.08 | 1 - 1 Mixed Materials | 14.c | - - | 15.a | - | - | - | - | - | - | - | - | - |
| TCU10-1-659-025 | 025 | TCU c-s.08 | 1 - 1 Mixed Materials | - | - | - | - | - | - | - | - | - | - | - | - |
| TCU10-1-659-012 | 012 | TCU c-s.08 | 1 - 1 Mixed Materials | 14.b | - - | 15.a | - | - | - | - | - | - | - | - | - |
| TCU10-1-659-006 | 006 | TCU c-s.08 | 1 - 1 Mixed Materials | - | - | - | - | - | - | - | - | - | - | - | - |
| TCU10-1-659-003 | 003 | TCU c-s.08 | 1 - 1 Mixed Materials | 14.d | 13 | 12 | 15.c | - | - | - | - | - | - | - | - |
| TCU10-1-659-002 | 002 | TCU c-s.08 | 1 - 1 Mixed Material | 14.a | 40 | 8 | 15.a | - | - | - | - | - | - | - | - |
| TCU10-1-659-001 | 001 | TCU c-s.08 | 1 - 1 Mixed Material | 14.c | 35 | 9 | 15.a | - | - | - | - | - | - | - | - |

**Notes:**
- **Unslipped:** Dolph Head Cayo Belize Red (Pip/diff); Belize Variety: Belize (sign).
- **Paste:** Hard Red: Belize Orange-
- **VARIETY:** Hard Red: Belize Orange-
- **Paste:** More orange than expected, but otherwise.
- **Harrison-Buck ca. AD 590 – AD 750/780.
- **Buck:** ca. AD 590 – AD 750/780.
- **Buck 2007:** ca. AD 590 – AD 750/780.
- **Buck 2007:** ca. AD 590 – AD 750/780.
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**DATE REFERENCES**

- ca. AD 280 –
- ca. AD 280 –
- ca. AD 680 –
- ca. AD 880
- ca. AD 750/780 –

**RIM LIP DECORATION**

- Vertical and Terminal
- Vertical and Terminal
- Vertical and Terminal
- Vertical and Terminal
- Vertical and Terminal
- Vertical and Terminal
- Vertical and Terminal
- Vertical and Terminal
- Vertical and Terminal

**SLIP PAINT PASTE TEMPER**

- Hard Red-Orange 90 - - Red Red Fine X - sand Fine Restricted 11.f 3 0.3 23 - Hermitage Peten Gloss Pucte
- Unslipped Hard Brown 99 - - Dark Brown Black Medium/Fine X - sand Fine - - 3 0.5 21
- Painted Hard Red-Orange 90 - - Red Red Fine X - sand Fine Restricted 11.f 3 0.3 23 - Hermitage Peten Gloss Pucte
- Unslipped Hard Brown 99 - - Dark Brown Black Medium/Fine X - sand Fine - - 3 0.5 21
- Painted Hard Red-Orange 90 - - Red Red Fine X - sand Fine Restricted 11.f 3 0.3 23 - Hermitage Peten Gloss Pucte
- Unslipped Hard Brown 99 - - Dark Brown Black Medium/Fine X - sand Fine - - 3 0.5 21
- Painted Hard Red-Orange 90 - - Red Red Fine X - sand Fine Restricted 11.f 3 0.3 23 - Hermitage Peten Gloss Pucte
- Unslipped Hard Brown 99 - - Dark Brown Black Medium/Fine X - sand Fine - - 3 0.5 21

**COMMENTS**

- Horizontal band of irregularly approximately 3.5cm below vessel shoulder on exterior of vessel.
- Sharp definition on vessel exterior.
- Raised band or flange on exterior of vessel, (toward the right; vessel shoulder on exterior of vessel.
- Horizontal band of irregularly approximately 3.5cm below vessel shoulder on exterior of vessel.
- Sharp definition on vessel exterior.
- Raised band or flange on exterior of vessel.
- Raised band or flange on exterior of vessel, (toward the right; vessel shoulder on exterior of vessel. 
- Sharp definition on vessel exterior.
- Raised band or flange on exterior of vessel.
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**DATE REFERENCES**

