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Papers of the 2008 Belize Archaeology Symposium

Edited by
John Morris, Sherilyne Jones, Jaime Awe, George Thompson and Christophe Helmke

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Archaeological Investigations in the Eastern Maya Lowlands: Papers of the 2008 Belize Archaeology Symposium

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John Morris and Jaime Awe

Belmopan, Belize, June 2009
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SECTION ONE: SOCIO-POLITICAL ORGANIZATION
ANCIENT MAYA SOCIO-POLITICAL ORGANIZATION: PERSPECTIVES FROM BELIZEAN ARCHAEOLOGY

Gyles Iannone and John Morris

Recent archaeological research in Belize has figured prominently in the discussion and debate of the emergence, florescence, and demise of the ancient Maya. In the last decade Belizean archaeology has contributed enormously to empirical data on the integration of ancient Maya society. A critical area of studies now required is how ancient Maya society was organized economically, socio-politically, and how tightly integrated was Maya society. This paper will explore various key themes such as the level of political and economic integration within local and regional spheres; and also to offer suggestions for the types of research and theoretical orientation that is needed to better understand ancient Maya socio-political organization. The focus here is, intentionally, on insights generated by researchers that have conducted research in Belize.

Introduction:

Modelling the Ancient Maya State: What Type of State did the Ancient Maya Have?

A Multitude of Models! Archaeologists who have conducted research in Belize have employed numerous models in their efforts to characterize ancient Maya socio-political organization. In fact, the range of actual models that have been marshalled is truly astounding, with segmentary states (Ball and Taschek 1986, 1991; Dunham 1990; Dunham et al. 1989; Fox and Cook 1996; Fox et al. 1996; Houston 1997; McAnany 1995; Pohl and Pohl 1994), city-states (Grube 2000; Hammond 1991; Iannone 2008; Morris and Ford 2005; Pyburn 1997; Thompson 1954), galactic states (Coe 1957; Hammond 1991:277, 280-281), feudal states (Leventhal 1981:206-207; Willey 1980:261, 1981:410-413; see also A. Chase and D. Chase 1992:9; Wilk 1988), regional states (Adams 1987; Adams and Jones 1981; Braswell et al. 2004), and unitary states (A. Chase and D. Chase 1996), all being offered up as the panacea to our interpretive problems (see also Lucero 1999 for a review). In northern Belize efforts to comprehend the dynamics of regional integration between the centers has yielded significant empirical information, the results published by the Programme For Belize Archaeological Project (Valdez et al. 2003, 2004, 2005; Valdez and Sullivan 2006; Scarborough and Valdez Jr. 2003) the Blue Creek Project (Lohse et al. 2005, Guderjan 2008) and other researchers working at Lamanai, Kakabish, Progresso, San Estevan, Kaxob, and Colha (Aimers 2006; Haines 2008, Masson 2003, McAnany 2004; Rosenswig 2007). But these researchers have yet to provide synthetic interpretations that go beyond Hammond (1975, 1991) initial classification of the sites, instead merely replacing his terminology with first, second and third order of sites ranking. In the Belize Valley the problems of defining socio-political integration is even more cumbersome. Leventhal and Ashmore (2004) in their rebuttal to Taschek and Ball (2004) contentions regarding the political interaction between Xunantunich, Buenavista and Cahal Pech emphasized that “a call to theoretical arms” was required for researchers working in the Belize Valley to “test models of political, social, and economic development in the Maya lowlands”. In the same volume “Towards an Understanding of the Belize Valley” edited by James Garber (2004), D.Z. Chase (2004:348) in her concluding remarks observed that interpretations of political integration in the Belize Valley by researchers offers many disagreements in their attempted syntheses and that “the multiple projects and multiple researchers make it difficult to synthesize the extant data to answer broader questions’. This observation is even more pronounced when we consider that the site of El Pilar (Ford 2004) is often relegated to the periphery of the Belize Valley discussions on political integration, despite the fact that it is the largest center in the immediate region, and no
doubt played a major role in the affairs of the valley communities. The same applies to the site of Pacbitun that when examined in the context of regional connections conceivably played an important role in the development of hierarchical social systems in the area in the Preclassic period (Healy et al. 2004).

Nevertheless, although the body of research referred to above may suggest otherwise, it is important to point out that most scholars conducting research in Belize have either purposely, or inadvertently, avoided any specific discussion of the different state models, preferring to employ the more ambiguous term “polity” or simply utilize terms such as minor, major centers, first order and second order sites whenever they discuss issues surrounding ancient Maya state formations (see Ball and Taschek 1991; Leventhal and Ashmore 2004; Scarborough et al. 2003). Others have fallen into the trap unintentionally set by esteemed scholars such as Robert Sharer (1991:185-186), Arthur Demarest (1996:821), and William Haviland (1997:443), all of whom have suggested that examples of many different types of state formation may have existed side-by-side in the Maya sub-area during the Classic period (e.g., Kindon 2002; Lohse et al. 2005; Masson and Friedel 2004). For example, Lucero (1999:213) concludes that: “The issue is not that any single model takes precedence but that the varied landscape resulted in diverse organizational needs and response...The difference was a matter of scale – different Maya polities are located on a spectrum from small local polities to large regional ones.” To be fair, if the latter statement is meant to suggest that during the Classic period the Maya subarea was home to “polities” that varied considerably in terms of size, and political clout, it fits well with almost any model of socio-political structure. If, on the other hand, it is meant to suggest – as is the case in the Sharer, Demarest, and Haviland discussions – that there were “polities” that were organized very differently, in structural terms, then one must conclude that this scenario is highly unlikely. Rarely, if ever, does a contiguous culture area manifest structurally different socio-political formations (see Trigger 2003; von Falkenhausen, 1993, 2006), and it is highly unlikely that this was the case for the Maya subarea.

City-States versus Territorial State. With respect to aforementioned issue, there is growing consensus that most models of state formation can be amalgamated within a dichotomy based on city-states and territorial states (Hansen 2000a, 2000b; Trigger 2003; Yoffee 1991:289, 2005). The characteristics of these two models are outlined in detail by Iannone (this volume). Significantly, Trigger (2003:266-270) notes that these state types do not constitute an evolutionary sequence, from smaller, less well-integrated states to larger, more highly centralized political amalgamations. Rather, they are simply contrasting state formations that emerge in different areas as a result of unique developmental circumstances (For example Pusilha in Southern Belize, see Braswell et al. 2008). In terms of why there is a tendency for city-states or territorial states to emerge in certain regions, Trigger concludes that there are numerous factors that may play a role, but the actual reasons for why one or the other of these state forms tends to materialize in particular parts of the world remains uncertain. Basically, once socio-political development begins to move along a particular path, there is obviously a tendency for one of these types of state to emerge, but why this is remains a mystery.

In recent years, a growing list of archaeologists conducting research in Belize have begun to advocate for the efficacy of the city-state model, given that many of the characteristics of this type of state seem to fit well with what we know about the Classic period Maya (Grube 2000; Iannone 2008; Pyburn 1997; Braswell et al. 2008). Equally important is the fact that some of the major thinkers on the subject, such as Bruce Trigger (1993, 2003), Mogens Herman Hansen (2000a, 2000b), and Norman Yoffee (2005), have all concluded that the Classic period Maya are likely an example of a city-state culture. It is also worth noting that many of the other models that have been employed as explanatory devices in the past, such as the segmentary, galactic, theatre, and feudal state models, can easily be amalgamated within what is now a well defined city-state model (cf. Dunning 1990).

Nevertheless, there are still advocates for a
territorial state model, with the various unitary and/or regional state models being included in this category (e.g., A. Chase, this volume; A. Chase and D. Chase 1996). For this reason, archaeological research in Belize must continue to strive to assess these two models using data sets from centers representing the entire settlement continuum. They must also strive to use these data sets to build models that are multi-scalar in perspective, including center-specific, sub-regional, regional, and pan-regional perspectives (see Scarborough and Valdez Jr. 2003; Braswell and Prufer this volume). We cannot speak of polities in northern Belize in isolation and completely ignore the interactions between for example La Milpa and Blue Creek. Paramount to the debate will be the collection of data that will allow us to address a number of key questions. For example, at what point in the settlement hierarchy do we begin to see site specialization, in administrative and/or economic terms? Empirically, it appears that this does not occur until one reaches the level of minor centers, which implies that all “major centers,” no matter how large in size and how grandiose in design, were settings for similar economic, social, political, and ideological activities – the differences between centers therefore being more quantitative than qualitative (Ball and Taschek 1991; Robin 2006 and this volume). This data set supports the city-state model.

An equally important question concerns how much control the ancient Maya elite had over the economy? As indicated by Iannone (this volume), the answer to this question has a direct bearing on the type of state formation that is present. Interestingly, although they both acknowledged the importance of the economy in their presentations at the 2008 Belize Archaeology Symposium, Arlen Chase and Gyles Iannone arrived at very different conclusions with respect to explaining the broad distribution of key economic items throughout the settlement hierarchies at Caracol and Minanha, respectively. Chase suggested that the wide-spread distribution of obsidian, shell, chert, and polychrome ceramics implies that a program of “symbolic egalitarianism” was initiated by the Caracol elite to mask the significant status differences that existed in Late Classic society (see also D. Chase and A. Chase 2006). At its base, “this egalitarianism was symbolic rather than actual...[as is]...suggested by stable isotope analysis that shows the presence of distinctive status-linked diets” (D. Chase and A. Chase 2006:178). The implications of this data are that the Caracol rulers had significant control over their economic sphere, which is in turn suggestive of the existence of a highly centralized, territorial/regional state (see also D. Chase and A. Chase 2006). The widespread practice of placing caches and burials in association with eastern ancestor shrines was offered as additional evidence in support of the territorial/regional state interpretation.

In contrast, in his presentation Iannone indicated that the detailed analysis of the obsidian and groundstone industries at Minanha suggests that there were no differences in terms of access to these items, regardless of where one was situated in the socio-political hierarchy. Everyone at Minanha also appears to have had unfettered access to the most popular serving vessel type, an ash-tempered red-ware dish with hollow oven feet. Iannone concluded that the Minanha economy was therefore fluid, decentralized, and market oriented, with little evidence for elite control – as one might expect in a city-state context. The broad distribution of lesser order status goods, and the widespread use of slate in ritual contexts, was viewed by Iannone as corroborating evidence for the city-state interpretation.

At the moment, both of the contrasting interpretations remain plausible, although Iannone’s city-state explanation is supported by data from other sites researchers in Belize (Ford 2008; Robin et al 2002; Healy et al 2004; Yaeger 2002) and data from city-states from around the world (e.g., Trigger 2003, Hansen 2000a, 200b), whereas the Chase’s interpretation is limited somewhat in that symbolic egalitarianism itself is a corporate practice that emerged in the late 20th century, particularly in Japan. One must therefore be cautious in applying it the ancient Maya case. Chase’s symbolic egalitarianism also does not correlate well with inferences drawn from Caracol’s paramount role in warfare that culminated in Tikal’s demise and in their own misfortunes in the latter half of the Terminal Classic period.
Problems with the Decentralized versus Centralized State Dichotomy. Before moving on, one final issue surrounding the modelling of ancient Maya socio-political organization needs to be addressed. This concerns the suggestion that there were two basic polity forms, one decentralized, the other centralized (e.g., Kindon 2002:2, 6). At the outset, it important to stress that the decentralized versus centralized dichotomy is only a heuristic device – a model representing two ends of a continuum of complexity. In reality, all state formations exhibit characteristics of both organizational possibilities (Iannone 2002; see also Aylesworth 2005:116; Willey 1999:88). This is because all early states were dynamic political systems (Marcus 1992, 1993, 1998, 2003; see also Chase and Chase 1996:804; Iannone 2002; Hammond 1991:256; Sharer 1991:196, Figure 8.1; Trigger 2003:218). For this reason, decentralization and centralization are best viewed as socio-political and socio-economic processes, rather than as the defining characteristics of two discrete forms of socio-political structure (cf. Iannone 2002; Kindon 2002).

Given the above, it is somewhat misleading to call city-states decentralized states, and territorial states centralized states, because all city-states, and all territorial states, exhibit oscillations between periods of increasing and decreasing centralization (Iannone 2002; Marcus 1992, 1993, 1998, 2003; see also Aylesworth 2005:116). For this reason, it is imperative to underscore that although city-states and territorial states are structured very differently, and even though territorial states are inherently more centralized in organization when compared to their city-state counterparts, it is still possible for a specific city-state to be more “centralized” than another city-state.

This issue has a direct bearing on one discussed earlier in this paper; specifically the suggestion that many different types of state formation may have existed side-by-side in the Maya subarea during the Classic period (Demarest 1996:821; Haviland 1997:443; Kindon 2002; Lucero 1999:213; Sharer 1991:185-186). In actuality, what these authors seem to have recognized is not that different types of socio-political structures existed contemporaneously, one being highly centralized, and the other comparatively decentralized, but rather that state formations within the Maya subarea during the Classic period could exhibit varying degrees of centralization. Some were large, and powerful, with greater levels of socio-economic and socio-political centralization. In our view, these were the hegemonic city-states that controlled vast alliance networks (such as Tikal, Calakmul, and Caracoal). In contrast, there were others that had less political clout, smaller territories, and who were required to pay tribute to one or more hegemonic overlords (such as Minanha, Xunatunich, and Cahal Pech). And in certain areas like the Belize Valley a city-state could have been more centralized than its neighbour (Audet and Awe 2004; Yaeger 2002). In summary, we believe that what the decentralized versus centralized state dichotomy really captures is the fact that there were a myriad of city-states scattered across the Maya world during the Classic period, and these centers were likely structured quite similarly, although their levels of centralized control may have varied considerably (i.e., they could be hierarchically ranked in relation to each other on a continuum from highly decentralized to moderately centralized). Nevertheless, it seems highly unlikely to us that any center in the Maya world was ever organized along the lines of a powerful, regionally expansive, overtly bureaucratic, highly centralized territorial state.

Debunking Some Myths

Cross-Cultural Models should be avoided at All Costs

One issue emerging from the previous discussion is the applicability of employing cross-cultural comparisons to model the ancient Maya state. A number of researchers who have conducted excavations in Belize have offered their opinions on this subject. Robin (this volume) on the one hand emphasizes the point that Anthony Giddens borrowing liberally from Sylvanus Morley characterization of ancient Maya commoners and elites, the latter being the intellectual engine for ancient Maya society development, as similar to other cultures around the world. Hammond (1991a:17), on the other hand, noted that when it involves bringing in
ideas, “from outside the corpus of Classic Maya archaeological and epigraphic evidence”, this can be called the “sideways” approach to studying ancient Maya socio-political organization. He indicates that, when applied cautiously, such approaches can be “fruitful” (Hammond 1991a:18). Iannone (this volume) concurs with Hammond as he utilizes aspects of state organization from ancient societies of India to model Maya socio-political organization. In contrast, the Chases (1996) argue that we should avoid borrowing models from outside Mesoamerica where at all possible (D Chase 1992:118; D. Chase and A. Chase 1992b:307; cf. D. Chase and A. Chase 2006).

In considering this issue, there appear to be both theoretical and practical reasons to support the use of analogies derived from states from outside the Maya sub-area. On a theoretical level, Yoffee (1991:288) underscores that the: “sideways’ approach, as discussed by Hammond…has an explicit justification. Everyone uses analogies in their analytical work, just because no one, not even Mesopotamian archaeologists and historians, have yet managed to achieve the blessed state of tabula rosa, even if some of them seem to aspire to it…Analogies are posited because they are assumed to yield data and patterns of data from known examples that resemble the data and patterns being investigated in the unknown one…They are used because they give the investigator confidence that his or her models are ‘probable,’ that is, not wholly unique and so unlikely.”

The last word on this matter can be given to Trigger (2003:15), who cautions that: “Comparative studies are potentially of great value for understanding human behaviour and culture change, but all too often a lack of rigor renders them uninformative or even misleading.”

It is also important to keep in mind that there are significant issues surrounding the alternative approach to interpreting ancient Maya socio-political organization, which involves the use “home-grown” ethnohistoric or ethnographic models. Advocates of such models need to keep in mind that the Maya with which the Spanish were in contact were separated from the ancient Maya society under investigation by over 500 years. We must assume that some changes transpired during this time (D. Chase 1992:118), especially considering that a very dramatic societal disturbance occurred in the Maya lowlands around 900 A.D. (i.e., the "collapse"; see D. Chase 1992:119). It should also be stressed that the ethnohistoric records were compiled by untrained Spanish explorers and churchmen, and for this reason they must be viewed as biased, possibly “ethnocentric” accounts (A. Chase 1992:31; A Chase and D. Chase 1992:8; D. Chase 1992:118; McAnany 1995:158). Finally, we must remain cognizant of the fact that a significant “compression and simplification of the social order” also likely resulted from contact with the Spanish (Farriss 1984:164-165). As Farriss (1984:165) effectively argues:

“The great territorial magnates were not only reduced to community batabs [heads of towns]. They and the rest of the aristocracy were deprived of the spoils of war and the profits of long-distance trade, and the slaves they had owned were set free to join the ranks of ordinary macehuales [commoners]. The Spanish also siphoned off the major share of the surplus wealth that macehual labour produced in the form of tribute goods and labour drafts, which had formerly gone entirely for the support of the native elites...the levelling process failed to close the gap between nobles and commoners completely. It was, however, significantly reduced, and the intermediate groups of professional warriors and artisans disappeared altogether.”

In the end, if we are going to effectively address the complexities of ancient Maya socio-political organization, we likely need to employ an approach that mines the Classic Maya archaeological and epigraphic data sets, and the later ethnohistoric and ethnographic records, as well as the information that has been generated by the detailed analysis of other state formations from around the world.

City-States are Unstable, Territorial States are Stable

Many scholars have pointed out that the rulers of city-states generally had limited control
over their hinterlands, and continually had to negotiate with, and sometimes placate, their subordinates in order to maintain their states (e.g., Schnepel 2002:25; see Robin this volume for the type of negotiation that may have occurred between a major center and its surrounding communities). This implies that city-states were inherently unstable when compared to their more centralized, territorial state counterparts. Trigger (2003:266-270) has, however, cogently demonstrated that both forms of socio-political organization appear to exhibit equal degrees of stability. Haviland (1997:444) concurs, arguing that the idea that centralized states (read territorial states) are comparatively more stable is a fiction promoted by those who live in centralized state formations today (cf. Demarest 1996:822). According to Hammond, “Whatever stability [centralized states] have achieved has been short-term at best; over the long term they show a clear tendency toward instability and transience. As a result, instability, and the fluctuation between centralized and decentralized modes of governance, should be seen as characteristics of all state formations (see also Chase and Chase 1996:804). As such, city-states and territorial states must simply be viewed as two possible options for stable state formations (Trigger 2003:266-270).

Maya “Cities” Do Not Conform to the Expectations of the City State Model

Although there seems to be a strong case for the applicability of the city-state model to the ancient Maya, there are clearly some divergences from the ideal type. Specifically, Maya capitals were not densely settled, and they also did not have city-walls for defensive purposes. Both of these traits are characteristic of other city-states documented throughout the world (Hansen 2000a, 2000b; Trigger 2003). This divergence does not, however, negate the applicability of the city-state model. In fact, it simply signifies cultural variability, and the deviation from ideal models expected when dealing with individual case studies. In the end, Hansen (2000:604) classifies the ancient Maya as a city-state culture, but he also recognizes the unique characteristics of their “open urban centers,” which are not as densely populated as the more typical European or Asian urban centers, where the walls of adjacent buildings often touch each other. Nevertheless, like their Old World counterparts, ancient Maya urban centers did serve as centers of trade and marketplaces, and they exhibit considerable evidence for a division of labour and specialization of functions.

Conclusions

Archaeological research in Belize has made significant contributions to our understanding of ancient Maya socio-political organization. Nevertheless, we need to make a more concerted effort to address this worthy topic. It is no longer sufficient to simply refer to ancient Maya “polities” in our discussions of political organization. For instance Braswell and Prufer (this volume) attempt to synthesize political interaction between the major centers in Southern Belize, but limit their discussions to the inland cities and only make passing reference to trade and development along coastal Belize. We need to generate a better understanding of precisely how individual states were structured, and how individual states interacted with other centers positioned above and below them in the broader socio-political hierarchy. To do so will require more settlement studies, an enhanced understanding of economic systems – of both the domestic and political varieties – more detailed analysis of material culture, mortuary, and bioarchaeological assemblages, and greater efforts to articulate the epigraphic and archaeological records. Most pressing is the need to move beyond single-center analysis (such as carried out in the Belize Valley); to more holistic sub-regional, regional, and even pan-regional interpretations that link centers representative of the entire settlement continuum. It is only through such a multi-scalar approach that we will be able to fully comprehend ancient Maya political dynamics, which is a prerequisite to elucidating the true nature of ancient Maya socio-political organization. In closing, we also urge Belizean researchers to spend more time examining the other end of the developmental sequence. Specifically, there is still very little attention being paid to the emergence of social inequality and complexity during the Preclassic period (See Awe 1993; Healy 2006; and Rosenswig this
volume). Future research should focus more attention on this particular subject, given the importance that it may hold for understanding the nature of later political forms.

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Archaeological data are frequently used to assess past social, political, economic, and religious organizations in human society. Just how complex or simple these past systems are interpreted to be, however, can be influenced by a host of factors that involve the theoretical background of the investigator, the methodology applied to archaeological data, and epistemology and hermeneutics. Homogenized distributions should not be automatically correlated with simplicity; likewise, differentiated distributions may not always be correlated with complexity. Through focusing on archaeological data from Caracol, Belize, this paper seeks to illustrate the complications of making attributions of complexity to an archaeological database. In particular, the concept of symbolic egalitarianism is used to show how homogenized distributions can represent great archaeological complexity.

Regardless of whether the approach is evolutionary, typological, cultural historical, processual, or post-processual, discussions of complexity in the archaeological record tend to focus largely on the development of an increasingly “complex and unequal world” that are both “critical problems in the world today” (Chapman 2003:4, 7). That not all differentiation is hierarchical is evident in literature that focuses on the development of networks and heterarchy (Crumley 1995). Just as there are aspects of complex society that lead to differentiation and inequality, there are also forces and/or mechanisms that may lead to greater homogeneity. One contemporary homogenizing phenomenon is globalization (Chapman 2003:2). In fact, in the modern world a frequent source of discussion is the relationship between local and global identity (Appadurai 2001). Archaeologists have long been aware of similar processes in the ancient past, having focused on homogenizing mechanisms such as acculturation and diffusion early in the theoretical history of the discipline (e.g. Wauchope et al. 1956). However, for a variety of reasons, homogenizing mechanisms have not been well integrated with discussions of archaeological complexity.

In this paper, we seek to explore one possible reason for less clear-cut stratification in the archaeological record, specifically the management strategies related to a phenomenon we have previously described as symbolic egalitarianism (D. Chase and A. Chase 2006; A. Chase and D. Chase 2005a). Initially defined by Pfeffer (1994) in a completely different frame of reference as one of 13 key people management techniques that can provide competitive advantage for organizations and companies, the term has clear applicability to other social and political situations that can be documented in the archaeological record.

The Archaeological Recognition of Complexity

A major impediment for discussions of the development of complex society is the interpretation of the archaeological record. Even a simple definition of complexity is complicated by general theory, available data, and perception. Following Stewart (2001:324), “complexity is a matter of perspective or framing (which in our case relates to human intention and interests), level of detail (fine or coarse graining), and the result of perceiving through observation.” Thus, while all scholars may have a sense of what constitutes complexity, how it is explored and explained in the archaeological record may differ based on an individual researcher’s background and perceptions.

Several years ago Cowgill (1989) commented on issues surrounding the recognition of diversity in the archaeological record, a necessary building block in any consideration of complexity. Cowgill (1989:135) noted that while archaeological data sets were investigated for diversity and then
related to ancient behaviors, far richer interpretations would result if discussions of diversity included considerations of “richness” (number of categories present), “evenness” (extent to which categories are represented by similar number of objects), “range” (amount of difference between the most different categories), “standardization” (low variation between categories), and “uniformity of standardization” (the extent to which some categories are more standardized than others). Thus, Cowgill’s real focus was the nature and interpretation of artifactual distributions in the archaeological record.

Much of our archaeological understanding of complexity has been framed through analytic approaches that are premised on normative considerations of culture. Archaeologists generally have focused more on similarities than on differences in an attempt to define cultural units; thus, considerations of kinds of diversity are often given short shrift. In our analytic models, uniform similarities in a given archaeological distribution generally are correlated with a lack of complexity, while any variability found in the archaeological record usually is framed in terms of the institutionalization of ancient social inequality. Thus, heterogeneous distributions of archaeological materials are often viewed as a sign of diverse behaviors and corresponding social complexity (or wealth: e.g., Smith 1987), while homogeneous distributions are considered to represent egalitarian behaviors and less complex societies (see also D. Chase and A. Chase 1992:313).

While the presence of stratification is cited as a hallmark of complexity, the determination of clear distinctions among potential or presumed social strata is a difficult, if not impossible, task. In some cases, the lack of distinct divisions or strata may be indicative of less complex “non-state” societies. Potentially muddying the discussion, however, are models of emerging complexity for the Formative era based on preconceived inequalities (Clark and Blake 1994), even when supporting archaeological data suggests a “lack of evidence from artifact distributions for economic differences between high- and low-status households” as in the case of Paso de Amada (Lesure and Blake 2002:20). This lack of clear-cut distinctions in artifact distributions among different status households is an issue not confined to Formative Period Mesoamerica. Similar gradations also appear throughout the Classic and Postclassic Periods in both the Maya Lowlands and the Mexican Highlands, presumably representing a completely different and more complex situation. In truth, in most of Mesoamerica, a lack of clear-cut artifactual distinctions relating to social class can be found for many time periods (D. Chase and A. Chase 1992:313). Where these occur, archaeologists have focused on developing a variety of analytical techniques to aid in differentiating among material culture remains. For Teotihuacan, George Cowgill (1992) used gradations in archaeological data to segregate the site’s inhabitants into seven levels that he then grouped into three larger social classes. The newer excavations of obviously important burials in the Temple of the Moon at Teotihuacan do little to alleviate difficulties in defining social gradations based on artifacts in other than a ritual realm (Sugiyama and Lopez 2007). Faced with a similar dilemma at Caracol, Belize, we have focused on identifying the mechanisms leading to broader shared social and ritual archaeological material culture during the Late Classic Period, suggesting that these patterns are indicative of a purposeful shared identity (A. Chase and D. Chase 1996; D. Chase and A. Chase 2004).

The Distributional Approach and Symbolic Egalitarianism

Two intertwined factors underlying the homogenizing phenomenon found interspersed throughout Mesoamerican prehistory are of particular significance in this paper: the first is economic, presumably related to the distribution of goods; and, the second is socio-political, likely related to issues of societal management.

Ken Hirth (1998) used a distributional approach to explain why certain imported artifacts were relatively evenly distributed among households of different statuses at Xochicalco, Mexico - providing a usable methodology for identifying markets in the archaeological record. The material culture – obsidian and imported decorated ceramics – had
been acquired through market exchanges which were not bounded by social rank. Hirth carefully positioned his distributional approach in terms of what was known of Pre-Columbian Mesoamerican economic patterns to demonstrate that market exchange was in fact taking place, at the same time explaining why homogenized distributions of certain artifactual classes occurred.

At Caracol, Belize, a similar homogenizing trend is in evidence among the site’s households. Like Xochicalco, the items include imported obsidian and decorated ceramics, including polychrome vases. But, unlike Xochicalco, the material culture similarities also extend into the ritual realm.

We have used the term symbolic egalitarianism to describe aspects of Late Classic Caracol (D. Chase and A. Chase 2006: 178-179,180-182,185; A. Chase and D. Chase 2005a). We believe that this symbolic egalitarianism was an intentional strategy employed by the ruling group or bureaucracy at Caracol during this time. This strategy - identified particularly with shared ritual identity, but also apparent in other material aspects of Caracol - served to integrate Late Classic Caracol far better than following strategies of differentiation. In fact, the switch away from symbolic egalitarianism may be seen as a key underlying factor in the Terminal Classic Maya collapse at this site.

The identification of factors such as symbolic egalitarianism that point to homogenizing versus differentiating mechanisms are important in discussions of complexity precisely because they provide alternative interpretations for similar material cultural patterning and phenomena, thus requiring more detailed multifaceted analysis that combines contextual and frame analysis to discern meaning from the archaeological record.

**Frame Analysis and Symbolic Egalitarianism**

In a paper focusing on the Maya Collapse (D. Chase and A. Chase 2006), we suggested the utility of viewing the ancient Maya past through frame analysis. Using four well-defined frames (Figure 1) - structural, human resource, political, and economic - we stressed the holistic potential of a multiple frame analysis in viewing past, as well as contemporary, organizations. Following Bolman and Deal (1997:15), we stressed the fact that “no frame is ‘the’ frame, rather each constitutes one ‘image of reality’” (D. Chase and A. Chase 2006:173). Thus, the structural frame defines the different units of the organization – both lateral (heterarchy) and vertical (hierarchy) (D. Chase and A. Chase 2006:173-175). The human resource frame focuses on the relationships between people and organizations with human resource-focused organizations providing greater individual control and democracy as well as the sharing of rewards for successful efforts (D. Chase and A. Chase 2006:175). The political frame concentrates on the “different interest groups that compete for power and resources” (D. Chase and A. Chase 2006: 175) as well as on the divergences and partnerships among these groups. And, the symbolic frame considers the role of symbols, metaphors, ceremonies, and traditions (D. Chase and A. Chase 2006: 175). We argue here, as well as in the earlier paper, that symbolic egalitarianism was a key aspect of the human resource and symbolic frames of Late Classic Caracol organization, and that only multi-frame analysis places the rise, fall, and regeneration of the Classic Maya into full perspective.

The concept of symbolic egalitarianism is one of a series of management organizational tools proposed as a source of competitive success by Jefferey Pfeffer (1994). The term implies the use of symbols to minimize differences and increase cooperation and collaboration among different people working towards a common purpose. Thus, organizations seeking to decentralize decision-making and elicit “employee commitment and cooperation” achieve their competitive advantage through minimizing symbolic separation of organizational members (Pfeffer 1991:48). These symbols are generally outwardly visible signs such as dress, insignia, or the use of physical space. In the modern corporate world these outwardly visible signs may include consistent dress codes, a common cafeteria, and/or constant office arrangements – all of which may increase cooperation and decrease obvious divisions. In archaeological contexts, the material culture signs of symbolic
egalitarianism might go well beyond work-place symbolism to include ritual and household identities and commonalities. We believe that it is precisely this sort of symbolic egalitarianism that led to Late Classic Caracol’s successes, and, conversely that the retreat from symbolic egalitarianism was directly related to the decline of the subsequent Terminal Classic polity.

Complexity, Symbolic Egalitarianism, and Archaeology at Caracol Belize

The material signs of symbolic egalitarianism are found throughout the archaeological record of the Late Classic Period at Caracol, Belize. They are evident in the fairly uniform distribution of material remains at the site, a number of which are assumed to be status markers elsewhere in the Maya lowlands. They also are evident in the widely shared ritual containers and features that are found in the majority of Caracol’s residential groups. For example, by the Late Classic Period, some 80% of Caracol’s residential groups were organized with an east-structure focus (D. Chase and A. Chase 2004); this compares to 15% of Tikal’s contemporary residential groups that evince this focus (Becker 2003:261). For Caracol it can be estimated that over 7,000 residential groups had an eastern structure that served a mortuary and
ritual focus, usually housing one or more tombs along with other burials.

The ubiquity of tombs recorded in the residential groups at Caracol resulted in the rejection of the pervasive definition of a Maya tomb as “an elite interment” (Loten and Pendergast 1984:9). Tombs are infrequent in the Tikal settlement area (Becker and Jones 1999) and at many other lowland Maya sites. Almost half of the recovered burials at Caracol, including most residential tombs, contained multiple individuals (D. Chase 1994, 1998; D. Chase and A. Chase 1996, 2003). This focus on multiple individuals does not appear to be as prominent elsewhere in the Maya lowlands (Welsh 1988). At Caracol, the prevalence of multiple bodies in single interments may be related to group definition and corporate landholding rights. Regardless, the nearly universal mortuary practices at Caracol comprise a significant aspect of symbolic egalitarianism.

Modification of teeth was also fairly common at the site: filing of teeth occurred in 26% of the recovered interments; 22% of the interments (presently some 65 burials) contained teeth inlaid with jadeite or hematite (D. Chase 1994:131). Put another way, 59% of the excavated groups that produced burials contained at least one individual with filed teeth and 45% of such groups contained one or more individuals with inlaid teeth. These percentages are far higher than others reported elsewhere in the Maya lowlands. Of the 214 burials excavated by the original Tikal Project at Tikal, inlaid teeth were rare, occurring only in 6 burials, and filed teeth only occurred in 11 burials (Becker 1973:401). Significantly, simple presence or absence of dental modification at Caracol cannot be correlated with status.

The material items that were placed in the residential interments also indicate a widespread distribution and included polychrome vessels (and cylinder vases). These polychrome vessels occur in residential groups in the same proportion that they are found in group interments in the site epicenter. Other researchers have suggested that cylinder vases served as markers of elite status (Reents-Budet 1994), but their contextual situation at Caracol dictates otherwise. We believe that such ceramic forms may have been readily available to the full social spectrum in Caracol’s markets (A. Chase and D. Chase 2008). Thus, the relative homogeneity in their distribution was likely due to both sociopolitical and economic factors.

Ritual ceramic containers are also widely distributed at Caracol, occurring both in elite residential units in the site epicenter and throughout the site’s settlement. Specially-made cache vessels, that are very standardized in terms of their paste, sizes, and forms, are found in the majority of excavated residential groups. In general, two kinds of caches vessels occur, either small lip-to-lip vessels containing human fingers (if anything) or empty lidded barrels, usually with an exteriorly modeled face, representing a human or bird. These caches were commonly positioned on the axes of the eastern mortuary buildings in residential groups (D. Chase and A. Chase 1998). Similar caches at other sites are almost non-existent in the archaeological literature. Also present in some
residential groups are modeled incensarios. These occur infrequently in Late Classic tombs and late varieties are found in association with the stairways of eastern buildings. The incensarios do not follow the predicted epicentral correlation suggested by Rice (1999) in her comparative study of Maya incense burners. The widespread use of all of these ritual objects is key to the previously defined Caracol identity and likewise comprises an excellent example of symbolic egalitarianism. Differences between high and low status caches are not outwardly visible, but instead are only apparent when cache contents are revealed.

Thus, a broad spectrum of artifacts and features appear as homogenized archaeological signatures within the site’s residential groups during the Late Classic Period. We have previously linked the widespread distribution of these items to the appearance of a social identity (Figure 2) following the successful warfare carried out by Caracol at the beginning of the Late Classic Period (A. Chase and D. Chase 1996). Some of these successful war campaigns were recorded in the site’s epigraphic record, beginning with the successful defeat of Tikal, Guatemala in A.D. 562 and then continuing with the calculated incorporation of Naranjo as an outlier of the Caracol polity from A.D. 631 through A.D. 680 (A. Chase and D. Chase 1998; D. Chase and A. Chase 2002, 2008).

The archaeological record indicates that the population of Caracol grew rapidly at the end of the sixth century (A. Chase and D. Chase 1989) and that the inner-ring termini plazas were constructed at the very beginning of the seventh century (A. Chase and D. Chase 2001) as a means of providing controlled access to commodities. This growth and, presumably, an influx of population can be correlated with the appearance of the homogenizing tendencies that start to become visible in Caracol’s archaeological record at the end of the sixth century and the beginning of the seventh century. Thus, we feel that socio-political control of Caracol’s burgeoning population was maintained by the elite through conscious fostering of symbolic egalitarianism in the distribution of social and religious items and features that were restricted in their distribution at other Maya polities. The end result of this purposefully fostered symbolic egalitarianism was Caracol’s successful nation-building of an inclusive population that shared in the prosperity achieved through successful warfare for most of the Late Classic Period. Thus, there were two processes or management techniques being employed at the same time – economic control of distribution and symbolic egalitarianism – and the combined impact of these two forces resulted in the relatively homogeneous signature that we see in the archaeological record.

But why is this categorized as symbolic egalitarianism and not simply as egalitarianism? It is “symbolic” because other data indicate that status differences continued to exist and that the elite had access to some – or at least more - items not overtly available to the rest of the Late Classic population. The Late Classic elite may have shared burial and ritual practices with the bulk of the population. They may have even worn similar clothing and shared access with the general population to the vast majority of material items that were available at the site. Yet, there were differences in material remains. The Caracol elite often maintained slightly larger plazuela areas; the interior contents of caches sometimes varied; and, larger numbers of vessels might have been associated with each elite individual in an interment. However, the sharing of symbols across socio-economic levels is unmistakable. That stratification was in fact present is most clearly confirmed by dietary analysis. Stable isotope analysis indicates that the elite had far greater access to maize and meat than did the rest of the population (elsewhere referred to as the “palace diet;” A. Chase et al. 2001). In fact, diet is the one area that can be used to see clear-cut variability within the Late Classic population of Caracol. Individuals living in neighboring groups often had very different diets. And, individuals living closest to the epicenter and termini areas, but not physically within these venues often had the worst diets found in the city. Elsewhere we have correlated the patterning seen in Caracol’s diets to well-known urban models, explainable in terms of workforce and economics (A. Chase and D. Chase 2007a).

The use of symbolic egalitarianism by the Late Classic population at Caracol surely eased some of the social tension that normally
would be found in a large metropolitan population. It is evident from the archaeological record that the bulk of Caracol’s Late Classic population enjoyed great prosperity. This is seen in the artifactual distributions and is confirmed in the health exhibited in the site’s mortuary remains (D. Chase 1994). However, the strategy of emphasizing symbolic egalitarianism also appears to have incorporated a lessened focus on dynastic rulership in the later part of the Late Classic era at Caracol. Between AD 650 and AD 750 Caracol reached and maintained its maximum population; however, the site’s monument record is relatively silent during this time. It is suspected that Maya bureaucrats were overseeing the functioning of a system that incorporated over 115,000 people at the site. These leaders oversaw the continued expansion of the site’s agricultural terracing and also raised and rebuilt the summit of Caana sometime after AD 680. Thus, the organizational elite of the site surely prospered with the rest of the population. However, the history and physical symbols of dynastic rulership were not flaunted as they were before and after the late Late Classic Period. Any Late Classic stone monuments were constrained to the site’s western plaza and relevant texts were recorded only in plaster on the cornices of buildings housed within more private elite complexes.

Managerial strategies and dynastic restraint changed, however, sometime immediately preceding AD 790. Caracol’s elite re-established their visible presence at the site with a flourish by placing a host of carved monuments in the B Group. That this was a purposeful strategy, much like symbolic egalitarianism had been two centuries earlier, can be seen through the conscious use of specific iconography that included a full-stela vision serpent set in front of the eastern building and the record of the establishment of the Terminal Classic rulership in monuments set in the B Group ballcourt, a liminal location important for dynastic matters. The impact of this dynastic reassertion was presumably the beginning of the end of symbolic egalitarianism - for a hundred years later the last material items found on the floors of Caracol’s epicentral palaces were distinct from those available to the majority of the population (A. Chase and D. Chase 2004, 2005b, 2007b). Long distance trade items were kept within elite purview. And, in a clear reversal of earlier practices, two different sets of status-linked ceramic subcomplexes were used by the site’s latest inhabitants, effectively differentiating the elite from the remainder of the population.

Conclusion

What can be seen in the archaeological record of Caracol are shifting strategies related to differentiation and homogenization. The most elaborate, labor intensive interments from the site are those that date from the Early Classic Period. The elite burials from this time span stress differentiation through both the size of the chambers and the elaborate items included. However, the tenor of elite burials shifted in the early part of the Late Classic Period. Thus, while Late Classic chambers could still be sizeable, the burial goods included within the tombs were more widely available to others and were not as ostentatious as those included in earlier offerings. Such homogenizing practices would have been in keeping with the tenets of symbolic egalitarianism.

Based on the differentiation that is evident in the latest palace materials, the Terminal Classic Period rulers at Caracol broke from Late Classic practices in an attempt to re-establish strong dynastic leadership. We would see the Terminal Classic resurgence of differentiating strategies as comprising a key factor in the ultimate collapse of Caracol. The attempt by Caracol’s Terminal Classic elite to establish a more autocratic organization potentially disenfranchised the bulk of the site’s population with regard to a long-held expectation of shared wealth and success. This would have effectively destabilized the general population and hastened their unwillingness to combat threats to Caracol’s last power elite. More important, however, these changes led to a breakdown in other aspects of what had been a successful socio-politico-economic framework based on sound people management strategies.

What appears at first to be simplicity in the archaeological record can often mask great complexity. Long-standing analytic modeling of the development of complex societies follows
preconceived theoretical notions of how socio-economic and political formations came into being (e.g., Fried 1967 and Service 1975). In western thought, such theory is well developed and resulting consequences were deduced from these general premises (Morgan 1889; Durkheim 1893). Thus, the evolution of social inequality in an ever more complex world was believed to be documentable in the archaeological record. But, sometimes archaeological data reveal patterning that is at odds with preconceived assumptions concerning the development of complex social, political, and economic institutions and these same data reveal issues in commonly held societal units and definitions (e.g., Pauketat 2007 and Yoffee 2005 for “chiefdom” and “state”).

Symbolic egalitarianism and homogenizing tendencies are terms that are not generally found in the literature on archaeological complexity. The use of such terminology in describing archaeological data reflects a growing vibrancy in archaeological interpretation relative to the identification of past strategies for both managing and coping with the divisiveness of social inequality. The results of human behavior are evident in the patterning seen in archaeological remains. And, it is in both the recognition of the application and subsequent rejection of such patterning that better interpretations can be derived concerning some of the great diasporas of the past, such as the Maya collapse.

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3 WHOSE COMPLEXITY? ANCIENT MAYA SOCIOPOLITICAL ORGANIZATION AND COMPLEXITY: A VIEW FROM THE FARM

Cynthia Robin

By asking the question – whose complexity are we talking about anyway when we discuss about complex societies – this paper asserts the importance of understanding the everyday lives of ordinary framers in understanding ancient Maya socio-political organization and complexity. It begins with a review of social theoretical perspectives on peasants and elites, particularly those of Karl Marx and Anthony Giddens. Identifying that Giddens’ theories drew upon out of date Maya archaeological data, particularly the 1947 version of Sylvanus Morley’s The Ancient Maya, this paper identifies the need to bring together current archaeological data and social theoretical ideas. It ends with an exploration of ordinary farmers’ lives at the Chan site in Belize.

Introduction

This paper begins with the premise that understanding the everyday lives of ordinary farmers is of crucial significance for understanding ancient Maya socio-political organization and complexity. At a basic level there probably isn’t a scholar who would dispute the validity of this statement. But on a close inspection of the anthropological literature there are relatively few discussions of political organization and states which foreground commoners and their everyday lives (for studies that do, see Brumfiel 1992; D’Altroy and Hastorf 2001; A. Joyce et al. 2001; R. Joyce 1991; Marcus 1995; McAnany 1995; Pyburn 1998; Schwartz and Falconer 1994; Sheets 2002; Stein 1999; Wattenmaker 1998). Commoners and their lives are often absent from traditional criterion used to assess topics of complexity and socio political organization. In discussions of state level political organizations commoners often only haunt the stage as the invisible others in the criterion ‘settlement hierarchies,’ or the overlooked workers behind ‘local economies’ and ‘local production,’ or as the wrong end of ‘dominant-subordinate relationships.’

The schism between “politics and state” and “everyday life and ordinary people” has a long history in anthropological thought. But as recent scholarship on everyday life has pointed out – since everyday life consists of the unremarkable and often forgettable daily practices and routines that comprise a person’s day-to-day existence – it is perhaps not surprising that academics have overlooked the importance of ordinary people and their everyday lives in the reconstructions of human societies (e.g., Bourdieu 1977; de Certeau 1984). In this paper, I argue that socio political organization and complexity cannot be fully understood without attention to the complex, concordant and discordant everyday lives of the people that make up all ends of the political spectrum, from powerful to powerless. I ask whose complexity are we discuss about anyway when we talk about socio political organization and complexity in human societies?

At the core of many discussions of complexity is a dichotomy between elites and commoners. Elites and their cities are seen to be dynamic agents and locales of progress and invention that drive state-level political economic machines, whereas farmers or peasants are considered to be backwards, unsophisticated, and unchanging people who lack in innovation and ability to affect the development of their societies. Scholars from across disciplines such as Raymond Williams (1975), Robert Netting (1993), and Eric Wolf (1955) have cautioned us to critique such romantic Western constructions.

These simplistic binaries don’t hold true, especially for the ancient Maya, for whom the city was also a garden, the home a workplace and place of learning, and 90% of the society lived on a farmstead. For the ancient Maya everyday life was not segregated from political life because the ordinary places of people's homes were often also locations of important political meetings (e.g., Hendon 1997; Robin 2003; Yaeger 2000). But, regardless of such overlap between the spaces of politics and daily life, political realms cannot be fully understood.
without concomitant attention to the lives of all people that make up a society.

Cultural anthropologist Tom Patterson, in his book *Inventing Western Civilization* (1997) argues that binary notions of class hierarchy which link elites with power and farmers with powerlessness are consequences of looking at the world “through the eyes of elites.” If this is indeed the case then we must think critically about whose interests we are serving if we examine societies from top-down perspectives. Such a view leads to replicating the order and organization of the world as seen by elites, an order and organization that homogenizes dominated groups and sees change as always emanating from top-down initiatives.

Taking a cue from Tom Patterson, I ask in this paper – who is complex in ancient Maya society? And is a lack of attention to the complexity in the lives of ordinary Maya farmers a consequence of our looking at the ancient Maya world through the eyes of ancient Maya elites?

To answer these questions I will first examine some of the history of the development of dominant social theoretical models concerning relations between elites and farmers (e.g., Giddens 1981; Marx [1869] 1963). I will then use archaeological data from our research at the ancient Maya farming community of Chan in Belize to show how farmers were a diverse and innovative group of people who partook in complex organizational and power relations amongst themselves and with elites (Robin 2008; Robin et al. 2004, 2005; also see http://www.anthropology.northwestern.edu/chan/).
Social Theoretical Models about Commoners and Elites

In the mid-nineteenth century, people like Karl Marx were questioning the meaning of ongoing historical events and were particularly critical of the hierarchical class relations between peasant farmers and elites observable in the capitalism of western Europe. For Marx capitalism had transformed a pre-existing conservative peasantry into an underclass of commodity producers in agriculture and agricultural wage work. Thus in his writing Marx referred to peasant farmers as, “sacks of potatoes” because they “form a vast mass, the members of which live in similar conditions but without entering into manifold relations with one another. Their mode of production isolates them from one another instead of bringing them into mutual intercourse… Their field of production… admits… no application of science and, therefore, no diversity of development, no variety of talent, no wealth of social relationships” ([1869] 1963: 123-4). Peasant farmers are “the class that represents barbarism within civilization” (ibid. 15). As Marx’s peasants are a passive and homogeneous under-class, elite-focused interests remain the clear differentiating organizational principle in society. But what evidence is there from mid-nineteenth century western European society, or any other, that peasants formed a passive and homogenous under-class?

At the same time that intellectuals such as Marx were interpreting historical events and the roles of peasant farmers in society, peasant farmers themselves were also writing about and interpreting similar historical events and seeing the world in very different ways. One such person was William Cobbett who is considered England’s first rural peasant political spokesman (Cobbett [1853] 1944; Keith 1975). Son of a peasant, Cobbett was born in 1763 at Farnham in Surrey, England. He was forced to flee England in 1792 when he tried to expose his army superiors who had been stealing the men’s pay. Returning to England in 1800, he became a journalist and peasant politician. As a peasant spokesman, Cobbett made his way into elite London society. In 1832 the Reform Bill had just passed in London and it was the opinion of London political elites that they were the ones responsible for the Bill’s passing because peasants were “ignorant creatures; that… have no sentiment at all relative to political rights and liberties; that, like cattle, they know when they are hungry, and that their rising and committing acts of violence, resemble, in point of motive, the feelings which animate cows, or oxen, when they break out of a barren field and go into a rich pasture” ([1853] 1944: 245-246). By way of contrast Cobbett held that England’s farmers had greater agency in the passing of the Reform Bill than all of the politicians combined. He argued that the politicians were simply unable to see and acknowledge the farmers’ world from their elite vantage point. Both peasants and elites played roles and made active and critical contributions in British society (Helsinger 1997). Cobbett acknowledged the existence of both local and dominant social systems in British society and illustrated how the local practices of peasants could elude and even cause changes in dominant politics, economics, and society.

By examining British society through a different lens, Cobbett was able to forge an alternative model of British social complexity. He was able to illustrate that elites, by homogenizing other classes, had impoverished their abilities to understand those groups. From the bottom-up, the world looked quite different. By identifying how people in the lower rungs of society were quite diverse, capable of innovation, active, and able to manipulate power relations to their advantage, Cobbett blurs the distinction between the abilities of elites and peasant farmers and leads us to loosen the determinacy of the hold of top-down hierarchical relations in defining and governing what people do in society.

But Marx and Cobbett were dealing with capitalist mid-nineteenth century Western Europe not the ancient Maya. Anthony Giddens is one social theorist who has tried to work through these ideas and apply them to non-capitalist complex societies such as the ancient Maya, Inca, Egyptians, or Sumerians, etc. Giddens argues that capitalist and non-capitalist societies differ in terms of the means of elite power. In non-capitalist societies, according to Giddens, elite power lies in the control of the social rather than the economic world. As such
he argues that farmers “do not ‘need’ the dominant class to carry on the process of production” (1981: 130). This is because farmers are natural beings whose abilities are linked to their natural access to land. While in capitalist societies there is a close link between farmers and elites in terms of production, in non-capitalist societies peasants do not need anything from elites. Thus Giddens’ peasant farmers are a conservative group quite separate and unaware of the political-economic strategies manipulated by elites. Although Giddens is trying to build a model of how non-capitalist societies are organized differently from capitalist societies, in terms of farmers in his model, they are not that different from Marx’s capitalist farmers in that they lack agency and thus cede the ability to organize and modify the world to the elites in their society.

What may be most interesting to Mayanists about Giddens’ theories of farmers in non-capitalist societies is that one of the primary data sets that he drew upon to build his model was the work of a Maya archaeologist. When Giddens was writing A Contemporary Critique of Historical Materialism in 1981, he developed his model based on the well known work The Ancient Maya by Sylvanus Morley. The particular version of Morley that Giddens read was the 1947 version. In 1947 Maya archaeology was in its nascent and studies of complexity and particularly the role of farmers in Maya society were underdeveloped. Thus it is not surprising that Giddens’ characterization of non-capitalist farmers, which was based on outdated 1947 Maya archaeological data – invoked a traditional, elite-centric set of assumptions about the roles and capabilities of farmers in the past. It is clear from the example of Giddens’ use of archaeological data that we need to re-asses current social theoretical models. I will now turn to explore how current archaeological research from the Chan site in Belize is presenting us with a different model of the complexity of farming in ancient Maya society.

The Chan Site

Chan is an ancient Maya farming community with a long 2000 year occupation history from circa 1000/800 BC to AD 1150/1200 which is located in west central Belize not far from the modern community of San Jose Soccutz (Figure 1; Kosakowsky 2008; Robin 2008; Robin et al. 2004, 2005). The Chan site is located in an interfluvial area of undulating limestone uplands between the Mopan and Macal branches of the Belize River. Across Chan’s hilly terrain its ancient inhabitants founded and constructed a small ceremonial center and agrarian community that developed a productive terraced agricultural landscape. The scale of the Chan community provides us a window into the lives of people who lived in what would have been a typical Maya agrarian community. The deep chronology of the Chan site provides us a means to examine diachronically how these lives were embedded in and significant for the construction of broader Maya society.

The Belize River Valley area was a peripheral area throughout much of Maya history and not unified under the rule of one capital city during most of Chan’s history. During the Preclassic, Early Classic, and Early Late Classic periods numerous mid-sized centers jockeyed for power across the region. Amongst these centers were Cahal Pech, Actuncan, Buenavista del Cayo, Las Ruinas de Arenal, Blackman Eddy, and Nohock Ek. We chose the Chan site for study because of the wealth of previous and current research by our colleagues in the Belize River Valley area at the larger Maya centers which would have been part of Chan’s local and regional interaction sphere. This work has and is documenting the founding, rises, and declines of these larger centers whose political fluctuations would have punctuated Chan’s long-term history. Chan’s residents presumably interacted with residents at numerous of these centers through time (e.g., Awe 1992; Garber 2003; LeCount et al. 2004; Taschek and Ball 1992; Yaeger 2008). As documented by the joint work of the Xunatunich Archaeological Project, directed by Richard Levenathal, and the Xunantunich Settlement Survey, directed by Wendy Ashmore, it was not until the Late Late Classic period, around AD 600 to 800 or 830, that this area was unified under the polity capital of Xunantunich (Leventhal and Ashmore 2003). This regional history provides us with a very interesting case
study to explore farming community-center relationships as across its history Chan would have interacted with numerous Belize River Valley centers – and as well, the late intrusion of the polity capital of Xunantunich into the long lived history of Chan provides us a window to explore both how a farming community might be transformed through its interaction with a polity capital – but also the less explored corollary – how a rising polity capital may have had to accommodate to pre-existing contexts in farming communities.

**Settlement and Agriculture**

Between 2002 and 2003 the Chan settlement survey conducted a full-coverage survey of 3.2 sq km at the Chan site. The Chan survey identified 275 mound groups, but by far the most expansive construction at Chan was agricultural terraces. At Chan farmers’ constructed over 1000 hill slope agricultural terraces. The construction of these terraces was more substantial than the construction of buildings at Chan. Conventional anthropological theory – largely drawn from the influential works of Ester Boserup (1965) would posit that the technologically advanced and time consuming technique of terrace agricultural construction at Chan developed in the Late Classic period was due to increasing elite tribute demands and/or rising population pressure. But ideas such as these have largely been developed in the absence of excavation data.

Andrew Wyatt’s dissertation research excavated terraces at Chan and identified that terrace construction was undertaken at the household and household group level, by farmers who had detailed local understandings of land and drainage systems necessary to develop quite technologically complex agriculture and water management systems. Also significantly his detailed excavations were able to document that certain of Chan’s terraces were built up in numerous construction phases, some dating back to the Preclassic period (Wyatt 2006, 2008).

As Wyatt notes, contrary to conventional anthropological wisdom – the Chan data now shows that farmers began constructing terraces prior to the Late Classic period based on detailed local knowledge of land and water. They employed local knowledge to enhance soil management and increase yields to intensify their land through terrace agriculture. Thus Chan’s farmers provide an apt contrast to classical notions of farmers as backwards, unsophisticated and unchanging people – Chan’s farmers were certainly the innovators of complex technologies in the agricultural realm that lead to the development of Maya civilization.

**Community Scale Craft Production**

Nick Hearth’s dissertation work on lithic production at Chan and Caleb Kestle’s MA thesis work on limestone quarrying at Chan have identified two types of community-scale productive strategies that begin at Chan in the Late Classic period (Hearth 2008; Kestle 2008). A plausible interpretation for why this economic investment in community-scale craft production begins at Chan in the Late Classic period is perhaps that community members were trying to buffer their community against the vagaries of external economic fluctuations and pressures as Chan becomes more and more a part of a regional interaction sphere during the period of the florescence of Xunantunich. Thus Chan residents were far from unaware and unable to take part in what was going on in broader Maya society; they were active participants who strategized to take advantage of and buffer themselves against changing political economic contexts.

**Community Ritual**

Chan’s central group was the center of community ritual across the 2000 year history of the Chan site (Robin et al. 2008). The burials and caches that constitute much of these ritual practices and ancestor veneration are discussed in detail by Anna Novotny and Laura Kosakowsky in this volume.

For Marx complex religious ideas were part of the superstructure of society. The creation of ideology was the domain of elites – who had the time and intellectual ability to devote to such complex schemes. But what the 2000 year history of ritual practices at Chan show us is that complex religious ideas were developed by farmers as they constructed a popular religion. A popular religion that only
later on gets co-opted by Maya nobility into state-level religious practices. When similar religious ideas are identified at small and large sites, archaeologists tend to argue that the small site is mimicking or emulating the ideas developed at the large site. But what the historical depth of the Chan site shows us is that many of the ideas that later in time became part of a Maya noble ideology, were in fact initially conceived by farmers in farming communities.

**Conclusion**

In light of the limitations in much of contemporary social theory on the nature of complexity and the relationship between elites and commoners the 2000 year history of a small Maya site, a typical farming community, is an instructive history indeed. Far from western notions that the city, its elites, and its intellectual institutions are the bastions of learning, innovation, and technological and spiritual advancement in society, Chan’s farmers are instructive of the complexity, intellectual breadth, and innovative nature of life in a farming community.

Far from a backwards, unsophisticated, and unchanging peasantry, Chan’s farmers and other inhabitants were truly innovative. Farmers drew upon local knowledge of land and water to enhance soil management and increase yields, developing an intensified agricultural landscape that has long been ascribed to the hands of elites (through rising tribute demands) or external objective structures (such as population increase). But agriculture was not the only innovation of this farming community. Farmers and other craft producers strategized to both engage and buffer themselves from expanding external economic opportunities and pressures. In the area of religious practices – long given a privileged role in elite society and elite innovation – the 2000 year history of Chan shows us that complex ideational knowledge was initially developed in the homes of farmers and then only later co-opted by society’s elites.

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Yaeger, J.  
THE JUNGLE KINGS OF MINANHA: CONSTELLATIONS OF AUTHORITY AND THE ANCIENT MAYA SOCIO-POLITICAL LANDSCAPE

Gyles Iannone

Mayanists have long debated the nature of ancient Maya socio-political organization. This chapter introduces this debate, with particular attention being paid to the opposing city-state and territorial/regional state models. The paper then turns to a discussion of the data generated during eleven years of archaeological investigations at the ancient Maya center of Minanha. It will be argued that this data confirms the viability of the city-state model. Closing remarks will focus more specifically on the significance of Minanha’s unique geo-political position, with specific reference to a comparative data set from India. This comparative material emphasizes the dynamic qualities of small city-states located in remote, frontier zones, and highlights the key roles that such centers play in perpetuating a socio-political landscape comprised of shifting “constellations” of authority, affiliation, and alliance.

Introduction

When John Morris and I first discussed the possibility of starting a research project at Minanha, back in 1997, the potential for investigating ancient Maya socio-political organization was first and foremost in my mind. Although we had yet to relocate the site, and were therefore unaware of its actual size and architectural complexity, Minanha’s spatial position – roughly equidistant between the great Classic period rivals of Naranjo and Caracol – suggested from the outset that it would be the ideal location to tackle such a challenging topic (Figure 1A). In preparation for the Minanha research I immersed myself in the literature on the subject of ancient Maya socio-political organization. I was immediately struck by two things. First, there had really been few concerted efforts to outline, in detail, the potential structural characteristics of ancient Maya states (but see D. Chase and A. Chase 1998; Culbert 1991a, 1991b; Marcus 1993). Second, those scholars that had attempted to do so had often arrived at vastly different conclusions, even when using the same data sets – such as Emblem Glyph distributions. Indeed, the literature on the subject contained models advocating for as many as 70 autonomous city-states (e.g., Mathews 1991:26-29; see also Stuart 1993:327), others which suggested that there were between four and eight regional states (e.g., Adams and Jones 1981; Barthel 1968a, 1968b; Culbert 1991b; Marcus 1973, 1976, 1983:461, 468), and still others that posited the existence of two “super-states” (Martin and Grube 1995).

Figure 1. (A) Vaca Plateau showing the location of Minanha and its proposed home territory; (B) rectified, isometric plan of the Minanha site core; (C) idealized territories of the various city-states of the Vaca Plateau, and the approximate limit of a Caracol hegemonic city-state.
Fortunately, over the past decade a growing consensus has begun to emerge amongst Mayanists (Grube 2000; Pyburn 1997; Webster 1997), and other scholars who study early state formations cross-culturally (Hansen 2000a, 2000b; Trigger 2003; Yoffee 2005), which suggests that ancient Maya socio-political formations were organized along the lines of city-states. The current city-state model differs from earlier versions in that it is broad in scope, and it therefore accommodates a certain amount of variability. In most instances it is held up as an “ideal” opposition to a more centralized (or unitary), and equally “ideal” territorial (or regional) state construct (Hansen 2000a, 2000b; Trigger 1993, 2003; Yoffee 2005; cf. Ferguson 1999:417-418). Although I will state up front that I do believe that the city-state framework is the best fit for the ancient Maya state, I also think that it is important to outline the key tenets of both the city-state and territorial state models at this point in the discussion so that when I present the Minanha case study you will be better able to evaluate my arguments. The primary points of divergence between these two models are summarized in Table 1, which combines insights derived from the seminal works of Hansen (2000a, 2000b), Trigger (1993, 2003), and Yoffee (2005).

Minanha: A Case Study

The ancient Maya center of Minanha is located in the rugged and comparatively remote north Vaca Plateau of west-central Belize (see Figure 1A). This area was originally settled in the late Middle Preclassic period (600-400 B.C.), and there appears to have been a gradual growth in overall population through the Terminal Preclassic (100-250 A.D.), Early Classic (250-550 A.D.), and Middle Classic (550-675 A.D.) periods. During the Late Classic (675-810 A.D.) period Minanha’s population exploded, and the center itself rapidly emerged as home to a fully functional royal court. This transformation is signified by the construction of a large agglomeration of public and more restricted access plazas, courtyards, and patios atop the highest hill in the area (Figure 1B). This epicenter contains all of the features expected of a fully functional royal court complex: including numerous temples and range structures, an eastern shrine complex, a ballcourt, eight stelae monuments, a royal residential acropolis with a throne room, and an intra-site causeway with a termini shrine. Minanha’s support population is concentrated in pockets in association with an extensive terrace agricultural system.

Eleven years of mapping and excavations in the Minanha epicenter and immediate periphery have generated a wide range of data that can be used to assess the two opposing models for ancient Maya socio-political organization. Most of this data is in full accord with the city-state model. For one, it appears that ideology and ritual were much more important integrative factors at Minanha than were the control of either administrative networks or the economy. The efforts put into constructing the various ideologically and ritually oriented components that dominate the epicenter support this postulation. It is also leant credence by the fact that one of the few wide-ranging integrative practices recognized at Minanha is ritual in orientation – namely the use of slate capstones in grave contexts (Iannone 2005; Schwake 2002). This practice has been documented in every large residential courtyard excavated at Minanha thus far, and it appears to have roots at the site going back into the Early Classic period.

In contrast, there is comparatively limited evidence for administratively oriented buildings and activities at Minanha (cf. Seibert 2002 ). In addition, there is no evidence for any specialized craft production. Detailed analysis of the obsidian and groundstone industries also indicates that there are no differences in terms of access to these raw materials, regardless of where one was situated in the socio-political hierarchy (Menzies 2003; Turuk 2007). It also appears that everyone in the greater Minanha community had unfettered access to the most popular serving vessel type, an ash-tempered red-ware dish with hollow oven feet. Even the extensive terrace system is ambiguous when it comes to the question of centralized control (Pollock 2007). Such systems have been produced by small-holders with little involvement from central authorities elsewhere in the world. Members of the Minanha project, however, favor a more heterarchical model which is based on the organizational and productive capacities of small-holders who are
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<tr>
<th></th>
<th>CITY-STATES</th>
<th>TERRITORIAL STATES</th>
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<tbody>
<tr>
<td><strong>State Form</strong></td>
<td>Micro-State</td>
<td>Macro-State</td>
</tr>
<tr>
<td><strong>Territory Size</strong></td>
<td>Small; 10 km - 30 km in radius</td>
<td>Large</td>
</tr>
<tr>
<td><strong># of Urbans Centers</strong></td>
<td>Normally one</td>
<td>Multiple</td>
</tr>
<tr>
<td><strong>#Capitals</strong></td>
<td>Normally densely settled; includes the ruler, key members of the royal court, craft specialists, and farmers</td>
<td>Normally moderate to sparsely settled; mainly the ruler, key members of the royal court, attached craft specialists, and laborers required to maintain the court</td>
</tr>
<tr>
<td><strong>Capital Settlement</strong></td>
<td>Normally densely settled; includes the ruler, key members of the royal court, craft specialists, and farmers</td>
<td>Normally densely settled; includes the ruler, key members of the royal court, craft specialists, and farmers</td>
</tr>
<tr>
<td><strong>Population</strong></td>
<td>1,000 to 100,000; most inhabit the capital</td>
<td>Large populations; most in the hinterlands, normally 50,000 or less in the capital</td>
</tr>
<tr>
<td><strong>Zone of Defense</strong></td>
<td>Most defense takes place at the city-walls</td>
<td>Most defense takes place at the territorial boundary</td>
</tr>
<tr>
<td><strong>Territorial Demarcation</strong></td>
<td>Normally poorly demarcated; natural features are key</td>
<td>Normally well demarcated; armed garrisons and walls signify the territorial boundary</td>
</tr>
<tr>
<td><strong>Nature of Authoritative Control</strong></td>
<td>Rulers have limited hegemonic control over the political and economic spheres; ideology, ritual, and political acumen are key to establishing and maintaining authority (political power is decentralized and heterarchical in nature; administrative bureaucracies are poorly developed)</td>
<td>Rulers have substantial bureaucratic control over the economic and political spheres; ideology, ritual, administration, and the threat of force are key to establishing and maintaining authority (political power is centralized and hierarchical in nature; administrative bureaucracies are well developed)</td>
</tr>
<tr>
<td><strong>Control of the Hinterlands</strong></td>
<td>Local leaders are maintained as long as tax and/or tribute demands are met</td>
<td>Non-local governors and the military administer and enforce tax and/tribute demands</td>
</tr>
<tr>
<td><strong>Economy</strong></td>
<td>Rulers have limited, indirect control over a fluid, decentralized, market economy; domestic and lesser order status goods are widely distributed – other components of the political economy may be more tightly controlled; the economy is outward looking and regional, or even pan-regional, in scope, linking numerous city-states; the broader economy is rarely affected by the frequent political conflicts between city-states</td>
<td>Rulers have extensive, direct control over a two-tiered, centralized economy; the elite political economy is based on the control of exotic raw materials and the productive capabilities of attached craft specialists; this elite economy articulates with a commoner market economy principally through the appropriation of agricultural surpluses; the economies of territorial states are inward looking, and goods moving in and out of the state are usually closely monitored, and even taxed</td>
</tr>
<tr>
<td><strong>Regional Settlement</strong></td>
<td>Regions are comprised of a myriad of autonomous, self-governing city-states of varying size, with differing degrees of political power; these city-states are often in conflict with each other; the city-state capitals exhibit a significant level of redundancy in form and function (i.e., they are both political and administrative units); settlement diversity begins below the level of the capital, on the sub-regional scale</td>
<td>Regions are controlled by a single state, and there is generally only one capital (i.e., both a political and administrative unit); there are also a myriad of lesser order, dependent urban centers that differ substantially in terms of their forms and primary functions (i.e., they are primarily administrative units with some form of specialized productive capacity); settlement diversity begins below the level of the capital, on the regional scale</td>
</tr>
<tr>
<td><strong>Larger Political Units</strong></td>
<td>More powerful city-states may amalgamate other city-states into their political network, creating hegemonic leagues (short-lived), hegemonic federations (moderate term of existence), or a hegemonic empire; the overlord of the hegemonic city-state demands tribute from the other city-states, but only maintains loose, hegemonic control over them (i.e., they remain relatively autonomous, and self-governing)</td>
<td>More powerful territorial states may amalgamate other states into their political network, creating a territorial empire; although the overlord may strive to establish full bureaucratic control over the other states within their empire, this is often difficult, and expensive to do, and for these reasons control over the empire may have both hegemonic and bureaucratic qualities.</td>
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Table 1. A comparison of the characteristics of city-states and territorial states (see Hansen 2000a, 2000b; Trigger 1993, 2003; Yoffee 2005).
in turn influenced by increasing demands for surplus on the part of their rulers (Macrae et al. 2008). In summary, the emphasis on ideology and ritual as integrative mechanisms, the underdeveloped administrative network, and the fluid, decentralized economy, all meet the expectations of the city-state, rather than the territorial state model.

Corroborating evidence for the city-state interpretation derives from the compositional properties of the Minanha epicenter, the site plan of which shares many characteristics with the great centers of Naranjo and Caracol (Mosher 2005). Indeed, it has the same basic inventory of buildings and associated features – albeit on a much reduced scale. More intriguing is the fact that Minanha’s primary eastern shrine complex precisely emulates its counterparts at both Caracol and Calakmul, particularly with respect to the placement and style of the various stelae monuments associated with the principal building components (Iannone 2005). Once again, it is telling that this emulation is associated with a key ritual complex. In the end, the redundancy in form and function displayed by the Minanha site plan – something which is also evident at the other “urban” centers scattered across the Vaca Plateau – is clearly a trait that is characteristic of city-states, not territorial states. Equally telling is that this data set confirms that in the Vaca Plateau settlement diversity begins below the level of the various urban centers, on the sub-regional scale – within the range of minor centers. This is another expectation of the city-state model. On the contrary, the territorial state model implies that settlement diversity should begin on the regional scale, immediately below the territorial capital – which in this case would be Caracol.

In contrast to the emulation discussed above, two areas of divergence are also worth mentioning. For one, Minanha’s use of slate in ritual contexts is much more pronounced than has been documented at Caracol. Equally important is the fact that our excavations at Minanha have yet to produce a single sherd from one of the “face pots” so commonly found at (D. Chase and A. Chase 1998). Considered in unison, these data suggest that, although they often emulated larger centers as a means of cultivating their own socio-political standing (see above), smaller kingdoms like Minanha were also able to cultivate their own unique expressions of cultural identity. This is what one might expect in a landscape of city-states. It is less likely to occur in a situation where a single territorial state dominates most of a region’s most important material cultural expressions.

Finally, an additional line of support for the city-state model derives from the fact that there is no strong evidence for a well-defined territorial frontier that would have encircled the various Vaca Plateau centers. Specifically, beyond its extensive causeway system – which I suspect is more indicative of a hegemonic city-state with increasing centralizing tendencies – there is no evidence for the demarcation of frontiers with garrisons or walls, and thus no unambiguous proof for the existence of a large, territorial state focused on Caracol.

Considering the various data sets discussed above, I propose here that Minanha was the capital of a small city-state with a territory size of roughly 7 km in radius, the edges of which were likely defined by significant natural features to the north and east – the edge of the Vaca Plateau and the Macal River respectively – with more ephemeral frontiers existing on the west and south (Figure 1A). The Minanah city-state was, at various times, undoubtedly part of a broader hegemonic city-state centered on Caracol. Nevertheless, Minanha’s location roughly 25 km from Caracol – a distance which approximates the territorial frontiers of the largest city-states documented cross-culturally (Hansen 2000a, 2000b) – does imply that its rulers likely maintained a significant level of autonomy; even when they were interacting with their Caracol overlords.

In summary, it is my belief that the city-state model is the most effective construct when it comes to accounting for what we think we know about Minanha. It also appears to have the greatest explanatory potential when it comes to characterizing the relationships between states of different sizes and varying degrees of political power elsewhere in the ancient Maya world. Nevertheless, a number of Mayanists have underscored the fact that it is not enough to build models that capture the structural qualities of
Gyles Iannone

ancient Maya states. We also have to infuse our interpretations with a dynamic quality (Demarest 1992:139-141, 1996:821, 823; Hammond 1991:256; Haviland 1997; Iannone 2002; Marcus 1992, 1993, 1998, 2003:103-104; Sharer 1991:194-198). In other words, we need to breathe some life into our characterizations of past socio-political interaction. In light of this, I wish to conclude this chapter by presenting a model that I not only feel is compatible with the city-state construct, but which also has greater potential for allowing us to better convey the dynamic qualities of past socio-political interaction.

Great Kings, Little Kings, and Jungle Kings in Early India

Burkhard Schnepel (2002, 2005) has recently outlined a dynamic model for the kingdoms of pre-colonial India that is based on the concepts of great kings, little kings, and jungle kings. To quote Schnepel (2002:82-83): “A king is (or becomes) great less because [they are] the lord of a clearly marked and rigidly bound territory within which other royal persons subject to [them] possess similarly bound properties or sovereign areas; rather, [they are] great kings because [they] command the distribution of land, offices, titles, hereditary relationships and other gifts which symbolize and constitute royal authority. In this way, [they] allow other persons to partake of [their] ‘universal’ royal authority and bind them into a system of hierarchical solidarity, a system which also involves conflictual negotiations” (see also Dirks 1987:65).

In contrast, Berkemer (1993:13) defines a little kingdom as:

“A political system whose ruler can regard [themselves] as independent as regards internal politics – for example, maintaining [their] own army, collecting taxes, receiving tribute from smaller kings and chiefs, and bestowing titles on them – and who, in addition, pursues an independent ritual politics within [their] own territory, but who at the same time must recognize a politically, ritually and militarily superior overlord over [them], whose authority [they] share and whom [they] need to legitimize [their] own internal rule...(see also Dirks 1987:95-96).”

Schnepel (2002:82) underscores that: “The identification of a kingdom or king as little is, therefore, based not on absolute, clearly measurable criteria, but rather on relational, abstract, political-ritual criteria, which can change rapidly historically and are often subject to contradictory interpretations by those involved...In brief, a king is only little in terms of a changeable, tense relationship with another king, who, in this very same relationship, counts as great.” To complicate matters further, one must keep in mind that “A great king may, obviously, himself be little in another relationship, just as the king standing to him in the relationship of little king may count as a great in relation to other kings” (Schnepel 2002:82).

The final component of this tripartite model is the “jungle kingdom,” a type of kingdom that I wish to draw special attention to because I believe that it provides a particularly apt model for Minanha. According to Schnepel (2002:13), a jungle kingdom is a special category of little kingdom that is defined by two primary criteria: 1) these kingdoms are located in comparatively inaccessible forested and/or hilly sub-regions that are often considered “impenetrable,” and “dangerous,” and that can only be accessed with great difficulty from the centers of power of the great kings, as well as the other little kings; and, 2) the populations of the jungle kingdoms include a high percentage of individuals of tribal origin. Jungle kings are of interest precisely because of these two characteristics. As Schnepel (2002:131) underscores: “It is clear that these jungle kings deserve to be attributed more than just a passive role or autonomy realized only in isolation: for the great kings and even for the claims of imperial power, they represented constant irritation and a permanent threat”

All things considered, the great king/little king/jungle king framework is effective because it enhances our ability to capture the dynamic character of socio-political interaction in pre-colonial India. Two additional concepts associated with this analytical framework serve to further augment our capacity to not only conceptualize, but also discuss socio-political dynamics. The first is the Perso-Arabic
The Jungle Kings of Minanha

concept of *fitna* which, according to Schnepel (2002:49), refers to “a process marked by the continual entering into, as well as dissolving or renewing of, alliances, loyalties, dependencies, rivalries and enmities” (see also Wink 1986). As Schnepel (2002:49) underscores: “While from the standpoint of the notion of universal rule, *fitna* represents a subversive power which is destructive of order, in the domain of actual political action, it represents that positive power which maintains a fragile but extremely dynamic and flexible system of mutually balancing forces and counter-forces. It is *fitna* that lends the political system its own vitality and expansive force.”

The final concept connected with this dynamic model emanates from what Schnepel (2002:131) refers to as “civilizing the wilderness.” Given their comparatively peripheral, and inaccessible location vis à vis the centers of power, the jungle kings had a significant advantage when it came to resisting the demands of the great kings. However, to quote Schnepel (2002:135) at length: “Civilizing’ the wilderness and its inhabitants was possible and, from the point of view of any great king, most desirable on the grounds of economics and military strategy. Success in taking such measures depended, amongst other things, on the great king’s ever-changing capacity to control little-kingly powers. In one period of shifting power relations, the central power might be strong enough to carry out extensive ‘jungle-cutting,’ while in another period local potentates who had become strong again might deliberately let estates lie fallow and become overgrown with protective bushes, bamboos and forest. The mere existence of a jungle and the size it reached was, therefore, not determined by the forces of nature alone. Although it may appear a paradox at first sight, to a certain extent the jungle was a product of politics, as its size was the complex result of competing claims to power.”

Discussion

Returning to my consideration of Minanha, I find some benefit in thinking about a center like Caracol as having held the status of great kingdom for much of the Classic period, albeit one which, given the relational aspects of the model discussed above, might have also, at times, found itself in the position of little kingdom in its specific relationships with the more powerful great kings based at Tikal and Calakmul. In its great kingdom relationships Caracol likely had hegemonic control over a realm encompassing much of the Vaca Plateau and its adjacent regions (Figure 1C). This is implied by Caracol’s greater size and complexity compared to other centers in the region, and the relative homogeneity in ritual practices and material culture inventories within this socio-political landscape. At the same time, it is important to keep in mind that the cross-cultural studies of city-state suggest that Caracol’s realm of effective hegemonic control likely never exceeded 30 km in radius. Within this realm there were various little kingdoms, such as Mountain Cow and La Rejolla. In contrast, Minanha, given its approximately 25 km distance from Caracol, and its comparatively rugged and inhospitable surroundings, appears to be a good candidate for a jungle kingdom – one that may have been established by a group of disaffected nobles during the 8th century (Iannone 2005). These nobles might have even derived from Caracol itself. The jungle kings of Minanha, like their Indian counterparts, likely enjoyed a significant level of socio-political autonomy in their interactions with the great kingdom of Caracol.

Did the rulers of Minanha and Caracol battle over the jungle in the same way as was discussed in the Indian example? This is hard to determine with any certainty, but anyone who as spent any time on a hot afternoon cutting their way through a section of dense waymil will probably attest to the potential effectiveness of the strategic use of secondary growth as a major component of a territorial defense system. In closing, I wish to once again underscore the dynamic character of the relationships between these various kings. Specifically, I would suggest that the Perso-Arabic concept of *fitna* is also likely applicable, if only in a general sense, to the Maya world. To reiterate, this concept underscores the positive power inherent in the “dissolving or renewing of, alliances, loyalties, dependencies, rivalries and enmities,” which are precisely the types of socio-political interactions that form the bulk of the ancient Maya
epigraphic record (e.g., Martin and Grube 1995, 2000).

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Inland Toledo District, Belize, is rich in Classic period archaeological sites. Among the most important Maya centers and cities are Pusilha, Uxbenka, Lubaantun, and Nim Li Punit. What has not been certain is whether these sites formed distinct political or economic units. A particular problem in answering this question has been chronology. Until recently, it has not been clear if these sites were all contemporary, and if so, when they were occupied. Recent archaeological and epigraphic research at Pusilha and Uxbenka demonstrate that these sites were at least partially contemporary with Nim Li Punit and Lubaantun. All four sites were occupied during the 8th century A.D., that is, during the second half of the Late Classic period. Our paper reviews the chronology of inland Toledo District and concludes that these four sites formed distinct polities.

Introduction

One of the enduring questions of Maya archaeology concerns the political and economic relationships of the Classic Maya. Specifically, archaeologists and epigraphers have long argued about integration and political structure at the regional level. Views on the existence of regional Maya states have not approached a steady equilibrium but have tended to swing like a pendulum between competing polar opposites.

In the late 19th century, Lewis Henry Morgan (1877) argued that the Maya had no state-level organization and lived at the level of "lower barbarism." Reacting strongly against this view, Sylvanus Morley (1920) proposed that the Maya were organized as two temporally distinct "empires," dominated during the Classic period by Tikal and in the Early Postclassic by Chichen Itza. Somewhat later, J. Eric S. Thompson (1954) depicted the Maya as living in small city states, like the ancient Greeks. Thompson and many followers, however, strongly argued that Maya sites - even the largest ones - were not cities at all but were empty ceremonial centers. This view of the mid-20th-century, that the Maya had city states without urban cities, was inconsistent with any anthropologically known example of state or empire, and represented a return of a sort to Morgan's position. But settlement studies conducted in the late 1950s through 1970s at Dzibilchaltun, Tikal, Seibal, and Quirigua all demonstrated without a doubt that the Classic Maya had cities, urban society, and therefore some form of state-level political organization (Ashmore 2007; Puleston 1983; Stuart et al. 1979; Tourtellot 1988).

Spurred on by Heinrich Berlin's (1958) discovery of the significance of emblem glyphs, epigraphers of the 1970s through 1990s engaged in vigorous debates concerning the size and nature of Maya states. Joyce Marcus (1976) used a distributional approach to emblem glyphs and was the first to propose the existence of competing regional states. The larger of these regional states - centered at cities like Tikal, Calakmul, Copan, and Palenque - encompassed secondary polities or provinces (with their own emblem glyphs), tertiary centers (without emblem glyphs), and fourth-level sites (lacking hieroglyphic texts). Richard E.W. Adams and Richard Jones (1981) used complementary architectural data, particularly counts of plaza groups, to create a model of regional states somewhat like Marcus' formulations.

But pendulums move most rapidly when in the middle of their swing, and these intermediate notions of regional states were quickly challenged by epigraphers. Peter Mathews (1991) argued that any site — no matter how small — that had an emblem glyph and was governed by an ajaw, was the capital of an independent polity. The 1980s and early 1990s, therefore, saw appeals to various political models that argued for some form of segmentary political structure (e.g., Ball and Taschek 1991; Demarest 1992; Laporte 1996; Ringle and Bey 1992). More recently, the work of Simon Martin and Nikolai Grube (1995) returned Maya political studies to a position between Marcus and Morley. Although there never was a unified
Political Organization and Interaction in Southern Belize

Figure 1. The Southern Belize Region, showing the location of four sites discussed in the text.

Maya “empire,” Martin and Grube argue that much of Classic Maya political history can be understood in terms of a centuries-long conflict between two large “super states” centered at Tikal and Calakmul. To them, smaller polities were hegemonomically bound through alliances to either of these two states. Both larger and smaller Maya cities had *ajawob*, but some *ajawob* were much more equal than others.

Many scholars now suggest that Maya political organization differed greatly over time and space. There probably were as many kinds of Maya polities as there were polities. The problem in evaluating competing models regarding political organization above the level of the individual polity — even if we consider just one particular time and one specific zone within the Maya area—is that scholars seldom have comparative archaeological data on the regional level. Without comparative data from different sites in the same region, it is difficult to test competing models of political and economic integration. If, as archaeologists, we are going to understand the political and economic organization of the Classic Maya above the level of the particular site or small polity, we will need to conduct more regional and comparative projects.

Southern Belize Region

One laboratory ideally suited for such a regional study is the “Southern Belize Region,” defined by Richard Leventhal (Figure 1). The Southern Belize Region encompasses the foothill sites of Lubaantun, Pusilhá, Nim Li Punit, and Uxbenka within a rather small geographical area bounded by the rugged Maya Mountains to the north and west, and by the agriculturally limited coastal plains and swamps to the south and east. Another group of smaller and less well-known sites is located in the Maya Mountains, specifically in the Bladen Branch River and upper Columbia and Rio Grande drainages (Prufer 2005). Maya mountain sites, such as Muklebal Tzul and Ek Xux, are discussed only in passing in this paper.
Although there are strong ceramic similarities, it is not yet clear how these sites interacted with the large centers in the foothills.

The sites in the Southern Belize Region all share certain architectural and hieroglyphic traits (Leventhal 1990, 1992). First, vaulted architecture is absent and masonry superstructural walls are uncommon. Second, many large structures are integrated into natural topography. Free-standing pyramids are rare, but modified hills with facades are common. In the Maya Mountains, about half the public architecture was built on modified hills, and about half consists of free-standing platforms built in the alluvial valleys. Third, many of the ballcourts in the Southern Belize Region are enclosed by walls. Fourth, and quite unlike most of Belize with the exception of Caracol, hieroglyphic monuments are very common. Finally, as noted by Thompson (1928) and Morley (1938), the lunar series content of the southern Belize monuments is often erroneous or, better said, inconsistent with that recorded in other areas.

The sites of the Southern Belize Region, therefore, share much in common. But were they ever unified politically into a single regional state? If so, when? Did they participate in a unified economic system? Did their inhabitants all share a common identity and speak a single language? We will not lead you on and pretend that we have any sure answers. But our two archaeological projects, currently based at Pusilha and Uxbenka, are working on these questions.

Southern Belize Chronology

The first step towards analyzing the relationships between the major sites of the Southern Belize Region is to understand their relative chronologies. Clearly, if the sites were occupied during different periods, then they could not have interacted politically. Put another way, without detailed chronological data, we cannot say which of these four sites existed at any given time, let alone which or how many were political capitals in the region.

Further complicating matters is that there are different sorts of chronological data for each of the major Southern Belize sites. Before the beginnings of our current projects at Pusilha and Uxbenka, Lubaantun was the only site in the region with a detailed ceramic chronology (Hammond 1975). Although Lubaantun has three ballcourt markers, they lack absolute hieroglyphic dates. Unless new monuments are found at Lubaantun, we will never know much about its dynastic history. Before 2001, all that was known about the chronology of Pusilha was derived from the hieroglyphic monuments discussed by Thomas Gann (in Joyce et al. 1928) and Morley (1938). No one had studied the ceramics of Pusilha in considerable depth, although Hammond (1975) and Leventhal (n.d.) did examine materials from Pottery Cave and other parts of the site, and dated them to the Late Classic. Uxbenka has many monuments described by Leventhal (1990, 1992) and most recently by Wanyerka (2003). Unfortunately, only three (including one discovered in 2005) have readable hieroglyphic dates. Neither ceramic studies nor radiometric assays were carried out until the current project. Finally, Nim Li Punit has many hieroglyphic monuments dating to a very narrow time frame (Hammond et al. 1999; Leventhal 1992; MacLeod n.d.), but the ceramics of that site have not been analyzed in detail. It is possible that the occupation of Nim Li Punit was much longer than is implied by the royal texts. Finally, radiocarbon dates and preliminary analyses of ceramics from several Maya Mountain sites reveal that occupation was heaviest during the Late to Terminal Classic, and that at least one center, Ek Xux, was occupied in the Early Classic (Prufer 2005). In short, until quite recently, what we knew about the chronology of the major sites of the Southern Belize Region was drawn from different sorts of data, and hence could not easily be compared.

Despite the general lack of chronological precision, Norman Hammond (1975), Leventhal (1990), and others recognized two broad periods of occupation in the Southern Belize Region. Uxbenka and Pusilha were both thought to be earlier sites, dating to the Early Classic and Late Classic periods. In contrast, Nim Li Punit and Lubaantun were viewed as dating to the end of the Late Classic and into the Terminal Classic period. It was not at all clear if Uxbenka and Pusilha overlapped in time with Nim Li Punit or
Lubaantun. In fact, until the discovery of new monuments at Pusilhá, there seemed to be at least a four year gap between the end of hieroglyphic writing at Pusilhá and the beginning of monument erection at Nim Li Punit.