- **Socotz**
  - Slipped
  - Gifford 1976:189
  - Tan Red-orange
d  ca. AD 280 -
  - Gifford 1976:255, 272
  - Non-
  - Gifford 1976:269; LeCount et
  - Hard Black 99 - Dark brown
  - Colours Pattern (core colour)
  - Fine -
  - Medium X - poss. quartz
  - Fine X - sand fine -
  - Slipped
  - Gifford 1976:212
  - New Town
  - Gifford 1976:193, 235, 240

**Modified Data**

- **Spanish Medium/Coars**
  - Slipped
  - Restricted 11.i 4 1.2 297
  - Non-
  - Shepard (coarse - fine) CaCO3 Ash Other (coarse - fine)
  - Slipped
  - Horizontal striations below
  - Unspecified
  - Augustine
  - Belize Red:
    - Three parallel, flattened,
  - Dolphin Head
  - Hard Red 99 - Tan Tan Fine X - - fine - - 2 0.4 16-
  - medium/fine restricted 10.d or 11.e 2 0.5 11-
  - Hard Orange 99 Black, Red Figural Buff Buff Fine X -
  - Medium X poss. quartz
  - Fine X - sand fine -
  - Slipped

- **Non-Belize Red:**
  - Socotz
  - Chunhuitz
  - Reddish-
  - Tzimin
  - quartz and
  - Shephard (coarse - fine) CaCO3 Ash Other (coarse - fine)
  - Slipped
  - Horizontal striations below
  - Unspecified
  - Augustine
  - Belize Red:
    - Three parallel, flattened,
  - Dolphin Head
  - Hard Red 99 - Tan Tan Fine X - - fine - - 2 0.4 16-
  - medium/fine restricted 10.d or 11.e 2 0.5 11-
  - Hard Orange 99 Black, Red Figural Buff Buff Fine X -
  - Medium X poss. quartz
  - Fine X - sand fine -
  - Slipped

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  - Slipped
  - Restricted 11.i 4 1.2 297
  - Non-
  - Shepard (coarse - fine) CaCO3 Ash Other (coarse - fine)
  - Slipped
  - Horizontal striations below
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  - Shepard (coarse - fine) CaCO3 Ash Other (coarse - fine)
  - Slipped
  - Horizontal striations below
  - Unspecified
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  - Belize Red:
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  - Hard Red 99 - Tan Tan Fine X - - fine - - 2 0.4 16-
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  - Non-
  - Shepard (coarse - fine) CaCO3 Ash Other (coarse - fine)
  - Slipped
  - Horizontal striations below
  - Unspecified
  - Augustine
  - Belize Red:
    - Three parallel, flattened,
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<th>Lip</th>
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**BAG NO.** TCU10-2-642
**CAT. NO.** TCU
**ART. NO.** c-s.08
**SITE** 1
**STR.** 2
**E.U.** Construction Fill
**LVL** -
**LOT** -
**CONTEXT** -
**COMMENTS** -
**RIM** -
**LIP** -
**DECORATION** -
**SLIP** -
**PAINT** -
**PASTE** -
**TEMPER** -
**VESSEL FORM** -
**SIZE** -
**COMMENTS** -
**COMMON VARIETY** -
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<td>Tiger Run</td>
<td>Uaxactun</td>
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<td>Jones Camp Variety ca. AD 590 – AD 680</td>
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<td>1</td>
<td>TCU10-3-624 003 TCU c-s.08 1 - 3 Test Pit to Sterile - - #VALUE!</td>
<td>Horizontal band of thumb impressed-appliqued ovoids (toward the right, vessel upright) high on shoulder.</td>
<td>Light grey Pinkish-buff Medium Fine</td>
<td>Sand and magnetic nodules medium-fine restricted</td>
<td>2</td>
<td>0.5</td>
<td>18</td>
<td>Old break mends with TCU10-3-624-001</td>
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<td>TCU10-3-625 001 TCU c-s.08 1 - 3 Test Pit to Sterile - - - - Strap handle - - - - - - Orange-buff Orange-buff Medium</td>
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<td>- - Gifford 1976:63,69</td>
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<td>TCU10-1-666 004 TCU c-s.08 1 - - - - - - - - Slipped and Painted Hard Orange 99 Black, Red Geometric Buff Buff Fine</td>
<td>Non-Carbonate Fine Open</td>
<td>10.c, 11.c or 12.c</td>
<td>2</td>
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<td>Spanish Lookout Vinaceous Tawny Chunhuitz Benque Viejo Polychrome : Variety Unspecified ca. AD 680 – AD 880</td>
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<td>Gifford 1976:269; LeCount et al. 2002:47</td>
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**Context Notes:**
- **Colours:**
  - Interior: Soft Brownish-Orange
  - Exterior: Orange
- **Pattern:**
  - Colour: Brownish-Orange
  - Other (coarse - fine): X
- **Decoration:**
  - Slip: Interior Soft
  - Other (coarse - fine): X

**Additional Notes:**
- **Shepard** (1961)
- **Sabloff** (1975)
- **Barton Ramie**
- **Fowler**

**Specifications:**
- **Thickness (cm):** 9
- **Weight (g):** 6
- **Dimension:** 14 cm
- **Grade:** Unspecified
- **Material:** Unidentifiable

**Materials:**
- **Calcite:** -
- **Other:** -
<p>| CAT. NO. | ART. NO. | SITE | STR. E.U. | LVL | LOT | CONTEXT | RIM LIP DECORATION SLIP PAINT PASTE TEMPER VESSEL FORM SIZE COMMENTS COMPLEX WARE GROUP |
|---------|----------|------|------------|-----|-----|---------|---------------------------------|-------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| TCU10-8-300 001 | TCU s.21 D 1 8 Surface - - - - | Clay Matrix 14.c 23 5 15.c | Unable to detect striations | - - - - - Tan Tan Medium/Fine X - sand medium/fine restricted | 11.i or 13.c 3 0.6 33 Finer paste than expected. Hermitage | Geometric brown magnetic sand and nodules (1961) | |
| TCU10-7-196 001 | TCU s.21 C 7 7 Clay Matrix 14.c 23 5 15.c | Unable to detect striations | - - - - - Dark brown Dark brown Fine X - | | | Geometric brown magnetic sand and nodules (1961) | |
| TCU10-2-051 005 | TCU s.21 A 5 2 Clay Matrix - - - - - | | | | | | Geometric brown magnetic sand and nodules (1961) | |
| TCU10-2-047 004 | TCU s.21 A 3 2 | | | | | | Geometric brown magnetic sand and nodules (1961) | |
| TCU10-1-002 004 | TCU s.21 - - - | | | | | | Geometric brown magnetic sand and nodules (1961) | |
| TCU10-2-012 004 | TCU s.21 - - - | | | | | | Geometric brown magnetic sand and nodules (1961) | |
| TCU10-9-292 001 | TCU s.21 D 2 9 Colluvium - - - - | | | | | | Geometric brown magnetic sand and nodules (1961) | |
| TCU10-9-301 002 | TCU s.21 D 1 9 Colluvium 14.c - - 15.a | | | | | | Geometric brown magnetic sand and nodules (1961) | |
| TCU10-7-180 002 | TCU s.21 C 3 7 Colluvium 14.c 29 4 15.a Striated Exterior | | | | | | Geometric brown magnetic sand and nodules (1961) | |
| | | | | | | | Geometric brown magnetic sand and nodules (1961) | |</p>
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<th>CAT. NO.</th>
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**CAT. NO. ART. NO. SITE STR. E.U. LVL LOT CONTEXT RIM LIP DECORATION SLIP PAINT PASTE TEMPER VESSEL FORM SIZE COMMENTS**

- **decorations**: impressed-appliqued ovoids, Small raised horizontal band (toward the right) high on shoulder. appliqued and impressed (direction uncertain).
- **slip**: Slip with black geometric painted.
- **paste**: Geometric sand and nodules medium restricted (1961)
- **temper**: Medium/Fine sand and nodules (1961)
- **vessel form**: Ovoid
- **size**: 2 0.7 48
- **comments**: remains open for future analyses.