Hammond (1981), Leventhal (1990, n.d.), and Dunham et al. (1989) all have proposed that Nim Li Punit and Lubaantun were contemporary sites. Hammond (1981) argues that they functioned together as one capital. For him, Nim Li Punit was the dynastic focus of the region (with kingly monuments) while Lubaantun was the administrative center. The division of sacred and secular space was important to the Classic Maya, but the distance between Nim Li Punit and Lubaantun makes it difficult to view them as parts of the same site.

Here we will look at each of the four major sites in the Southern Belize Region. We will give special focus to Uxbenka and Pusilhá, the two sites where we have been working, but we will also summarize some of what is known about Nim Li Punit and Lubaantun, specifically in regard to chronology. Finally - and very tentatively - we will consider potential models for the political and economic organization of the Southern Belize Region from its initial occupation, which we now date to the 1st century A.D., until its near abandonment sometime in the Postclassic period.

Uxbenka

Uxbenka is located at the western end of a line of rolling foothills below the limestone eastern flank of the southern Maya Mountains (Figure 1), but distinctly separated from the interior of the mountains by lines of craggy karst. This same line of foothills is also home to Lubaantun, Nim Li Punit, Xnaheb, and a host of smaller sites, making it the most densely populated pre-Columbian landform in southern Belize. The underlying geology of the foothills is sedimentary, and produces calcareous and noncalcareous soils; the former of notable fertility. These soils derive primarily from decaying silt and mudstones, rapidly weathering sedimentary rocks dominated by silt-and-clay-sized particles. This contrasts strongly with Pusilhá and the Maya Mountains sites which occupy different landforms with different soils.

Around Pusilhá landforms are mostly limestone, with alluvial soils along the Machaca and Poite Rivers giving way to thinner limestone soils in the uplands. In the interior of the Maya Mountains, soils are derived from limestone and volcanic rocks eroding along the eastern flank of the central mountain divide.

Uxbenka is located in what is today an exceptionally rich agricultural region with easy access to coastal and inland trade routes. These trade routes probably existed in the past, as well. Although impermanent human presence in the region extends back further, we consider Uxbenka to have been the first settled community and the oldest known of the ancient Maya sites in southern Belize, with roots dating back to the Terminal Preclassic period (Prüfer et al. 2008). The earliest radiocarbon date we have for the site has its midpoint just before A.D. 100. Excavations suggest that Uxbenka began as a small farming village. About 200 years later, that is, during the Early Classic Period, it emerged as a regional center. Although the rise of Uxbenka was followed by the development of a number of other regional political centers sometime after A.D. 570, current data suggest that it may have been the only significant site in the Southern Belize Region for more than 250 years.

Carved stone monuments from Uxbenka tell us about both the development and complexity of the region and connections with larger polities outside of southern Belize. Epigraphic and iconographic analyses suggest that the majority of these monuments date to the Late Classic period, but several have been stylistically dated to the Early Classic and one, the recently discovered Stela 23, contains an Early Classic Initial Series date. Stela 15, the latest dated monument, was erected in A.D. 780. All of the known monuments are found in Group A, suggesting continuity over a period of at least four centuries.

Monuments from Uxbenka suggest a political relationship between southern Belize and Tikal during the latter part of the Early Classic, slightly before A.D. 400, and possible dynastic connections between the rulers of Uxbenka and a ruling dynasty of Tikal. Uxbenka Stela 11, a nearly complete monument, has been dated stylistically to within one k’atun...
of 8.18.0.0.0 (A.D. 396). It portrays and names Chak Tok’ Ich’aak I, who ruled Tikal until A.D. 378, and also mentions his grandmother, Lady Une’ B’ahlam (Prüfer et al. 2006; Wanyerka 2003). Unfortunately, this intriguing reference does not tell us the exact nature of the relationship between Tikal and Uxcan’bat. Did Tikal install a ruler of Uxcan’bat during the life of Chak Tok’ Ich’aak I? Did elements of this dynasty arrive in southern Belize after their ouster from Tikal? Or was Uxcan’bat merely emulating a powerful neighbor? At present, we can conclude only two things. First, that there was some sort of dynastic link between Uxcan’bat and Tikal. Second, because Uxcan’bat was settled long before Stela 11 was erected, the stela does not demonstrate that Tikal “founded” the site in the 4th century A.D.

In 2005 we recovered the oldest monument with a long count date known for southern Belize. Stela 23 is a fragment of an Early Classic monument that records an Initial Series date of 9.1.0.0.0 6 Ajaw 13 Yaxk’in (25 August, A.D. 455). The text begins with a representation of an Early Classic ajaw glyph. Recorded at A1 is the Tzolk’in day name 6 Ajaw. Immediately following the Tzolk’in is a truncated Lunar or Supplemental Series featuring the Lord of the Night. In this case G9 appears to have been recorded since the main sign appears to feature a half-darkened k’in sign. The text continues at A2 with an unusual form of what is likely Glyph D. According to Nikolai Grube, this example may be a “New Moon” reference being described in an unusual collocation suggesting that the moon entered the che’en or cave.

During the Late Classic period, Uxcan’bat grew significantly, indicating either rapid population growth, migration to the region, or both. We are currently investigating major construction at the site dating to this period. The decline of the site is poorly understood, but likely coincided with the rapid abandonment of most political centers in the region. There is little evidence of any Postclassic occupation of the site, but tantalizing evidence is emerging of Late Postclassic and historical use of the region as a farming community. Historic accounts suggest there may have been people living in the area at the time of the Spanish Conquest and colonization.

Pusilha

Pusilha is by far the largest ancient Maya city in southern Belize. It is also the second oldest permanently settled site known in the Southern Belize Region, founded about A.D. 570 by K’awil Chan K’inch’, whom Christian Prüfer has nickname Ruler A. During the ensuing 228 years, or until A.D. 798, the rulers of Pusilha erected at least 21 stelae, four zoomorphic altars, three carved ballcourt markers, the only known hieroglyphic stair in Belize, and 18 miscellaneous carved monuments (Braswell 2007a, 2007b; Braswell and Prüfer 2003; Braswell et al. 2004, 2005a, 2005b; Maguire et al. 2003; Prüfer 2002). With the exception of the zoomorphic altars, which have their closest comparisons at nearby Quirigua, the figural sides of the Pusilha monuments are all rendered in a clearly Peten style. Despite this, possible political and economic connections between Pusilha and both Copan and Quirigua have long been posited. In fact, our project began with the goal of understanding the relationship between Pusilha and Copan. Nonetheless, as we have reported at this conference for several years, we now see only the most tenuous of evidence for such connections. K’ak’ U Ti’ Chan, the second ruler of Pusilha, shares the same name as Ruler 11 of Copan and was at least partially contemporary with that ruler. But careful analyses of the inscriptions conducted by Prüfer (2002) reveal that the Pusilha king lived at least 20 years after his counterpart at Copan died, and that he was the first born son of none other than Pusilha Ruler A. The two lords of Copan and Pusilha shared a name, and perhaps even the king of Pusilha was named after his more powerful counterpart. But we can deduce little more than this. By the middle of the 7th century, there is no other hieroglyphic evidence of connections between Pusilha and either Copan or Quirigua.

Cassandra Bill’s ceramic analyses also found only the most tenuous of ties between Pusilha and the Copan/Quirigua region (Bill and Braswell 2005; Bill et al. 2005; Braswell et al. 2005a, 2005b, 2006, 2008). Moreover, those connections seem to have been limited to the
early 7th century. Instead, the vast majority of the pottery recovered from Pusilha can be assigned to types best known from the Peten. Pusilha is a Tepeu-sphere site, and ceramic ties are especially close to sites in the Pasion, Petexbatun, and Cancuen regions. For this reason, we speculate that the inhabitants of Pusilha may have come originally from the southwestern Peten.

One of the most curious ceramic discoveries is that comales or griddles are common at Pusilha (Bill and Braswell 2005; Braswell et al. 2008). This suggests that the inhabitants of the site made and ate tortillas. Comales are well known in the Maya highlands and parts of the southern lowlands, including the southwestern Peten and the Dolores Valley. But they are unknown or quite rare in the central Peten, and western and northern Belize. They are also missing from the inventory at both Uxbenka and Lubantun (see Hammond 1975), suggesting that within the Southern Belize Region, the populations of different sites maintained different foodways. Identity is often closely linked with food, so it is quite likely that the Classic period inhabitants of Toledo District, just like the modern ones, had distinct identities.

Grinding stones from Pusilha were made of a number of local and imported materials. Most interestingly, most of the imported manos and metates were made of late Tertiary and Quaternary volcanics from the eastern Guatemalan highlands (Braswell et al. 2008). Not one groundstone artifact made of much older volcanic materials from the Maya Mountains was recovered. This implies that the inhabitants of Pusilha did not engage in much trade with the small yet relatively nearby sites in the Maya Mountains, and that we might need to reconsider the temporal placement, economic importance, or regional affiliation of the latter.

The latest monument at Pusilha is the hieroglyphic stair found in Moho Plaza, whose calendar round date and style suggests a date of A.D. 798 (Braswell et al. 2005a, 2005b). Occupation of Pusilha continued for sometime after the cessation of monument carving (Braswell 2007a; Braswell et al. 2005b). Much of the surface debris in the Gateway Hill Acropolis and other important groups dates to the Terminal Classic period. Two important burials that we discovered in the acropolis date to sometime after about A.D. 830 and contain copies of Pabelon Model Carved vessels (Braswell and Gibbs 2006; Braswell et al. 2008). We have also found limited quantities of exotic Mexican obsidian which were imported to the Maya region principally during the 10th century (Braswell et al. 2008). Finally, at the platform we call the Bulldozed Mound, we recovered pottery dating to the Postclassic period (Bill and Braswell 2005; Bill et al. 2005; Braswell et al. 2005b). When we began work at Pusilha in 2001, the only evidence for the end of occupation was the latest monument known to Morley (1938), which was dedicated in A.D. 731. We now know from hieroglyphic texts and ceramics that dynastic rule continued until at least the end of the 8th century, and that permanent occupation continued, perhaps sporadically, until the Postclassic.

Nim Li Punit

We know much less about Nim Li Punit than we do about the other three major sites of the Southern Belize Region. After its discovery in the 1970s, the site was mapped and many monuments were drawn (e.g., Hammond et al. 1999; MacLeod n.d.). Leventhal (1990, 1992) conducted salvage excavations of a royal tomb at the site, as did members of the more recent MASDP development project. Most of what we know about the chronology of the site is derived from its hieroglyphic monuments, and general appraisals that it has both Late and Terminal Classic ceramics. In this regard, Nim Li Punit is like Uxbenka and Pusilha before the beginnings of our two projects.

There are 21 known stelae at Nim Li Punit (Hammond et al. 1999; Mexicon 1998; Wanyerka 2003). Stela 15 is the oldest of these monuments. It begins with what is probably a retrospective Initial Series date of A.D. 721. The monument itself seems to have been carved no earlier than A.D. 734, because an additional calendar round date probably refers to a day in that year (see Wanyerka 2003:62). The latest monument at Nim Li Punit with an Initial Series date is Stela 7, dedicated in A.D. 810. Stela 3 is a curious monument that seems to contain a backwards portion of a Short Count date, ajaw 7. This would date the k'atun of its dedication
to the 20-year period after 10.0.0.0.0, or A.D. 831. The stela is not in canonical Late Classic form (or even in normal northern Maya Short Count form), which suggests that it is a post-collapse monument. In fact, the carving on Stela 3 may have been added to an already existing blank stela. In sum, with the exception of Stela 3, all the carved monuments of Nim Li Punit were erected during a 76-year span from A.D. 734 to 810.

Wanyerka (2003) has analyzed the epigraphic content of the monuments. Based primarily on texts on Stelae 2, 15, and 21, Wanyerka posits a complex political relationship between Nim Li Punit and Copan/Quirigua. Specifically, there are three references to ek’ xukpi lords and the phrase ox witik appears once on these monuments. Although his interpretation is plausible, it is far from the only one. It is true that the leaf nosed bat in the main sign of Copan is read as xukpi. But we know of no references at Copan to “Black Xukpi” lords. In contrast, references to “Black Xukpi” lords are known from Quirigua stelae erected after the defeat of the 13th ruler of Copan by K’ak’ Tiliw in A.D. 738. The three references to ek’ xukpi in the Nim Li Punit corpus, therefore, probably do not refer to Copan but might refer to Quirigua. Nonetheless, it is also possible that this enigmatic title was used at more than one site.

The appearance of the phrase ox witik, which means ‘three roots,’ on Nim Li Punit Stela 21 may be a reference to something other than the toponym used at Copan. To begin with, the appearance of the phrase immediately after the verb ‘its scattering’ does not suggest that it is meant to be the place of the event or, indeed, any sort of indirect object. Ox witik could be part of the long name and title that follows (it is actually joined with k’awiil in the same glyph block) and form with it an intransitive phrase. That is, ox witik could be the beginning of the name or title of a ruler of Nim Li Punit. Alternatively, it could be the direct object of the transitive sentence: “the three roots were scattered by K’awiil Mo’ ... k’ul ajaw of Nim Li Punit.” Finally, as suggested by David Stuart, ox witik could refer to some aspect of the god K’awiil, and an item involved with the scattering event, perhaps even the substance, could have been called ox witik k’awiil.

Having relied at first on speculative interpretations of the hieroglyphic corpus of Pusilha (see Braswell et al. 2004), and having learned from further epigraphic research (Prager 2002) and archaeological investigation that there is very limited evidence of connections between Copan and that site, Braswell warns that interpretation of the Nim Li Punit stelae should be more cautious. It is important to remember that the Nim Li Punit stelae that may contain oblique references to Copan or Quirigua never — not even once — show the full emblem glyphs or name persons known from those sites. It is also important to remember that these monuments date to the period of A.D. 734 to A.D. 790, that is, during or after the decline of Copan as a regional power. The death of Waxaklajuun U’baah K’awiil, an important turning point in the history of Copan, was A.D. 738. This is just four years after what is probably the latest date mentioned on Nim Li Punit Stela 15 (which twice employs the ek’ xukpi title), it is the same year as the latest date on Stela 2 (which also mentions an ek’ xukpi lord), and is some 52 years before Stela 21 was erected. It would be much more reasonable to expect that Copan exerted distant political influence during the two hundred years before any of these monuments were erected than in the waning years of a declining dynasty. It is much more likely that references to ek xukpi’ at Nim Li Punit refer to Quirigua, and not Copan. Nevertheless, it is not known if this title was used exclusively by the lords of Quirigua. That is, the hypothesis that the texts of Nim Li Punit directly reference individuals from Quirigua is still unproven.

Beyond the 76-year span of its Late to Terminal Classic monuments, we know very little about the occupational history of Nim Li Punit. Until ceramics are formally analyzed, we will not know when the site was first settled, when it was abandoned, or what sort of economic ties Nim Li Punit had with other sites within or beyond the Southern Belize Region. Not even the hieroglyphic monuments of Nim Li Punit shed much light on political relations with its neighbors. Pusilha does not even once mention Nim Li Punit in its lengthy inscriptions, nor does Nim Li Punit mention Pusilha. Finally,
Uxbenka, as far as we know, mentions neither of the two sites.

**Lubaantun**

From an archaeological perspective, Lubaantun is by far the best-known site in the Southern Belize Region. Notable excavators at the site include Gann (1929), R. E. Merwin, Thomas A. Joyce (1926; Joyce et al. 1929), Thompson (1928), Hammond (1975), and members of the more recent MASDP project. As already mentioned, the only hieroglyphic texts are found on three undated ballcourt markers. The most important chronological work was conducted by Hammond (1975), who defined occupation of Lubaantun as dating to at least the period of A.D. 770-850, and perhaps as early as A.D. 700 to as late as A.D. 890. In ceramic terms, he viewed Lubaantun as a Tepeu II to Tepeu III site, and cautioned that he was not sure how early in Tepeu II times the site was first occupied.

At the time of Hammond’s work at Lubaantun, Nim Li Punit and Uxbenka had not yet been discovered. But his careful consideration of chronology addressed the possibility of temporal overlap with Pusilhá. It was a question he was then unable to answer, but we now can. The latest inscriptions at Pusilhá probably date to A.D. 798, well within even his narrowest chronology for Lubaantun. Moreover, like Lubaantun, Pusilhá has both Tepeu II and Tepeu III ceramics. Occupation of the two sites overlapped during at least the last quarter of the 8th century and the first half of the 9th century, and perhaps even for all of the occupational span of Lubaantun.

The ceramic report for Lubaantun still remains the best and most complete published source for southern Belize. It describes local types such as Puluacax Unslipped (also found at Pusilhá) and Turneffe Unslipped. Also present are Belize Red from the Belize Valley and what Hammond (1975) identifies as Altar Group Fine Orange ware. We wonder if, like most of the Fine Orange sherds from Pusilhá, many of these are imitations of Altar. But most ceramics from Lubaantun belong to the Tepeu ceramic sphere, and forms and decorative modes from the southern Peten are most common. Hammond does not describe any *comales*, so there are also important differences between the ceramic complexes of Pusilhá and Lubaantun.

**Chronology**

Thanks to recent archaeological work at Uxbenka and Pusilhá, and also to Wanyerka’s (2003) analysis of the inscriptions of Uxbenka and Nim Li Punit, we now have a better—albeit still incomplete—understanding of the chronology of the Southern Belize Region.

Uxbenka was the earliest major site in the region to be settled. For the entire Early Classic period, Uxbenka was the largest settlement in inland Toledo District. The smaller settlement of Ek Xux also flourished in the Maya Mountains at this time. During the late 4th century, there were real but poorly understood connections between Uxbenka and Tikal. We now understand that Uxbenka remained an important community and erected carved and dated monuments describing the actions of its rulers until at least A.D. 780, overlapping in time with both Nim Li Punit and Lubaantun.

In the late 6th century, at the dawn of the Late Classic period, Pusilha was settled, probably by immigrants from the southern—and perhaps even southwestern—Peten. We have speculated that push factors that may have led to their migration included the beginning of the endemic warfare characteristic of the southwestern Peten (Braswell et al. 2005a, 2005b). Pull factors for migration could have included plentiful agricultural land and control of an important east-west, riverine trade route linking the Caribbean to the Rio Pasion and Usumacinta. This would have made Pusilhá a competitor of the smaller site of Uxbenka, which had exploited an alternative east-west transportation corridor. During the early to mid-7th century, Pusilha had evanescent, weak, and poorly understood ties with Maya and non-Maya polities in western Honduras. By the late 7th century, however, evidence for these connections disappears entirely from the archaeological and epigraphic record.

Major occupation of Pusilhá, as documented by ceramics, continued well into the Terminal Classic period. This is demonstrated first by the appearance of Belize Red after about A.D. 780, and some 50 years later by the presence of imitation Fine Orange ware. But the
hieroglyphic corpus becomes spotty after A.D. 751 and mute after A.D. 798.

Without ceramic studies, it is difficult to know when Nim Li Punit was first occupied and when it was ultimately abandoned. But we know that the *ajawob* of that site erected monuments during the period A.D. 734 to 810, and that at least one more post-collapse monument was carved even later. During this brief period of monumental activity, which corresponds with the florescence of Quirigua, the rulers of Nim Li Punit may have had ties with lords from that polity.

Lubaantun lacks dated monuments, but the ceramic chronology of the site contains Tepeu II types well documented at both Uxbenka and Pusilhá, and Tepeu III types known from Pusilhá and perhaps also Uxbenka.

Radiocarbon and ceramic data from the Maya Mountains sites suggest that Ek Xux went into decline after A.D. 700. During the Late and Terminal Classic, Muklebal Tzul grew to be the largest site in that region.

Cobbling together all the chronological information, what is now quite clear from ceramics and epigraphic texts is that many of the major sites of the Southern Belize Region — Pusilhá, Uxbenka, Lubaantun, Xnaheb, Nim Li Punit and Muklebal Tzul — flourished during the 8th century A.D. An apparent break in monument erection at Pusilhá might be construed as indicating that the beginning of political decline at that site occurred shortly after A.D. 750, and it is quite possible that this was before the dramatic growth of Lubaantun, which probably took place near the end of the 8th century. Nonetheless, there is considerable temporal overlap of all the major sites in the Southern Belize Region.

**Conclusions**

What does all this tell us about political and economic integration in southern Belize? Except for the Early Classic, when Uxbenka was the only sizeable polity in the region, there were multiple sites that raised hieroglyphic monuments. At least three of the sites — Uxbenka, Pusilhá, and Nim Li Punit — had emblem glyphs, suggesting at least nominal independence of their rulers. Curiously, not one of the three sites with stelae — and there are more than sixty stelae among these centers — contains a clear mention of another site in the region. We have no hieroglyphic references to events at one of the four sites overseen by another, we have no record of royal marriage and female hypogamy, we have no record even of one of the major sites attacking and defeating another. Victories and defeats are recorded, but these seem to refer to other unknown and smaller centers, perhaps in Guatemala.

The four major sites in the foothills of the Southern Belize Region are all relatively close to each other and their populations were quite small. Pusilhá was the largest city, with a population perhaps as great as 6,000 or 7,000 individuals. The density of structures at Lubaantun is less than half that of Pusilhá, and the settlement area also is considerably smaller. The population of Lubaantun was certainly no more than about 3,000, and perhaps much less (see Hammond 1975). Nim Li Punit and Uxbenka were considerably smaller places.

Given the very low total population of the Southern Belize Region, resources would have been abundant, and arguments of scarcity as a factor leading to political expansion and incorporation seem unwarranted.

At present, the most likely political scenario for the Southern Belize Region is that during the 8th century, the major sites coexisted as small regional polities of the sort Joyce Marcus (1993) calls provinces and that Juan Pedro Laporte (1996) — who works just across the border from us in Guatemala — calls “unidades políticas segmentarias.” Although he uses the word “segmentary,” Laporte is careful not to enter the segmentary state debate. What he means is that very small territories, each probably only 500 to 1000 km² in area, were dominated by political centers ruled by *ajawob*. Through processes like fissioning or emulation, these *ajawob* maintained most or all the trappings of much more powerful rulers of sites like Naranjo, Tikal, and Copan. Nonetheless, they never could muster the manpower or force to incorporate, subjugate, or even hegemonically dominate their neighbors. For such politically weak *ajawob*, who could not project power at a distance, the carving of stelae and construction of elaborate acropolis (such as we see at Pusilhá and Lubaantun) might have held particular
importance as two of the few ways to express their status.

To speculate, the ancient polities of the Southern Belize Region seem to share much in common with many modern Maya villages across the southern lowlands. They were fiercely independent small polities, each with a strong local identity. The local polities may have had political, economic, or even historical ties with larger centers located outside of the Southern Belize Region, and perhaps tried to manipulate these ties to their own advantage. At present, however, we see relatively little evidence that the small and rather simply organized secondary states that characterize the Southern Belize Region were dominated by external powers in any meaningful way. We have even less data suggesting that the four polities were ever unified within a single cohesive unit. Perhaps this is a lesson that would help the modern nation state of Belize better understand the Q’eqchi’ and Mopan villages of western Toledo District.

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Political Organization and Interaction in Southern Belize


Negotiation through feasting, marriage and trade alliances were important ways the ruling Maya established, maintained, and reinforced power relationships. Although there was earlier settlement both inland and on the coast of southern Belize, population dramatically expanded during the Late Classic. The coast was a source of biologically necessary salt, other marine resources for ritual and subsistence activities, and a link to trade goods from the outside world via sea trade. Rather than use military force or imposing local rulers to incorporate the coastal Maya salt works into a regional tribute economy, the inland dynastic Maya may have created trading and other alliances, sanctified by rituals, in order to maintain a regular trade in salt. As part of the political hierarchy of feasting, the coastal Maya of southern Belize, perhaps centered at the trading port of Wild Cane Cay, were incorporated into the ritual ideology and political structure of the Maya dynasties. The decentralized political economy of southern Belize, in which power was brokered more by negotiation than by direct political control or tribute, is underscored by the coastal Maya’s ability to survive the Classic Maya collapse and find new markets with the emerging polities to the north during the Postclassic.

Introduction

Discussions of the political economy, settlement history, and geopolitics of southern Belize have focused on inland cities (Leventhal 1990; Bill and Braswell 2005; Braswell et al. 2005, 2007; Prufer 2005; Prufer et al. 2007), largely ignoring the long trajectory of Late Preclassic through Postclassic settlement on the coast and offshore cays (but see Hammond 1975). By implication, the coast was not important in the geopolitics of ancient Maya society in southern Belize. Or perhaps external relations of the inland Maya were not directed towards the coast or sea trade, but instead towards other inland politics (Braswell et al. 2007), so that any trade with the coast was marginal to the geopolitical world of the inland Maya. Coastal sites may have been marginalized because they lack dynastic records. Furthermore, sea-level rise has inundated the coast and its ancient settlements, obscuring their visibility in the modern coastal landscape (Figure 1; McKillop 1996a, 2002, 2005a). Still, the coast of southern Belize was a source of ritual and dietary resources for the inland Maya as well as a transportation avenue for goods and resources from farther away. What were the relations between the coastal and inland Maya in southern Belize? From a coastal perspective, did the inland Maya of southern Belize figure in the political economy, settlement history, and geopolitics of the ancient Maya on the coast and cays of southern Belize? Were the inland Maya of southern Belize marginal to the geopolitical world of the coastal Maya of southern Belize?

Settlement History of Southern Belize

Only by viewing the larger geopolitics of the ancient Maya world over time from the Preclassic through the Postclassic periods can a meaningful perspective of coastal-inland relations in southern Belize be evaluated. The Preclassic witnessed settlement throughout the Maya lowlands, with the Sierra Red pottery marking broad patterns of trade and
communication during the Late Preclassic, including southern Belize, as noted by inland settlement at Uxbenka (Prüfer et al. 2007) and coastal settlement at Butterfly Wing (McKillop 1996a). Uxbenka began as a small farming community located on good arable land. Butterfly Wing followed late lowland ceramic traditions of Protoclassic mammiform tetrapod pottery vessels, Sierra Red pottery, and an obsidian flake industry. Awe and Healy (1994) document the widespread production of obsidian flakes from cobbles, beginning in the Middle Preclassic period, prior to the core-blade technology typical from Late Preclassic times onward. Butterfly Wing also followed the Preclassic tradition of shell middens, which continued later in the area at the Schmidt Site and other nearby Paynes Creek salt works.

A major factor in coastal-inland relations during the Classic period was the strong inland demand for salt to meet the basic daily biological needs of the growing population, particularly in urban areas (McKillop 2002, 2005b). It was not only salt, but also other marine resources — both for ritual and subsistence uses — that forged inland interest in the coast (McKillop 1995, 1996a, 2002, 2004, 2005b, 2005c). The inland dynastic Maya’s interest in the adjacent coast also was driven by the nature of external relations, specifically the importance of the coast as a transportation gateway for goods and resources from outside the region (McKillop 1996a).

Settlement in southern Belize increased on the coast and inland throughout the Classic Period. Dated monuments record dynastic histories at Uxbenka, Nim Li Punit, and Pusilha (Braswell et al. 2005, 2007; Wanyerka 2005). Ceramic chronologies place Lubaantun in the Late Classic Tepeu 2 and 3 (Hammond 1975), and extend settlement near Pusilha to the end of the Late Classic during Tepeu 3 (Bill and Braswell 2005). The earliest radiocarbon dates from Wild Cane Cay place initial settlement during the Early Classic, along with nearby Pelican Cay (McKillop 2002:158). Ceramic chronology and radiocarbon dated midden deposits at coastal communities indicate expansion of settlement in the Late Classic at Wild Cane Cay, Pork and Doughboy Point, Village Farm, Green Vine Snake, Frenchman’s Cay, and the Paynes Creek salt works (McKillop 1996a, 2002, 2005a, 2005b, 2006, 2007; Sills 2007; Somers 2007). Wild Cane Cay was first settled in the Early Classic as a fishing community. During the Late Classic, Wild Cane Cay became a trading port, likely controlling the inland transportation of salt from the nearby Paynes Creek salt works (McKillop 2005a, b). As a trading port, Wild Cane Cay also funneled other maritime resources, such as stingray spines, conch shells, and seafood, inland. The abundance of obsidian at the island underscores the islanders’ easy access to this imported material and its participation in long distance sea trade during the Late Classic.
wooden buildings, where brine was boiled in pots over fires to produce loose salt or salt cakes, leaving behind the broken bowls and jars, the cylindrical clay vessel supports, and water jars. They have wooden structures used for indoor production of salt by boiling brine in pots over fires, and likely other wooden structures used to concentrate the salinity of the brine before boiling. Salt boiling vessels were made using local clays and quartzite sand temper that was commonly available locally. Brine was boiled to produce salt. Salt production took place inside wooden structures, providing protection from rain, which is common even during the dry season. Mapping individual pottery sherds at the K’ak’ Naab’ salt works indicated waste was moved outdoors, presumably to keep the workshop clean of debris (McKillop 2007). Buildings also were used to store equipment and supplies, such as firewood and water jars for storing brine and salt pots for boiling, as at Sacapulas. Some structures were likely warehouses where salt was stored before it was transported elsewhere. A full-size wooden canoe paddle found at the K’ak’ Naab’ salt works provides evidence for water transport (McKillop 2005b, 2007). Some of the salt works hosted periodic salt rituals, as evidenced by pottery ocarinas and serving vessels. They were not locally produced, in contrast to the salt boiling vessels.

A major factor during the Postclassic period was the abandonment of most inland cities in the southern lowlands, rise to prominence of Chichen Itza and Mayapan, and their participation in a much larger geopolitical world from central Mexico to Honduras (Sabloff and Andrews 1986; Smith and Berdan 2003; Chase and Rice 1985; McKillop 2006). Coastal trade figured prominently in this political landscape. Coastal settlement increased in the Postclassic, perhaps in response to population movement from inland areas, but clearly as a response to an increase in sea trade. Prominent Classic period cities in southern Belize were virtually abandoned, including those cities with public dynastic records carved on stelae at Nim Li Punit, Uxbenka, and Pusihá, as well as those without, notably Lubaantun. Apart from limited Postclassic settlement noted near Pusilhá (Braswell et al. 2007), available data indicate the inland area was largely depopulated. On the coast of southern Belize, the Paynes Creek salt industry collapsed for lack of an inland market, but its port on Wild Cane Cay survived, and became a major player in Postclassic sea trade and the Postclassic Mesoamerican world (McKillop 2005a). Settlement continued elsewhere on the south coast of Belize at Frenchman’s Cay and Foster Farm, but there was a diminution of settlement on the coast compared to the Classic period. Fig 3

Sixteenth century Spaniards and later British buccaneers and logwood workers encountered Maya both on the coast and the interior of southern Belize

Figure 3. Late to Terminal Classic imports to the coast of southern Belize from inland regions (a-d) and the northern Yucatan (e-f): a-b) Mold-Made Figurine Whistle from Stingray Lagoon, c) Figuring Whistle from David Westby, d) gouge-incised Jar from Carpenter Site, e-f) Trickle Ware tripod bowl from Stingray Lagoon.

(McKillop 2005: 194-196; Wilk 1987). The sixteenth century Spaniards disrupted a thriving circum-Yucatan canoe trade that included Wild Cane Cay. The presence of Spanish artifacts at Wild Cane Cay, such as fragments of Olive jars stylistically dated between 1550 and 1770,
Coastal Maya Economy in Southern Belize

indicate early historic European presence in the coastal waters north of Punta Gorda. Among the voyages of pirates, the famous British buccaneer Bartholomew Sharp captured a Spanish Dominican Friar and several Maya south of Punta Gorda in 1677 (McKillop 2005a: 195). According to Richard Wilk (1987), the Maya were dispersed in the rainforest in small communities inland in southern Belize. Indigenous Maya population grew in southern Belize with Maya fleeing forced labor and other hardships in Guatemala in the late nineteenth century. Logging along the rivers of southern Belize by 1802, along with nineteenth century Garifuna settlement of Punta Gorda, the US Confederate settlement north of Punta Gorda, and settlement of the coast and cays by fisher folk is evidenced by historic pottery, glassware, and metal at various locations, including Wild Cane Cay, Village Farm, the Sapodilla Cays, and Deep River (McKillop 2005: 194-196).

Discussion

There are several models pertaining to political economies elsewhere that might explain coastal-inland relations in southern Belize. The models include the “tribute model,” the “alliance model,” and the “household production model.” The “tribute model” parallels the Aztec or Inca strategy of using military force or imposing local rulers. Following the tribute model, the inland dynastic Maya controlled the coast (trading port of Wild Cane Cay) and its resources (such as the Paynes Creek salt works) by incorporating the coast into a regional state owing tribute. In the “alliance model,” the inland dynastic Maya may have created trading and other alliances, sanctified by rituals and feasts, in order to maintain a regular supply by trade in salt and access to external sea trade routes. Some areas fluctuated between alliance and tribute, such as the Pacific coast “Soconusco” area during the Aztec empire (Voorhies 1989). In the “household production” model, households were largely self-sufficient, resulting in little communication or trade between the coast and inland areas. In this model, coastal salt production was limited to household or cottage industry, with limited distribution, underscoring the need for long-distance import from the northern Yucatan salt flats, or implying that inland salt sources were adequate.

The Paynes Creek salt works were not part of the “household production model,” since they appear not to have been directly associated with residences or communities, and because the scale of production exceeded household demand. The salt workers presumably lived year-round at the contemporary coastal settlements nearby. There is no evidence of the “tribute model” at the Paynes Creek salt works. They were not part of the royal court workshops supplying goods for the dynastic Maya, because of the considerable distance. There is no evidence of dynastic Maya direct control of production (like the Inca used with Inca style warehouses throughout their empire, for example). The “alliance model” best fits the Paynes Creek salt works, with independent, local producers engaged in a negotiated trade relationship with the inland dynastic Maya.

Because of the distance and the special skills needed for salt production and canoe navigation, the dynastic Maya at their inland urban centers may have found it more cost effective to negotiate trade and perhaps marriage alliances with the coastal salt producers than to manage the production and distribution of salt directly. Moreover, the Late Classic Maya polities of southern Belize, closest to the salt works, were decentralized, putting the coastal Maya in an advantageous position both economically and politically.

But why would the coastal elite have wanted to satisfy the inland salt demand by establishing trade alliances with the dynastic leaders of the inland cities? The main trading port of Wild Cane Cay was located some seven km from the Paynes Creek salt works, at the mouth of the Deep River and the northern end of the relatively sheltered waters of Port Honduras (McKillop 1996, 2005a). This location was at the nexus of the riverine and coastal trading routes. In the “alliance model,” as part of the political hierarchy of feasting, the coastal Maya, perhaps centered at the trading port of Wild Cane Cay, were incorporated into the ritual ideology and political structure of the Maya dynasties that drove their understanding of the Maya world, the gods, and people’s place in the world. The coastal Maya received goods such as
ocarinas, serving vessels, and other trade pottery that were markers of status. The stylistic similarities between Paynes Creek ceramics, especially figurines whistles and “unit-stamped” pottery, tie the coast to inland cities due west in southern Belize and adjacent Guatemala, as far as Seibal, Altar de Sacrificios, and the Petexbatun region (Figures 2 and 3; McKillop 2002), further supporting the “alliance model.”

After the abandonment of the Paynes Creek salt works, salt was locally produced as part of the household economy during the Postclassic at the trading port of Wild Cane Cay and at nearby Frenchman’s Cay (McKillop 2002:112). The Late Classic Paynes Creek salt works are clearly an industry, whereas elsewhere production was for household needs, as at Wild Cane Cay and Frenchman’s Cay in the Postclassic; even if the household-produced salt was traded elsewhere, that trade was organized at the household level.

The “alliance model” describes the organization of the Postclassic economy at Wild Cane Cay and its survival as an autonomous trading port when larger inland cities in southern Belize were abandoned. The Postclassic witnessed exponential growth of sea trade, with Wild Cane Cay figuring as a major player linking external worlds and the Maya. Wild Cane Cay was integrated into the Mesoamerican world system as a major Postclassic period trading port.

The mercantile Maya on Wild Cane Cay realigned their trading partners with more distant areas in Honduras, Guatemala, northern Belize, the Yucatan, and central Mexico. A Postclassic coral foundation was dedicated with the sacrifice of a young woman accompanied by an imported Las Vegas Polychrome pottery vessel from Honduras (Figure 4). Obsidian from the La Esperanza outcrop in Honduras was more commonly traded outside the Maya area, so its presence at Wild Cane Cay further underscores external ties beyond the Maya area (McKillop et al. 1988). Trade with Guatemala included significant amounts of obsidian from the Ixtepeque outcrop, as well as minor quantities from El Chayal and Rio Pixcaya, along with Tohil Plumbate pottery from the Pacific coast (Figure 4). Wild Cane Cay was linked to other coastal trading ports farther north, such as Marco Gonzalez and San Juan on Ambergris Cay, and Isla Cerritos. They included similar repertoires of trade goods, notably Tohil Plumbate, green obsidian, and Tulum (or “Payil”) Red pottery (Figure 4). Both the high quality and similar styles point to Colha in northern Belize as the source for chert at Wild Cane Cay (as well as the Paynes Creek salt works).

**Figure 4.** Pottery from Beyond Southern Belize Marks Trading Port of Wild Cane Cay’s Participation in International Trade of the Postclassic. a), Las Vegas Polychrome from Honduras in Burial 10; b) Tulum Red (Payil Red) from Burial 11/12; c), Tohil Plumbate from Pacific coast of Guatemala.

**Conclusions**

The geopolitics of modern southern Belize are poor indicators of the dynamics of the ancient past in the region. Further archaeological field research likely will expand the knowledge of Preclassic settlement both inland at Uxbenka and on the coast at Butterfly Wing. Settlement expanded in the Early Classic, both at inland farming communities such as Uxbenka, Nim Li Punit, and Pusilhá accompanied a dramatic population increase in southern Belize both inland and on the coast. Inscriptions on carved stelae cement the dynastic history of leadership,
but the battles and alliances reported are largely with as yet unknown polities. It is traded pottery that elucidates much of the geopolitics of negotiation and alliances: The distribution of “unit-stamped” pottery from the coast inland to the Petexbatun region of modern Guatemala and the distribution of Lubaantun-style figurine whistles on the coast underscore enduring coastal-inland communication in the Late and Terminal Classic periods. Coastal control of production and distribution of salt at the Paynes Creek salt works defined the relations of the coastal Maya with inland polities whose inhabitants needed salt. When the inland polities fell, the coastal salt industry ceased. However, the mercantile, opportunistic Maya at the trading port of Wild Cane Cay, accustomed to negotiating with their inland neighbors for salt and other marine resources, were able to build new alliances with emerging politics far to the north, tying into the circum-Yucatan sea trade of the Postclassic. The only arable land on the coast and cays of southern Belize (McKillop 1994, 1996b) has been inundated by sea-level rise, with ancient salt works and sites submerged below mangroves and underwater, a sobering reminder to modern residents of low-lying areas in Belize and beyond.

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THE PRECLASSIC IN THE MOPAN RIVER VALLEY: PRELIMINARY INVESTIGATIONS AT NOHOCH EK AND XUNANTUNICH

M. Kathryn Brown

This paper examines broad patterns of the Preclassic landscape in the Belize valley. Previous investigations at Nohoch Ek and Xunantunich Group E encountered Preclassic architecture, however, only limited testing was conducted. The Mopan Valley Preclassic Project initiated investigations at both sites in order to assess the nature and function of these Preclassic centers. Although the regional data for the Preclassic within the Belize River valley are preliminary, several interesting observations are apparent. First, there is a clear pattern of re-building on locations that appear to have been established as sacred early in the history of the site. Evidence suggests that elites appropriated these sacred places to display their power and authority through monumental constructions. Second, there is variability in size and labor investment of Preclassic public architecture that has implications for site hierarchies and the establishment of early seats of power. Lastly, Xunantunich Group E, and possibly Nohoch Ek, appears to have been abandoned at the end of the Late Preclassic, signaling dramatic political shifts during this dynamic time period.

Introduction

The origins of Maya civilization in the Early and Middle Preclassic lowlands have been difficult to investigate because the continual re-use and re-building of constructed spaces by the ancient Maya has deeply buried Preclassic remains at most sites. At the same time, Maya practices of establishing and re-using sacred space can provide information regarding the role of constructed landscapes in the processes that led to a more hierarchical society. It is apparent that these places were integral in social practices that integrated Preclassic communities and, at the same time, legitimated social differences that distinguished the emerging elite segment of Preclassic Maya society.

The establishment and re-use of sacred space at centers such as Cahal Pech, Blackman Eddy, and the Chan site have been well studied within the Belize River Valley (Awe 1992; Brown 2003, Brown and Garber 2008; Garber et al. 2004; Healy et al. 2004; Meierhoff et al. 2004; Robin 2004). Maya acts of ritually establishing and terminating sacred places heavily impacted the perception of these locations before and after they were abandoned. As Wilson and David (2002:6) state, “landscapes exist in relation to the human actors who engage with them and imbue them with meaning.” The Blackman Eddy and Cahal Pech data provide excellent examples of how socially constructed landscapes were made meaningful through the community’s participation in ritual activity (Brown 2007, Brown, Awe and Garber 2008). Nevertheless, little is known about how these Preclassic communities interacted with contemporary communities in the Belize River Valley. Clearly, Blackman Eddy and Cahal Pech did not exist in isolation, but rather, were part of a larger Preclassic social/political network of interacting sites and a full understanding of the social and political developments within each community requires contextualizing them within a larger regional perspective (Brown 2007).

The Mopan Valley Preclassic Project Goals

The Mopan Valley Preclassic Project (MVPP) examines the Preclassic upper Belize River Valley with the goals of understanding the rise of complexity and the roles of public architecture and ritual activities in sanctifying an emerging hierarchical social order, and also understanding how the interactions between competing communities influenced these processes on a regional scale. The examination of the establishment of early seats of power and the ways that these centers competed for, and acquired control over, smaller communities and local and non-local resources is crucial for understanding the rise of complexity. Examining sites on a regional scale will provide critical information pertaining to how the Preclassic landscape was shaped in the Belize
Preliminary Investigations at Nohoch Ek and Xunantunich

River valley through various social and political mechanisms such as the establishment and reuse of ideologically charged places, as well as competition between communities through large-scale public construction efforts, access to imported prestige objects, and most notably warfare. The MVPP has recently begun archaeological investigation at two sites within the Mopan valley, Nohoch Ek and Xunantunich, to address these issues.

The sites of Nohoch Ek and Xunantunich were chosen for several reasons. First, previous investigations at the sites of Nohoch Ek and Xunantunich (specifically in Group E and O/A2-1) had uncovered evidence of Middle Preclassic architecture which appears to be larger and more elaborate than comparable domestic architecture dating to this early time, suggesting a possible public function. Second, at both sites, the investigation of this early time period was very limited. Further investigations were needed to better understand the initial settlement and subsequent development of both sites. Lastly, and most importantly, Preclassic architecture at both sites is relatively assessable. As most researchers focusing on the Preclassic time period know, excavating early architecture is a difficult task due to overlying Classic period architecture and deposits. Generally, buried Preclassic buildings are investigated through narrow trenches and deep test pits which provides only limited exposure. It is very difficult to interpret architectural data recovered from a small excavation unit or trench, and such interpretation becomes even more complex when dealing with ritual deposits. This is why it is necessary to take a resourceful approach to investigating Preclassic remains, such as the salvage excavations conducted at Blackman Eddy (Brown 2003; Garber et al. 2004), as well as the ongoing plaza investigations at the site of Cahal Pech (Awe 1992; Garber et al. 2005). Researchers must pick and choose their research locations wisely, asking questions they can address through limited exposure or, in the case of Nohoch Ek and Group E, unique situations, where the Preclassic architecture is readily accessible.

Previous Research at Nohoch Ek and Xunantunich Group E and O/A2-1

The site of Nohoch Ek is situated on a series of limestone knolls between the Macal and Mopan rivers (Taschek and Ball 2003) on an artificially leveled hilltop (Coe and Coe 1956). The site is located approximately equal distance between the larger centers of Cahal Pech and Xunantunich. Nohoch Ek was initially investigated by William Coe and Michael Coe in 1949 (Coe and Coe 1956) and further excavated by Joseph Ball and Jennifer Taschek in 1985 (Taschek and Ball 2003). The site itself is a relatively small center with one plaza (Plaza A) bounded by six masonry buildings associated with two smaller courtyard groups (Group B and Group C) (Figure 1). In 1949, the investigations focused on Structure A1 and A5 within the main plaza group (Group A), which were originally designated Mound I and Mound V respectively by Coe and Coe (1956) and renumbered by Taschek and Ball (2003).

Structure A1 was intensively excavated by Coe and Coe (1956) and they determined the mound to have four construction phases. Excavations by MVPP in 2005 found the remains of an additional construction phase (discussed below) on this mound dating to the Late/ Terminal Classic time period. The earliest construction phase was described by Coe and Coe (1956: 371) as “a low (45 cm.) platform with a plastered surface and a small masonry step.” The fill consisted of dark organic matrix similar to Early and Middle Preclassic wet-laid fill found at both Blackman Eddy and Cahal Pech. The exposure of the platform was limited due to the overburden of the later construction phases. Due to the limited exposure area, only 50 ceramic sherds were recovered from within the platform fill. The ceramics were described as predominately small red ware bowls some of which were decorated and or incised (Coe and Coe 1956). Other ceramic sherds included brown and gray wares as well as unslipped types. Coe and Coe (1956) note that one sherd was from a miniature vessel. This form was fairly common during the Middle Preclassic as seen at both Blackman Eddy and Cahal Pech (Brown 2003). Other forms include outcurve bowls and dishes, straight-sided bowls, incurving bowls, and large ollas and storage jars with flaring lips (Coe and Coe 1956). Coe and Coe (1956) suggest that the ceramic assemblage...
from this construction phase was similar to the Mamon phase from Uaxactun, suggesting a Middle Preclassic date for this platform. Also of interest was the numerous fresh-water clam and snail shells that were encountered within the dark sticky fill. This is consistent with Middle Preclassic remains at both Blackman Eddy and Cahal Pech, as fresh-water clams and jute (*Pachychilus* ssp.) were both utilized heavily during the Preclassic as supplemental food items (Awe 1992; Brown 2003; Healy et al. 1990).

Coe and Coe (1956:370) also placed a center-line trench in Structure A5 and excavated a chultun in Group C, but these investigations were not detailed and were reported to have “limited results.” Taschek and Ball (2003) discuss the damage of architecture at the site from looting activities, which included the total destruction of Structure B3 and severe damage to Structures A4 and A5. They conducted further investigations at the site during the field season of 1985 and focused on the Late to Terminal Classic at the site. Their research strategy emphasized horizontal exposures of living surfaces related to the Late/Terminal Classic at the site. They do mention the existence of Preclassic residential settlement spread over the north edge of the limestone knoll, but the published article focuses on the Late/Terminal Classic data collected from the site.

In the near hinterland of the Late Classic site core of Xunantunich, a Preclassic site was encountered by the Xunantunich Archaeological Project (XAP) in the 1990’s. The site consists of two closely spaced groups of large architecture named Group E and O/A2-1 and appears to have been initially occupied during the Middle Preclassic, a time when there is no evidence of monumental architecture at Xunantunich (LeCount et al. 2002). Within the Xunantunich site core there were a few low platforms (< 1m in height) and some Middle Preclassic domestic deposits, but no evidence of large Middle and/or Late Preclassic architecture has been found to date (LeCount and Yaeger 2008). Excavations within Plaza A-III by the MVPP during the 2008 summer field season support this assessment. Middle Preclassic ceramics sherds were numerous but were from mixed contexts and no intact Preclassic architectural features were located within the excavation units.

Group E is located roughly 800 meters east of the Xunantunich site core and lies on a natural limestone rise overlooking the Mopan River (Robin et al. 1994) (Figure 2). The architectural group is made up of two pyramidal structures, designated Structures 1 and 2 (renumbered E-1 and E-2 by the MVPP), located on an east-west axis, and is associated with ten smaller mounds (Robin et al. 1994) (Figure 3). As discussed above, the pyramidal form of architecture has implications for the appropriation of sacred space by the elite segment of the population. The ten smaller mounds may or may not be contemporaneous to the pyramidal structures; they have not been tested archaeologically.

A second architectural group, designated O/A2-1, is located only 85 meters northeast of Group E. The architectural focus of this group is a massive platform, designated F1, measuring approximately 100 meters north/south by 115 meters east/west (Figure 3). The builders took advantage of the sloping topography, and the platform rises to an impressive height of 13
Five mounds were encountered on top of F1, which was accessed by two ramps on the northeast and northwest. The platform was associated with eight small mounds located to the west and north. Again, these smaller associated mounds have not been tested, so they cannot be assumed to be contemporaneous with the platform. Preliminary investigation (Robin et al. 1994) suggests that this site may have been as large as, or larger than, other centers during the Middle Preclassic, including Blackman Eddy and Cahal Pech.

The initial investigations of Group E and O/A2-1 were conducted by XAP members during the 1994 field season (Robin et al. 1994). Surface collections, shovel tests and five 1x2 meter test units were opportunistically placed throughout the architectural groups. Two test excavation units were placed between Structures
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E-1 and E-2 within Group E and a summit test unit was excavated on Structure E-2. Two other test units were placed on the large platform (F1) in O/A2-1.

The excavations on the summit of Structure E-2 encountered a plastered surface approximately 40 cm below the mound’s surface. Preliminary ceramic analysis conducted by Lisa LeCount, suggests a Preclassic date for this structure as the ceramics were predominately of the Mars Orange Ware (Robin et al. 1994). Interestingly, the ceramic material from the other two test units within Group E were dominated by Mars Orange types as well. The Mars Orange Ware dates to the Middle Preclassic and Savanna Orange types are a hallmark of this time period in the Belize Valley. This suggests that at least one construction phase of the pyramid designated Structure E-2 dates to the Middle Preclassic. Excavations by the MVPP in 2008, also focused on Structure E-2 and confirmed a Middle Preclassic date for the initial construction phase supporting the XAP assessment of the site.

Two test excavations within O/A2-1 on top of F1 found no evidence of more than one phase of platform construction, although earlier constructions could lie somewhere in the heart of this massive platform. The preliminary analysis of the ceramic material from the platform’s fill suggests a Middle Preclassic date, as the ceramics were “uniformly Mars Orange type” (Robin et al. 1994:104). These observations, although limited to a only a few testpits, are quite striking, as they indicate that the 13-meter high platform initially dates to Middle Preclassic and is clearly associated with the early architecture in Group E.

Summary of the MVPP Initial Research at Nohoch Ek and Xunantunich Group E

The MVPP initiated investigations at the site of Nohoch Ek during the 2005 field season. The site itself directly overlooks the modern Cayo sanitary landfill which, ironically, is not so modern or sanitary. Structure A1 was targeted for further investigations as Coe and Coe (1956) encountered a small rectangular Middle Preclassic platform within a centerline trench on this building. The Coe brothers had completely exposed what they thought was the final construction phase of Structure A1, a range structure. They excavated a centerline trench in order to assess the architecture’s history and investigate previous construction phases. The centerline trench that was excavated in the 1940’s was easy to locate as the early excavations were never backfilled. In 2005 the MVPP cleared out the debris from the trench and expanded the excavations approximately 1.5 meters to the east. Interestingly, the 2005 investigations revealed a final construction phase that that was missed by Coe and Coe in 1949. The basal step to this terminal construction phase was buried under the back dirt from their excavations which was piled to the south of the mound in Plaza A. Only a few poorly preserved ceramic sherds were associated with this construction phase and preliminary analysis suggests a Late to Terminal Classic date. This is consistent with the data collected by Taschek and Ball in 1985.

Beneath this phase were two additional phases dating to the Late Classic. A badly preserved late Preclassic construction phase was encountered beneath the Late Classic architecture suggesting that this location had been abandoned at the end of the Late Preclassic and left exposed for some time prior to reoccupation during the Late Classic. The previous work by Coe and Coe (1956) and Ball and Taschek (2003) support this assessment. The construction fill of the Late Preclassic architectural phase differed dramatically from the later phases and consisted of a thick layer of wet-laid, white marl. No intact steps or terraces were encountered, suggesting that facing stones may have been re-used in other construction projects at the site. Intrusive into the Late Preclassic building was a Late Classic burial of an adult male (Dana Ritchie-Parker 2008). As luck would have it, the Coe brothers missed this burial by approximately 5 cm. The individual was in a flexed position and had no associated grave furniture. Unfortunately due to time constraints, excavations were terminated above the Middle Preclassic platform. Future investigations, however, are planned to expose and investigate this building further.

Excavations by the MVPP during the 2008 field season were conducted at Xunantunich within Group E on Structure E-2.
An 8x2 meter trench was placed down the western face of the mound and encountered three distinct construction phases. Earlier construction phases may be present as the excavations were limited and terminated with the partial exposure of the third construction phase encountered. The terminal construction phase, designated Structure E-2-1st, was badly preserved and preliminary ceramic analysis suggests a Terminal Preclassic date. The basal step and associated plaza surface to this phase of the pyramid were located approximately 1.20 meters below the modern surface. This suggests a considerable sediment buildup confirming that the building was abandoned with no additional rebuilding episodes during the Classic period. Thus, the investigation of this site provides an unparalleled opportunity to study in detail the history, layout, and functions of a Preclassic ceremonial center without the destruction of overlying Classic period architecture.

The penultimate construction phase, designated Structure E-2-2nd, dates to the Late Preclassic and was also poorly preserved. The basal three steps to this phase were intact, however the upper stairs and terraces were only distinguishable by a thick, wet-laid, white marl fill similar to that seen within the Late Preclassic building at Nohoch Ek discussed above. It is interesting to note that Structure E-1 (the western pyramid within the pair) also was constructed with a white marl fill clearly evident in a looters trench on the west side of the mound. The earliest construction phase encountered within the excavations, Structure 2-E-3rd, appears to date to the Middle Preclassic and is well preserved. The ceramic material from this phase is predominately from the Mars Orange Ware, however, the sample is quite small. The distinctive white marl fill contained very few ceramic sherds. Time constraints allowed only limited exposure of this early structure, and further investigations of Structure E-2 are planned for the 2009 field season. Nevertheless, the size and solidly constructed nature of this building dating to the Middle Preclassic should be emphasized as it may be one of the largest documented in the Belize River valley, quite possibly rivaling similar early structures at the site of Nakbe (Hansen 1992).

**Discussion**

The initial data from the sites of Nohoch Ek and Xunantunich Group E (and O/A2-1) add to the growing body of data on the Preclassic in the Belize River valley. Although the regional data for the Preclassic within the Belize River valley are preliminary, several interesting patterns are apparent. First, as discussed in the introduction to this paper, architectural sequences from many centers demonstrate that Maya communities often repeatedly built ceremonial structures on top of locations that were established as sacred early in the history of those centers. Although this pattern has been recognized by many researchers, the detailed work on the Preclassic in the Belize River valley has clearly demonstrated the importance of re-building on sacred places. It has been argued elsewhere that through ritual activities associated with the sacred locations, these places were constituted as powerful locations and became part of both the physical and ideological landscape of the community (Brown 2003, Brown and Awe 2007, Brown and Garber 2008).

Ashmore (2004:104) suggests that human action, as well as individual and social memory, is necessary to maintain an orderly landscape. Clearly, ceremonial architecture was a visible aspect of the social landscape for the ancient Maya. The emphasis on continual use and rebuilding through time allowed these sacred places to become part of the shared memory of ancient Maya communities, thus lending themselves to the manipulation by elites as they sought to reinforce and strengthen their elevated status by controlling access to these sacred places. The appropriation of sacred places by the elite segment of population over time can be identified in the archaeological record with the introduction of new architectural styles, such as the pyramidal form (Brown 2003; Brown and Garber 2007). These new styles and forms served to restrict the access to these sacred places to most community members. Despite that, they continued to integrate the increasingly heterogeneous community in two interrelated ways: they were places where the supernatural and natural landscapes came together, and they maintained and continued sacred places that were established early in the
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community’s history and that had become central to community ritual and identity. These processes have been clearly recognized at the sites of Cahal Pech (Awe 1992; Garber et al. 2005), Blackman Eddy (Brown 2003; Garber et al. 2004), and the Chan site (Meierhoff et al. 2004; Robin 2004) in the Belize River valley where researchers have documented the establishment and uninterrupted continued use of sacred places from the Early or Middle Preclassic to the Late Classic.

A second interesting observation emerges when the Middle Preclassic landscape is examined on a regional scale. Undoubtedly, the emphasis on labor and material investment in monumental buildings not only served to unite the community through a shared identity, but also these same sacred places communicated messages to neighboring communities related to the power and authority of the ruler. The preliminary evidence uncovered at both Nohoch Ek and Xunantunich sites, discussed above, suggests that the nature of the early public buildings at these two sites may be quite different indicating possible hierarchical differences in settlements at this early date. The Middle Preclassic architecture differs dramatically in size and labor investment at the two sites. The small plastered platform at Nohoch Ek was approximately .45 meters in height, while Structures E-1 and E-2 and Platform F1 (O/A2-1) were considerably larger and more elaborate. The possible Middle Preclassic buildings at both Xunantunich Group E and O/A2-1 appear to be comparable to, and quite possibly even larger than, Middle Preclassic architecture documented at other sites in the Belize River valley. Of even greater interest, the site of Nohoch Ek is located between and approximately equal distance to Xunantunich and Cahal Pech. Investigations at Cahal Pech have also documented large and well constructed architecture dating to the Middle Preclassic time period (Awe 1992). This coupled with the existing data on Middle Preclassic structures at the sites of Blackman Eddy, Chan, Pacbitun, as well as the Cahal Pech hinterland sites such as Tolok indicate variability in architectural investment and by extension the ability for community leaders to mobilize labor. Clearly, the authority of the leaders at sites such as Xunantunich Group E (and O/A2-1), Cahal Pech, and Blackman Eddy was manifested in the monumentality of the early architecture constructed at each of these centers and, in turn, these large edifices were visible affirmation of this power and authority to both the community itself and, more importantly, to rival communities. The close examination of public architecture and sacred space on a regional scale is, therefore, important in order to shed light on the development of early seats of power within the Belize River valley and to provide a clearer understanding of inter-polity dynamics.

A third general observation from a regional landscape view is that the sites of Nohoch Ek and Xunantunich Group E both diverge from the pattern of continuous occupation and rebuilding seen at sites such as Cahal Pech (Awe 1992), Blackman Eddy (Brown and Garber 2008), and the Chan site (Meierhoff et al. 2004; Robin 2004) in the Belize River valley. Both Nohoch Ek and Xunantunich Group E (and O/A2-1) appear to have been founded by at least the Middle Preclassic time period. However, a possible abandonment, or construction hiatus, at the end of the Late Preclassic is seen at both sites suggesting only several centuries of rebuilding. Evidence suggests that Nohoch Ek was reoccupied during the Late Classic period, while Xunantunich Group E was not. Despite the growth of the Late Classic center of Xunantunich 800 meters to the west, preliminary evidence suggests that Group E and O/A2-1 were never resettled. The fact that this large site was abandoned at the end of the Preclassic and possibly never reoccupied is an interesting anomaly within the valley, and suggests that dramatic political shifts were occurring at this time. More detailed studies on this dynamic time period are necessary in order to provide a clearer picture of inter-polity dynamics, which, no doubt, impacted Classic period political trajectories.

The data recovered from the initial investigations at Nohoch Ek and Xunantunich Group E compliment the existing data on the Preclassic time period in the Belize River valley and when examined on a regional scale provide some interesting general patterns. While these
patterns are preliminary, they provide a foundation from which new and exciting questions can be addressed through future research at both Nohoch Ek and Xunantunich Group E as well as other Preclassic sites that have yet to be discovered.

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8 BURIALS AND CACHES FROM THE CHAN SITE E-GROUP: A BIOARCHAEOLOGICAL PERSPECTIVE ON RITUAL AND SOCIAL COMPLEXITY AT AN ANCIENT MAYA FARMING COMMUNITY

Anna C. Novotny and Laura J. Kosakowsky

Here we take the perspective that ancient Maya commoners contributed to the continued formation of Maya belief systems through local ritual activity. At the Chan site, construction of a tri-partite “E-group” architectural complex at the beginning of the Late Preclassic (300 B.C. – A.D. 100/150) developed a space for community ritual and linked this agrarian community to broader social and political changes in the Maya lowlands. The “E-group” was the nexus of ritual behavior at Chan throughout its 2,000 year history, evidenced by a series of caches and burials recovered from its eastern and western structures. Using bioarchaeological, ceramic, and architectural evidence, we express how the residents acted within a pan-Maya belief system and structured this belief system given their unique social and historical context. We find that mortuary practices and caching behavior changed from the Late Preclassic to the Terminal Classic period, and suggest that these changes conveyed an increasing emphasis on community ritual by the Late Classic that may reflect changes at Chan as well as sociopolitical changes elsewhere in the Belize Valley and the Maya lowlands.

Introduction

For all human groups mortuary practices are a complex interplay of belief system, emotion, and politics because, “the issue of death throws into relief the most important cultural values by which people live their lives and evaluate their experiences” (Metcalf and Huntington 1991:25). Historically, various aspects of mortuary practices have been emphasized. Archaeological and ethnographic data demonstrate that treatment of the dead, formerly attributed to cultural norms, is determined by both social complexity and an individual’s social role during life (Binford 1971; Brown 1995). However, such ceremonies are conducted by the living and thus mortuary rituals may reflect the goals and needs of the survivors as much as they reflect the social persona, status or role of the deceased (Hodder 1982). Modern ethnographic data demonstrates that philosophical-religious factors, particularly beliefs about the soul and what happens to the soul after death, also determine variation in funerary treatment (Carr 1995). The multi-vocality of mortuary rituals is readily apparent in the practice of ancient Maya ancestor veneration.

Before presenting data on the sequence of burials and caches from the E-group, we discuss Maya “soul” concepts and how these may be related through treatment of the body after death.

The Chan E-Group

The eastern and western structures of Chan’s central group (Kestle 2004; Meierhoff et al. 2004; Robin et al. 2008) exemplify the archetypical form of “E-Group” architectural complexes (Figure 1) (Ricketson and Ricketson 1937; Ruppert 1940). An “E-Group” has been defined as “three small buildings on a single platform defining the eastern side of a plaza” with “a large pyramid structure” on the western side (Ruppert 1940: 222). While E-Groups in the Maya lowlands exhibit variation as a whole (Ruppert 1940: 224, 227: Table II), they represent a formalized and ritualized architectural assemblage (Chase and Chase 1995). The location and design of E-Group complexes resemble eastern structures identified at sites throughout the Maya lowlands, (Aimers and Rice 2006) and appear to have functioned as foci of ancestral veneration and corporate group ritual (Becker 1971; Levanthal 1983; McAnany 1995, 1998). Although most commonly recognized in residential groups, the eastern building pattern has been found also in monumental public plazas (Becker 1971; McAnany 1995:58) where it most likely represents ancestor interment for the site’s “ruling elite.”
The eastern E-group building at Chan is a tripartite construction composed of three adjoining substructures, with a central substructure that rises 5.8 meters in height to form the tallest masonry construction at the site (Robin et al. 2008). Ceramic analysis of the central and northern substructures (Figure 2) (Kosakowsky 2008), indicates the earliest construction phase beginning in the Late Preclassic Cadle complex, and ending in the Late Late Classic Pesoro complex, with occupation continuing into the Terminal Classic Vieras complex. A total of nine burials were excavated from the central (8 total) and northern (1 total) substructures of the eastern building (Robin et al. 2008). A total of ten caches, and a special deposit that may represent a terminal event or occupation, were also excavated from the eastern building.

The 2004 Chan project excavations of the western substructure revealed a free-standing pyramidal structure with staircases on the eastern and western facades (Robin et al. 2008). The northern and southern sides of the building were not excavated and may have staircases on their facades as well (Cynthia Robin, personal communication 2008). Ceramic analysis indicates the earliest construction phase of the
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Figure 2. Ceramic Chronology for the Chan Site.

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Calendar Years, approximate</th>
<th>Chan Ceramic Complexes</th>
<th>Regional Ceramic Spheres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Postclassic</td>
<td>AD 900-1150/1200 (?)</td>
<td>(Not a complete complex)</td>
<td>New Town</td>
</tr>
<tr>
<td>Terminal Classic</td>
<td>AD 800/830 – 900</td>
<td>Vieras</td>
<td>Tepeu 3</td>
</tr>
<tr>
<td>Late Late Classic</td>
<td>AD 670 – 800/830</td>
<td>Pesoro</td>
<td>Tepeu 2</td>
</tr>
<tr>
<td>Early Late Classic</td>
<td>AD 600 – 670</td>
<td>Jalacte</td>
<td>Tepeu 1</td>
</tr>
<tr>
<td>Early Classic</td>
<td>AD 250 – 600</td>
<td>Burrell</td>
<td>Tzakol (1, 2, 3)</td>
</tr>
<tr>
<td>Terminal Preclassic</td>
<td>AD 100/150–250</td>
<td>Potts</td>
<td>Floral Park</td>
</tr>
<tr>
<td>Late Preclassic</td>
<td>300 BC – AD 100/150</td>
<td>Cadle</td>
<td>Chichen</td>
</tr>
<tr>
<td>Middle Preclassic</td>
<td>650 BC – 300 BC</td>
<td>Boden</td>
<td>Mamom</td>
</tr>
<tr>
<td>Late Early Preclassic</td>
<td>1000 (?) / 800 BC – 650 BC</td>
<td>(Not a complete complex)</td>
<td>Cunil/ Kanoche</td>
</tr>
<tr>
<td>Early Middle Preclassic</td>
<td>800 BC – 650 BC</td>
<td></td>
<td>Swasey/ Bladen</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eb &amp; Xe</td>
</tr>
</tbody>
</table>

The western substructure dates to the Late Preclassic Cadle complex (Kosakowsky 2008). Extensive looting prevents precise dating of the final construction phase, however the Chan residents continued to place caches within the building through the Terminal Classic period. The construction sequence of the western substructure differs from that of the eastern substructures in that the facades facing the central plaza were dismantled and replaced rather than left intact and covered with new construction. This would have maintained the size of the central plaza as the construction of the eastern structure encroached upon it (Cynthia Robin, personal communication 2008). Excavators encountered four burials and two caches in the western substructure (Robin et al. 2008).

Ancestor Veneration and Maya ‘life essences’

The Maya ‘life essence’, analogous in some ways to our Western understanding of the ‘soul’ as an animating life force (Astor-Aguilera 2008) is believed to consist of at least two parts (Monaghan 1998). The Maya life-essence is not fully formed at birth but is shaped over the course of one’s life through “lived experience” and interaction with other life-essences (Monaghan 1998). At death, the physical being is lost but, as Leslie McGeever Furst (1995:182) describes, the life essence dissolves “... into constituent parts whose nature is to live, with or without an intact body”. Modern Maya human beings are transformed into non-corporeal other-than-human beings that behave in human ways and depend on their descendants for ritual nourishment in the form of food, drink, candles, and incense (Redfield and Villa-Rojas 1962). Exhumation of the ancestors and the curation of their remains is still practiced in some Maya villages today as a way to facilitate communication with the deceased (Astor-Aguilera 2008; Redfield and Villa-Rojas 1962). Ancestors can be ritually called upon to assist their descendants in the form of political legitimation, rights to agricultural land, and to ensure the general well being of the lineage (McAnany 1995).

Parallels between material and glyphic representations of ancient Maya ancestor veneration suggest some degree of continuity in beliefs about death. Archaeological and hieroglyphic evidence suggest that the ancient Maya negotiated relationships between the living and the ancestors through mortuary rituals involving re-entrance into tombs to collect skeletal remains, rituals involving burning, bloodletting, divination, and caching of ritual objects (Chase and Chase 1996, McAnany 1995:62, 127; Tiesler 2000:145; Tozzer
Stone monuments indicate these rituals were done at certain times after death and that both males and females of varying ages were venerated (McAnany 1998:289). Human skeletal remains are a largely unexplored dataset by which to interpret the practice of ancestor veneration (McAnany 1995). We propose that treatment of the deceased body is a fruitful line of evidence to add to the suite of archaeological indicators of ancestor veneration described above.

**Methods**

In addition to the standard osteological analysis (Buikstra and Ubelaker 1994), the burials were analyzed using a taphonomic based approach called *anthropologie de terrain*, or field anthropology (Duday 2006). Drawing on forensic and archaeological data, the field anthropology approach applies principles of decomposition and decay of the body and the extrinsic factors of the burial environment to reconstruct mortuary ritual.

Maintenance of labile, or weak, articulations – the cervical vertebrae, small bones of the hands and feet, the temporal mandibular joint, costosternal, and scapulo-thoracic articulations (Duday 2006:33) – indicates a primary burial. A secondary burial is missing small skeletal elements and the labile articulations are not maintained (Duday 2006:45-46). It is crucial; of course, to consider what other factors may have caused the bones to become disarticulated – bioturbation, scavenging, looting (modern or ancient) or disturbance by excavators.

The space in which the body decomposed can also be reconstructed (Duday 2006:40-44). Whether the grave was filled with soil immediately upon burial, whether it was filled incrementally, or not at all will affect the degree to which bones become disarticulated. Reconstruction of the space of decomposition can also provide information about multiple individual burials – whether the deceased were interred simultaneously or sequentially (Duday 2006:49-50). Given the detail of the *anthropologie de terrain* analysis only the results of two burials – burial 8 and burial 3 – will be highlighted below.

**Burials and Caches from the Chan E-Group**

**Middle Preclassic Boden complex**

The first ritual activity in the Chan site center was a series of cached ritual items buried in bedrock cists beneath the central plaza floor during the Middle Preclassic Boden complex. A single individual of unknown sex was interred among these caches (Robin et al. 2008). This deposit may have comprised dedicatory ceremonies marking the spot that would be the focus of Chan’s ritual activity.

**Late Preclassic Cadle complex**

During the Late Preclassic Cadle complex the Chan residents began placing burials within the E-group. In the central substructure of the eastern building, three primary, single individual burials were interred, burials 8, 9, and 10 (Meierhoff et al. 2004). Chronologically, burial 10 was the earliest interment in the eastern structure (Kosakowsky 2008). A young adult male, he was interred in a simple pit with obsidian, hematite fragments, an incensario plug, a jade bead, a Sierra Red bucket, and a stingray spine. Burial 9 a young adult male, was interred within a stone-lined crypt, face down with arms at his sides and a Sierra Red vessel placed over the cranium (Figure 3). Due to its pristine preservation, burial 9 is an excellent example of a primary individual burial whose grave was most likely filled gradually over the course of the decomposition process (Duday 2006).

Burial 8 was placed face-down in a stone-lined crypt (Figure 3). The recovery of cervical vertebrae and small hand bones indicate that the burial was primary (Duday 2006). Root infiltration and some rodent activity disturbed the hand bones (Meierhoff et al. 2004). Burial 8 also showed evidence of post-interment re-entry; a cairn placed above the grave may have marked it for descendents. Mandible fragments, teeth, and a jade bead were found within a Sierra Red dish in the anatomical place of the cranium. Occipital and parietal fragments were found around the vessel and it is possible that the other bones of the calvarium and face were curated as they were not within the grave. Due to poor preservation it is difficult to say for sure whether the body was buried in soil or left in an open...
space to facilitate re-entry to curate the cranium. In addition burial 8 contained six whole vessels and a large chert blade placed near the left tibia.

Burial 17, the cranium of a young adult male, was the first human skeletal material to be interred in the western pyramid in the Late Preclassic period. The cranium was accompanied by a curated Middle Preclassic figurine (Laura Kosakowsky, personal communication 2008). In addition, a sequence of burials, burials 15 and 16, were placed within and on top of a stone-lined crypt. An adult male and child aged 5-6 were placed within the crypt and accompanied by jute, jade, copal, a piece of jade, and numerous small shell beads. A third individual, also a child, was placed on top of the crypt’s capstones and was accompanied by a Sierra Red dish, a jade bead, and several shell artifacts. A fourth individual, burial 14, was interred in close proximity to burials 15 and 16 in a simple pit with two conch spirals (Keller 2008).

**Terminal Preclassic Potts complex**

Burial 6, a young adult of unknown sex, was the only burial placed during the Terminal Preclassic Potts complex in the central substructure of the eastern building (Meierhoff et al. 2004). This individual was interred with a Sierra Red bowl, a Paila Unslipped jar, and a jade bead. Burial 2, a young adult male, interred with two disk-shaped shell ornaments, was placed in the northern substructure of the eastern building (Kestle 2004).

**Terminal Preclassic/Early Classic Transition**

One burial and one cache marked the transition to the Early Classic Burrell complex from the Terminal Preclassic Potts complex. Burial 12, an 8 year old child, was placed in a simple grave in the western pyramid. Associated grave goods included two partial, unmodified *Nephronaias* freshwater bivalves, and a piece of a greenstone. Cache D8 contained two lip-to-lip eroded basal flange bowls placed into a hole cut into the bedrock at the centerline of the western pyramid. Within the bowls excavators uncovered four small anthropomorphic figurines, one yellowish *Spondylus*, one reddish *Spondylus*, one green jade, and one black slate, of the “Charlie Chaplin” type arranged in a quincunx pattern (Keller 2008).
**Early Classic Burrell complex**

The Early Classic Burrell complex marked the first caches in both the eastern and western building. Caches at the Chan site followed the typical Maya pattern of placement along the centerline of a centrally located structure during episodes of refurbishing (Leventhal 1983). The caches in the eastern building, D8, D9 and D10 consisted of partial or poorly preserved ceramic vessels.

**Late Classic Jalacte complex**

The Late Classic Jalacte complex was the only time period in which both burials and caches were interred in the eastern building of the E-Group. Cache D6 and D202 contained ceramic vessels only. D6 was placed in the fill at the center of the ultimate step of the central upper substructure. D202 was recovered from the center doorway step leading to the rear bench of the central eastern building’s superstructure. Cache D4 consisted of 6 chert eccentrics placed on the central axis of the substructure. Three are simple crescent forms, a fourth is a ring that exhibits use wear, possibly from hafting, a fifth is likely a serpent form and the sixth is a notched biface (Nicholas Hearth, personal communication 2008). Cache D4 was placed nearby cache D6 and Altar 3 marking the (re)construction and dedication of the central eastern building.

Burials 3, 4, 5, and 7 also date to the Late Classic Jalacte complex. Burial 4 is an adult of unknown sex buried in a crypt grave and accompanied by a jade bead. Burial 7 contained the remains of a young adult female interred within a cist and no grave goods. Burial 3 and burial 5 contained multiple individual interments of adult individuals of both sexes. Burial 5 contained an older adult male and a young adult female in a stone-lined crypt. The female, interred first, was moved to the side of the crypt to make way for the male individual. Labile articulations of the male individual’s right hand were still in articulation upon excavation indicating that his body was most likely not the subject of extended funerary ritual after his interment in this crypt (Duday 2006). A piece of obsidian was interred with them (Meierhoff et al. 2004).

**Late Late Classic Pesoro complex**

Near the end of the Jalacte Complex and the beginning of the Late Late Classic Pesoro Complex cache D2, consisting of a Mt. Maloney Blackware bowl, was placed in the northern substructure of the eastern building (Kosakowsky 2008). This was followed by the placement of cache D101 in the central substructure, the last cache to be placed within architectural construction in the eastern building. D101 consists of a large unslipped incensario placed upright in the central step that leads from the front to the rear room of the eastern structure. Terminal deposit D102 represents a final depositional event on the surface of the eastern building. It consists of a number of mostly incomplete vessels and includes
fragments of incensarios and polychromes (Kosakowsky 2008).

**Terminal Classic Vieras complex**

Cache D1 dates to the Terminal Classic Vieras complex, and is composed of two large, thin, chert laurel leaf bifaces found in an east west orientation along the central axis of the western building. The bifaces were placed between the penultimate and ultimate fill of the final phase steps.

**Conclusion**

The deposits in the Chan E-group demonstrate a pattern in which burials were interred with ceramics and other grave goods throughout the Preclassic period. By the Early Classic ceramics are no longer used as grave offerings although other artifact classes are included in the E-Group burials (Robin et al. 2008). Beginning in the Early Classic period and continuing into the Late and Terminal Classic periods, ceramics and other items were placed in Chan’s eastern building only in caches.

In addition, the Preclassic burial vessels had use wear indicating that they may have been personal possessions of the deceased during life. We suggest that caches became the focus of community rituals associated with the E-Group, rather than specific ancestors, and thus may represent a heightened concentration on highlighting and engaging the community as a whole in ritual practices (Robin et al. 2008).

The treatment of the bodies interred in the eastern building seems to have changed through time, as well. The eastern building burials of the Late Preclassic contained single individuals, all young males, interred face down with arms extended at the sides. By the Late Classic, multiple individual interments including females were placed in the eastern building. Treatment of the bodies differed between these Late Classic graves. One contained three individuals interred in rapid succession with a secondary burial interred sometime later while the other contained the remains of two individuals interred with a longer amount of time passing between burials. There are many
Investigations of Burials and Caches at Chan Site

ways to form ones life-essence over the course of ones life and certain behaviors may have warranted each individual slightly different treatment at death. Perhaps there are different kinds of ancestors or different kinds of ancestor veneration. Alternatively, this change could be contingent on socio-political changes in the Belize Valley, specifically the rise of Xunantunich in the Late Classic period. A goal for future research will be to apply a more detailed analysis of both veneration and non-veneration contexts to document post-interment mortuary ritual.

In further contrast, several children were interred in the western pyramid while only adults were buried in the central structure of the eastern building. This is consistent with findings from other Maya sites as infants and young children were often placed in graves with other children or adults and on occasion in ceremonial architecture (Welsh 1988). If the fate of the body reflects the fate of the soul, perhaps the young, malleable souls needed to be placed with more fully formed souls. Child burials in the Chan E-group may have held a different ritual significance than the adults.

The people of Chan materialized their ancestors in grave goods, grave location, and treatment of skeletal remains. As their community changed through time so did the materialization of the ancestors. At this time we can only speculate as to the causes of these changes. However, if rituals, particularly those concerning death, reflect and emphasize deeply held cultural values (Metcalf and Huntington 1991) then burial and caching practices in the Chan E-group convey the growing value of community ritual into the Terminal Classic period. Overall, the Chan E-group demonstrates how remarkably rich and dynamic religious practices were for this group of Maya farmers.

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1995 External Impetus, Internal Synthesis, and Standardization: E Group Assemblages and the


Meierhoff, Jim, Caleb Kestle, and Ethan Kalosky


Whitetail deer remains are common in archaeological deposits in the upper Belize River valley during the Late Classic. Strontium isotope analysis of 44 faunal specimens from sites across the upper Belize River valley shows that residents at each site acquired wild game from multiple catchments, including the Mountain Pine Ridge, located over 15 km away. Carbon isotope values suggest that deer acquired in or near the sites had access to significant quantities of maize, but that patches of forest still were present. This pattern suggests that the Late Classic population expansion documented in the valley had a significant impact on the region’s ecology, particularly on whitetail deer populations. In contrast, Late Classic deer sampled from Caracol were not being procured from the Maya Mountains or Mountain Pine Ridge, despite its equal distance from the site. These data demonstrate a diverse set of animal procurement practices and movement of subsistence goods within and between neighboring regions.

Introduction

Mesoamerica is unique among the regions where archaic states developed in its lack of large domesticated livestock that could have provided a reliable source of significant amounts of animal protein. The implications of protein scarcity are many, and scholars have suggested several ways that Precolumbian societies might have coped with this challenge, particularly in densely populated regions where anthropogenic landscape change would have reduced the availability of wild game. In the Maya lowlands, some scholars have argued that large segments of the populations in some regions ate very little meat, obtaining necessary amino acids and fats from other sources (Gerry and Krueger 1997; Reed 1997). Researchers also have suggested that the Maya tamed and reared wild game like whitetail deer and peccary (Dillon 1988; Pohl 1990, 1994) or that the Maya managed animal populations or traded animals and meat more widely (e.g., Carr 1996; Emery 2008; Kennedy Thornton 2008; Pyburn 1996; Teeter 2001; Teeter and Chase 2004).

In this paper, we argue that the Classic Maya of the Belize River valley acquired some game from non-local sources. This conclusion is not unique to our study, but the method we employ to identify trade in animals and meat is new. In the past, arguments about the trade of basic foodstuffs have relied on estimates of population density and carrying capacity, inferring trade if the former exceeded the latter. Some faunal analyses examined the frequencies of bone elements to evaluate the possibility of trade in wild game (Hamblin 1984), but these only provide indirect evidence of trade. In this paper, we apply strontium and oxygen isotope analyses to directly identify non-local animals, just as scholars have done with humans at sites like Tikal, Teotihuacan, and Copan (e.g., Price et al. 2008, 2000; White et al. 2007). These methods also can be applied to faunal remains to identify trade and acquisition of animals and/or animal products like meat (Kennedy Thornton 2008; Freiwald and Yaeger 2007; Yaeger and Freiwald 2006). We also use carbon isotope ratios to reconstruct the catchments used by residents of the region and conclude with a discussion of the economic and environmental ramifications of our findings.

The Study Area: the Upper Belize River Valley

The study focuses on sites in the Xunantunich polity (Figure 1), which reached its maximum population density of approximately 500 people per square kilometer during the Late Classic (LeCount et al. 2002). Over the course of the Classic period, rising population densities around Xunantunich and throughout the region led to substantial changes in the natural landscape that likely had significant consequences for animal populations. The expansion of agricultural terracing systems and the replacement of closed forest by *milpas* decreased the opportunities for animals like deer to browse in forests, but also increased their opportunities to graze in agricultural fields. At the same time, growing human populations...
At the same time, growing human populations likely resulted in increased hunting pressures. Large game animals dominate the faunal assemblages recovered from Late Classic deposits throughout the Xunantunich polity. At the small hinterland hamlet of San Lorenzo, deer represent 27% of the identifiable bone fragments (Stein and Yaeger 2004). At Chaa Creek, a hinterland settlement zone with several elite residential and administrative complexes, large game form more than half the faunal assemblage. At Xunantunich itself, whitetail deer comprise nearly 1/3 of the animals (MNI), and along with dog and peccary, make up the bulk of the faunal remains at the site, excluding invertebrates (Freiwald 2009a).

These findings raise interesting questions about the local landscape, deer acquisition, and venison distribution: Were deer common in the densely populated and heavily impacted landscapes around centers like Xunantunich? Or were they scarce and valued imported resources? The heterogeneous geology of the Belize River valley and the neighboring Maya Mountains and Vaca Plateau provides an excellent opportunity to apply isotopic methods to questions of animal procurement. Our study shows that animals were acquired from multiple catchments with diverse local environments, including a surprising number of animals acquired at a distance from the Belize valley. These data contrast sharply with data from Caracol in the Vaca Plateau, where isotopic signatures of all animals sampled match values at the site. The discussion of the implications of these findings follows an outline of the methodology and a detailed presentation of the results.

**Methods in Bone Chemistry: Strontium and Carbon Isotope Measures**

Strontium isotopes are most commonly used to identify population movement of people in Mesoamerica (Price et al. 2008), but they also can be applied to animal populations. Strontium isotope ratios ($^{87}$Sr/$^{86}$Sr) are largely determined by local geology; strontium isotope ratios vary according to the different mineral composition and age of the bedrock and overlying sediments (Hodell et al. 2004; Price et al. 2008). Strontium
values in the Yucatan Peninsula match that of seawater at the time the land mass formed, decreasing from its modern value of .7092 in the north to ~.7075 in the south, the value of seawater 80 million years ago (Palmer and Elderfield 1985). These values are distinct from Pacific Coast volcanic formations (.7041), the southern highlands in Guatemala (.7047), the metamorphic geological formations near Copan (.7068), and the Maya Mountains in Belize (> .711).

Strontium enters the ecosystem through soil and groundwater, leaving a signature in plants and animals that reflects the local geology (Ericson 1985). It enters an animal’s tissue mainly through food consumed, but also through water. Strontium isotope ratios can be measured in both teeth and bones, but we analyze only teeth, as tooth enamel is less likely to be affected by diagenetic contamination (Hillson 1986). Discrepancy between an individual’s tooth enamel and the local strontium value is used to identify non-local animals, or more precisely, animals that lived in a different locale when that tooth was forming.

Local strontium values are usually determined by analyzing modern fauna, and we have sampled 26 small animals to provide baseline strontium values across the upper Belize River valley and adjacent regions. Rocks, water, or plants can also be used, and 13 samples collected by Hodell and colleagues (2004) provide additional baseline data for the study area. Researchers also employ oxygen isotope measures to identify non-local human populations and provide information on the environment (Emery and Kennedy Thornton 2008; White et al. 2007, 2004a, b, 2002, 2001a.) We have conducted oxygen isotope analyses, but these data are not presented here.

Our study also includes carbon isotope analysis. Carbon isotope ratios can be used to infer levels of maize consumption, which in non-human animal populations also aids in environmental reconstruction (Emery et al. 2000; Emery and Kennedy Thornton 2008). Plant species use distinct photosynthetic pathways that result in different ratios of carbon isotopes in the plant’s tissues. Most plants use the temperate C3 pathway, which results in depleted 13C/12C values that range from -22 ‰ to -35 ‰. Tropical grasses and other plants using the C4 pathway have enriched 13C values ranging from -9 ‰ to -19 ‰. Some plants like cacti have a highly variable isotopic signature that can resemble either C3 or C4 plants (Ambrose and Norr 1993, Tykot 2006). In the Maya region, researchers consider maize to be the main C4 plant that contributed to the diet, and thus they use carbon isotope signatures to assess the level of maize consumption (e.g., Emery 2000; Gerry and Krueger 1997; Tykot 2006; White et al. 2001b, 2004).

Establishing a baseline for carbon isotope values is more complex than for strontium because it depends upon the density of the forest cover, the age of the sample, and an in-depth understanding of the fractionation that occurs at different stages in the food chain. White and colleagues’ (2001) analysis of deer in Belize measures carbon ratios in both bone collagen and apatite (Coyston et al. 1999; White et al. 2004) to estimate baseline values for C4 and C3-based diets. However, we also rely on diets of animals in our study region known to prefer C3 foods to estimate the possible baselines for different regions in our study.

Strontium isotope samples were prepared in the UW-Madison Laboratory for Archaeological Chemistry and processed at the UNC at Chapel Hill Department of Geological Sciences. Teeth were first sonicated in purified water and then mechanically cleaned with a dental drill before processing on a VG Sector 54 mass spectrometer. Carbon isotope samples were both mechanically and chemically cleaned following procedures in Balasse et al. (2002) and were processed at the University of Arizona’s Environmental Isotope Laboratory.