**TYPE-Non-Gifford**

- **Socotz**: Gifford 1976:179
- **Uaxactun**: Gifford 1976:179

- **Slipped and Unslipped**:
  - **slipped**:
    - **colors**: Hard Orange 99 Black, Red
    - **pattern**: (exterior Spanish Vaca Falls)
    - **core color**: Pinkish
    - **temper**: Very Fine
    - **paint**: X
    - **paste**: sand fine
    - **size**: 2 0.5 1
    - **complex**: Hermitage Peten Gloss Dos Arroyos
    - **ware**: TCU10-10-332

- **unslipped**:
  - **taken**: TCU10-10-332

- **Weight (g)**: 0.5

- **Other**: Unable to detect striations

**Non-Gifford 1976:189**

- **Slipped and Unslipped**:
  - **slipped**:
    - **colors**: Hard Orange 99 Black, Red
    - **pattern**: (exterior Spanish Vaca Falls)
    - **core color**: Pinkish
    - **temper**: Very Fine
    - **paint**: X
    - **paste**: sand fine
    - **size**: 2 0.5 1
    - **complex**: Hermitage Peten Gloss Dos Arroyos
    - **ware**: TCU10-10-332

- **unslipped**:
  - **taken**: TCU10-10-332

- **Weight (g)**: 0.5

- **Other**: Unable to detect striations
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- Anthropomorphic impressions and incised geometric patterns.

- Ext. (diameter cm): 16

- (plastic) (surface): 0.04

- (core colour): Brown

- (exterior colour): Reddish-brown

- (coarse - fine) CaCO3

- (coarse - fine): Sand medium/fine

- (remaining): 1

- (specimen): 0.4

- (context): Spanish Lookout

- (province): Cayo

- (site): Unslipped Cayo Variety

- (ca. AD): 680 - AD 880

- Gifford 1976:276

- Shepard 1961

- Sabloff 1975

- Barton Ramie

- Collected 1990-1991
APPENDIX II—LITHICS CATALOGUE

Surprisingly, given the frequency with which lithic artifacts have been recovered from the region’s several rockshelters, flaked and ground stone constituted an extreme minority of those identified/recovered from deep cave contexts. Lithic materials/artifacts were identified in consultation with Dr. Christopher Andres and Dr. James Stemp and focussed on identification of basic material, method of manufacture, stage of reduction, and tool/object form. Macroscopic evidence for usewear was noted where present. The following pages constitute the entire lithic assemblage recovered as part of my primary research.
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APPENDIX III—FAUNAL CATALOGUE

Very little faunal material was recovered. The majority of this material consisted of fresh water and marine shell; the majority of this the ubiquitous freshwater jute. Human remains were identified by Dr. Gabriel Wrobel. The following pages compile the entirety of the faunal catalogue recovered through my primary research.
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555
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557
September 21, 2010

Dr. Christopher R. Andres

RE: Radiocarbon Dating Results For Samples TCU S08, TIPAN A-1

Dear Dr. Andres:

Enclosed are the radiocarbon dating results for two samples recently sent to us. They each provided plenty of carbon for accurate measurements and all the analyses proceeded normally. As usual, the method of analysis is listed on the report with the results and calibration data is provided where applicable.

As always, no students or intern researchers who would necessarily be distracted with other obligations and priorities were used in the analyses. We analyzed them with the combined attention of our entire professional staff.

If you have specific questions about the analyses, please contact us. We are always available to answer your questions.

The cost of the analysis was charged to the VISA card provided. As always, if you have any questions or would like to discuss the results, don’t hesitate to contact me.