**Strontium Results: Where did Belize Valley Residents Obtain Game?**

The upper Belize River valley has some of the greatest variability in strontium isotope ratios in the Maya lowlands, which allows us to identify the movement of people and animals between closely spaced locales. We distinguish four zones with distinct strontium isotope values. In the Mopan and Belize River valley and adjacent limestone hills, strontium values range between .7084 and .7087. In the older Cretaceous limestone upland zone, extending
south to include the Vaca Plateau, values range from .7076 to .7078. Values in the Mountain Pine Ridge and Maya Mountains zone exceed .711 and may surpass .727.

People and animals in the Macal River valley have yielded a distinct range of values intermediate to those in the Maya Mountains and adjacent zones, ranging from .709 - .710. This likely is due to the fact that the Macal’s alluvial floodplains are composed of sediments from the Mountain Pine Ridge and Maya Mountains (Smith 1998). While strontium values as high as .713 have been measured in land snails at Tipu (Kennedy Thornton personal communication 2008), Late Classic humans interred nearby at Chaa Creek average .7095 (Freiwald 2009b). This probably reflects the fact that humans obtain their food from a much larger catchment than land snails, which have very small ranges, possibly restricted to a single geologic zone. Alternatively, strontium values may decrease gradually along the Macal River from the Mountain Pine Ridge to the Belize River below. Given the data currently available, we interpret values between .710 and .711 as representing areas bordering the Maya Mountains or Mountain Pine Ridge and those exceeding .711 as indicating the Maya Mountains and Mountain Pine Ridge.

We use these ranges to ascertain the origins of animals found at sites across the region. Identifying with certitude a specific point of origin is impossible, as multiple regions across the Maya lowlands share the same baseline values. For example, the average measure in the Belize River valley of .7084 is shared with parts of the northern Yucatan Peninsula and with Palenque (Hodell et al. 2004; Price et al. 2008). Applying least-effort assumptions, we identify animals with strontium values that fall within the baseline of the zone where they were recovered as local. We conservatively assume that animals with different strontium values come from the nearest zone with a matching baseline value.  

Chan: Cynthia Robin and Chelsea Blackmore provided faunal samples from the Chan site, including two brocket and three whitetail deer (Figure 2). Our current unders understanding of strontium isotope variability in the region suggests that all of the animals could have been obtained within 5 km of the site. The values of both brocket deer and one whitetail deer fall within local baseline values of the Mopan and Belize valleys. The other two whitetail deer have values of .7092 and .7094, suggesting they came from the Macal valley.

Chaa Creek: The two samples from the small Chaa Creek faunal assemblage include a tapir and a peccary. The value of the peccary (.7084) is substantially lower than the average value for humans interred at the site (.7094), but it matches values from modern fauna taken just a few kilometers away in the Mopan and Belize valley zone. The tapir, however, has a much higher value (.713) and most likely was acquired in the Maya Mountains.

San Lorenzo: The largest number of samples comes from the small site of San Lorenzo, 1.6 km from Xunantunich. Eighteen whitetail deer teeth (not necessarily 18 unique individuals) come from diverse locations (Figure 3). Only one deer sampled had a value local to the Belize Valley, and five deer had values that matched the Mountain Pine Ridge, ranging from .7110 to .7123. Eight more animals had values that match those identified along the Macal River, representing a gradient between the higher strontium signatures in the Mountain Pine Ridge and those in the lowlands. It is likely that many animals had ranges that overlapped each zone, especially since more than half of these deer also show moderate levels of maize consumption.
Figure 3. San Lorenzo strontium values: dashed line shows UBRV value, solid line shows the average of intermediate values near the Macal River and/or mountainous zone, and values above that likely derive from the Mountain Pine Ridge.

Fig. 4: Xunantunich strontium values, with a dashed for values found near the site and a solid line for those identified near the Macal River.

Xunantunich: The eight samples from Xunantunich reflect similar patterns (Figure 4). One peccary is clearly non-local, with a value matches the Cretaceous limestone uplands to the south and east, while one peccary and one brocket deer have values that match the local range. One brocket deer, one peccary, and one whitetail deer have values outside this range, but they do not form a statistically distinct population and cannot be excluded as local even though they do not match known baseline values. Two other animals match the Macal valley zone, approximately 7 km from the site.

Several patterns are clear: first, residents of each site consumed animals acquired from multiple zones, and second, acquiring non-local animals was common. Whitetail deer, the most common animal in these faunal assemblages, was the most likely to be nonlocal. Whitetail deer were twice as likely as other animals to have non-local strontium values. This suggests that anthropogenic change to the local landscape included a sharp reduction in deer populations, particularly in the Mopan valley where Xunantunich and San Lorenzo are located. Carbon isotope analysis of these same faunal
remains provides additional information on the landscape change in the zones in which these animals lived.

**Results: Carbon Isotope Values and Environments**

Space constraints prevent a full discussion of the carbon isotope results here. The combined carbon and strontium isotope values show two patterns (Figure 5): First, animals that ate little or no maize generally had strontium values that matched less populated areas in and around the Maya Mountains and Mountain Pine Ridge, where anthropogenic landscape change was presumably less intense. Animals from in the Mopan and Macal valleys, however, have diverse carbon isotope signatures. Some have values that suggest high maize consumption, but animals with depleted carbon isotope values suggest the continued availability of brush or forest patches for browsing. None of the animals had levels of maize input that White and colleagues (2001, 2004) have linked to animal taming or rearing.

Figure 5. Strontium and carbon isotope values for fauna found at upper Belize River valley sites.

An admittedly small sample of analyzed deer from Caracol provides an interesting contrast. Five whitetail deer individuals were sampled, two of them multiple times, yielding a total of 11 values (Figure 6). All of the animals had strontium values that matched the local value at the site (one problematic sample is still being analyzed). Surprisingly, none of the animals were acquired in or around the Mountain Pine Ridge or Maya Mountains, although they lie the same distance from Caracol as do the Belize River valley sites in this study. Furthermore, all five animals ate C₄ foods at levels approaching invasive feeders in modern corn fields (Cormie and Schwarz 1994), supporting their origins in a heavily populated environment. The presence of local deer is surprising, given the densely-populated urban zone around Caracol, and could be explained by Chase and Teeter’s (2004; Teeter 2001) proposal that the Maya of Caracol managed game resources. It is important to point out, though, that similar strontium baseline values likely extend throughout the Vaca Plateau, so these animals could have come from farther afield.

![Caracol strontium and carbon isotope values for 5 whitetail deer. It is interesting to note the shift in the diet of deer 2, possibly after dispersal from its natal range.](image)

Conclusions

More research is required to understand the degree to which anthropogenic change affected the natural landscape and game availability in the Late Classic Belize valley, and to chart the diverse ways people responded to those changes. Our data indicate that one response was to seek game from farther afield. This is one strategy for acquiring animal resources in conditions of growing population pressure as outlined by Teeter and Chase (2004; also see Emery 2000, 2008). The inhabitants of the upper Belize River valley used animals that came from the Mountain Pine Ridge and Maya Mountains zone, over 15 km distant and the source for other important resources like granite and pine (Graham 1987; Lentz et al. 2005). Carbon isotope data indicate that animals from these zones consumed very little maize, a result that should be expected given the acidic soils in
those zones and the paucity of ancient human habitation there.

Although the pilot project for this study (Yaeger and Freiwald 2006) indicated a straightforward dichotomy between local and non-local animal acquisition and a stronger reliance on animals from distant locales, the more robust data presented here suggest that people in the sites in our study acquired some game locally and some from adjacent zones in the upper Belize River valley. The carbon isotope data demonstrate that many of the latter animals ate substantial amounts of maize, suggesting they come from heavily populated areas like the Mopan and Macal River valley zones.

The picture that our data painted of the upper Belize River valley is of a complex ecology, strongly conditioned by more than two millennia of human activities. More research, including paleoclimatological and geomorphological studies, will allow us to more fully reconstruct this ecology, but current data indicate that the landscape had been transformed by agricultural systems by the Late Classic period. This complex ecology shaped a diverse set of human response, conditioned in part by the valley’s political landscape and complex economic system, which led to importing meat and/or animals from distant locales, likely by hunters.

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Lithic industries leave their traces, and the LDF Chert site at El Pilar represents a unique view into the use of this ubiquitous material of the ancient Maya. Excavations at the LDF Chert site of El Pilar included the examination of Cahal Tok (Place of Flint), a limestone rise with a small platform associated with the chert workshop. Excavations uncovered evidence of specialized flintknappers, producing bifaces in the Late Classic. Analyses show that production at Cahal Tok locus was of primarily chert axes. On the platform, smaller primary flakes remained in situ, but much of the larger debris was deposited to the east off the edge of the platform and into the LDF dump. While control of an important industry may be implied, knapping could equally well be organized independently. We expect that small industrial areas are actually present at most large sites but have not been recognized.

Introduction

Stone tools and their waste products form the most plentiful and durable evidence of craft production in many prehistoric cultures. Because to modern archaeologists, knapping seems an exotic skill, and high levels of proficiency are not easy to acquire, we tend to see flintknapping as a likely area of craft specialization. In Maya archaeology, the immense deposits of debitage at Colha (Shafer and Hester 1983) have become the best-known example of the industrial-scale production of common utilitarian tools. Lithic industries at other sites are often expected to be equally the realm of specialists, and stone tools may be seen as commodities controlled by the state or elite members of society. Stone tools have thus been the focal point of a good deal of argument about the nature of industry and political organization in Maya society.

Evidence of areas devoted to industrial activity within major Maya centers is not commonly reported. Therefore, the situation at the Cahal Tok/LDF locality at the site of El Pilar in Belize is unusual. At Cahal Tok a small stone platform on a cleared limestone surface was the actual knapping area, with debitage deposited nearby to form a dump, designated the LDF Chert Site. The debitage from deposits at Cahal Tok and LDF shows that the knappers made flaked stone celts in great numbers, and little else. The density of deposits and the scale of specialized production were comparable to some loci at Colha. There was some separation of work and discard over a substantial period of time, using material which was acquired and partly prepared elsewhere. All of this is evidence of a considerable amount of organization. The immediate area around Cahal Tok and LDF seems to have been used for limestone quarrying, and shows only sparse signs of habitation. A nearby concentration of about 200 intentionally broken limestone spindle whorls is probably a ritual deposit that may indicate fabric production in the area as well (Kamp et al. 2007). This apparent industrial zone is very close to the ceremonial and civic center of the site, and could have been controlled from it, although a less centralized organization of production is equally plausible.

Excavations

The El Pilar Archeological Reserve is located on the international boundary between Belize to the east and Guatemala to the west, approximately 15 miles north of San Ignacio town and 7 miles from Bullet Tree Falls Village in Belize (Figure 1). The site is in the uplands drained by tributaries of the Belize River. The core of El Pilar is the largest center of the Belize River area and consists of several plaza complexes, with most construction occurring in the Middle Pre-classic (950-650 BC) and Late to Terminal Classic (AD 650-1000).

The LDF Chert locus (Ford and Olson 1989:189; Michaels 1993: 227) is a dense deposit of lithic debris, roughly 150 m northwest of Plaza Copal near the middle of the El Pilar monumental center (Figure 2). The densest
debris covers an area roughly 15-20 meters in diameter in a large depression which is probably the result of quarrying for limestone. In 1990 the BRASS/El Pilar project excavated two 1x1 m test pits, recovering over 1000 kg of debitage from a single test pit. Adjacent to the LDF locus are two low mounds and a platform with lithic debris, referred to as Cahal Tok (Place of Flint) (Figure 3). In 2004, a team from Grinnell College directed by Kamp and Whittaker, joined the El Pilar Project to test the context of lithic production at the previously discovered and tested LDF Chert Site. Our analysis included lithic debitage recovered from Cahal Tok, a sample from LDF column and bifaces collected in 1990.

**Stratigraphy and Structures at Cahal Tok and LDF**

The stratigraphy at Cahal Tok was uncomplicated. All trenches were carried to limestone bedrock, encountered at 50-70 cm below surface. Cultural deposits lay directly on the limestone in all the trenches, and it appeared that the limestone was exposed and clean at the beginning of occupation. At the eastern edge of the site, knapping debris had accumulated directly on bedrock in a layer 50-60 cm thick at the east end of T3. This debitage deposit was very dense, and it was only possible to collect a sample. The identification of a wall in T3 and T4 convinced us it was a low platform, and there was no evidence that the platform had a plastered floor.

At LDF, the two test pits showed 70-100 cm of fill that was almost entirely debitage, with minor portions of soil and limestone rocks, and only a few sherds and other artifacts. The surface today is well below the adjacent surface of trenches at Cahal Tok, and the debitage appears to be filling a depression.

**Artifact Analyses**

The artifacts of Cahal Tok are dominated by lithic production debris. Our analyses concentrated on the lithic material, but the limited assemblage of temporally diagnostic ceramics provided the best evidence for dating activities at the locus.

**Ceramics**

The Cahal Tok ceramic assemblage included 4144 sherds, of which only 229 (5.5%) were temporally diagnostic, a low rate for contexts at El Pilar. Overall, the ceramic assemblage was sparse and poorly preserved.
The temporal range of the ceramics is limited, showing that the platform on the site was in use in the late facet of the Late Classic Period. Large open jars and bowls of fine paste dominated the assemblage, which lacked the coarse paste cooking vessels common in domestic sites in the region (Lucero 2001; Ford 2000). From the ceramic evidence, we have concluded that Cahal Tok was not a residential area but a special activity site dating to the later part of the Late Classic.

Lithic Tools

Specialized tools are rare at Cahal Tok. Tools of any kind were scarce in the debitage-dominated deposits in the eastern trenches of our excavation. About 37% of the tools were made on casually retouched biface thinning flakes, 25% on relatively thick flakes struck from cores, and the rest on other pieces, including flakes of indeterminate origin. The tool assemblage suggests a low level of the normal craft and maintenance activities. The LDF tool assemblage, in contrast, is almost entirely biface manufacturing failures and broken biface tools.

Bifaces

The 1990 test pits in the LDF deposits produced a number of biface failures among the debitage. The sample is not very large, and there are no apparent pattern. There were 57 biface pieces, plus a dozen flake tools and an obsidian blade segment. The knappers at Cahal Tok and LDF emphasized axes, but there are also 12 pieces of thin bifaces (Figure 4), that would have been knives or spear points. Two of the LDF specimens are very finely flaked and finished by pressure retouch; a third, less well finished, shows signs of heavy use. The other 9 pieces are from middle or late stages in manufacture and were still being thinned when they were broken.

Figure 4. Thin bifaces. The upper row of bifaces are finished pieces with carefully refined edges; the specimen to right shows damage and reworking. The two lower specimens are typical of pieces broken at a middle stage in manufacture

In the LDF test trenches, there was a small but useful assemblage of discarded axe forms. There are 10 early pieces where little has been done except edging and decortication of a
chert nodule (Figure 5). The debitage analysis suggests that this is the form in which most of the material must have arrived. Fourteen pieces from LDF show middle stage work, thinning and shaping the preform. A late stage, in which final shaping is done and edges are finished is represented by 11 pieces. Almost all the biface specimens show the kind of bending fracture common to manufacturing failures (and heavy use in the case of finished axes). Among the collections are several axes that had been finished and used, including two with ground bits, and seven proximal (butt) end pieces with heavily dulled edges or ground surfaces. One other axe is complete, but worn out by the resharpening of edges and the broken butt. These pieces suggest that the knappers on site not only made new implements, but reworked old tools.

Debitage

The debitage analyses allow us to further discuss the process and location of manufacturing activities at Cahal Tok and LDF and to provide a basis for estimating the scale of production. Debitage was analyzed by size classes, presence of cortex, coarseness of material, evidence of burning, and type of flake (Figure 6). Thick flakes with large bulbs of percussion, lipped platforms, and multiple flake scars on the exterior surface were classified as biface thinning flakes. Flakes with missing platforms and/or lacking other recognizable indicators were classified as indeterminate, and angular pieces that appeared freshly broken but lacked identifiable flake features were classified as shatter. Chert pieces that were clearly broken by fire and showed no evidence of knapping were not recorded.

With the exception of a few pieces of obsidian, all the lithic material from the site was chert. The chert varies from opaque brown or grey stone to translucent browns, greys, purples and colorless material. Quality varies from coarse and gritty to very fine and glassy, although material of all qualities may have voids or other flaws. There are some pieces so grainy that quartzite is probably a better term, and a few flakes are of hard limestone with a silicious component. We do not make a distinction between chert and chalcedony because in the El Pilar material, a high proportion is deeply patinated to a dead white, only revealing original color when broken.

Production Process

Although LDF has been described as a “quarry and reduction site” (Ford and Olson 1989), and “adjacent to chert quarry holes” (Michaels 1993:227), we now do not consider these initial assessments to be correct. First, although there are many flakes with minor amounts of cortex, the masses of decortication flakes produced in the early stages of knapping
and expected at quarry sites are completely lacking at LDF and Cahal Tok. It appears that knappers brought partially decorticated nodules to Cahal Tok for further reduction. Second, although some chert nodules are found on the site, and apparently derived from the quarry holes, we made a point of testing a number of these.

For comparative material, Whittaker, an experienced knapper, produced two axes and collected and analyzed the debitage. One axe was made of fine opaque banded chert collected from rip-rap on the waterfront in Belize City, derived from modern quarries (Hester personal communication). The second axe was made from a nodule from road gravel coming from the gravel quarries around Spanish Lookout, comparable to the site material. The debitage from these axes was treated like that from the archaeological contexts, and different stages of the knapping process were collected separately. The decortication debitage was all produced during initial preparation of the nodules by percussion with hammerstones. The non-decortication debitage comes from subsequent thinning using a large antler billet, and thinning, shaping, and platform preparation using hammerstones.

The debitage comparisons support our initial assessment that the Cahal Tok knappers were producing chipped stone axes from previously decorticated blanks. There was little shatter in the assemblages from Cahal Tok. The lack of shatter is primarily a reflection of the generally high quality of the raw material, and of the removal of cortex and flawed pieces in early stages of knapping that were largely performed away from the Cahal Tok area.

Knapping occurred on the Cahal Tok platform throughout the Late Classic, and the debris from the knapping found there is the result of primary workshop activity. Some of the lithic waste was removed from the knapping area, however, by dumping it into the adjacent abandoned limestone quarry area, forming the LDF Chert locus. The distributions of flake types and sizes east to west in the column samples relate Cahal Tok to the LDF deposits. Biface flakes predominate throughout, visible especially in the high proportions of biface thinning flakes compared to very low proportions of flakes with hard hammer platforms. The main difference is that LDF has higher proportions of larger flakes. Therefore, we interpret that knapping was actually done on the limestone surface and platform above LDF, with larger waste removed and dumped over the edge to form the LDF deposit.

**Debitage Composition.**

T3 and 4 are represented only by the column samples. For the other trenches (T1, 2, and 5-9), which were off the platform and did not have the concentrated lithic debris, we analyzed the complete lithic collections. These assemblages look different. While biface manufacture is still strongly represented, there are more tools, more hard hammer flakes (including a few that are definitely not from biface manufacture), more shatter, more cortical flakes, and larger flakes. We interpret this as a more typical lithic assemblage for El Pilar, with some of the biface industry from LDF mixed in.

Microdebitage is often indicative of the actual locations of knapping activities. The fraction of microdebitage that passed through the 1/4” screen was not analyzed, but the relative proportions by weight (grams) are useful. Microdebitage makes up 2-7% of the LDF chert, except for Level 8 where the bottom of the deposit mixes with the underlying clay. In the column samples from T3 and T4 at Cahal Tok, the microdebitage is mostly around 40% of the total debitage, with some samples, especially smaller ones, much higher. In comparison, the microdebitage from the two experimental axes makes up 25% of all the debitage.

Cahal Tok thus has very high proportions of small debitage and lower proportions of larger flakes than LDF. We interpret that primary materials were prepared before arrival at Cahal Tok. The Cahal Tok knappers shaped the tools and swept the waste off the edge of the platform into the adjacent LDF deposit. Examples of similar associations between knapping areas and debitage have been recognized at Colha (Hester and Shafer 1992; Roemer 1991; Shafer and Hester 1983).

**Scale of Production**

Some of the arguments about Maya lithic craft have focused on the scale of production.
Calculating productivity is inevitably based on assumptions, and estimates based on different samples, procedures and theoretical expectations are notoriously difficult to compare. We used density to try two methods for estimating the number of axes that might have been produced at Cahal Tok, one based on debitage weight and the second based on number of pieces of debitage. In both cases we estimated total quantities for the combined Cahal Tok and LDF debitage and then used the data from the experimental axe production to calculate a total number of axes.

Using the most conservative dimensions to estimate a density of 1069 kg/m3 and a deposit volume of 240 m3 for the LDF/Cahal Tok deposit, we calculate 250,000 kg as a conservative estimate of the total weight of the LDF/Cahal Tok debitage. According to our axe replications, an axe made from a very large core produced 738 g of analyzable debitage, while an axe from a small blank produced 113 g. If we convert this to an estimated - but, again conservatively broad - range of 100 to 800 g per axe, this suggests that somewhere between 300,000 and 2.5 million axes were produced at El Pilar in the Cahal Tok/LDF area. Using the average of 425 g per axe, the estimate is almost 600,000 axes.

The number of pieces of flake and shatter 1/4” or greater for 10x10x15 cm column samples from levels 2, 4, 6, and 7 averaged 1211. Rounding this to 1200 we calculate an approximate average density of 800,000 flakes per cubic meter. Again using our estimate of 240 cubic meters of debitage, this density produces a figure of 192 million total pieces. The two experimental axes each produced about 600 pieces of biface thinning flakes and related shatter after the initial decortication that we believe took place away from the locus. If this is used to estimate the number of axes produced, the most conservative estimate is about 320,000, very close to the lower estimate using weights.

We have attempted to use the most conservative values to calculate all of our figures. Our estimates do demonstrate that the Cahal Tok workshop produced very large numbers of axes. If the locus were used for 250 years, which is probably considerably longer than the actual use of the site, more than 1000 axes a year would have been manufactured there. Knappers at the locus would have produced at least several axes a day. Less conservative estimates of debitage quantities would elevate production values, as would shortening the hypothetical use life of the platform. In rough terms, the workshop at El Pilar is comparable to some individual loci at Colha, although at Colha there are many larger deposits and a longer time span, and the concentration of many loci implies a much larger overall productivity.

Conclusions: Cahal Tok in Social Context

In Maya archaeology, much discussion of lithic industries, and craft production in general, has attempted to come to terms with the question of occupational specialists and the organization of production in Maya centers. Basic to these discussions is the problem of identifying workshops and deposits resulting from them. Many studies have shown that debitage concentrations should not be uncritically interpreted as representing workshop loci; many are more likely to be secondary “dumps” (Moholy-Nagy 1990; Mallory 1986; Clark 1986). Do Cahal Tok and LDF represent a lithic production locus, or merely a dump of hazardous waste?

Modern discussions of lithic waste disposal include the idea that sharp flakes are hazardous to prehistoric feet, and in some ethnographic and archaeological situations, they were removed from underfoot (Clark 1991; Moholy-Nagy 1990; Whittaker and Kaldahl 2001). Yet many cultures regarded debitage with indifference, to judge by the quantities scattered around and the lack of facilities for segregating it. The Maya complicated matters for archaeologists by moving great quantities of fill around their centers during construction, demolition, and remodeling of monuments. This fill included debris from households and apparent specialist workshops, including lithic debris (Moholy-Nagy 1997), as well as quarried limestone and clay.

There are a number of possible interpretations of Cahal Tok and the LDF chert deposit. It could be that stone-workers all over El Pilar brought their waste to one spot. The material also has little of the evidence of flake tools and their manufacture common on other
sites; it is a specialized deposit. It makes more sense to interpret the edge of the limestone rise at Cahal Tok and the platform built on it as the actual workshop, and the deposit at LDF as the associated dump. In addition, the presence of microdebitage is often cited as evidence of on-site knapping (Behm 1983; Clark 1986; Moholy-Nagy 1990; Shafer and Hester 1986). At Cahal Tok and LDF, small flakes and microdebitage are common, a strong indication that knapping was done on site. As debris accumulated, it was swept off the edge of the limestone ledge (and later the built platform), where it formed the deep deposit recognized as the LDF chert site.

The next question then, is who did the knapping and who controlled production? Cahal Tok and LDF do not fit the usual expectations for large Maya sites. Central sites are seen as often including residential compounds whose inhabitants engaged in craft activities (Becker 1973), often making prestige goods, but the centers are usually believed to be more involved in distribution than in production, especially when considering common tools (Fedick 1991). In our area, Ford (1991, 2004; Ford and Olson 1989) has used lithic and other evidence to argue that the occupants of smaller sites in less productive foothill zones relied in part on craft specialization to integrate themselves into the larger economic system, and similar models are often applied elsewhere, for example in the Three Rivers region (Hyde 2003).

The debitage at Cahal Tok and LDF indicates a very specialized operation. Virtually all the material can be explained as coming from making bifaces, focusing on thick “axe” forms from preforms that had been quarried and prepared elsewhere. Systematic manufacture of bifaces, especially thin ones and carefully made axes, implies a high level of knapping skill. Thus, the restricted forms and use of great quantities of material that had to be carried in implies a fairly organized system.

Cahal Tok and the LDF chert deposit are practically “downtown.” The central area of monumental architecture at El Pilar would have been visible from Cahal Tok; the main plazas and causeway of El Pilar are within 50-150 meters. This whole sector of El Pilar is dotted with house mounds and must have been densely inhabited during much of the occupation. However, in the immediate area around LDF and Cahal Tok mounds are relatively scarce and the topography is broken by small limestone outcrops and quarry pits. Evidently this was an area of industrial activities, set close to the heart of El Pilar.

Proximity to elite centers could indicate that the knappers at Cahal Tok were under direct elite control. However, less centralized entrepreneurship could produce similar patterns. Usually the evidence is equivocal. Lithic workshops are often associated with habitation units or plazuela groups at Colha. At Cahal Tok, the knappers apparently did not live on site. This could imply that knappers who lived elsewhere were employed at a state “factory,” or merely that knapping by individuals was best done cooperatively, as in some ethnographic situations (Stout 2002). The knappers produced mostly common tools, although thin bifaces may have had some more prestigious uses. The scale of production, although far beyond that of any single household’s needs, is not so grand as to suggest a major manufacturing enterprise, like that seen at Colha.

In our opinion, it is likely that many major centers have small industrial zones. Specialized production of bifaces was certainly the focus of the Cahal Tok workshop. The debitage on the Cahal Tok platform and in the LDF dump represents the work of many knappers in one place and the sustained and continuous use of a knapping area over a long period of time, using a limited range of material to produce and rework a couple of tool types. All of these factors are consistent with specialized production. Whether the location of the workshop close to the high-status monuments indicates centralized control or whether the location is merely an expedient one, near a quarry pit convenient for waste disposal, depends more on our biases about the Maya than the evidence of this site.

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This paper explores evidence of political complexity at San Estevan. I focus on the time when local population founded the first sedentary villages (~900 B.C.) through to the creation of the earliest centralized and hierarchical society during the Late Formative period (~100 B.C.). Excavations in 2005 documented that the central part of the site was plastered over after 50 B.C. – at roughly the same time as monumental construction projects also began at the surrounding sites of Cerros, Nohmul and Lamanai. San Estevan’s central Mound XV was built on these plaster surfaces as was the adjacent ballcourt. Work in 2008, at ten mounds around the site’s central precinct, document a progressive infilling of the community during the Late Formative period as San Estevan’s elite expanded their political power. Occupation of these ten mounds, however, indicates that existing Middle Formative habitation zones (outside of what would become the site core) were not always the locale of Late Formative domestic mounds. Numerous new locations were selected that were then occupied through the Classic period. This paper ends with a reassessment San Estevan’s position in the regional political hierarchy during the Late Formative period. I argue that San Estevan was one of a dozen independent polities that formed a political patchwork across northern Belize at this time.
intersected in northern Belize (e.g., chert tools from Colha, maritime goods from Cerros as well as prestige goods from the Petén and other inland locations from Lamanai).

Recent investigations have targeted the Formative-period occupation of San Estevan. In this paper, I review what we know of San Estevan during the Formative period (Bullard 1965; Hammond 1975; Rosenswig 2007, 2008a) and its place in the local political geography of this period (see Rosenswig and Kennett 2008). Then, I report some highlights from our 2008 field season (Rosenswig 2008b).

**Previous Work at San Estevan**
San Estevan is located on high ground between the New River and Long Swamp, south of the modern village of San Estevan. In 1962, William Bullard (1965) mapped the civic-ceremonial center, dug test trenches and restored two Early Classic structures in Plaza A. Based on these excavations, he proposed that San Estevan’s main occupation was during the Late Formative and Early Classic periods. Norman Hammond (1975) expanded Bullard’s map and excavated at Plaza D as part of the British Museum Corozal project. The ceramic collections from these excavations at San Estevan along with initial testing at Nohmul, Santa Rita, Colha and Cuello were used by Duncan Pring to established the Swazey, Bladen, Lopez Mamom and Cocos Chicannel phases (Kosakowsky 1987:9; Kosakowsky and Pring 1998). Next, Laura Levi (1996, 2002, 2003) mapped outlying house groups at San Estevan and excavated several domestic structures – focusing primarily on Classic-period settlement patterns.

During the late 1990s, much of the monumental architecture in San Estevan’s core was bulldozed and a large crater excavated for the underlying limestone marl. The damage to San Estevan, while unfortunate, provided extensive access to the earliest occupation at the site’s center. Taking advantage of the easy access to the earliest occupation levels, work at the site began again in 2002 (Rosenswig 2004).

Returning in 2005, Middle and Late Formative period deposits were documented at this time including a cobble surface with an intact stone wall alignment (Rosenswig 2008a). We also discovered that part of the west ballcourt bench remained intact despite the bulldozing, and further, established that this architectural feature had been built during the Late Formative period. In the course of excavations on the east side of the only remaining mound at the site center (Mound XV), we discovered a Chicannel period cache, associated with the earliest documented monumental construction episode. Excavations in 2005 also documented several Middle Formative domestic features and midden deposits below what later became the core of the site (Rosenswig 2007, 2008a). These deposits were sealed by a series of expansive plaster surfaces that stratigraphically define the beginning of monumental construction during the Late Formative period. Mound XV and a ballcourt were built directly on top of these plaster surfaces that are dated to between 50 B.C. and A.D. 40 (Rosenswig and Kennett 2008: Table 1).

**Political Organization of Northern Belize**
Hammond (1975:42) originally classified San Estevan as a medium-sized, major ceremonial center larger than Colha and smaller than Nohmul. Scarborough (1991:181-190) suggested that this was a second-order center within the Late Formative Nohmul polity and subsequently an independent first-order center during the Early Classic period. McAnany (2004:12) classified Lamanai, Cerros, and Nohmul as first-order sites, San Estevan and Cuello as second-order sites, and small villages such as K’axob as third-order communities. I concur with this size-ranking as well as with her caution that: “The extent to which this site hierarchy translated into active political control over lower-order centers is far from obvious” (McAnany 2004:12).

In a recent paper, Doug Kennett and I (Rosenswig and Kennett 2008) outline three alternative models that describe the Late Formative political landscape of northern Belize. These are 1) a hierarchical four polity model
Figure 2. Map of San Estevan with topography and excavation units from 2005 and 2008 seasons of the San Estevan Archaeological Project.

Figure 3. Carved stone from San Estevan, Suboperation 12.

Figure 4. San Estevan Suboperation 13 road-cut showing stratigraphy.
(after Scarborough 1991); 2) a rural autonomy model (after McAnany 1995, 2004); and 3) our political patchwork model (Rosenswig and Kennett 2008: 138-140). Each model describes different levels of political centralization with a different number of autonomous polities coexisting in northern Belize during the Late Formative period. Each of the three models further provides a different set of expectations for San Estevan’s place in the local political hierarchy. In the first, San Estevan is defined as a secondary center within the Nohmul polity that also subsumed tertiary centers such as K’axob. In the second model, San Estevan and K’axob were two among scores of independent polities in the region. An underlying assumption of both these models is that a degree of stability and peace (through coercion and cooperation respectively) existed for each political structure to remain unchanged over the numerous centuries of the Late Formative period. In the third model, we propose that each second-order site was an independent polity that competed with first-order sites and extracted tribute from rural populations in their vicinity (such as K’axob in the case of San Estevan). The fortunes of the dozen or so centers waxed and waned in a competitive political environment that would have included warfare and the conspicuous displays of wealth and power that is evidenced by the building of temple mounds.

San Estevan Archaeological Project 2008

Due to the extensive damage to San Estevan, we have begun remapping the site (Figure 2). In 2005, all excavations were concentrated in what was the site core where we documented Middle Formative domestic deposits and Late Formative architecture. In 2008, we tested a number of surrounding mound groups in an attempt to recover Late Formative domestic materials with which to document economic changes (or lack thereof) from the preceding Middle Formative periods. For example, Suboperation 12 was excavated 350m east of Mound XV. We excavated units off the east side of this 3m high mound and documented Late Formative levels below a mound that consisted mostly of Classic-period fill. Among the artefacts recovered from these excavations was the incised rock pictured in Figure 3. This find at San Estevan is similar to the better known examples from Cerros (Garber 1983: Figure 2). Two other mounds (Suboperation 9 and 10) were tested 400m northwest of Mound XV that encountered significant intact Middle Formative deposits. Excavations at Suboperation 9 documented Middle Formative midden below Classic period construction fill (that raised the mound to its current height) capped by Classic period midden. This mound was thus occupied during the Middle Formative periods, abandoned for the centuries of the Late Formative and then reoccupied during the Classic period.

During the 2008 season, we expended considerable effort in documenting a mound that the sugarcane access road had cut in half (Suboperation 13) that was built on a gentle rise in the landscape (see Figure 2). Such settlement location is typical of the dispersed occupation of the 6 or 7 sq km that make up the San Estevan site. Mounds were located on virtually all high ground and the Suboperation 13 mound was no exception. In the east side of the mound, we encountered solid bedrock within 10cm of the current ground surface. However, cultural deposits on the west side of the mound were considerably deeper. Once the south wall of the road cut was cleaned, we were able to document a series of floors and occupation zones (Figure 4). We also documented a feature sealed between the two lowest plaster floors with Chicanel vessels that thus dated the overlying floor to the Late Formative period (Figure 5A). Furthermore, within the fill of the lowest plaster floor we recovered mostly Middle Formative sherds (Figure 5B) and 10-15 cm of Middle Formative midden below this. At Suboperation 13, we thus encountered the Middle to Late Formative transition.

To reach the Formative deposits at Suboperation 13, we excavated numerous Classic-period occupation levels, and noted many more that had long been scrapped away by ploughing of the fields. We documented six Late Classic burials dug down from an occupation level that no longer existed. All interments were of single adult individuals. Their heads were all oriented north, which is also the direction towards Mound XV.
Robert M. Rosenswig

Figure 5. Ceramics recovered from Suboperation road-cut profile dating to the Late Formative and Middle Formative periods (a) Sierra Red Dish (B) Consejo Red effigy jar and Copetilla Unslipped strap handle.

The burials were in reasonably good state of preservation and two contained Classic period vessels covering their faces.

Below the Classic period levels at Suboperation 13, we documented a Late Formative period structure and associated refuse. While we were not able to establish its full dimensions, we documented 6m east-west and 3m north-south of a rectangular building – the remainder of which remains buried in the mound (Figure 6). At Cuello, the transition for a Middle Formative apsidal building to a Late Formative rectangular building was documented at Structure 315 (Hammond 2005:54). The Late Formative rectangular structure at San Estevan Suboperation 13 was built on top of a dark brown stratum that contains late Middle Formative Mamom ceramics. As at the site center, Suboperation 13 also documents that it was during the Late Formative that plaster was first widely used in architectural construction projects (Rosenswig 2008a). At the Suboperation 13 mound, in 1.7m of vertical excavation, we have documented 1500 years of occupation beginning during the second part of the Middle Formative and extending through to the Late Classic period.

At the other mounds documented in 2008, Classic-period deposits were the most extensive with Late Formative remains below. This was the case at Suboperation 12 (mentioned above) as well as at the mounds documented as Suboperations 10, 14, 15, 16, 19, 20 (Rosenswig and Cruz 2008). To date, outside of the site core, Middle to Late Formative occupational continuity has only been recovered from Suboperation 13. At Suboperation 9, we documented Middle Formative but no Late Formative occupation and at Suboperation 11 no Formative occupation at all. No Middle Formative occupation was documented at any of the other six mounds documented outside of the site core (Suboperations 10, 14, 15, 16 19, 20) but all had Late Formative deposits. All ten mounds tested in 2008 were occupied during the Classic period.

In sum, most Middle Formative occupation of San Estevan was concentrated at what was to become the site center with some occupation at two of the mounds we excavated (Suboperations 9 and 13). During the Late Formative period, six of the ten mounds we tested were occupied while the site center was transformed from a location of domestic habitation to a civic-ceremonial precinct. During the Classic period, when civic-ceremonial construction continued to expand at the site center, all ten of the mounds we tested in 2008 were occupied.

Conclusion

There was a marked increase in complexity that occurred in northern Belize during the Late Formative period. At this time there was: 1) a clear settlement size hierarchy in the region; 2) new forms of public architecture
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Figure 6. Late Formative rectangular building documented at San Estevan Suboperation 13.

such as the central mound and ballcourt at San Estevan: as well as 3) different sized domestic mounds. However, what remains to be determined is how (or if) the Late Formative political differentiation translated into economic differences compared to the preceding Middle Formative period patterns.

We now have the materials necessary to document economic patterns throughout the course of the Formative period occupation of San Estevan. As analysis continues we intend to compare San Estevan patterns with those from other sites to evaluate the three models outlined above. In particular, we will evaluate economic relationships between San Estevan, Nohmul and K’axob. First, to evaluate our contention that San Estevan was an independent polity during the Late Formative period that controlled the people who inhabited the K’axob branch of Pulltrouser Swamp (Rosenswig and Kennett 2008). And further, to evaluate if this Late Formative polity was independent of Nohmul. Our expectation is that the answer to each will be in the affirmative and we possess the data with which to test them.

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ANCIENT MAYA SOCIAL ORGANIZATION: A MULTI-SCALE ANALYSIS FROM THE DOS HOMBRES HINTERLAND, NORTHWESTERN BELIZE

Rissa M. Trachman

The data presented here are a result of a recent household investigation that I conducted in the hinterlands near the site of Dos Hombres, northwestern Belize. The investigation sought to understand ancient Maya social organization both within households and between them. The resulting analysis was a multi-scalar one in which differing patterns of social organization became evident. Larger scale social and political organization is evidence by the ways in which material resources are utilized and managed in and around households, as well as the multiple ways in which political and communal allegiance are expressed materially among them. The research presented here is a perspective gathered from multiple scales of society and demonstrates that socio-political organization both in and around the Dos Hombres hinterland is the result of the interaction of a number of social, political, ideological, and environmental factors, resulting in diverse manifestations across the landscape.

Introduction

Ancient Maya households have sometimes been viewed as homogenous, and the inhabitants of them a simple undifferentiated group (Yaeger and Robin 2004). However, households are quite sensitive to society and household archaeology provides an exceptional opportunity to see how identity, diversity, and social change are reflected in everyday life from household to household. In addition, social, economic, and political relationships are all visible archaeologically through the material residue of particular activities, including those carried out in daily household life. The significance of these can be understood as deliberate action, actions which constitute a reflection of society (Bourdieu 1973:99).

This paper will address the material data recovered from an investigation of three ancient Maya households in northwestern Belize and their implications with regard to socio-political organization (see Trachman 2007). The household study presented here was carried out using a decidedly micro-scale approach with the objective of articulating it with multiple scales of society, resulting in a multi-scale analysis (see Tringham 1991; Joyce and Hendon 2000).

The households in this study expressed themselves materially very differently from each other. These differences are an important reflection of the ways in which the members of these households perceived and formulated their social, political, and economic relationships with each other, the community, and society. The diversity of these households as reflected in their material assemblages indicate that ancient Maya households in northwestern Belize are both dynamic and diverse, and felt uninhibited in participating differentially in their social and economic world.

Investigations: Household Archaeology in Northwestern Belize

This household investigation is the result of my dissertation research which took place in the Rio Bravo Conservation and Management Area (RBCMA) in conjunction with the Programme for Belize Archaeological Project (PfBAP) (Figure 1). I chose three households in the settlement near Dos Hombres. The site of Dos Hombres itself is located just below the Rio Bravo Escarpment within the Rio Bravo Embayment (Brokaw and Mallory 1993). Ancient settlement in the area extends in each direction past the limits of the Dos Hombres site proper and including settlement located on the face of the Rio Bravo Escarpment itself (Lohse 2001; Trachman 2003, 2007; Walling et al 2005; Walling et al 2006). Both architectural and non-architectural contexts were investigated at each of these household groups in order to acquire as great a range of data as possible including that towards subsistence activities, economic activities, everyday domestic activity such as food preparation, special domestic ritual activity, mortuary behavior, and architecture.
Pak’il Nah

The Pak’il Nah household group is located just over 1 km east of the Dos Hombres center at the transitional margin of a bajo that spans the distance between the two. In general Pak’il Nah was occupied during the Tepeu 2-3 phase of the Late to Terminal Classic Period, A.D. 700–900 as has been defined for northwestern Belize by Sullivan and Valdez (2004:191) and Sullivan and Sagebiel (2003:26).

Pak’il Nah is a plazuela group with three cobble platforms, likely supporting perishable structures, and one masonry vaulted structure (Figure 2). The cobble platforms at Pak’il Nah were actually very similar to many Late to Terminal Classic examples that have been found across northwest Belize with somewhat informal cobble construction. Structure 1, is a single roomed rectangular structure oriented east-west and situated on the southern portion of its rectangular platform. The structure has a north facing doorway and walls of cut stone masonry approximately one meter thick. Masonry vaulted structures such as this are somewhat uncommon amongst domestic groups in the Dos Hombres hinterland (see Aylesworth 2005, Houk 1996, Lohse 2001, Robichaux 1995, Walling et al 2005; Walling et al 2006).

Dancer Group

Two of the three households are situated on the face of the Rio Bravo Escarpment face. The first of these, the Dancer Group household (Figure 3), is located on a residential terrace approximately 1.5 km west of the Dos Hombres site center. One of the smaller household groups in the immediate area of settlement, the Dancer Group was occupied primarily during two different time periods, the Tepeu 2-3 phase (A.D. 700–900) of the Late to Terminal Classic Period with an earlier occupation during the Chicanel phase (400 B.C.—A.D. 250) of the Late Preclassic.

The Dancer Group household built space is comprised by a L-shaped platform courtyard group. The Late to Terminal Classic platform supports two small structures with low stone walls and perishable walls and roofs. The terminal phase platform is a typical informal cobble construction. I did identify, however, an earlier architectural component in the construction sequence as evidenced by a buried remnant substructure below Structure 2, and corroborated by stratigraphic chronology.
The chronological sequence at the Dancer Group was also mirrored in the sequence of three sets of multiple burials (or episodes) located under the basal L-shaped platform in the construction fill between the two terminal phase structures. One of these episodes of multiple burials is clearly Tepeu 2-3, while the other two burial episodes, the deepest in stratigraphic sequence, date to the Chicanel phase of the Late Preclassic.

The total number of people represented in the three multiple burial episodes is 13 (with a possible 14th, see Trachman 2007). The individuals buried were both adults and children who ranged in age from as young as 2-4 years to as old as 20-34 years. A number of grave goods were distributed through the three episodes, including eight whole vessels, an engraved shell “dancer,” a bivalve pendant, seven shell tinklers, four greenstone beads, three shell disc beads, and a large chert anvil.

Grupo Agua Lluvia

The third of the three households, Grupo Agua Lluvia (Figure 4), is located approximately 1.7 km west of the site center, situated on a partially modified knoll extending from the face of the Rio Bravo Escarpment. The evidence for construction sequence indicates that this was a household that grew over time architecturally, occupied as early as the Tepeu 1-2 phase (A.D. 600-800/850) until its abandonment during the Tepeu 2-3 phase (A.D. 700-900).

The plazuela group is comprised of two linear platforms and three small structures around a central open plaza space. Structure 4, a small structure with walls that were partially of stone, was supported by a rectangular basal platform. Structure 3, a Late Classic round structure, had formally constructed walls supported by a round basal platform. Structure 3 also represents the earliest construction efforts at this household as evidenced by the buried plaza floor adjacent and attached to its exterior. Structures 1 and 2 were likely the final construction efforts. Structure 2 is actually an unfinished or partial structure. Some important subsurface features were also investigated at the Grupo Agua Lluvia household, including a borrow pit, a chultun, and a domestic water reservoir.

Investigations: Material Culture

Additional differences among these three household groups can be seen in their material assemblages. While the material culture found at each certainly reflects similarities to other assemblages found across the lowlands, there was also an obvious preference to certain items, particularly tools, likely related to different activities conducted at each household. The households also utilized...
local resources differently and imported resources differently.

Lithics

The total analyzed sample of excavated chipped stone for all three households numbers 8,250 (104.3 kg). The overall total amount of debitage analyzed in that sample numbers 7,904 (84.8 kg). Though there is clearly no specialized production of tools or even cottage industry reflected in the quantity of debitage, there is certainly enough debitage to suggest that each household made many if not all of the informal or expedient tools that they needed on a day to day basis.

Formal tool types are comparable between the three households, with each household having similar (formal) tool kits. One slight difference is that there were more general utility bifaces (Type I and II) found at the Dancer Group which may indicate a preference for woodworking activity at the Dancer group.

As for informal tool types there is some of similarity among types across the three households, but each household also seemed to have its favorite tools reflected in differing quantities of each between the households. Pak’il Nah had a predominance of utilized flakes, while the Dancer Group household had a preference for scrapers. Excavations at Grupo Agua Lluvia revealed a high quantity of perforators.

Ceramics

Ceramic assemblages, outside of ritual contexts, were the most uniform with regards to forms between the three households. No evidence for ceramic production was identified in any of them. All three had the forms and quantities that would be expected for domestic contexts. Bowls and jars were the primary forms found with only a few plates or cylinders represented (Sullivan 2003).

Although the ceramic forms were fairly regular across the three households, pastes were not. Evidence for non-local pastes were found in the Pak’il Nah household assemblage from a specific deposit of ceramics found in a storage or provisional discard context. The ceramics in this deposit are of the same forms and types as the other ceramics found in this and the other households, however Sullivan (2003) noted that the pastes were unique. The pastes resemble pastes in the ceramics found in the Irish Creek Marsh area located near the site of Sierra de Agua, an agricultural ditched field system (Baker 2003). Sierra de Agua is located ca. 30 km south to southeast of Pak’il Nah below the Booth’s River Escarpment. The unique pastes are indicative of non-local economic relationships in which the Pak’il Nah household participated.

Local Resources

Each household had a primary preference or ease of access to locally available chert of varying quality. The analysis of secondary or alternate lithic resources, however, generates interesting results. Both quartzite and limestone were secondary lithic resource of choice, after chert, used at the Dancer Group located on the Rio Bravo Escarpment. Interestingly, the distribution of these two alternative materials differs chronologically between the two occupation phases, the Late Preclassic and Late Classic. Quartzite occurred equally in both phases; however limestone occurred more often in the Late Classic component at the Dancer Group.

At Grupo Agua Lluvia, also located on the Rio Bravo Escarpment, chalcedony was the preferred secondary resource during the Late Classic (Tepeu 1 and Tepeu 2-3; A.D. 600-900) occupation duration at the household. Of all three households, chalcedony was found in highest quantities at Agua Lluvia. The access of each household to these secondary resources, some local and some not local (quartzite and chalcedony), indicates that each household participated in a unique set of economic relationships.

Items of Exchange

Three long distance trade materials provide additional evidence as to each household’s economic role. First, either shell or greenstone artifacts (or other mineral specimens) were found at all three households, however, the distribution was not at all equivalent. Obsidian was also found at each household, but will not be addressed here since it was distributed fairly evenly between the households.
The Dancer Group had by far the greatest number of shell and greenstone artifacts. It had almost two times the amount found at Grupo Agua Lluvia nearby and fully 12 times that found at Pak’il Nah located some 3 km away. A total of 21 out of 24 (88%) were found in mortuary contexts and 19 (79%) of the marine shell and greenstone artifacts were from the Late Preclassic (Trachman 2007). If the Late Preclassic mortuary contexts are removed from consideration, the distribution of marine shell and mineral artifacts becomes fairly even, given the intensity of excavation, between each household across all other contexts. Certainly a disparity of access with regards to the abundance of imported material in ritual contexts is evident at the Dancer Group.

As for the Late to Terminal Classic, marine shell, greenstone, and other mineral artifacts, found at Grupo Agua Lluvia and Pak’il Nah are also primarily personal ornaments. However, there seem to be greater limits to access in the Late to Terminal Classic with one exception. Grupo Agua Lluvia did have access to marine shell fragments however. The presence of perforators at this household along with several stages of the finishing process of bead production as well as a production failure indicates household level bead production. The scale of the productive activity represented likely indicates production only for internal household use.

Politics and Communities
A holistic look at the evidence from the households presented here suggests two primary socio-political organizing forces at the community level. The differences at the community level in socio-political organization, as evidenced in this study and discussed below, is partially related to their relative proximity or spatial separation from each other. It must be noted however that the distance relationship is inversely related in the hinterlands to the east of Dos Hombres versus that to the west, as will become apparent. Ultimately the evidence demonstrates that there is an obvious alliance between Pak’il Nah and the relatively large site of Dos Hombres to the east. Meanwhile to the west another means of distinctive community organization on the Rio Bravo escarpment face is expressed in a separate community that the Dancer Group and Agua Lluvia were likely a part of, one likely removed from the Dos Hombres political influence.

Political Ties
There are several key factors at the Pak’il Nah household (Figure 2) that I believe demonstrate its connection to the Dos Hombres social and political sphere. First the architecture exhibited at Structure 1, evidence for a vaulted ceiling, is unusual for households in the hinterlands. The same structure, even more incriminating, was ritually terminated. The ritual termination of a structure is generally reserved for elite or monumental structures in Maya centers (Freidel et al. 1998, Garber et al. 1998, Walker 1998).

The ritual termination of Structure 1 (Figure 5) was evidenced by the deconstruction of the upper portion of the room, ritual burning inside the room, ochre spread near the ritual hearth, and the sealing of the entryway with dense conglomerate wet fill. Ceramics indicate that the timing of this event was Tepeu 3 (A.D. 850-900). The timing is contemporaneous with a ritual termination of the acropolis in the Dos Hombres center, in the south acropolis (Group C) and subsequent abandonment of the site as reported by Houk (1996).

The material culture evidence that may indicate something about socio-political organization at Pak’il Nah is found in the trade wares. The clays or ceramics imported from the Irish Creek Marsh area have not yet been found at the Dos Hombres site center, but they do indicate an economic relationship between the Pak’il Nah household and those in the Irish Creek Marsh area. Also of note is the observation that only two occurrences of hieroglyphs have been found to date in or around Dos Hombres, one found at Pak’il Nah and one found in the Dos Hombres center. Both were painted on ceramics in similar styles and both date to the Terminal Classic.

The capacity to formulate economic relationships at a distance may be an indication
of a “rural elite” presence at Pak’il Nah possibly related to the ruling lineage or an extension of the Dos Hombres central political authority. In addition, the considerable investment and expense of the masonry and vaulted architecture seen in Structure 1 and its termination, the overall size of the group, and hieroglyphic sherds are all unique to Pak’il Nah and evidence that the Pak’il Nah household had a direct social, political, and economic association with Dos Hombres.

One final comment about the potential role of a rural elite presence in this part of the hinterland area, Pak’il Nah is situated 1.2 km east of Dos Hombres, but almost no settlement has been documented in that 1.2 km of space between the two. The open space between the center and this household is an Escoba Bajo, a very low lying area that becomes very wet during the rainy season. It is possible that this bajo was used for agriculture during the Late to Terminal Classic. Further investigation would be required to confirm this admittedly speculative idea. If the hypothesis were confirmed, then it would be likely that the residents at Pak’il Nah supervised or managed this productive activity.

**Escarpment Community**

Community ties for the Dancer Group and Grupo Agua Lluvia are just as distinct west of Dos Hombres. Both of these households are apparently part of a different community organization on the escarpment face itself, different from that seen at Pak’il Nah and Dos Hombres two kilometers away or more.

Several features tie these households together leading to my interpreting them to have been a part of another distinct community altogether. First, the settlement is fairly dense along the face of the escarpment in the area immediately surrounding Agua Lluvia along with that to the south (see Lohse 2001; Walling et al 2005; Walling et al 2006). The settlement is continuous to the south and includes features that also connect the settlement into a cohesive community.

Many of the landscape features that modify the escarpment face are also not distinguishable or clearly separated from one household to another. The array of features includes subsurface walls, some of the residential terracing, and at least one water management feature near the Dancer Group. One example, a bedrock canal, estimated at roughly a meter in width, an obvious intentional modification, hugs the face of the escarpment horizontally near the Dancer Group household. It runs perpendicular to the slope for a distance of approximately 20 m spanning the distance between three households ending just adjacent to the southern limits of the Dancer Group household. I believe this feature may have served two purposes, both to divert water washing down the face of the escarpment slope away from the residences there, and consequently, it also would catch and store water during the rainy season.

The residential terrace on which the Dancer Group rests is also connected to two other households south of it. Both of these features are singular examples of a more systematic patterning of cooperatively built landscapes. Not only do they require cooperative labor, but they also require long term cooperative maintenance.

Another level of management in effect during the Late to Terminal Classic is exemplified by the domestic reservoir located within the household boundaries of Grupo Agua Lluvia. The residentially bounded location suggests decentralized, domestic control of the feature (see Weiss-Krejci and Sabbas 2002; see also Scarborough 1998). As a result, there may have been a combination of communally
directed management and household directed management both of which were likely outside the control of the Dos Hombres centralized political authority given evidence for communal labor, the distance between Dos Hombres and the escarpment community, and density of settlement found on the escarpment.

Finally, Walling et al (2005; also Walling et al 2006), have reported an important discovery in the adjacent settlement with implications for Agua Lluvia and the Dancer Group, less than 300 m south, that of a ballcourt (Walling et al 2005; Walling et al 2006). This single architectural feature is a symbolic indication that a community identity was perceived and ritualized by those living on this particular part of the Rio Bravo Escarpment.

Conclusion
Clearly the three households in this investigation exhibit diversity in their architecture and material assemblages, though each assemblage correlates to that found at other sites across the central lowlands. The inconsistency illustrates that each household is different yet certainly a part of the larger Maya universe sharing its ideology and material cultural identity. The same can be said for the activities indicated by the material culture represented at each. While many of the basic domestic activities are echoed at each household, available resources, access to resources, service to community, and political ties for all three households Pak’il Nah, the Dancer Group, and Grupo Agua Lluvia differs to some degree. Identity, ideology, and ritual (see Trachman 2007) are each also key contributors in how each household conveys its position within the pervading social structure. The culmination is an interpretation of at least two different forms of socio-political organization in the hinterlands near Dos Hombres based on political alliance and community organization.

Given the evidence resulting from this household investigation, it is clear that these ancient households participated in Maya society socially and economically somewhat fluidly, based on a number of considerations including those specific to that household as well as their social positioning, socio-political or community affiliation, available resources, and individual household needs and obligations. Conceptually it implies an interaction between households that exists outside the usual hierarchical assumptions about social organization, one that relied on certain degree of household autonomy related to the individual set of circumstances of each. The picture presented here is one in which the integrated scales of ancient Maya socio-political organization is a complexly ordered yet adaptable set of relationships.

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Structures of power and authority among the ancient Maya were the consequence of two dynamics: control of critical resources and multigenerational interaction among lineages. At the Maya site of Blue Creek in northwestern Belize (Figure 1), we have been able to investigate a variety of residential components of an ancient city. The residential groups of Kín Tan, Chan Cahal and U Xulil Beh offer the opportunity to compare and contrast the nature of power and authority among them and how they were tied to the rulers in the central precinct. In this paper, I compare the internal organization of these three residential components in order to demonstrate how these two principles are reflected in the archaeological record.

Introduction

Blue Creek

Blue Creek is a medium sized Maya center and that was occupied from approximately 600 BC until approximately AD 1000 (Guderjan 2004, 2007). Spatially, the “greater” Blue Creek area covers approximately 100-150 square kilometers (Guderjan 2007; Lichtenstein 2000). Since our investigations began in 1992, nearly 500 ancient buildings have been documented and more than 100 excavated in the 20% of this area that has been intensively surveyed. Excavations have been undertaken throughout this area and across all contextual zones resulting in a rich database that is nearly unmatched in the Maya area.

The central precinct of Blue Creek is located on top of the Bravo Escarpment, a 100-150 meter tall uplift that runs generally NE to SW. Above and west of the escarpment, the terrain consists of eroded limestone hills, often 50 meters tall or more, on which Maya residences were built. These are separated by large expanses of rich, clayey soils, “bajos” and “bajitos” ranging in size from a square kilometer to 40 square kilometers. Similarly, below and east of the escarpment are wetland zones with Maya residential activity located on the adjacent low terraces and other slightly elevated features. The impact of this topography on both settlement and our ability to analyze ancient settlement is significant. The residential components of Blue Creek were separated into units that we can compare and contrast because of this topography and our studies have identified numerous distinct, bounded residential components or barrios, all politially and economically centered on the central precinct of Blue Creek (Figure 2; Guderjan 2007; Guderjan, Baker and Lichtenstein 2003; Guderjan and Hanratty 2006; Guderjan, Lichtenstein and Hanratty 2003; Lichtenstein 2000). Further, the topography offered the residents of Blue Creek the opportunity to control one of the region’s most valuable resources, agricultural land, and to use that control to built wealth power and authority (Baker 2001, 2003; Beach and Luzzader-Beach 2004, 2005; Beach et al 2002; Beach, et. al in press; Luzzader-Beach and Beach 2007; Guderjan 2007).

First Arrivals and Control of Resources

Ancient Maya society had multiple avenues of acquiring status (i.e., Chase and Chase 1987; Masson and Freidel 2002; Scarborough, Valdez and Dunning 2003). However, most models of how ancient wealth, power and authority were created and maintained are based upon the concept that control of resources is based upon first occupancy. First residents established control over local resources and they and their descendants maintained control and exploited the same resources for purposes of increasing social prestige and authority (McAnany 1995). This principle helps explain how critical resources, such as agricultural land and stone for tool manufacture (Barrett 2004) were controlled by specific lineages throughout the area’s history, how Maya households were occupied by many generations of the same familial lineage.
and how some seem to acquire status and authority very early and never lose it while others never acquire such status at all.

World Systems Theory and Multigenerational Interaction

Archaeologists have often viewed status and power among the ancient Maya as a function of leadership within lineages. One powerful model is the segmentary state (Fox 1978, 1987) in which lineage heads hold authority over their members. I argue that such lineages lived in bounded residential components of Blue Creek and that power among them was created by control over critical resources and maintained by interaction among lineage heads. This approach is steeped in World Systems Theory, a conceptual framework that archaeologists and others have borrowed from sociology and remade into their own (Chase-Dunn and Hall 1991; Frankenstein and Rowlands 1978; Friedman and Rowlands 1978; Peregrine 1991; Peregrine and Feinman 1996; Rathje 1972; Wallerstein 1974. In the Maya area, early formulations of Maya economics examined the goods traded among Maya polities. However, William Rathje changed the discussion by using Wallerstein’s Core-Periphery model to argue that interaction
between the central Petén Maya and outlying areas created a political economy that led to complex society (1972). Since Rathje’s attempts to deal with Maya political economy, a large body of work has developed on both the nature and implications of Maya economic interaction (Masson and Freidel 2002). One approach has been to undertake empirical studies of the mechanics of inter-regional trade and the second approach has been to focus on the structural relationships within polities that controlled the flow of goods.

Residents of the central precinct.

There were relatively few residents of the core area and they were the highest elites of Blue Creek. While some other people of lesser status also lived in the vicinity, they were probably in some sort of service capacity to the ruling elites. The two primary residences, though, are the Structure 13 Courtyard and the Structure 19 Courtyard (Figure 3). These are very dissimilar residences with very different histories (Guderjan 2004, 2007).

The Structure 13 Courtyard was originally built as a small public plaza and was re-oriented to face what became Plaza B. At about the same time, the “Old Plaza B” was converted into a residence. Despite the scale of Structures 12 and 13, the Structure 13 Courtyard was a relative small residence, with an open courtyard space of less than 150 square meters surrounded by only a few rooms. It may have been the residence of only one high status family.

The other major residence was the Structure 19 Courtyard, located across Plaza B from Structure 13. During the Late Classic period, this was a complex building with at least eight rooms was built on top of an Early Classic platform. It was built around an open court of approximately 200 square meters, somewhat larger than the Structure 13 Courtyard. Sometime later in the Late Classic, the courtyard was divided to create two smaller courts.

This was also almost certainly an important residence in the Early Classic but it is unclear what sort of buildings existed on the platform at that time. If the pattern we see in Kin Tan is also the case here, there were probably perishable residential structures in use until the end of the Early Classic, when masonry buildings replaced them.

One important feature of the Structure 19 Courtyard is the set of burials in a bench in Room 7. There were seven people interred in the bench in four to six different events. We do not know which of these events that our radiocarbon assay of approximately AD 555-675 actually dates. However, it is likely that there were burial events before and after this date. If so, then the same lineage occupied the Structure 19 Courtyard at the end of the Early Classic period and into the Late Classic period. Interestingly, this is approximately the same time that the Structure 13 Courtyard was converted to residential use.

By the scale of palaces elsewhere, such as at Palenque, these residences are diminutive.
However, their complexity and proximity to the monumental architecture indicate that these are homes of the ruling elite of Blue Creek. Whether the residents were kings, local ruling elite, or vassals of another polity is discussed elsewhere (Guderjan 2007). For now, it is enough to know that they were the highest status people at Blue Creek.

**Kín Tan**

Kín Tan consists of a series of eleven elite residential complexes northwest of the central precinct and consists of seven patio groups, three courtyards, one plazuela, and a civic-ceremonial group (Figure 4). The energy required to construct each of these was significant and many of the courtyards and plazuela are large enough to house more than one nuclear family. While, there may have been some “invisible” residences housing lower status people near hilltops that have been lost because of land clearing, the residents of all the known buildings at Kín Tan were high status members of Blue Creek. Like nearly all of the residential components at Blue Creek, Kín Tan had a sacred ceremonial center or Axis Mundi. While the core area residents controlled public plazas and soaring pyramids, the residents of Kín Tan’s sacred civic-ceremonial center was the much smaller Structure 38. Structure 38 is a six-meter tall Early Classic pyramid that faces east onto a small bounded plazuela.

The Kín Tan residences are situated on the tops of a string of hills that begin east of Structure 24 at the Structure 60 Patio Group and arch to its terminus at the Structure 37 Plazuela. These hills range from 20-40 meters tall and are surrounded by relatively flat, upland bajitos that consist of highly productive agricultural soils. These provided an economic basis for Kín Tan’s elites and were likely controlled by them in some manner. On the east end, Kín Tan was physically separated from the core area by a 15-20 meter deep drainage that separates it from the Plaza B complex. This drainage becomes less deep, but also separates Plaza A from Plaza B.

Many of the buildings at Kín Tan have been excavated, and we see a clear pattern of occupation and growth (Guderjan, Lichtenstein and Hanratty 2003; Guderjan and Hanratty 2006; Hanratty 2002a, 2002b, 2008). The earliest occupation of these hilltops appears to have been at the Structure 37 Plazuela where a large Late Preclassic (300 BC-AD 100/150) midden was found. Not long after this occupation, the hilltop was plastered over to create a large platform that was built upon for many centuries.

Throughout Kín Tan, it was common to find burials of important males underneath or within the first construction phase of the main building in each group. These burials were generally associated with Terminal Preclassic ceramics (AD 100/150- AD 250) and often included whole ceramic vessels and jade beads placed with the body in a small crypt. These individuals were early, high status members of their lineages and arguably they are “lineage founders”. The first masonry constructions were commonly low platforms on top of which perishable buildings that were constructed in the Early Classic (AD 250-600). However, in the Late Classic period (AD 600-750), most of the groups saw unprecedented construction of complex masonry buildings that buried these low platforms.

All of these residences commanded extraordinary views, had very restricted access, and required significant investment of energy to construct, I argue that they were clearly the homes of elite members of the society. Further, they were also occupied by multi-generational lineages that revered their founding members. Consequently, it seems that they held control of the vastly productive agricultural land around them that underpinned their social position and power through multiple generations. However, it seems equally unlikely that these were royal elites. Their proximity to the core area is somewhat distant, especially in the cases of the most elaborate residences such as the Structure 37 Plazuela and the Structure 46 Courtyard. Nevertheless they apparently held multi-generational land tenure, conforming to McAnany’s first arrivals concept (1995). The largest and most complex of these residences is the Structure 37 Plazuela, located on top of a 14 meter hill about 600 meters northwest of Plaza A. Intensive excavations by Colleen Hanratty allow us to address the way in which this non-royal lineage marked and revered its founder and
Figure 4. Map of western portion of Kin Tan showing Structure 37 Plazuela.

Figure 5. Idealized profile of Str 37 showing sequence of events.
interpretive window into the political dynamics of a Maya polity.

In its final form, the Structure 37 Plazuela included seven buildings, Structures 31-37, arranged around two open courtyards or exterior areas (Figure 5). The southern exterior space is centered on Structure 34. This small shrine capped an Early Classic tomb (AD 250 - 600) and a transitional Late Preclassic/Early Classic crypt (AD 100/150 - 250).

A number of specific events are of interest in understanding the temporal aspects of the Structure 37 Plazuela lineage. The first is the earliest occupation of the hilltop that would become the plazuela. Buried under the floor of the southern exterior area is a significant Late Preclassic (AD 100/150-250) midden deposit that gives us a reasonable date for this first occupation. Following this, we see the initial construction of the platform and the flooring of the exterior area.

When the platform floor was constructed, a chultun was left open in the center of the area. The chultun was partially filled and a crypt was constructed in the western part of this chultun for Burial 45. The poorly preserved skeleton was an adult male in a tightly flexed position, lying on his left side and oriented north to south. The only artifact was a red-slipped ceramic pendant. This pendant and ceramic sherds found within the crypt date to the Terminal Preclassic Period (AD 100/150-250). After the internment, the chultun was plastered over and the entrance marked by pecking its outline into the plaster floor. Some time following this interment, the shrine, Structure 34, was constructed on top of the chultun. Later yet, but probably not much later, the first version of Structure 34 was constructed on top of the burial, publicly marking the individual’s importance for future generations (Figure 5). This was the first burial first anywhere at the plazuela and combined with the construction of Structure 34 on top of the crypt indicates that this was the burial of the lineage founder. Further, the central location of the crypt marks the individual as the bearer of the tree of life.

Later, in the Early Classic period, a second important burial, Burial 44 in Tomb 7, was placed 2.3 meters east of Burial 45. We do not know precisely how much time passed between these two burials, but it may have been as little as one or two generations. We are confident that Burial 44 was a direct descendant of the lineage founder and likely to have been a later lineage head. He may have been a son, a grandson, or great-grandson of the founder. Tomb 7 was dug through previous Late Preclassic deposits and into bedrock. Judging from the formality of the tomb, the accompanying burial goods and the later marking of his tomb, Burial 44 was a very important individual. The complete adult male skeleton was recovered oriented north/south and lying on his right side in a partially flexed position. Placed directly above his skull was a Terminal Preclassic Transition (AD 100/150-250), red slipped plate with a kill-hole and a small polychrome bowl was recovered below this plate. A jade pendant in the form of an acrobat glyph was found on his chest and a triangular jade bead was recovered from within the left portion of the jaw. This jade bead had either originally been placed in his mouth or was worn around his neck. There is a strong likelihood that the bead was, in fact, placed in the mouth, a funerary ritual practice described by Landa in the 16th century (Landa 1978). Further, Karl Taube indicates that such jade beads were regarded as the breath spirit essence of the deceased (2005).

Often in Maya iconography, jade is linked to the concepts of centrality, maize, and rulership. The maize god in an acrobat pose has been found in association with Early Classic burials and caches at Copan and with Late Classic burials at Tikal. Karl Taube has argued that this acrobat position alludes to a growing tree. For instance, Burial 196 at Tikal contained a jade bead portraying the maize god as the world tree (Taube 2005). While the presence of the acrobat is relatively rare in Maya iconography, it is more common in the Olmec world. The acrobat pose in Olmec art signifies “a person in a visionary or ecstatic state who is integrated into the ritual life of the community” (Tate 1996). This interpretation can also be applied to the occupant of Tomb 7. The presence of the tomb represents a link to the Underworld...
and its occupant, the keeper of the portal to the Underworld, was a shaman.

Further, phytoliths recovered from beneath the body in Tomb 7 revealed the presence of reeds and grasses that could have been from a reed pillow and grass burial mat beneath the body (Steven Bozarth, personal communication, 2001). The woven mat or “pop” symbolizes rulership and elite status. For instance, a ruling lord was often referred to as “ah pop”, or “He of the Mat”. This was synonymous with ahau, or lord. In addition, mats are often portrayed as settings for important ritual events. Among the Yucatec Maya, the “popol na”, or mat house, was a place for the rulers of the community to meet and perform ritual acts (Miller and Taube 1993; 110-111). The association of Burial 44 with a woven mat in conjunction with the mode of interment and the burial goods associated with his remains speaks to his prestige and clearly marks his continuing importance within the lineage.

Cache 49 was placed directly above Tomb 7’s capstones and consisted of two redware bowls placed lip-to-lip. These date to the transition between the Terminal Late Preclassic (AD 100/150-250) and Early Classic periods (AD 250-600). Recovered from them were the remnants of a smashed jade bead, jade flakes, numerous marine shells, pieces of coral, fish bones, a stingray spine, charcoal, and red ochre. Biosilicate analysis revealed that there were also numerous sponge spicules present, marking this cache as another symbolic recreation of the cosmos. Finally, large quantities of land snails (jute’ and pomacia) were deposited in the shaft to Tomb 7 as it was being filled. While this is not unusual in itself, later events make it intriguing. The opening was then sealed with plaster.

Shortly after, the residents of the Structure 37 Plazuela resurfaced the southern exterior space. This thick layer of plaster covered the capped intrusion of Tomb 7. However, Tomb 7 was not to be ignored. Pecked into the surface of the layer of plaster was an outline of the tomb beneath. Like his predecessor, his memory was so important that his location had to be visually marked. Again, the elapsed time between the interment of Burial 44 and this event cannot be clearly established, but both occurred in the Early Classic (AD 100/150-250) period. The final event was the construction of the second phase of Structure 34. Intriguingly, the location of Tomb 7 was not only marked by a pecked outline in the plaster floor but the placement of jute’ and pomacia on the floor above Tomb 7, referring back to the shell previously placed in the tomb shaft.

The fundamental form of the structure remained the same though it was expanded to enclose the sacred space surrounding Tomb 7. While the top of Structure 34 had been damaged by bulldozer activity before excavation, we have no reason to believe that it had a superstructure. Instead, it was a central shrine honoring the lineage founder and the lineage head beneath. Other such shrines have been found elsewhere and they commonly contain burials of the elite. In this case, however, the burials were beneath rather than within the shrine. Again, its centrality in a four-sided space replicates the Axis Mundi.

Structure 34 remained a central shrine to these two important individuals and only to these individuals throughout the Late Classic. During this time the residential buildings surrounding them were expanded as the importance of the lineage grew, while the Structure 34 shrine remained central to their lives for several hundred years.

Ancestor related shrines in large residential complexes from Copan to Palenque to Uaxactun show variability in form, orientation, and interment of human remains. Nonetheless, from the very beginning, the maintenance of links with the ancestral realm via interment practices within such sacred shrines is a prominent characteristic of Maya society. For instance, residences of the K’anjobal Maya of Huehuetenango have a prominent structure referred to as the “yatut jichman” or house of the ancestor. Also both the Quiche Maya and the Tzotil Maya maintain lineage shrines and venerate ancestors within their residences. These shrines were not constructed merely to house the dead, but to commemorate them and to engage their assistance in the continued prosperity of the family line (McAnany 1995). Similarly, mortuary practices at Altun Ha (Pendergast 1979, 1982) have been interpreted as evidence
of the use of ancestors to define the Axis Mundi of a new construction event (McAnany 1995).

The individuals interred beneath Structure 34 had substantive roles in the rise of this lineage in the Blue Creek community. We see Burial 45 as the interment of the founder of this non-royal lineage at the time of the beginning of Blue Creek’s complexity and as the first rulers asserted their authority. He was revered at his death and afterward with the construction of Structure 34, a shrine in his honor.

As time passed, the importance of the lineage grew within the political spectrum of Blue Creek. This is reflected at the beginning of the Early Classic, when another member of the lineage was buried. His interment was marked with increased formality and more valuable and ritually charged artifacts than that of his predecessor. This included a jade acrobat pendant linking him to the centrality of the lineage and the universe and the close relationship between him and his lineage with the royalty of Blue Creek. His lineage honored his life by incorporating his tomb into their daily lives for several hundred years.

In a larger sense, Kin Tan consisted of a multi-generational corporate group that itself consisted of distinct lineage. The power and authority of this multigenerational group grew with the larger fortunes of Blue Creek over time. It seems apparent that they controlled the agricultural resources around them to the degree that they were closely involved with the authority and power of the residents of the core area. Given the scale of their architecture and how they restricted other people from access to their residences, the lineages of Kin Tan had increasing prestige and authority from their founding through the rest of Blue Creek’s history.

**Sayap Ha.**

Another situation altogether existed at Sayap Ha, directly below the core area at the base of the Bravo Escarpment. We have tested 41 of the approximately 80 structures at Sayap Ha and its neighbor, Chan Cahal. The more than 30 structures at Sayap Ha (Figure 6) are virtually surrounded by ditched agricultural fields (Giacometti 2002; Lichtenstein 2000; Popson 2000). The earliest occupation of both areas was in the Middle Preclassic period (100-800/650 BC) at Chan Cahal and extensive settlement is seen throughout the area by the Late Preclassic (350 BC- AD 100/150). Terminal Preclassic (AD 100/150- 250) residential structures generally consist of perishable structures at ground level, or built in low (20-40 cms) platforms. Most of the visible architecture was constructed in the Early Classic period, when a public plaza-group with two small pyramids was also built (Giacometti 2002). Occupation continued into the early part of the Late Classic, although without any known residential construction. Later in the Late Classic only Chan Cahal and the far northern portions of Sayap Ha show any settlement occupation. There is also an ephemeral Early Postclassic re-occupation of Structure U-5 at Chan Cahal.

![Figure 6. Artifacts from SH2 including carved bone bib-head](image)

A small civic-ceremonial group consisting of Structures L-26 and L-25 was intensively excavated (Giacometti 2002). Structure L-26 was built on a low platform covering approximately 140 square meters. When it was originally in the Early Classic period, Structure L-26 was a two-room masonry building. Later in the Early Classic, this building was modified into a 3.5 meter tall, tiered pyramid that probably had a small perishable superstructure. Structure L-27, a two-meter high
platform mound facing Structure L-26, was built on the same platform as Structure L-26.

The construction dates of Structures L-26 and L-25 correspond well to the general dates of housemounds at Sayap Ha. These housemounds are the low platforms, perhaps only 10-20 centimeters thick, on top of which perishable buildings were constructed. Commonly, they are in the range of 8 x 5 meters in size. Most commonly they were built in the Terminal Preclassic period (AD 100/150-AD 250).

Also, burials are often found underneath housemound floors. Most often these are the burials of adult males interred with relatively simple grave goods, such as a plate, ritually killed by a puncture in its center. These are regarded as the remains of an important individual in the history of the household’s residents—again, perhaps the lineage founder. The ceramics from these graves are one of our best tools for assessing the age of the housemounds. Consistently, they date to the transition between the Terminal Preclassic (AD 100/150-250) and the early part of the Early Classic Period (AD 250-600).

Eighteen burials or partial burials dating to the Terminal Preclassic and Early Classic periods have been recovered from Chan Cahal and Sayap Ha. Most (14) were recovered from residential buildings. However, one was recovered from an unknown/special function building and three were recovered from what was probably a non-residential building. Thirteen of the fourteen burials in clear residential contexts are intrusive while one may have been interred during construction of the building. These show a consistent pattern of placement under the floors of thatch roof houses. Of these residential burials, only five (all tightly flexed) included any grave goods. One burial included two pieces of jade in the vicinity of the cranium, three burials had one upturned vessel placed over the head, and one burial had two upturned vessels over the head as well as a jade bead and a jade pendant near the head. In short, the consistent pattern here is of burials with few or no grave goods.

At first glance, the situation at Sayap Ha appears to be that of a group of commoners who built their own central place to imitate the high ritual they saw occur in the much more grand plaza at the top of the escarpment above them. It is reasonable to argue that they were the workers who toiled in the fields around them. Further, it is reasonable to argue that they did not control the large ditched field complexes. Instead, they worked in the fields of the elites and probably had control only over the kitchen gardens that they grew near their homes.

There are two problems with this view. First, our understanding of Classic Maya social organization has become vastly more detailed in recent years. Too often it had formerly been described as a simple dichotomy between elites and commoners. Despite the existence of more complex models, commoners are still often perceived as a homogeneous group without internal social and political stratification and structure (Lohse 2001; Lohse and Valdez, 2003; Marcus 2003).

In general, archaeologists believe that the Classic Maya were organized into lineal descent groups, or lineages (Hendon 1991; Lohse 2001; McAnany 1995; Schele and Freidel 1990; Webster 1989). Such descent groups often have acknowledged “founders” as well as other ancestors who were also revered for their contributions to the status of the lineage, such as we see at Kin Tan (Schele and Freidel 1990). Archaeologists have been successful in applying the concept of lineages to the Classic Maya through analysis of residential patterns and mortuary patterns (Hendon 1991, McAnany 1995; Yaeger 2000). Ancestor reverence formed the basis for the transmittal of land rights and a lineage’s prestige and patterned expansion of elite residences indicate the linkage between the lineage and its home. Earlier in this chapter, I argued that the growth of prestige and authority of a non-royal, elite lineage at Blue Creek is traceable through several centuries. Expansion of residential buildings around the shrine, especially during the Late Classic, clearly indicates that the lineage continued to become more and more important in the fabric of Blue Creek’s authority structure (Guderjan and Hanratty 2006).

In addition to the growing acceptance of the idea that the Classic Maya were a lineage-based society, there is also a growing perception that there were multiple pathways to authority
and prestige for the Classic Maya. Heterarchies or multiple lines of authority within Maya societies are just now being explored (Scarborough, Dunning and Valdez 2003). While the scholarship on heterarchies is still young, it is only reasonable to expect that variability of patterns of authority and prestige within individual Maya sites would exist as they do in our society today.

Aside from the complexity now recognized in Maya societies, the other problem with the over simplistic dichotomy of commoners and elites is that a burial at Sayap Ha offers clear evidence that complexity among commoners existed. Burial SH2 in Structure L-11 is a dramatic exception to the mortuary pattern discussed earlier. First, the Structure L-11 mound is somewhat larger than most of the neighboring housemounds, approximately 10 meters in diameter and 50 cms in height. Unfortunately, modern agriculture has damaged the building to the extent that its form cannot be ascertained. It was built in two construction phases, both dating to the Early Classic period. The earliest is a low (20 cm) platform extending at least 8 meters East-West. The later phase consisted of raising the western part of the platform another meter.

Burial SH2 was placed in a cyst cut into bedrock that intruded through the early phase of the building. 653 chert and 46 obsidian pieces were recovered immediately above the cyst burial. This is a far higher density than recovered from the excavation of the rest of the housemound and clearly these were deposited as part of the interment ritual. It is not unusual that the shafts of elite tombs in monumental architecture were partially filled with chert and or obsidian flakes produced for that specific interment. For example, tombs with such flakes associated with them have been found at nearby La Milpa and Kakabish and was probably the case at Structure 24 at Blue Creek. Usually, these deposits consist of thousands rather than hundreds of artifacts. However, Burial SH2 is the only case at Blue Creek and the only case that I know in which a burial in a humble housemound was treated in such a manner. While archaeologists do not fully understand the emic nature of these deposits, the etic nature is that they were part of the public acknowledgement of the status and importance of the interred person during life. So, while the flake deposit on top of Burial SH2 consists of fewer artifacts than the very high status burials, it mimics them and emphasizes the importance and status of the person.

The individual was probably a male, aged 20-30 years and was buried in a flexed position on his left side with the hands placed beside the face and the head to the northeast. Buried with him were a set of unexpectedly lavish grave goods that included two inlaid shell disks found on either side of the skull and an anthropomorphic head carved of bone. The carved bone head was found with jade and hematite beads on the neck and upper chest area. Many other carved bone beads were found in the neck area and along the back. These may have been parts of a headdress or a long hair braid. A few were also found at the feet and knees. Four bone beads were found in the mouth, but this could be due to displacement.

The anthropomorphic head is a small bib-head sculpture of a human head carved of bone (Figure 5; Guderjan 2007). Bib-head or “helmet-bib” motifs were first identified by Tatania Proskouriakoff and are generally carved of jade and considered to be royal jewels during the Early Classic period. In some cases, they may be depictions of actual kings while in other cases they may be deities whose vestiges have been appropriated by royalty. Hammond has argued that they represent Kinich Ahau, the sun god. Alternatively, the contexts of the bib-heads from Cerros and Nohmul led Schele and Freidel to identify them as the Jewels of Kingship. Likewise, their contexts at Blue Creek and nearby Chan Chich lead to similar conclusions (Proskouriakoff 1974. See Freidel and Schele 1988, Guderjan, ms., Hammond 1987, Houk 1998, Proskouriakoff 1974, Schele and Freidel 1990: 102). In either case, the general consensus is that these are closely associated with royalty.

Seven other Early Classic bib-head pendants, importantly, all made of jade, have been recovered from Blue Creek. In each case, they derived from very high status contexts such as the ritual event at Structure 4 that resulted in the deposition of nearly 1000 jade artifacts at approximately AD 500. For the most part, these
pendants depict unknown deities or persons. Related images are also seen on the stucco masks on Structure 9-IV that were discussed in Chapter 2. The masks may represent at least one actual individual, an Early Classic ahau of Blue Creek or the maize god. Regardless of the identification of the maize god or ahau, it is clear that the bib-head representation is closely associated with royalty and power as well as the economic and political ability to obtain exotic goods such as jade. This does not, though, explain the presence of a bib-head interred with Burial SH2.

Equally interesting is the pair of carved shell, ear adornments with clear Teotihuacan style imagery. These were incised and inlaid with stones of various colors. Each shell depicts a high-status, elaborately ornamented man seated on a cushion within a larger circular frame. Both men have hunched backs and lean forward, grasping something in their hands. Both are also wearing “backpacks” which are clearly a trait derived from Teotihuacan. While it is no longer surprising to find bib-heads at Blue Creek, any Teotihuacan imagery is unexpected. The only other even remotely related artifact is a single Early Classic sherd found in the shaft in Structure 4 that probably derives from Tikal (Manik phase) when it was intensively interacting with Teotihuacan. Further, the jade and coral inlays on the shells are unlikely to be found outside of the elites of Blue Creek.

While it is possible that their presence reflects some sort of contact between Blue Creek and Teotihuacan, the only additional evidence of such contact at Blue Creek consists of a single Manik phase sherd from Tikal, and gives little support to a concept of direct contact. Nevertheless, Teotihuacan-related imagery is seen during the Early Classic period, especially in royal contexts. And here it would comment on the power structure of Blue Creek. However, its association with the low status level of Burial SH2 is not typical.

First, it is clear that the SH2 individual was of higher status than his neighbors and contemporaries. However, unlike the burials at Kin Tan, that status was not inherited by his descendants. I believe that Burial SH2 represents an individual within the Sayap Ha community who gained prestige and perhaps power through his interaction with the ruling elite residing in the core area of Blue Creek. Elsewhere I have explained this, rather poorly, as being similar to the Trobriand “Big Man” model (Malinowsi 1920, 1922, 1978; Sahlins 1972). Big Men typically work harder than other individuals and hold larger stores of food and this often enables them the option of polygyny. They stand out based on their own industriousness. While Big Men achieve internal status within their communities, their status is also acknowledged outside of their communities. Interaction among and exchange among Big Men of different communities marks and reinforces each others status by the exchange and display of exotic goods, such as jade among the Maya, commonly used as adornments. The Big Man model has been used effectively to understand other fundamentally egalitarian societies such as the Late Woodland period Hopewell culture of the eastern United States (Brown, Kerber and Winters 1990, Young and Fowler 2000). The Hopewell Culture is seen as being a non-stratified society in which individual males achieve high status due to their activities as Big Men. Consequently, the exotic goods that have come into their possession by exchange with foreign Big Men through a prestige good economy are interred with them at death. Other than such grave goods, there is a fundamental lack of stratification seen in residential architecture or mortuary practices.

There is no question that Maya societies were much more stratified and complex than these fundamentally egalitarian societies in New Guinea and prehistoric North America (Chase and Chase 1992). In general, most scholars concur that Maya lineages created, then maintained, power and authority, through multiple generations. However, Burial SH2 indicates that there was a role for individually achieved status that did not translate into status for the lineage within Classic Maya society as well. To be clear, I am not imposing a “Big Man” model on the ancient Maya. Rather, I am simply saying that individual achievement could elevate an individual’s status within existing structures of power and authority. The “Big Man” model could be one of many avenues for
the creation of prestige within a heterarchial society.

Comparing Kín Tan and Sayap Ha

First, to digress, throughout Blue Creek, each residential area has a unique signature in terms of the dates of their founding, the nature of associated natural resources, and the quantity and quality of residential buildings. This heterogeneity appears to be associated with the multiple pathways to power and authority that were available in Classic Maya communities.

Further, we know a great deal more about the intra-site relations between the core area and more elite residential areas, such as the Structure 37 Plazuela at Kín Tan we identified the lineage founder for the group. His interment, somewhat earlier than that of Burial SH2, was followed by a sequence of events that included the construction of a shrine over his burial, then the tomb of a prestigious male, possibly a shaman and probably the founder’s descendant, in front of the shrine. Then the shrine was expanded to cover the descendant’s tomb. The shrine remained a central focal point for the lineage for several hundred more years. During this period, the lineage grew in power and prestige within the larger Blue Creek community as evidenced by the growth in construction of the Late Classic period. It is clear that the long-term power relations between the Kín Tan lineage and the rulers residing in the center of Blue Creek were strong for several centuries.

In contrast, Burial SH2 is very different. First, Sayap Ha and Chan Cahal both appear to be residential areas for fundamentally equalitarian groups. While prestigious grave goods were included in the SH2 burial, there is no evidence for consistent or future power associated with his elite status. Consequently, we must assume that his status was achieved in a manner that would not further the authority of his lineage and descendants. SH2 achieved personal status through his relationship with sources of authority outside of the Sayap Ha community but could not transform that relationship into a source of authority for Sayap Ha and its future role within greater Blue Creek.