Sincerely,

[Signature]
# Report of Radiocarbon Dating Analyses

Dr. Christopher R. Andres  
Indiana University-Purdue University  
Report Date: 9/21/2010  
Material Received: 9/7/2010

<table>
<thead>
<tr>
<th>Sample Data</th>
<th>Measured Radiocarbon Age</th>
<th>δ13C/12C Ratio</th>
<th>Conventional Radiocarbon Age(*)</th>
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| **Beta - 284075**  
SAMPLE: TCU S08  
ANALYSIS: AMS-Standard delivery  
MATERIAL/PRETREATMENT: (charred material: acid/alkali/acid  
2 SIGMA CALIBRATION: Cal AD 140 to 390 (Cal BP 1810 to 1560) | 1780 ±/-.40 BP | -26.4 o/oo | 1760 ±/-.40 BP |
| **Beta - 284076**  
SAMPLE: TIPAN A-1  
ANALYSIS: AMS-Standard delivery  
MATERIAL/PRETREATMENT: (charred material: acid/alkali/acid  
2 SIGMA CALIBRATION: Cal AD 1290 to 1420 (Cal BP 660 to 530) | 610 ±/-.40 BP | -26.2 o/oo | 590 ±/-.40 BP |

*Dates are reported as RCYBP (radiocarbon years before present, "present" = AD 1950). By international convention, the modern reference standard was 85% the 14C activity of the National Institute of Standards and Technology (NIST) Oxalic Acid (SRM 4990C) and calculated using the Libby 14C half-life (5568 years). Quoted errors represent 1σ relative standard deviation statistics (68% probability) counting errors based on the combined measurements of the sample, background, and modern reference standards. Measured δ13C/12C ratios (delta 13C) were calculated relative to the PDB-1 standard.*

The Conventional Radiocarbon Age represents the Measured Radiocarbon Age corrected for isotope fractionation, calculated using the delta 13C. On rare occasion where the Conventional Radiocarbon Age was calculated using an assumed delta 13C, the ratio and the Conventional Radiocarbon Age will be followed by **"***. The Conventional Radiocarbon Age is not calendar calibrated. When available, the Calendar Calibrated result is calculated from the Conventional Radiocarbon Age and is listed as the "Two Sigma Calibrated Result" for each sample.

Page 2 of 4
CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=26.4; lab. mult=1)

Laboratory number: Beta-284075

Conventional radiocarbon age: 1760±40 BP

2 Sigma calibrated result: Cal AD 140 to 390 (Cal BP 1810 to 1560)

(95% probability)

Intercept data

Intercept of radiocarbon age with calibration curve: Cal AD 250 (Cal BP 1700)

1 Sigma calibrated result: Cal AD 230 to 330 (Cal BP 1720 to 1620)

(68% probability)

References:

Database used

INTCAL04

INTCAL04 Radiocarbon Age Calibration

Mathematics

A Simplified Approach to Calibrating C14 Dates

Beta Analytic Radiocarbon Dating Laboratory
CALIBRATION OF RADIOCARBON AGE TO CALENDAR YEARS

(Variables: C13/C12=-26.2; lab. mult=1)

Laboratory number: Beta-284076

Conventional radiocarbon age: 590±40 BP

2 Sigma calibrated result: Cal AD 1290 to 1420 (Cal BP 660 to 530)
(95% probability)

Intercept data

Intercepts of radiocarbon age with calibration curve:
- Cal AD 1330 (Cal BP 620) and
- Cal AD 1340 (Cal BP 610) and
- Cal AD 1400 (Cal BP 560)

1 Sigma calibrated results: Cal AD 1310 to 1360 (Cal BP 640 to 590) and
(68% probability) Cal AD 1380 to 1410 (Cal BP 570 to 540)

References:
- Database used: INTCAL04
- Calibration Database: INTCAL04 Radiocarbon Age Calibration
- Mathematics: A Simplified Approach to Calibrating C14 Dates

Beta Analytic Radiocarbon Dating Laboratory