However, he had access to some of the most rare and valuable materials and iconography that existed. Simply the presence of the jade alone makes that clear. However, the royal iconography of the bib-head associated with the iconography of distant and exotic power emanating from Teotihuacan indicate that he was a participant in the upper level political processes of Blue Creek as well as an individual who was an active participant in the religious rituals and principles that integrated the social and political system. At the same time, there is no indication that he shared in the wealth and power of the rulers and other elites of Blue Creek. His rudimentary home makes clear that he was a commoner, not a royal. In fact, the simple fact that the bib head was made of such a mundane material as bone, rather than, say, jade, makes clear that he was not in the upper echelon of Blue Creek’s politics.

Instead, he probably gained access to the iconography and material of power in a transitory manner. The implications are that Burial SH2 was given the artifacts that reflected his association with the powerful elements of society. These artifacts reflected his association with the power of the rulers, but they do not reflect any significant power of his own. While he may have become a local leader or at least held local status within Sayap Ha, his power beyond Sayap Ha was limited.

This supports the idea that exotic, status reinforcing goods such as jade came to such individuals through their individual relationships with more elite members of society. Such materials were probably gifted to non-elites for service or other sorts of relationships with the rulers who resided in the center of the city. In the classic “Big Man” model, local leaders acquired internal status due to their relationships with powerful external leaders. In this case, the external leaders were not remote members of another polity or island community but the rulers only a few kilometers away. Consequently, this burial event illustrates and underscores the presence of multiple heterarchial structures within Classic Maya society. While he was close to power, the individual who we know as SH2 was never powerful himself, except perhaps within his local community, Sayap Ha.

U Xulil Beh

Kín Tan and Sayap Ha are examples of residential settings that are repeated elsewhere at
Blue Creek. The situation at Kin Tan is probably repeated at Rosita, Nukuch Mul and other elite residences above the escarpment. Likewise, Sayap Ha is closely related to Chan Cahal and probably other non-elite components. Of course, the site core, by its nature, is a unique residential setting. Another unique component is U Xulil Beh.

U Xulil Beh is a small informally clustered group located 2.5 kilometers southwest of the core area that consists of twenty-two small, Classic period house mounds (Figure 6: Lichtensten 2000; Guderjan, Baker and Lichtenstein 2003; Guderjan 2007; Guderjan, Barrett and Preston 2009). Unlike all other known components of Blue Creek, U Xulil Beh has no monumental architecture or larger residential structures. Test excavations of most of these house mounds resulted in recovery of no jade or other exotic goods and not even burials under the floors of houses. While U Xulil Beh’s initial occupation postdates the Late Preclassic – Early Classic transition when this practice was common, the lack of such activities and goods indicate that the residents of U Xulil Beh were of relatively low social status.

U Xulil Beh’s is in a resource-poor margin area of Blue Creek. It is located on a largely flat expanse of land bounded by several large drainages and a series of small hills. While they built agricultural terraces at the west end of the group (Figure 7), the large expanses of highly productive agricultural land available to other components did not exist at U Xulil Beh. Instead, the group is bounded on three sides by erosional cuts more than ten meters deep.

McAnany’s “first arrivals” view explains a great deal about U Xulil Beh’s role in the fabric of “greater Blue Creek”. The first arrivals “staked claim” to the best and most important resources both above and below the escarpment. While their interaction with each other and the elites of the site core led to their multi-generational success or failure in terms of power, legitimacy and authority, they controlled the best agricultural resources. By the time that U Xulil Beh was settled, the most valuable resources had been claimed for centuries. So, the residents of U Xulil Beh can be seen as a lateral expansion of Blue Creek and unable to become major players in Blue Creek’s authority structures as they had neither the legitimacy acquired through multiple generations or control over any significant resource. U Xulil Beh probably had the agricultural potential for production for its own food purposes but it did not participate in the large-scale production of other residential areas.

We have no way of knowing whether the residents of U Xulil Beh were immigrants into Blue Creek from other areas or members of Blue Creek who moved from other components to found a new residential area. If either could be demonstrated to be the case, U Xulil Beh could represent a powerful argument for relocation of people due to warfare and conflict or local population expansion during the Classic period. Unfortunately, to paraphrase every archaeologist everywhere… more research must be done.

Summary

This examination of examples of residential components is meant to underscore several points. First, residential components at Blue Creek exhibit diversity in terms of social status, internal complexity, and access to exotic goods as well as diversity in terms of power, legitimacy and authority. The causes for this diversity can be seen in terms of two interacting factors; the control of strategic resources by first arrivals and human agency in regards to how local leaders in residential components interact with each other and the ruling elites of the core area.

In some cases, such as the core area and Kin Tan, control of resources and multi-generational interaction among leaders was mutually beneficial. Each participant grew in power, legitimacy and authority as a consequence. However, in the case of Sayap Ha, the status acquired by Burial SH2 during his lifetime was ascribed to future generations. I argue that this was because the ruling elite, rather than Sayap Ha’s residents, already controlled the important agricultural resources around Sayap Ha. Consequently, the residents were already relegated into a social status where their interaction with the ruling elite for mutual gain was limited.
Figure 7. Map of U Xulil Beh

Figure 8. Photo of 2008 excavations of agricultural terraces at U Xulil Beh
On the far end of the spectrum was U Xulil Beh. Lacking both resources and authority and legitimacy acquired by multi-generational interaction with other components, the residents of Sayap Ha were permanently marginalized much as Wallerstein argued that the periphery of the modern industrial world was marginalized. Not only did multiple avenues to power exist, there were also dead end streets.

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SECTION TWO: GENERAL RESEARCH PAPERS
Between approximately 1200-1000 BC in Belize, the late Archaic transitioned into the early Middle Preclassic. This transition occurred over a relatively brief span of time and for many reasons is difficult to see in the archaeological record. This paper reviews radiocarbon dates and their stratigraphic contexts from five sites that pertain to this transition. Most dates that have been used to place the appearance of pottery before 1000 BC are probably the result of old carbon being reworked into later, ceramic-bearing contexts. While it is possible, based on calibrated radiocarbon dates presented at the 95%, two-sigma range of probability, that pottery was present before 1000 BC, no irrefutable evidence supports this early date. Additionally, there seems to be only a small probability, based on currently available data that ceramics appeared earlier in central Belize than in northern Belize. Clearly, much more work, including a larger sample of contextually controlled radiocarbon dates, is required before this important transition can be well understood or more precisely dated.

**Introduction**

Research into Mesoamerica’s Archaic has increased recently as researchers look for early villages and all cultural attributes that comes with them. Archaic research in Belize has been as active as in any region in Mesoamerica. Yet much remains unknown, including how and when the Archaic concluded. This is an important topic given the current consensus that it was in Belize where the Maya first appeared. This paper examines the stratigraphic details of dates used to place pottery before 1000 BC. This date marks the approximate end of the transition from a preceramic way of life to Maya village life. The principal objective of this study is to contextualize the appearance of Maya society.

**Why We Don’t Know More about the Transition**

One answer to the second part of the question of the title of this paper is obvious: Not enough people have looked. Also, some are vaguely aware of Archaic evidence in their project areas but don’t pursue it. Two other parts to this answer needs to be made clear. First, the transition happened over a brief time, and so is hard to see in the archaeological record. Second, the record of incipient villages indicates that existing ground surfaces were often cleared to bedrock. This process had two unfortunate outcomes. First, the record for some Archaic occupations has been erased from the landscape. Second, old carbon could have been introduced into some later deposits, giving the impression that these contexts are older than they actually are.

**What We Know about the Transition**

The Archaic-to-Preclassic transition should be viewed as a regional phenomenon that took place across Belize and beyond. However, we should allow for the possibility that it did not occur at exactly the same time or under the same circumstances everywhere. Compiling regional radiocarbon chronologies illustrates these trends. In order to recognize bad dates that skew this transition, each site’s sequence must be examined in order to recognize potential problem samples. I review dated sequences from Cuello, Blackman Eddy, Cahal Pech, Actun Halal, and Colha. These sites offer the best available documented evidence for early Middle Preclassic (Cuello, Colha, Blackman Eddy, and Cahal Pech) and Archaic (Colha and Actun Halal) occupations in Belize. All dates are calibrated using the latest on-line version of the OxCal program, are discussed at a two-sigma range of error, and are presented as calibrated calendar ages.

**Cuello**

Excavations at Cuello have compiled an account of early village development (Hammond 1991; Hammond et al. 1995). Researchers have defined a developmental sequence extending from Phase 0 to Phase XI based on site center excavations and over 80 radiocarbon dates.
Excavations in 1975-1976 produced estimates for an Early Preclassic component dated at 2000-1000 BC (Hammond et al. 1976). These dates were not universally accepted (Potter et al. 1984), though they had a large impact. For example, Richard MacNeish used the proposed date for early village life, 2000 BC, as the end date for his sequence of Belize’s preceramic phases.

Excluding the problematic dates, 32 are from Swasey (Phases 0, I, and II) or Bladen (Phases III and IIIA) deposits (Andrews and Hammond 1990; Hammond et al. 1991). Only a small number of these pre-date 1000 BC (Figure 1). The earliest is from Burial 179, a young female found with an infant, Burial 180 (Hammond et al. 1995), and dating to 1456-1049 BC. Burials 179 and 180 were stratigraphically below Burials 176, 177, and 178, all of which had grave offerings of Bladen bowls, jar sherds, and jade jewelry. All five burials were in the site’s underlying paleosol. While Burials 176, 177, and 178 are clearly Bladen, Burials 179 and 180 had no accompanying grave offerings.

Hammond et al. (1991, 1995) compare Burials 179 and 180 to Burial 62, dated to about 1402-1055 BC and 1292-810 BC. That Burial 62 was dated twice means that the number of dates indicating Swasey occupation should be reduced by one, from 32 to 31. Burial 62 was in a bedrock cleft in the paleosol rather than under a structure of floor, and also lacked any grave goods.

The three dates from Burial 62 (OxA-1649 and OxA-2103) and Burial 179 (OxA-4461) (see Figure 1) are three of the four oldest from the site. Also, coming directly from human burials, these are the only dates closely associated with cultural events that support dating Swasey prior to 1000 BC. Their contexts in the paleosol rather than below sealed occupation surfaces, early dates, and lack of any grave goods suggests that they represent a late Archaic population.

Another early assay is OxA-4454 (Hammond et al. 1995), which dates to around 1130-810 BC. This date comes from charcoal collected from the paleosol. A second date, OxA-4453, only 5cm higher yielded a date of 782-412 BC. A third date from this paleosol, OxA-4542, dates to around 940-750 BC (Hammond et al. 1995). Dating Maya soils is notoriously imprecise; paleosols elsewhere in the Maya Lowlands span the Archaic through Preclassic or even Classic periods (Beach et al. 2008; Pohl et al. 1996). The wide spread of dates shows the gradual accumulation of this soil over time, but reveals that it should be considered a poor context for early pottery.

Another assay used to substantiate the early age for Swasey and Bladen materials is Q-1916. This sample was recovered from a firepit (F51) in Structure 325, and is part of Phase II (Hammond et al. 1991). This was the first patio arrangement, and Structure 325 had four stages of flooring (Hammond et al. 1991:32). Seven total dates are available for Phase II; the other six of these span from 774-412 BC to 514-196 BC. Based on its relationship with these six other dates and its large span or error, Hammond (personal communication, 2008) has determined Q-1916 to be too early and not representative of cultural activities going on during this time period.

Additional assays have only small probabilities for pre-dating 1000 BC. One, Q-1918, dates to 1266-751 BC. This sample was from Bladen Phase IIIA (Hammond et al. 1991:36). Sample OxA-4455 dates to 1058-794 BC and was from a chultun with Bladen pottery (Hammond et al. 1995:125). Given their association with Bladen material, these samples are likely old carbon. A final sample, AA-485, dates to 1114-410 BC but has a very large error range. This sample, associated with Swasey Phase IA, is listed as “corn kernels from ?occupation level” (Hammond et al. 1991:Table 3.1). The date’s large sigma makes it difficult to assess. That it might be maize would make it a distinctively cultural item. However, 83.9% of the two-sigma age range of this date post-dates 1000 BC, making it likely that the sample itself falls toward the younger end of that span. Alternatively, it may also be old carbon that got mixed into a younger deposit. Once these early dates are removed from the Cuello radiocarbon chronology, the case for pre-1000 BC pottery is somewhat lessened.

**Blackman Eddy**

Blackman Eddy has been investigated by James Garber from the early-1990s onwards.
Figure 1. Swasey and Bladen phase radiocarbon dates from Cuello (from Andrews and Hammond 1990: Table 1; Hammond et al. 1991; Hammond et al. 1995).

(Andrews and Hammond 1990: Table 1) Only one of the Kanocha assays substantially pre-dates 1000 BC. This sample, dating to 1400-1048 BC, comes from Bedrock Feature 3, a chultun filled with debris and interpreted as a refuse pit. The three remaining Kanocha dates are also from features in or on bedrock and cluster to 1051-838 BC, 996-816 BC, and about 980-804 BC. Given their distribution, these dates represent a well-defined early occupation that might have begun by 1000 BC, though probably slightly later.

(Garber et al. 2004a, 2004b). Structure B-1 was damaged by bulldozing in the 1980s, and the Department of Archaeology decided that an opportunity existed to excavate what remained of it in order to document its full history (Garber et al. 2004a:26). A series of chultuns and arcing postholes were documented representing initial-phase occupation (Garber et al. 2002), and 15 radiocarbon dates come from these features and the overlying Str. B-1 (Figure 2). The site’s early component, Kanocha, is part of the regional Cunil sphere (Awe 1992).
Cahal Pech

Jaime Awe’s ongoing work at Cahal Pech has sought evidence for early occupation (Awe 1992; Healy 1999; Healy and Awe 1995a, 1996). Dates come from two contexts- Unit 5, excavated through the building, and a couple of units in the plaza immediately in front of Str. B-4. These excavations provide perhaps the best early sequence from central Belize (Figure 3A).

Unit 5 extended to the bottom of the building. Sample Beta-77207, dating to 1307-996 BC and collected from beneath Floor 13 (Healy and Awe 1995b:201), is the earliest in its sequence. Awe (1992:133) notes that no cultural items were found in this stratum. Healy et al. (2004) associate this date with the fill of Str. B-4 sub-12, the first version of this low platform. The description of the context as lacking artifacts and its context over bedrock leave open the question of whether this sample pre-dates Maya occupation is a fragment of old carbon that was redeposited into ceramic-free fill for Str. B-4 sub-12, or is burned material originating with the site’s first construction.

This date was run to corroborate an earlier sample, dating 1306-516 BC, that was collected from Level 12, below Floor 11, belonging to Str. B-4\3rd. While this date is associated with early construction and Cunil pottery, its large error range makes it difficult to assess. However, it can be understood in relation to overlying construction phases, B-4\4th and B-4\5th (Awe 1992:134-136). Floor 10C, belonging to Str. 5-4/4th, supported a wattle-and-daub structure dating to 1056-792 BC (Awe 1992:135). Immediately afterwards, this platform was elaborated into Str. B-4\5th, dating to 1002-797 BC. The proximity of these dates to the earlier one increases the likelihood that the latter date falls on the pre-1000 BC side of its two-sigma
range. Moreover, the fact that these two are nearly identical indicates the rapid growth of this building.

Two units in Plaza B provide more information about early constructions at the site. PU 94-1 (Cheetham 1995) went to bedrock, and contained at least 12 floors. At the bottom was a remnant of the original paleosol that contained chert debitage but no pottery (Cheetham 1995:27). Two dates from this unit indicate the chronology of the plaza. One from below Floor 9 (a Cunil level) dates to 1088-832 BC. The other, collected from the ceramic-free paleosol, dates to about 1214-537 BC. This sample has a large sigma, yet its location on bedrock suggests it dates to sometime around 1000 BC. In 2007, Awe excavated a second unit here. According to Awe (personal communication 2008), Cunil ceramics are at the bottom of this new unit. It is not clear, however, whether this unit found the paleosol described earlier, or instead was in an area where this soil had been scraped away.

The Cahal Pech sequence not only contains sealed Cunil contexts, but also has an important series of radiocarbon dates. Like at Cuello, the earliest Maya removed soils before constructing their platforms and houses directly on bedrock. The sequence of dated deposits spans up to, if

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Figure 3 (A) Radiocarbon dates from in and in front of Structure B-4 at Cahal Pech (Awe 1992; Healy and Awe 1995b); (B) Radiocarbon dates from Actun Halal (Lohse 2008: Table 1).
not slightly before 1000 BC. However, according to original descriptions, neither of the two earliest dates was associated with ceramics. This leaves only the date from below Floor 9 in the plaza and the sequence from Str. B4-4th and B-4-5th as evidence for Cunil pottery before 1000 BC.

**Actun Halal**

Actun Halal is a rock shelter in the Macal River Valley in western Belize that was reported by the Western Belize Regional Cave Project and excavated in the early 2000s (Griffith and Morehart 2001; Griffith et al. 2002). Excavations in 2006 (Lohse 2008; Morgan et al. 2008) encountered a small but well defined Archaic component, the first such component in central Belize.

Four dates from Area B frame the site’s preceramic deposits (Figure 3B). Three of these were from point-plotted charcoal; the fourth was from burned sediments and does not indicate a human presence. The upper three dates were associated with lithic debitage, and a constricted adze was recovered from the same depth as the middle date, around 2040-1770 BC. Maize and morning glory pollen are present throughout, as are small amounts of cotton pollen (Jones and Hallock 2008).

Even though Halal’s dates are limited, they are in stratigraphic order and currently provide the best available data from central Belize for a dated Archaic presence. The radiocarbon chronology indicates that preceramic peoples were camping here intermittently at least as early as 2300-2100 BC until ca. 1440-1210 BC. Based on ceramic evidence, Maya began using the shelter at least by Middle Preclassic, Jenney Creek times (LeCount 2008:38). This is substantiated by the fifth radiocarbon date of approximately 670-394 BC. While additional dates would clarify the Archaic-to-Preclassic transition, these data establish the site as a temporary camp for foragers in central Belize.

**Colha**

Perhaps the most important site for dating the Archaic-to-Preclassic transition is Colha. Excavations have documented an early village by the Middle Preclassic, similar to Cuello (Sullivan 1991). Several preceramic deposits are also present nearby (Hester et al. 1996; Iceland 1997; see Lohse et al. 2006). A total of 31 dates from Colha are from the Archaic and Preclassic (Figure 4). Of these, nine are from Op 4046 and 22 come from the site’s main plaza. Samples from Op 4046 date the two-layered Archaic component to around 900-1500 BC and 1900-3000 BC, though this lower component is poorly dated. One date, Tx-8295, from a humate sample spanning 17 cm of vertical deposit, dates to around 850-758 BC. Given its collection technique, it can probably be dismissed.

Dates from the Colha center are from Bolay, Chiwa, and Oncecimo phases (Valdez 1987) and represent the growth of domestic buildings and features. None of these pre-date 1000 BC; the earliest is around 931-786 BC. When these 22 dates are arranged with the preceramic ones and the problematic Archaic date is removed, a slight gap appears just before 1000 BC. Sample CAMS-8397, dating to 1056-810 BC, marks the end of the preceramic sequence, while Tx-4060/4151 indicates the beginning of ceramics. While each is associated with its respective cluster, the overlap of their distributions suggests a fairly uninterrupted transition from preceramic to ceramic culture.

**Considering the Case for Continuity and What We Know about the Transition**

This review includes 91 dates from five sites representing the Archaic, early Middle Preclassic, or both. Two important points are made. First, no site contains any clear, irrefutable indication of pottery dating to before 1000 BC. The earliest dates at Cuello are on burials with no associated goods and that are not under house floors or patios. Only two other assays extend faintly past 1000 BC; all others probably represent old carbon that has been reworked into later deposits. At Blackman Eddy, only a single “good” date extends beyond 1000 BC; here, too, most age distributions are in the 900s. Cahal Pech is the best case for early pottery, though the three best dates from Str. B-4 and the plaza are mostly or almost entirely later than 1000 BC. Additionally, dates from this site are just barely older than the ones for ceramics at Cuello, and it is not clear based on this comparison that pottery did not appear at virtually the same time in these two regions. If
The Cunil and Swasey spheres are indeed contemporary or *nearly* contemporary, as suggested by the dates, then an interesting avenue for future research might be to look for reasons why the decorative motifs found on these vessels appear to be so starkly different.

The second important point concerns the nature of Archaic sites and why these seem to be so difficult to locate. As would be expected, all in situ Archaic finds come from soils that pre-date Maya deposits. Once populations became sedentary, however, these soils were frequently cleared from bedrock for the construction of houses and platforms. In some cases, as at Cuello and Cahal Pech, bits of these paleosols appear to have been left in place as “yard” areas.

In other cases, old carbon that formed naturally or through preceramic human agency is likely to
have found its way into later contexts. This shows not only that Maya and pre-Maya sites are fundamentally different in nature, and should be approached accordingly, but also that, in creating their first villages, the early Maya erased some of the Archaic record from the landscape. Archaeologists should be mindful of this pattern when excavating their site center units to bedrock, and allow not only for the possibility of old carbon in later contexts, but also for the likelihood that earlier, Archaic deposits might await discovery in any relic soils that remain.

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A TERMINAL EARLY FORMATIVE SYMBOL SYSTEM IN THE MAYA LOWLANDS: THE ICONOGRAPHY OF THE CUNIL PHASE (1100-900 BC) AT CAHAL PECH

James F. Garber and Jaime J. Awe

Research in the upper Belize Valley has produced substantial evidence of a Terminal Early Formative occupation (Cunil 1100-900 BC). The largest sample of this material has been recovered at the site of Cahal Pech, primarily from a series of test pits into the summit of Structure B4. Additional Cunil material has been recovered from Cahal Pech Plaza B excavations and other excavations in outlying groups associated with the site core. Research at Blackman Eddy (Kanocha Phase) and Xunantunich has revealed Cunil material as well. This article addresses the symbolic and iconographic aspects of the Cunil remains as they relate to other areas of Mesoamerica. In particular, we intend to show that the Cunil Phase occupants were active participants in a pan-Mesoamerican ideological interaction sphere. We will also show that the Cunil style of the expression of symbols is uniquely lowland Maya. The presence of a uniquely lowland Maya symbol system in the Terminal Early Formative is a departure from the traditional view that the lowland Maya were “latecomers” as far as participation in and or contributions to this pan-Mesoamerican system.

Introduction

The Cunil Phase (1100-900 BC) was initially reported and defined by Awe (1992) as a result of a series of excavations in the Cahal Pech site core and surrounding area. Subsequent investigations by Awe (1994), Garber et al. (2004), Healy and Awe (1995, 1996) and Strelow and LeCount (2001) have expanded the Cunil database in the areas of ceramics, architecture, settlement, trade, and subsistence. The focus of this article is the chronological and spatial distribution of iconographic symbols as they relate to the Cunil Phase occupation and other areas of Formative Period Mesoamerica.

Formative Period Mesoamerican art is thematically conservative, primarily restricted to cosmology, inhabitants of the supernatural world, and political power derived from supernatural access (Reilly 1994, 1995). Many researchers refer to this symbol system as the Olmec art style. Style, by definition, has a single point of origin and thus these researchers see the Olmec Gulf Coast as the “Cultura Madre” of Mesoamerica. Some have taken this model to an extreme which we refer to here as “Olmecitis” - the belief that all Mesoamerican symbol systems, ceremonial complexes, gods, and supernatural beliefs originated among the Gulf Coast Olmec. On the other hand, others see the system emerging as a result of regional interaction. This has been referred to as the “Sister Culture” model. Proponents of these opposing models have engaged in vigorous and at times heated debates. We take yet a third view. It is our position that for the Terminal Early Formative (1100-900 BC) there is no single pan-regional style but rather several related styles spread across Mesoamerica. We refer to these related styles as the pan-Mesoamerican ideological interaction sphere, noting that there is not one style or ceremonial complex, but rather a series of related styles and complexes. This approach facilitates regional comparisons and is the first step in demonstrating the ways in which each region utilizes the related symbols to suit their socio-political needs. The ideological messages conveyed by these symbol systems can be used to gain insight into the beliefs and practices of the people who created them.
systems created the foundation for Mesoamerican religion and formed the basis for the legitimization of power and authority. It is important to note that elements of the symbol systems form the basis of cosmological view and fundamentals of authority, but that each region of Mesoamerica developed and used these in their own ways.

Coe (1977) has noted Olmec-Maya connections in at least seven areas – sociopolitical, warfare, deities, religious paraphernalia, blood letting, ball game, and symbol systems. The traditional view of this transmission has been by way of Izapa – it being the connection between Gulf Coast Olmec and Classic Maya (Guernsey 2006). The richness of the iconographic elements of the Cunil data in the Terminal Early Formative demonstrates that the traditional transmission route model must be re-examined. As we will see, many of the symbols are earlier than their occurrence to the south (Izapa), and as early or in some cases earlier, than their occurrence in areas to the west at sites such as San Lorenzo, La Venta, and Chalcatzingo. It is important to note that the La Venta Horizon (900-400 BC) is generally regarded as the time frame for a pan-Mesoamerican symbol system. Importantly, the Cunil Phase (1100-900 BC), predates this. The full significance of this is not clear at this time.

In this analysis we will examine five iconographic motifs and or themes: Avian Serpent; Cave Monster Maw; Crocodilian imagery; Flame Brow; and Kan Cross. It is clear that the Cunil Phase peoples developed their own versions and expressions of these symbols and motifs and used them in a manner to suit their cultural needs.

The Avian Serpent

As noted by several researchers, the fauna and flora of the natural environment provided the source from which Formative peoples generated symbolic metaphors through which they described the cosmos and reality of the supernatural world. The Avian Serpent is one such supernatural entity. Joralemon (1976) refers to this as the “Olmec Dragon” and notes its role as the zoological supernatural being of the Formative systems. The Avian Serpent is a composite beast made up of body parts from several natural animals notably crocodilian and the Harpy eagle. It can exist as a sky or terrestrial beast. Also, as typical for the art of this time, it can be shown in profile or frontal view. Figure 1 illustrates typical Middle Formative examples of the Avian Serpent from the Gulf Coast Olmec (La Venta) as well as Tlapacoya and Chalcatzingo. By comparison, Figure 2 shows an earlier lowland Maya example from Terminal Early Formative Cunil (Figure 2d) and Late Classic examples from Palenque, Tikal, and Yaxchilan (Figure 2a-c). Within the Cunil corpus this motif occurs as an incised design on ceramic bowls. Several examples have been recovered from Cahal Pech, Blackman Eddy, and Xunantunich. Several centuries later, a similar motif appears as a headdress on the central figure of Altar 4 at La Venta (Figure 2e). We suggest that the Cunil motif is primarily avian, showing strong similarities to the Harpy Eagle (Figure 3). The Cunil avians are curvilinear, highly stylized, and possibly unique to the Maya lowlands. Although the examples in Figures 1 and 2 are thematically similar, it is important to note that that the Cunil expression of this theme is as early and in many cases earlier that other examples across Mesoamerica.

The Cave Monster Maw

Perhaps the most well known examples of the open maw occur at Chalcatzingo on Monument 1 and Monument 9 (Figure 4a,b), both of which
Figure 1. Olmec Dragons and Avian Serpents: (a, b) Tlapacoya vessel, frontal and side views, from Joralemon 1971, p. 42; (c) Chalcatzingo monument 5, drawing by sr. author; (d) Tlapacoya vessel, drawing by sr. author; (e) La Venta monument 6, drawing by Kent Reilly.

Figure 2. The Harpy Eagle in Maya art; (a) Palenque, from Gutenberg Project; (b) Tikal, from Gutenberg Project; (c) Yaxchilan, from Gutenberg Project; (d) incised motif on Cunil Phase ceramic vessel from Cahal Pech.
The Iconography of the Cunil Phase (1100-900BC) at Cahal Pech

Figure 3. Harpy Eagle: (a) photo of Harpy eagle; (b) incised motif on Cunil vessel from Cahal Pech.

Figure 4. The Earth Monster Maw: (a) Chalcatzingo monument 1, drawing by sr. author; (b) Chalcatzingo monument 9, redrawn after Joralemon 1971, Figure 141, p. 49; (c) Cunil Phase marine shell pendant from Cahal Pech; (d) Maw from Palenque sarcophagus, from Schele and Miller 1986, plate 111c, p. 283.
date to the Middle Formative. A Cunil Phase marine shell pendant recovered from Cahal Pech shows the same motif and predates the Chalcatzingo examples by at least two or three centuries (Figure 4c). This giant zoomorphic supernatural has been identified by Grove (2000) as the “Cave Monster”. The gaping maw is a portal between the supernatural and natural worlds. The maw of the earth monster became a prominent and important motif in the lowland Maya Classic Period symbol system and can be observed in a wide range of contexts and manifestations of earth related supernatural beings (Figure 4d).

**Crocodilian Imagery**

Crocodilian imagery is pervasive in Mesoamerican art and is an important component in Olmec, Izapan, and Maya symbolism in the formation of earth monster supernaturals and crocodile axis mundi “World Trees” (Figure 5). At Izapa, crocodile vegetative “World Trees” represent the axis mundi. As noted earlier, the natural world and the order that it represents is frequently the source from which Mesoamericans generated symbolic metaphors in their depictions of the supernatural world. The similarity between crocodile skin and tree bark is obvious (Figure 6). Additionally, crocodiles are known to clean their ventral scoots by backing up a tree. With this in mind, a “crocodile tree” makes sense. Within the Gulf Coast Olmec and related Chalcatzingo symbol systems, there is a clear relationship between crocodilian zoomorphs and agricultural fertility (Reilly 1994). In the Maya area, crocodilian imagery is prolific and representations occur in a variety of forms and contexts (Figure 7). Additionally, crocodilian skeletal remains have been recovered in burials at Tikal (Coe 1965) and Classic Period Altar T at Copan represents a large crocodile (Figure 7a). Crocodiles are commonly depicted in Postclassic contexts as well. Crocodile imagery is also included in Maya hieroglyphs. In the Book of Chilam Balam of Mani it is noted that the surface of the earth is the back of a crocodile which floats in a large lake, illustrating the linkage between crocodiles and fertility. Crocodilians at Cahal Pech include a mandible from a Cunil cache in Structure B4 (Figure 7d), a Middle Formative slate crocodile effigy (Figure 7b) and a large conch shell crocodile (Figure 7c). This last item was recovered from a Late Preclassic cache, but contained Middle Formative items such as figurine heads and chocolate pot spouts. We believe the conch shell crocodile is also a curated item from the Middle Formative or perhaps earlier Cunil Phase.

**The Flame Brow**

This is an element found within several motifs and generally functions to indicate that the entity is a supernatural being. It is found on Avian Serpents and water related supernaturals. Figure 8 shows examples from across Mesoamerica including two Cunil Phase greenstones which are probable mosaic inserts.

**The Kan Cross “Center”**

Within the Formative system, the Kan Cross functions as a locative, signaling to the viewer the location of the event or position within the cosmos. The Kan Cross is the most basic symbol representing the concept of a quadripartite universe (Matthews and Garber 2004). The act of “centering” in ritual or demarcating the “center” on ritual objects are metaphors for creation and world order as well as establishing foci of power and authority (Freidel and Schele 1993). All Mesoamerican peoples recognized a multi-layered quadripartite universe.
Figure 7. Crocodilians: (a) Copan Altar T, from Project Gutenberg; (b) Middle Formative crocodile head slate effigy from Cahal Pech; (c) conch shell crocodilian effigy from cache in Str. B4 at Cahal Pech; (d) Cunil Phase crocodile mandible from cache in Str. B4 at Cahal Pech.

Figure 8. The Flame Brow: (a) vessel design, from Joralemon 1976, Figure 6e, p. 36; (b) greenstone celts, from Covarrubias 1946, plate 5; (c) Cunil Phase greenstone mosaic from Cahal Pech; (d) Cunil Phase greenstone mosaic from Cahal Pech (possible fang)
This structure is associated with concepts of creation, cyclical completion, cardinal direction, lineages, gods, and colors. All of these concepts are embedded in the Kan Cross – it is perhaps the most fundamental symbol of the Mesoamerican world and is found throughout Mesoamerica spatially and temporally (Figures 9 and 10). At Cahal Pech the Kan Cross symbol occurs on a Cunil phase vessel (from Cache 1 on Structure B4) and it (Figure 9a) represents one of the earliest reported examples of the Kan cross in the Maya lowlands (Awe 1994).

**Figure 9.** Kan Crosses from Formative Mesoamerica, adapted from Cheetham 1998: (a) Cahal Pech; (b) Chiapa de Corzo; (c) Izapa; (d) Altamira; (e) Tehuacan; (f) Chalchuapa; (g) San Jose Mogote; (h) Chalcatzingo; (i) San Lorenzo

**Conclusion**

Grove and Gillespie (1992) note that at about 900 BC, pottery was no longer the primary carrier of the Olmec symbol system. At this time, however in many regions of Mesoamerica, pottery bowls have the double line break and new figurine types emerge. This is precisely what we see in the Belize Valley at Cahal Pech and Blackman Eddy. This has important implications for the emergence of social complexity. This has important implications for the emergence of social complexity. This has important implications for the emergence of social complexity.

**Figure 10.** The Kan Cross: (a) Humbolt Celt, drawing by F. Kent Reilly III; (b) Temple of the Foliated Cross, Palenque, from Freidel et al. 1993, Figure 1:9, p. 54; (c) Pot of the Seven Gods (Kan Cross in second upper band), from Freidel et al. 1993, Figure 2:6, p. 68.

The Cunil Phase people of the Belize Valley were participating in a pan-Mesoamerican ideological interaction sphere from its very beginnings. This is a departure from the traditional view that the lowland Maya were “latecomers” as far as
participation in and or contributors to this system. It is important to note that the Cunil expressions of these motifs and symbols are in a style uniquely lowland Maya in their expression and execution. The concept of regional expression, particularly during the Early and Middle Formative, has traditionally been applied to Gulf Coast and highland Formative areas. Research at Cahal Pech now establishes that it must also be applied to the lowland Maya area as well.

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New excavations at Cahal Pech have provided an increased sample of Cunil phase pottery and these new data serve as the basis for refining the diagnostic features of the Cunil Ceramic Complex of the Belize Valley. The type-variety-mode method of analysis utilized in this study provides clearer type: variety descriptions as identified in this larger sample comprised of two wares, four groups, and 19 types. While Cunil pottery exhibits relatively simple modal and stylistic attributes there are a number of characteristics that clearly distinguish it from early facet Jenney Creek pottery. Results of this new study support the arguments that Cunil ceramics precede those of early facet Jenney Creek occupation chronologically and stratigraphically. These data also suggest in situ development from the late Preceramic period with stylistic influences from other regions.

Introduction
When excavations focusing on the Middle Formative by Awe began at Cahal Pech in the late 80’s, the earliest known pottery of the Belize Valley was the pre-Mamon early facet of the Jenney Creek Complex at Barton Ramie that was typologically but not stratigraphically defined. Awe’s (1992) dissertation, based on his excavations and subsequent analyses of materials from Cahal Pech, was the first work to identify the distinct Cunil Ceramic Complex as “typologically and stratigraphically a predecessor of the Jenney Creek Complex” (Awe 1992: 230). When originally described, Cunil pottery was represented by a sample of “two fragmented vessels and approximately 250 sherds” (Awe 1992: 226) from the earliest levels of Structure B-4 as well as from mixed deposits in the site core, and the Tolok and Tzinik Groups. Subsequent excavations in 1994 and 1995 (Healy and Awe 1995) recovered additional ceramic remains from Structure B4, from a 5x5 meter block unit at the base of B4, and from a series of nine 1x1 meter test excavations across Plaza B that were analyzed by David Cheetham (Cheetham 1995; Cheetham and Awe 1996, 2002; Clark and Cheetham 2002). These original excavations also provided a set of radiocarbon dates that placed the Cunil phase between ca. 1100 and 900 B.C. (Awe 1992; Healy and Awe 1995). The B4 excavations also revealed “the most detailed and lengthy stratigraphic sequence at Cahal Pech: 13 building platforms, the first 10 of which were built during Cunil, EMF and LMF phases” (Healy et. al. 2004: 105,106). Subsequent work in the Belize Valley at the sites of Blackman Eddy (Garber et. al. 2004) and Xunantunich (Strelow and LeCount 2001) confirmed the presence of pottery that predates early facet Jenney Creek, but while the existence and stratigraphic precedent of Cunil pottery was recognized by the mid 90’s, there were several concerns with some versions of the definition of the Cunil ceramic phase in the Belize Valley, and an obvious need to more clearly define and describe the Cahal Pech Cunil ceramic assemblage (Ball and Taschek 2003).

Structure B4 and Plaza B Data
With these objectives in mind, Awe began a new phase of investigations at Cahal Pech in 2002. These investigations included the excavation of several new units in Str. B4, a collaborative project with Jim Garber to look for Cunil phase occupation in Plaza B (Figure 1), and a ceramic workshop designed to compare ceramic traditions in Belize. Structure B4 at Cahal Pech provides a unique opportunity to examine well preserved Cunil pottery in a stratified context unlike that seen at other sites in the Valley. For example, while Kanocha phase pottery has been identified at Blackman Eddy it is only found in small pockets and most often in mixed deposits (Garber et. al. 2004; Brown 2007).

The new excavations in Str. B4 (Columns 7/2002; 8/2006; and 9/2007) were designed to increase the sample size of Cunil ceramic material and to better understand the
associated architectural features in the structure. These newer excavations have confirmed the Cunil phase dating of the four lowermost levels (Levels 11-14) of Str. B4, and have provided considerable new information on the relationship between the Cunil and early facet Jenney Creek/Kanluk phases in the Belize Valley. These data further confirmed that Cunil levels were separated by tamped marl floors with postholes and likely represent the surfaces of several superimposed dwellings. Ceramic and exotic materials found on the surface of several of the floors and in the construction fill beneath these platforms support the early development of social inequality in this area of the Belize Valley (Awe 1992; Brown 2007).

Figure 1. Cahal Pech, Plaza B (Garber and Awe 2008)

The collaborative investigations at Cahal Pech by Garber and Awe/BVAP included a north-south trench placed across Plaza B to gain a more detailed picture of architectural features, activity areas, ritual activity, and community organization (Garber et. al. 2005). These excavations revealed mixed Cunil and early facet Kanluk/Jenney Creek deposits – and while not as well preserved as the B4 assemblage, these materials have added substantial information for our understanding of the early Maya of the Belize valley.

Cunil Ceramic Complex

The ceramic workshop organized by Jaime Awe and Jim Aimers in San Ignacio in 2007 was the first time that Cunil pottery was presented to large group of ceramicists and scholars working in Belize. Besides physically laying out the Preclassic Cahal Pech assemblage next to other early collections from around the country, the workshop allowed participants to compare and contrast the Cunil phase ceramics with those of the Swasey and Bolay complexes in northern Belize, and with subsequent Jenney Creek phase materials from the Belize Valley.

The primary goals of this study are twofold: to provide an accurate description of the Cunil Ceramic Complex at Cahal Pech and to present the Cunil ceramic assemblage in a traditional type-variety format (e.g., Gifford 1976; Sabloff 1975) that will facilitate future and accurate intersite comparisons. We are also in the process of creating a formal type collection that will eventually be housed at the Institute of Archaeology in Belize. It is important to note that this work is based on the study of some 1,500 pottery sherds recovered from three new excavation units (Column 7/2002, Column 8/2006, and Column 9/2007) placed into Structure B4 at Cahal Pech. The ceramic samples from each column were examined as individual units and grouped by level. Sherds were then sorted based on paste, surface treatment, and other readily visible attributes and roughly categorized into Cheetham and Awe’s (2002) ware and group designations. This new collection of pottery was also compared to types previously defined by Awe (1992) and Cheetham and Awe (1996, 2002) and all accurately defined and described previous types were used in our classification of this collection.

As noted in the original collection of Cunil ceramics (Awe 1992; Cheetham and Awe 1996, 2002) there are also two wares observed in this sample: Belize Valley Dull Ware (33.19 % of collection) and Belize Valley Coarse Ware (66.81 % of collection). In this assemblage we have identified four ceramic groups (Uck, Cocoyol, Chi, and Sikiya), and 19 types. Belize Valley Dull Ware is characterized by its fine paste texture with volcanic ash, calcite, quartzite, and mica and/or hematite inclusions and dull slips associated with serving vessels. As noted by Cheetham and Awe (2002: 10) the “pastes range in color from creamy buff to a light whitish-gray” and often have a dark core. This ware may represent a precursor to Flores Waxy Ware with some of the Cunil red and/or
creams leading to types such as Sampoperro Red, Joventud Red, and/or Pital Cream. Belize Valley Coarse Ware, associated with more utilitarian forms, is distinguished by a medium to coarse paste texture with calcite, quartz, quartzite, and small grains of mica and may be a predecessor to Uaxactún Unslipped Ware.

Belize Valley Dull Ware

Belize Valley Dull Ware includes the following three ceramic groups: Uck, Cocoyol, and Chi. Although Belize Valley Dull Ware only forms 33.19% of the collection, this ware is by far the more distinctive and recognized ware associated with Cunil pottery. The Uck Group pottery includes the various incised types that range from grooved geometric shapes to more pan-Mesoamerican or “Olmec style” motifs (Awe 1992). Uck Red: Uck Variety has a uniform dull red slip on a soft ash-tempered paste that is most often associated with flat bottom plates unslipped on the exterior and bowls that are slipped on the interior and exterior. While there are well preserved examples of Uck Red sherds it is common to find eroded examples with little to no slip remaining – a phenomenon most likely due to the ash temper and low firing temperature. 20.55% of the Uck Red: Uck Variety sherds from Column 8/2007 appear to be burned with slip that is red to black or black in color. In some cases, the paste macroscopically resembles pottery from the later Joventud Ceramic Group; however, the later examples tend not to have a dark core. This possible continuity in paste recipe can sometimes make it difficult to distinguish eroded Uck Red from later red slipped types and may lead to the over reporting of Cunil types. In cases where slip is preserved, the waxy red slips used during Kanluk/Jenny Creek times are quite distinctive from the dull slips associated with Cunil pottery. We do want to note that while the presence of volcanic ash has often been considered a hallmark of Cunil pottery with calcite tempering dominating many later Preclassic and Early Classic assemblages (Ford and Spera 2007), it is important to note that ash temper is also seen in Jenney Creek pottery (Gifford 1976; Sullivan 2006; Brown 2007). For example, in Garber and Awe’s Plaza B excavations a Sampoperro Red: Sampoperro Variety vessel (Cache 7) that contained a poorly preserved human skull and six small jade beads was recovered (Garber et. al. 2005). This vessel has a waxy red streaky slip with a buff colored paste almost “Cunil” in style, and oxidized throughout. Angular volcanic glass fragments were noted in the petrographic analysis (Sullivan 2006). Had the waxy red slip not been preserved this bowl could have easily been included with eroded Cunil Uck Reds. A similar vessel, identified as Joventud Red, with ash temper was recovered from the site of Blackman Eddy (Brown 2007).

Another interesting observation from the Plaza excavations is the high percentage of volcanic ash in vessels spanning Cunil (Cocoyol Cream) to Jenney Creek times (Savana Orange: Variety Unspecified, Reforma Incised: Variety Unspecified, and Consejo Red: Variety Unspecified) (Sullivan 2006). Gifford actually noted (1976: 75, 77) an unspecified variety of Savana Orange from Barton Ramie designated as “Ash-paste Variety”. His description is based on a sample of 61 sherds but he provides no firm chronological designation. While the Mars Orange group is generally thought to represent a new tradition associated with early facet Jenney Creek these data support the idea that it may have Cunil era precursors (Awe 1992; Garber et. al. 2004; Cheetham 2005; Cheetham and Awe 2002; Sullivan 2006).

There are also two unspecified varieties of Uck Red – one with a well polished almost glossy red slip and another is more orange in slip color. In the lowest levels of Column 8/2007 (Level 13), Uck Red: Variety Unspecified (Orange) tends to occur on bowls and is not observed on plates until the upper levels (Level 12).

We have also noted two Unnamed Red-on-buff types. Red-on-buff: Variety Unspecified (A) includes only one sherd with a cream slip and red rim encircling the vessel exterior. While the paste has similarities to Uck Red the slip appears glossier or more polished. The example here bears a resemblance to Tower Hill Red-on-Cream (a Swasey type) (Kosakowsky 1987) and compares with sherds from the original column (Awe 1992). Unnamed Red-on-buff: Variety Unspecified (B) is characterized by dull vertical red lines in a
geometric design on a buff slipped vessel with what looks like a black resist design.

Baki Red Incised: Baki Variety is basically the incised version of Uck Red: Uck Variety that is characterized by dull red slipped sherds with postslip grooved-incised lines that are typically seen on flat bottomed dishes with outsloping walls and wide everted rims (Awe 1992). Zotz Zoned Incised: Zotz Variety is similar to Baki Red with the addition of zones of brown-and-red or brown-and-cream slip. While there are several great examples of this from Awe’s (1992) earlier excavations the zoned type represents only a small portion of our sample. Modally this type is similar to Pico de Oro Incised (Adams 1971; Sabloff 1975) and to Chanmico Incised from Chalchuapa (Sharer 1978; Awe 1992). Another incised type that is typically associated with Cunil phase pottery is Kitam Incised: Kitam Variety. The identifying attributes of this type include thin, fine, post slip incised lines on incurving bowls with a multicolored or mottled slip. As noted by Cheetham and Awe (2002: 13) “the designs vary from simple rim encircling incisions to geometric shapes and complex Olmec-style motifs (e.g. flame-eyebrows)” (Figure 2.).

![Figure 2](image_url)  “Olmec”-style motifs (Healy et. al. 2004)

We have also identified a plain/not incised version of this type that we are referring to as Mo Mottled: Mo Variety. There has been much discussion of these incised types and the role they may have played in the rise of social complexity (Awe 1992; Cheetham 1998; Garber et al. 2004; Brown 2007; Garber and Awe 2008). The motifs observed on many of these serving vessels – gum brackets, flame eyebrows, kan cross, lightening, and a stylized avian serpent motif – do suggest that early occupants of Cahal Pech were tied into a “Pan Mesoamerican ideological interaction sphere” (Garber and Awe 2008) or set of shared symbols found in several regions of Mesoamerica including Chiapas, the Gulf Coast, El Salvador, Valley of Mexico, and Oaxaca (Awe 1992; Cheetham 1998, 2005; Garber et al. 2004; Brown 2007). As Garber and Awe (2008) have suggested, the symbols associated with Cunil pottery are also in a style that is uniquely lowland Maya in their expression and execution. This idea “is a departure from the traditional view that the Lowland Maya were “latecomers” as far as participation in and or contributions to this system” (Garber and Awe 2008). Interestingly, these types of symbols are not associated with early facet Jenney Creek pottery (Awe 1992; Cheetham and Clark 2002; Brown 2007; Stark 2007) and were likely reduced to simple geometric designs. For example, the Middle Formative double line break may be a derivative of the gum bracket (Stark 2007). Barbara Stark (2007) suggests that by the Middle Preclassic these symbols were so widespread that there was a decline in their exclusivity and a change in the “materialization” of ideology.

The second ceramic group associated with Belize Valley Dull ware is the Cocoyol Group which is dominated by Cocoyol Cream: Cocoyol Variety. As noted by Cheetham and Awe (2002:16) this type is recognized by “a creamy white, pale brown, to light gray slip” and is found on bowls and shallow dishes. The sherds tend to be eroded due to low firing temperatures and the high percentage of volcanic ash in the paste (Cheetham and Awe 2002; Sullivan 2006). However, they are fairly easy to recognize by their smooth creamy paste. Petrographic analysis from Cocoyol Cream sherds in the Plaza B excavation associated with a deposit (Cache 10) immediately overlying bedrock show a high percentage of volcanic ash in the paste (Sullivan 2006). We noted a few sherds (Cocoyol Cream: Variety Unspecified Resist) with a light gray to brown partial slip – resist design - over the Cocoyol Cream slip. Also associated with the Cocoyol Group are several unspecified varieties, one of which includes jar sherds similar to the White-clouded blackware pottery identified in the original B4 column (Awe 1992).
The third Belize Valley Dull Ware Group is the Chi Ceramic Group comprised of Chi Black: Chi Variety and Unnamed Black Punctated-incised. These sherds have a dull streaky black slip that erodes easily. As is typical for this part of the Belize Valley (Awe 1992) the black slipped pottery comprises a very small portion of the total collection and is represented by only three sherds. The punctuated sherd is similar in form to “mushroom stands” with fingernail tops (or cob impressions) as noted by Cheetham (2005) in Eb deposits at Tikal and seen in later assemblages at Altar de Sacrificios (Adams 1971).

Belize Valley Coarse Ware

Belize Valley Coarse Ware which forms 66.81% of this assemblage has one ceramic group – the Sikiya Group. The paste of the Sikiya Group pottery tends to be poorly sorted and much coarser and grittier than seen in Belize Valley Dull Ware. Sikiya Unslipped: Sikiya Variety sherds are distinguished by their unslipped surface and sometimes burnished surface with highly variable color that ranges from tan to brown to black due to extensive fire clouding. This type is dominated by jar forms although tecomates and bowls with slightly incurving sides are noted. As stated earlier this ware is typically associated with utilitarian vessels and this is clearly seen with Sikiya Unslipped: Sikiya Variety sherds. We do see tremendous variation in these sherds with color, paste recipes (e.g. jar forms seem to have a grittier coarser texture that other forms), and firing temperature. We have no Sikiya Group colander fragments in this sample although they were reported by Cheetham and Awe (2002) and Garber et. al. (2004) at Blackman Eddy. They are also present in non-Cunil levels in the Str. B4 sequence at Cahal Pech.

The second type associated with the Sikiya Group is Ardagh Orange-brown: Ardagh Variety. This type includes unslipped jars of dark orange, brown, and gray paste with smudging and sometime a dull orange wash. While the slip color is variable it appears far more consistent than with Sikiya Variety sherds. Petrographic analysis of Ardagh Orange-brown sherds from the Plaza B excavations (Cache 10) show shell and fossiliferous limestone but do not indicate the presence of volcanic ash (Sullivan 2006). In the Sikiya Group there are some examples of straight filleting which becomes a much more common decorative technique, along with undulating filleting, during early facet Kanluk/Jenney Creek times. This increase is clearly seen in the Column 8/2007 sample with no examples of filleting in the lowest level (Level 13), one example in Levels 12, and 15 examples seen on Jocote Orange-brown jars from Level 9. We would like to want to call attention to the forms associated with Sikiya Group pottery. Past reporting of Sikiya ceramic forms has varied from descriptions of “typical medium-size jars have rounded bottoms, short vertical necks, and wide vertical strap-handles” (Clark and Cheetham 2002:321) to extremely rare occurrences of “jars with low vertical necks, colanders, and wide strap-handles” (Cheetham 1998:27). In this sample (Column 8/20007) there is clearly a predominance of jar forms (80.70%), followed by bowls (14.91%) and tecomates (4.39%). The most common jar forms include those with out-flaring jar rims (Figure 3) in lower levels to more upright restricted jar rims as seen in Jenney Creek forms. Awe (1992) has suggested that the Sikiya Group was a precursor to the Jocote Group. These data support this with what seems to be an almost seamless transition from Sikiya pottery in the upper levels to later unslipped types making the transition from Cunil to early facet Jenney Creek difficult to pinpoint as is noted with many utilitarian types from later time periods (Smith 1955).

Figure 3. Sikiya Unslipped jar rim (Brown 2007)
This new sample confirms Cunil pottery as a predecessor clearly distinct from early facet Jenney Creek. As a whole, Cunil pottery can be described as technologically developed with relatively simple modal and stylistic attributes (Awe 1992). Overall trends that distinguish Cunil from early fact Jenney Creek include: 1) prevalence of dull slips that are not waxy 2) absence of Mars Orange /Savana Orange types 3) absence of spouted jar forms 4) few examples of filleting 5) rare occurrence of figurines in Cunil contexts 6) rare occurrence of black slipped pottery (a trend that continues in the middle Belize Valley through time), 7) the presence of incised types and decoration that are not seen in Jenney Creek or in Swasey/Bladen and Bolay assemblages 8) local varieties that do show ties to Swasey/Bladen and Bolay from Northern Belize especially in the red and cream types (Valdez, Jr. et. al. 2008) 9) less standardization in ceramic types between Belize Valley, Northern Belize, and Peten than during subsequent Mamom times.

Conclusion

Recently there has been much debate concerning the origins of early Middle Formative settlements in the Maya lowlands. Much of the discussions have also focused on the relationship between ceramics types across the Maya area and the possibility of different ethnic groups inhabiting the Petén (Xe/Eb/Real Xe), northern Belize (Swasey/Bladen/Bolay), and Belize River Valley (Cunil) areas at this early time. Andrews (1990) has suggested that Xe (900 to 600 B.C.) pottery and the associated populations of the Petén may be more closely aligned with the ‘non-Maya’ ceramic traditions of Chiapas or the northern highlands of Guatemala. He has argued for the ethnic and linguistic unity of these groups, their ethnic affiliation with the Mixe-Zoque, and their separation from the Maya Lowlands (Andrews 1990). The ceramic traditions of northern Belize (Bolay complex at Colha and Swasey/Bladen at Cuello and from Kaxob) may represent a contemporaneous, but different and independent ceramic sphere (from Xe) (Andrews 1990; McAnany and Lopez Varela 1999). Ball and Tashek (2003) have also proposed that Cunil pottery may represent a special-purpose subcomplex of a very general Middle Preclassic horizon. They also assert that ceramic types and wares associated with “the long-lived Maya ceramic tradition occur only as traces or minority elements in the Belize Valley complexes of the Middle Preclassic” (Ball and Tashek 2003: 189) and suggest that there were two different ceramic production systems in the Belize Valley – one that is Maya and one that is “non-Maya”.

Clark and Cheetham (2002) suggest the prolonged presence of tribes in the Lowlands from early Archaic (ca. 3000 BC) that persist until 900 – 700 BC and the subsequent spread of social ranking. They propose four different zones or “tribal territories” across northern Guatemala and Belize – Xe, Eb, Cunil, and Swasey – with Cunil being the earliest of the four. Each of these groups has its own “independent history” of parallel and complimentary development with similarities noted in slipped serving vessels and differences noted in the forms and size of utilitarian pottery (Clark and Cheetham 2002). These groups eventually become a part of the Mamom sphere/horizon. Their analyses do not support a late colonization or migration of the Maya Lowlands by peoples of the Guatemalan highlands or Chiapas/Tabasco area. After Awe’s (1992) original analysis of the Cunil pottery and associated materials he suggested that the original settlers of the Belize Valley were “full participants in a lowland Maya cultural tradition” (Awe 1992: 349) with possible ties to the Olmec and highland areas being a result of “trade and ideological diffusion” rather than representative of foreign immigrants. The recent discovery of substantial new Preceramic data for the Belize Valley (Awe and Lohse 2008; Lohse et al. 2006), plus the new data produced by continued investigations at Cahal Pech supports Awe’s previous contention and suggest that late Preceramic occupation in the Belize Valley is replaced by the ceramic producing Cunil people by around 1000 B.C.

Eventually, increasing populations and interregional interaction gradually connected the diverse and independent Preclassic settlements in the Maya lowlands and this lead to a more uniform ceramic tradition by Mamom times.
(600 – 400 B.C.) (Valdez 1987; Andrews 1990). Architectural data and other forms of material culture also support the idea of increasing complexity (Awe 1992; Garber and Awe 2007) and the development of a pan-regional Maya identity and ideology by the latter part of the Middle Preclassic.

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AN INVESTIGATION OF MIDDLE PRECLASSIC STRUCTURES AT PACBITUN

Terry G. Powis, Paul F. Healy, and Bobbi Hohmann

Limited plaza zone excavations at the medium-sized Maya site of Pacbitun have revealed well-preserved traces of Middle Preclassic (900-300 BC) structural foundations, midden deposits, extensive artifactual and faunal remains, and a human burial with offerings. Remnants of at least fourteen early house platforms were unearthed in tests conducted between 1995 and 1997, probably representing a series of Preclassic households, and perhaps the remains of an early Maya hamlet. One of the most interesting findings was the presence of more than 3,000 pieces of marine shell ornaments, shell detritus, and lithic tools associated with these platforms. Given the accessibility of the Preclassic deposits and very good preservation of the platforms, it was decided that further study was warranted. Investigations in the summer of 2008 were focused on partially exposing one of these platforms, and its associated activity areas, through large-scale horizontal excavation. Archaeological analysis of early houses, particularly non-elite residential compounds, will produce important, and badly needed, data on Preclassic Maya household organization, social structure, religion, subsistence, and craft specialization. Our current fieldwork is designed to address the issue of whether or not this was the location of a shell ornament production workshop during the Middle Preclassic period.

Introduction

Archaeological excavations conducted in 2008 by the Pacbitun Preclassic Project (PPP) focused on the Middle Preclassic architecture and associated activity areas located in Plaza B of Pacbitun’s site core. Specifically, the fieldwork was centered on partially exposing one Middle Preclassic house platform (Sub-Structure B-2), which was previously identified during excavations conducted at the site during the mid-1990s (Healy et al. 2004; Healy et al. 2007; Hohmann and Powis 1996, 1999; Hohmann et al. 1999).

Data from these excavations will be used to address two research questions. The first question is directed towards understanding Middle Preclassic domestic households in terms of their organization, social structure, religion, subsistence, craft production, and political and economic organization. By looking at household size, architectural design, burial patterning, activity areas, refuse middens, and the content of the artifact assemblages associated with the individual household, we can make inferences regarding many aspects of Maya society. Individually, each of these criteria is not particularly useful for identifying household variation, but when combined into a single investigative framework they provide a powerful means for indicating variability between households. The data generated from Pacbitun can be compared to other sites in the Belize Valley in order to reconstruct early Maya community organization in this important region. This research will provide badly needed comparative data from a region not well represented for this temporal horizon and will shed new light on what is presently one of the least known, and yet most important chronological horizons in Maya prehistory.

The second question is directed towards further clarification of the nature and extent of Maya shell production in Middle Preclassic times at Pacbitun. Excavations in the mid-1990s revealed the presence of shell working materials in all units, including a very small area (50 cm x 50 cm) of the floor of Sub-Structure B-2. A total of 3,200 worked shell artifacts, 1,500 pieces of shell detritus, 125 burin spalls, and 92 chert drills were recovered from the excavations. The partial exposure of this Middle Preclassic house platform (with a floor area measuring 45.87 square meters) has substantially increased our knowledge of early Maya craft production at the household level. Specifically, our excavations provided information that can be used to reconstruct the scale and context of shell ornament production at Pacbitun.

Location

The ancient Maya site of Pacbitun is located approximately 10 km south of the Belize River and 3-4 km north of the Maya Pine Ridge in west central Belize. The central precinct is
situated atop a limestone acropolis which provides a commanding view of the hilly, rolling terrain surrounding the site. The location of Pacbitun likely was chosen by the early Maya to take advantage of local, contrasting micro-environments and resources: limestone lowlands, with broadleaf rainforest around the site and to the north; sandy soils, pine-covered, granitic uplands to the south; and multiple water sources (springs, creeks, ponds) nearby (Healy 1990; Graham 1987).

While the site and its agricultural sustaining area likely covered a territory of at least 9 km², the epicenter covers only about 0.5 km². This “downtown” zone is marked by over 40 masonry constructions, including temple-pyramids, palace-like range structures, a ball court, five plazas, two lengthy causeways, and a number of smaller courtyard groups (Bill 1987; Healy 1992) (Figure 1). The remains of 20 stelae and altars have also been recovered in the epicenter.

Previous Investigations

Excavations in Plaza B have shown that Pacbitun was first settled in the Middle Preclassic period, ca. 900 BC. The local ceramic complex for this time, known as the Mai phase, can be divided into early and late facets of the Middle Preclassic at ca. 650 BC. The Pacbitun region was marked by a tropical forest as the initial settlers set about clearing land for swidden agriculture and the establishment of a small, farming village (Wiesen and Lentz 1999). The vast majority of standing, masonry architecture visible today dates to the Late Preclassic, Early Classic, and especially Late Classic periods. Site abandonment occurred about AD 900 (Healy 1990; Healy et al. 2007), and to date there is no sign of any significant Postclassic settlement.

While evidence is accumulating to reveal that the Belize Valley was settled by the Maya during the terminal part of the Early Preclassic (ca. 1200-900 BC), locally termed the Cunil and Kanocha phases at Cahal Pech and Blackman Eddy respectively, Pacbitun does not seem to have been permanently occupied until the subsequent Middle Preclassic (Awe 1992; Garber et al. 2004; Healy et al. 2004). However, it is quite reasonable to suggest that these first Pacbitun inhabitants came from the Valley, located only a short distance away, and that settlement at the site on the southern rim of the Belize Valley, may have been directly related to population growth and an ongoing Preclassic process of settlement fissioning. Under such a scenario, Maya colonists, following settlement of the most productive river bottom lands by the tenth century BC, had then begun to in-fill available, adjacent lands.

Ceramics

The excavations in Plaza B have yielded more than 10,000 sherds from Mai phase deposits. Of this assemblage, approximately 300 sherds, or 3 percent of the total ceramic assemblage, have been identified as Cunil. Despite the presence of Cunil sherds in Plaza B, all of them are derived from mixed deposits. No stratigraphically sealed Cunil deposits have been found to date, but there may be a small, still unrecognized Cunil phase settlement at or near Pacbitun. It is hoped that current research will shed some light on the earliest pottery and habitation at Pacbitun and that the results will add to the growing evidence for initial colonization of the Belize Valley.

Mai phase pottery at Pacbitun is found in numerous sealed deposits associated with both early and late Middle Preclassic structures. The pottery assemblage recovered from early Mai deposits is relatively homogeneous and dominated by only two groups: Jocote (64%) and Savana (29%) (Arendt et al. 1999). These two ceramic groups account for more than 90 percent of the total early Middle Preclassic assemblage. All varieties identified by Gifford (1976) at Barton Ramie were present in these two groups of pottery. The remaining portion of the early Mai assemblage is mostly made up of Joventud (1.7%) and Chunhinta (0.4%).

The late facet of the Mai complex, which is related to the Mamom sphere, shares a greater number of types with other lowland regions than the previous early Mai sub-assemblage. There is slightly more ceramic heterogeneity during this period than early Mai times, but Jocote (58%) and Savana (27%) Group pottery continues to dominate the assemblage (Arendt et al. 1999). The diversity in the late Mai assemblage comes from the
Figure 1. Plan View of the Pacbitun Site Core.

Figure 2. Original plan view of Middle Preclassic structural remains in Plaza B. Units 1 and 2 from the 2008 field season were positioned inside southwest corner of Sub-Structure B-2. Note the early Mai phase structures highlighted in black.
increased frequency in red slipped pottery belonging to the Joventud Group. While red and black slipped pottery represents approximately 2 percent of the early Mai assemblage, they increase to 4 percent during the late Mai period.

**Settlement and Architecture**

Excavations at Pacbitun in 1995, 1996, and 1997 focused on Plaza B, the largest open area of the epicenter. These excavations revealed substantial architectural and artifactual remains dating to both the early and late facets of the Middle Preclassic period (Arendt et al. 1996; Hohmann and Powis 1996, 1999). Our investigations on the north side of the plaza, just south of Structure 8, exposed an area of more than 54 square meters containing the architectural remains of at least nine buried platforms, all dating to the Middle Preclassic period. All of these platforms were covered by a late Middle Preclassic midden deposit approximately 50 cm thick.

The earliest architectural remains identified are the retaining walls of two partially exposed platforms (Sub-Strs. B-1 and B-4) (Figure 2). Both of these were constructed of two courses of roughly cut limestone blocks which ran parallel to one another in a northeast-to-southwest direction, and sat only 10-15 cm above bedrock. It appears that both structures were built directly on a paleosol or ground surface with little or no modification beforehand. The presence of postholes, marked by circular rings of darker soil, suggests that these stone-edged platforms once supported perishable superstructures. There are also traces of stone alignments hinting at associated structure porches or patios. The exact dimensions of these rectilinear, early Mai phase (900-650 BC) structures have not been determined, but they were at least 6.5 to 6.0 m on a side with hard-packed marl floors. Ceramics recovered from test pits into the structures, consisting of ash-tempered Savana Orange, Jocote Orange-brown, and Chacchinic Red-on-orange-brown types, along with a few Cunil sherds. A single radiocarbon date (Beta-93778), at CAL BC 800-770 (1 sigma), was obtained from a stratigraphic lense (Level 5) directly above both structures, confirming the temporal assignment of Sub-Strs. B-1 and B-4 to the early Middle Preclassic (Healy 1999:Table 1). We have yet to run charcoal samples from inside these platforms, but we anticipate an even earlier date. Around 500 BC both Sub-Strs. B-1 and B-4 were abandoned and partly covered.

By the late Mai phase (650-300 BC), more substantial architecture (e.g., Sub-Strs. B-2, B-3, B-5, and B-14) was built directly over the initial early Mai phase structures. These rectilinear structures, consisting of at least three courses of cut limestone block (25 cm high), were oriented north-south (see Figure 2). Four corners were identified on Sub-Structure B-2. Calculations indicate this structure measured 37.6 square meters (8.25 m x 5.25 m). Ceramics recovered from test pits into these late Mai structures revealed primarily late varieties of Savana Orange and Jocote Orange-brown pottery types. Their stratigraphic position (above Sub-Strs. B-1 and B-4) also suggests a late Middle Preclassic date for these more substantial platforms. Finally, a radiocarbon date (Beta-93776), at CAL BC 525-395, was obtained on charcoal from a stratum (Level 4) of Sub-Str. B-3, again reinforcing the late Middle Preclassic temporal assignment.

**Shell Ornament Production**

Excavation of the Middle Preclassic deposits of Plaza B produced over 3,200 modified shell artifacts, including items that would have been attached to clothing or worn as jewelry items. The majority of these artifacts were made from marine species such as Strombus, Marginella, Oliva, Spondylus, and Dentalium, but locally abundant freshwater snails (jute) and mussels (Nephronaias) were also utilized. Disk and irregular beads dominate the worked shell assemblage. Disk beads measure between 5-10mm in diameter and are perforated with ground edges. Irregular beads are perforated, but have irregular outlines and edges that show little to no modification (Hohmann 2002). A variety of tinklers, adornos, and pendants were also identified.

In addition to the modified shell artifacts, approximately 1,500 pieces of marine shell detritus or production byproducts were also
recovered, providing evidence that the early Pacbitun Maya were producing shell ornaments on site by the early Middle Preclassic (Hohmann 2002). The concentration of production activities appears to have been restricted to Plaza B, since testing elsewhere in the central precinct and periphery has so far revealed no accumulations of shell artifacts, shell working tools or debris. The presence of shell working materials in Sub-Structure B-2 and the association of shell working debris with domestic refuse around this structure suggest that production activities were being undertaken at the household level.

That this was the home of a shell working specialist is further supported by standard deviation and coefficient of variation calculations showing increasing disk bead uniformity or standardization between the early and late Middle Preclassic periods (Hohmann 2002). The sample means of the early and late Middle Preclassic disk bead samples are similar at 7.958 and 8.123 respectively, but the standard deviations differ considerably at 3.225 for the early Middle Preclassic and 1.660 for the late Middle Preclassic. The coefficient of variation calculations used to evaluate the differences in variation between the two samples resulted in values of 40.5 percent for the early Middle Preclassic and 20.4 percent for the late Middle Preclassic, indicating that the late Middle Preclassic sample was more uniform than the earlier period.

Although shell ornaments have been found at other Middle Preclassic sites in the Belize Valley, few have produced evidence of finished and unfinished shell artifacts, production debris, and chert tools, all from primary contexts. The Cas Pek Group at Cahal Pech (Lee 1996; Lee and Awe 1995) provides one of the few examples of shell ornament production evidence outside Pacbitun, but the majority of the materials come from construction fill in Late Preclassic contexts. Finished examples of these tiny shell beads are also known from Middle Preclassic contexts at Colha (Buttles 1992; Dreiss 1982), Cuello (McSwain et al. 1991), K’axob (Isaza 1997; Isaza and McAnany 1999) and elsewhere in the lowlands. Clearly, shell beads were an important, widespread component of Middle Preclassic Maya personal adornment, and whole marine shells were being imported to Pacbitun, roughly 100 km from the Caribbean coast, for re-working.

**Lithic Production**

All of the lithic material associated with the shell production has been identified as locally available chert. Willey et al. (1965) and Ford and Olson (1989) mention outcrops of chert from the Belize Valley, and this is certainly a source possibility. What is particularly interesting is that of the more than 300 formal tools (whole and fragmentary) from Middle Preclassic deposits at Pacbitun, 217 of them consisted of burin spalls (n=125) and micro-drills (n=92). As mentioned above, most of the small chert drills (presumably once hafted into wood or bone handles) were found associated with marine shell artifacts and debitage, and clearly important tools for shell bead manufacture (Hohmann 2002).

**Current Investigations**

During the course of our three week field season in the summer of 2008, two units (Unit 1 and Unit 2), were excavated in Plaza B. The units were placed just to the south of the base of Structure 8 (Figure 3). We relocated the units excavated in the mid-1990s, then placed the new units adjacent to them to continue exposing Sub-Structure B-2, whose corners had previously been identified. Specifically, our main goal was to expose the southwestern corner of this structure, which had not been excavated during our original investigations. Units 1 and 2 were placed adjacent to one another on the northeast side of the original unit. Unit 1 measured 1.75 meters north-south by 1.50 meters east-west, and Unit 2 measured 1.50 meters north-south by 1.50 meters east-west (Figure 4). We followed the stratigraphy that was outlined in earlier reports, and based on the ceramic material recovered we were able to confirm the temporal assignation of each cultural layer that was previously noted, particularly those related to the early and late Middle Preclassic periods. Of particular importance was the rediscovery of the 50 cm thick late Middle Preclassic midden deposit which covered Sub-Structure B-2. By knowing
the stratigraphy beforehand, we were able to excavate carefully to the top of Sub-Structure B-2 without destroying the integrity of the tamped marl floor surface of the structure.

Directly below this dark, thick midden deposit we exposed the southwestern corner of Sub-Structure B-2. As with our previous excavations into this structure, the tamped marl floor surface was found intact. Through our current investigations we were able to expose about 2.5 square meters of additional floor area in Sub-Structure B-2. By digging in 5 cm intervals into the floor, we could control for the recovery of artifacts embedded in the surface of the floor, and therefore relate them directly to the manufacture of shell ornaments. Any artifacts found below this initial 5 cm depth were considered to be secondary fill and not primary floor deposits. By excavating in this manner we hoped to find primary evidence of shell working activities, which would be identified by the presence of shell beads, chert drills, and shell detritus, all lying in direct association with one another. Previously, we were unable to state conclusively that each of these materials were associated with one another on the floor surface of this structure. Based on our current work in the southwest corner of Sub-Structure B-2, we can now confirm that shell beads, chert drills, and shell detritus did in fact co-occur on the same floor surface and are contemporaneous in date.

The 2008 excavations in Plaza B produced an additional 239 shell beads, 30 chert micro-drills, and 38 pieces of shell detritus (Figure 5). Of this, we recovered 67 shell beads, 9 chert micro-drills, and 15 pieces of shell detritus in the floor of Sub-Structure B-2. The remaining artifacts were found either in lower levels associated with earlier structures or in the thick midden deposit which overlies Sub-Structure B-2. The overwhelming majority of the shell beads were manufactured from conch (Strombidae Family) shell, with only two being made from freshwater species. One bead was made from *jute*, a freshwater gastropod found nearby in Barton Creek, and the other was made from Nephronaias, a freshwater univalve also found locally in Barton Creek. Of the 67 shell beads, 57 of them were identified as being disk-shaped and the remaining 10 were irregular. All of the shell detritus was marine in origin, and
has been identified as conch. The chert drill assemblage was small, but we did find both complete (n=2) and broken pieces of drills (n=7) on the floor of the structure.

Figure 5. Representative sample of chert micro-drills (top), modified shell artifacts (middle), and shell detritus (bottom) from Units 1 and 2.

Conclusions

The 2008 excavations at Pacbitun built upon and advanced the research begun over a decade ago. The current investigations have allowed us to examine the lifeways of some of the earliest known Lowland Maya through the careful unearthing of buried architectural platforms and associated artifactual materials. Although these results are preliminary in nature, they have given us the opportunity to begin making inferences regarding the nature of Preclassic occupation of the site and, by extension, the Belize Valley in which Pacbitun is located. These excavations have provided new insights to topics such as craft production and patterns of exchange. Although we have made considerable headway towards elucidating Preclassic period occupation at Pacbitun, our knowledge of the social, political, and economic organization at this early stage of cultural development remains underdeveloped.

The partial excavation of domestic architecture and associated artifactual assemblages from Plaza B indicates that the system may have undergone significant organizational changes throughout the Preclassic period. Artifactual and architectural evidence from the early Middle Preclassic suggests a predominantly egalitarian society. The increased frequency of long-distance exchange goods and the presence of substantial quantities of shell ornaments and shell production debris during the late Middle Preclassic indicate that the system changed, perhaps to more a hierarchical or ranked society. The continued presence of shell ornament production activities during the Middle Preclassic provides support of this notion. Through additional laboratory and distribution analyses we expect to clarify some of these issues and provide a more complete picture of the organization and evolution at Pacbitun during the Preclassic. One issue which remains to be addressed is whether Sub-Structure B-2 is a domestic structure in which a defined interior space was set aside for shell production, or if the entire structure was used exclusively for the production of these ornaments. Clearly, additional investigations of Plaza B are needed to test this hypothesis.

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Investigations at Cahal Pech, in the upper Belize River Valley region, uncovered 10 monuments: nine stelae and one altar. Of the nine stelae recorded at the site, only one was carved. It is argued that the "wrap around" style of carving, the iconography, size, and general design all indicate that this monument dates to the Late Formative period. It is further hypothesized that carved Preclassic stelae in the Maya lowlands may have developed from an earlier, local, stucco mask tradition executed on monumental architecture. The ritual deposition of the stela in an a relatively elaborate Classic period tomb also indicates that the monument may have been kept as an heirloom, and that the human figure depicted on the stela probably represents an important member of the ruling, Late Preclassic, Cahal Pech lineage.

Introduction

During the last twenty years, the Belize Valley Archaeological Reconnaissance Project (Awe 1992, Awe et al. 2008), the Belize Valley Preclassic Maya Project (Healy and Awe 1995, 1996; Healy et al. 2004), and the Belize Valley Archaeological Project (Garber et al 2004a, b; Garber and Awe 2008; Brown 2003) all focused considerable research attention on Formative period settlements in the upper Belize River Valley (Figures 1). Investigations at Cahal Pech, particularly in the central precinct (Figure 2), established that this site was continuously occupied from the terminal Early Formative (1200 - 900 B.C.) to the Late and Terminal Classic Periods (600-900 A.D.) (Awe 1992; Healy and Awe 1995b, Awe et al. in press). By the start of the Middle Preclassic (900 B.C.) the precocious Cahal Pech community had begun acquiring exotic materials such as jade, obsidian and marine shell and fish, was depicting pan-Mesoamerican ideological symbols on ceramics, and was erecting large non-domestic architecture (Awe 1992, 1994; Awe and Cheetham 1994; Awe and Healy 1994; Healy and Awe 1995; Powis et al. 1999). By the Late Preclassic (300 B.C. - 300 A.D.) the central precinct of Cahal Pech contained several large pyramidal structures and the site had developed into one of the major centers in the upper Belize Valley (Awe 1992; Awe and Healy 1995).

Within a 2 km radius of the Cahal Pech site core (Figure 3), evidence of comparable Formative period (900 B.C. - A.D. 250) development was also recorded at several peripheral settlement clusters (Powis 1996; Aimers et al. 2000). One of these settlements, the Zopilote Group (Figure 4), is located at the terminus of a 350m sace that was initially constructed during the Late Preclassic. The causeway connects the core area of Cahal Pech with the Zopilote Group and ends at a large structure designated as Str. A-1. The terminal construction phase of Str. A-1 is 12 m high and overlies a series of superimposed non-domestic architecture that span the Middle Formative through Late Classic periods (Cheetham et al. 1993, 1994; Awe 1992).

Excavations within Str. A-1 of the Zopilote Group uncovered two vaulted tombs. The first, Tomb 1, was discovered at the summit of the structure and contained the flexed remains of a single individual, a variety of grave goods and the cranium of a young adult. The ceramic artifacts included both monochrome and polychrome vessels that date to the first half of the Late Classic period (A.D. 600-750). The second tomb (Tomb 2) was located beneath the staircase of the penultimate construction phase (Figure 5). Unlike Tomb 1, the entire chamber of Tomb 2 had been filled with loose dirt. Below the capstones were the disarticulated remains of at least two infants (possibly three), and one fetus or stillborn infant. Beneath the infant remains Stela 9 had been placed in an upright position. Encircling the length of the monument were more than 200 small unslipped bowls with 225 phalanges located within or next to the vessels. At the base of the monument there were 45 mandibular incisors and other fragments of human remains.
Cahal Pech Stela 9 – Preclassic Monument from the Belize Valley

Figure 1. Map of the Belize Valley

The Ancient Maya Ruins of
CAHAL PECH
Cayo District, Belize
(Final Phase ca. AD 600)

Figure 2. Map of Cahal Pech Site Core
Figure 3. Map of Cahal Pech site core and settlements

Figure 4. Map of Zopilote Group
Stela 9 – Description and Iconographic Commentary

Prior to the discovery of Stela 9, a total of nine uncarved monuments had been documented at Cahal Pech. These included six stelae and one altar in the site core (Awe et al. 1990), one stela in front of Str. 2 of the Zinic Group (Conlon and Awe 1991), and an eighth stela from the Zopilote Group that was discovered alongside the Str. A-1 staircase (Cheetham et al 1994). With the exception of Stela 9, all the previously documented monuments are plain and presumably date to the Classic Period.

Stela 9 (Figure 6) was defaced and broken into two large pieces. Despite its condition, the monument was positioned as vertically as possible within Tomb 2 in an apparent effort to facilitate the placement of the ritual deposits (finger bowls) which surrounded its entire length. Unfortunately, the lowermost, but uncarved portion (butt) of the monument was not discovered. A hemispherical "bowl-like" depression was carved into the top of the stela, perhaps functioning as a receptacle for burnt offerings (incense?). It cannot be determined whether this depression was carved together with the rest of the stela, or whether it represents a later modification.

Stela 9 depicts the head of either a jaguar or a serpent with a widely opened maw. The central standing figure is placed within the open mouth. The figure is shown only from head to waist and the face is in frontal view but only partially preserved. Two scrolls are depicted under the face. Due to heavy breakage in this area, it is not clear how these scrolls are related to the face. The figure exhibits flexed arms. The hands are held in front and rest with their back on what may be the lower lip of the open maw. The hands are in a position characteristic for "scattering" iconography, but no fingers are indicated.

Above the forehead of the central anthropomorphic figure rests the upper part of a zoomorphic head. The prominent nose, with clearly indicated nostrils, suggests that the zoomorphic head more likely represents a jaguar rather than a serpent. Scrolls emanate from behind the eyes of the head and these may represent the ears of the jaguar instead of smoke (c.f. Cheetham 1994:13). A second, lower set of scrolls seems to be connected to the mouth and could represent saliva or blood.

The lower part of the monument is marked by a thick horizontal line. As previously indicated, this line is the lower end of the open maw and thus is most logically interpreted as the lower lip. A large bifurcated tongue emanates from the maw. No further carving is found on the basal area. Even though the butt is broken off, it is very unlikely that the sculpture extended beyond the tongue.

Style, iconography, size and execution all argue for Late Formative workmanship of Cahal Pech Stela 9. The compositional field of the monument is of the "wrap-around" type, intended to display narrative imagery and evoke the dimensional powers of sculpture in the round (Clancy 1990:22). "Wrap-around" monuments are extremely rare in the Southern Lowlands and previously have never been recorded in the Petén or in Belize. They are, however, very common at Preclassic sites, especially in the Guatemalan highlands and the adjacent Southern Pacific Coast.

The absence of hieroglyphs on the carved monument suggests that it may have been carved at a time before the development of Maya writing, or before Maya writing became transferred from small portable objects, mostly jade, to monumental sculpture. Conservative estimates would date the first inscribed objects from the Lowlands in the first century A.D. Early writing from this period is represented on the Kichpanha bone (Gibson, Shaw, and Finamore 1986), on several jade objects, mostly of unknown provenance (Schele and Miller 1986:Plates 9, 10, 22, 31, 32b, 45a, 90), on a ceramic sherd from El Mirador (Matheny 1987:Figure 3), on an incised text on El Mirador Stela 2 (Hansen 1991), the Hauberg Stela (Schele 1985), the San Diego cliff carving (Schele and Grube 1994a:2) and the relief at the
entrance to Loltun cave (Schele and Grube 1994b). The above inscribed stone monuments already stylistically display all the characteristic features of Early Classic Maya monuments. Their carving is limited to one surface and does not try to emulate three-dimensionality. Cahal Pech Monument 9 is markedly different from these stone carvings, probably because it represents a more archaic stage of stela carving.

Comparison of Cahal Pech Monument 9 with other Formative period monuments from the Maya Lowlands is difficult because of their relative scarcity. Except for the stelae from Nakbe, El Mirador, Güiro and Tintal (c.f. Hansen 1992; Sharer and Traxler 2006:212-213) – all from the same area of Northern Petén - and the Hauberg Stela, which is of unknown provenance (Schele 1985), the only other examples of freestanding Formative Lowland sculpture are a stela from Actun Can, Cayo District, Belize (now on display at Xunantunich), the unpublished stela from Cival, Peten, Tikal MS 82 (Jones and Satterthwaite 1982:Figure 65m-p) and, although of dubious dating, a round altar from Polol, Petén (Proskouriakoff 1950:110, Fig. 36d). It is important to note that none of these monuments share the same three-dimensional features with Cahal Pech Monument 9, except for Tikal MS 82, which in fact is an incomplete small "pot-belly" figure. Furthermore, the iconographic motif of a human figure encased in an animal's mouth has no counterpart on any of the Late Formative monuments described above.

The closest counterparts to the Cahal Pech stela are found to the south, in sculpture from Kaminaljuyu and the Pacific coast area. In regard to the imagery, perhaps the most striking similarity is found with Izapa Miscellaneous Monument 2, the largest of all Izapa monuments (Norman 1976: 256-259). Monument 2 is the only known Izapa example of a human figure encased within an animal's mouth. In his discussion of Izapa iconography, Norman links this convention to La Venta Olmec sculptures, where they are more typical. For this and other reasons, Miscellaneous Monument 2 has been dated as one of the earliest Izapa sculptures.

A rather similar monument, also with a human figure encased in a jaguar maw, has been found at Tiltepec, near Tonala, Chiapas (Norman 1976:Figure 5.27). Tres Zapotes Stela D (Stirling 1965:723), a monument from the Gulf Coast, also shows a jaguar with open mouth and a group of three humans inside. An even more conventionalized depiction of a jaguar maw frames the standing figure on La Venta Stela 1 (Stirling 1965: Figure 13). In highland Guatemala the motif also occurs in Abaj Takalik, Monument 67 (Orrego 1990:53) which is approximately the same size as Cahal Pech Monument 9. Orrego (1990:52) dates Monument 52 tentatively as Middle Preclassic and "Olmecoid", because the motif is considered to be typical of Olmec sculpture.

There are other features of the Cahal Pech stela which have their parallels in the sculpture of the Pacific Coast. The long bifurcated tongue has been noted with many
A jaguar head on Monument 9 could almost be a miniature replica of Monte Alto Monument 3 (Parsons 1988:Figure 1.1), a late Middle Formative or Early Terminal Formative monument which Parsons describes as having “... relatively high relief... used for the typical "fanged" jaguar mouth; the central, blocky, projecting upper lip with nostrils above; the rounded-rectangle eye; the volutes leading off both sides of the forehead, the double scroll earplugs, and the double scrolls on both cheeks” (Parsons 1988:12). Another jaguar head with similarities to Cahal Pech Monument 9 is Kaminaljuyu grotesque head fragment Monument 49, in Miraflores or early Izapa style (200 B.C. - A.D. 1) (Parsons 1988:12).

These counterparts from the Gulf Coast Region and the Pacific Coast area strongly suggest an "early" date for Cahal Pech Monument 9. Given its diagnostic features, and the absence of glyphs, we also believe that the stela was most likely carved during the Late Formative and that it represents one of a few stone sculptures from this period in the Maya Lowlands. Parsons (1988:38) suggests that Terminal Formative sculptural art in the Maya Lowlands appears in the Peten at about 100 B.C., mostly in the form of architectural relief masks. He also suggests that the roots for Maya Lowland sculpture are in the Miraflores and Arenal styles of the southern region, from which it was transferred into the Maya lowlands prior to A.D. 50.

In recent years archaeological projects in the Peten and in Belize, especially the excavations undertaken at Nakbe (Hansen 1989, 1992, 1994) and the El Tigre complex at El Mirador (Matheny 1980; Hansen 1990:133-150) have indicated, however, that architectural sculpture begins much earlier and probably predates the beginning of the Arenal and Miraflores styles in the south. Especially at Nakbe, evidence can be found that some of the stucco masks from Structure 27 (Hansen 1992:Figures 7-11) were constructed in the transition between Middle and Late Formative times, perhaps as early as 400 BC (Hansen 1992:3). Since most of the Northern Peten is still terra incognita in terms of our archaeological knowledge, much more evidence for Middle Preclassic architecture and related sculpture may still be undiscovered. By the beginning of the Late Formative, architectural masks executed in
stucco - a medium whose basic components, limestone and firewood were easily obtained - decorate monumental architecture not only at Nakbe and El Mirador, but also at Cerros Str. 5C (Freidel 1981, 1985), Lamanai Str. N9-56 (Pendergast 1981), Uaxactun Group H (Valdés 1987, 1989, 1992), Tikal Str. 5D-33 (Coe 1990), Calakmul Str. 2 (Ramón Carrasco, pers. communication, 1994), and Acanceh's main pyramid (Seler 1902-23, Vol. 5:389-404), to name just a few examples.

Even though Cahal Pech Monument 9 bears considerable resemblance to sculpture from the south, it seems much more likely that the artist who carved the stela was inspired by the local lowland stucco mask tradition rather than by sculpture from the distant Kaminaljuyu and Pacific Coast area. In fact, the stela probably provides an insight as to how stucco masks were copied onto stone. Cahal Pech Monument 9 may even represent a stucco mask realized in stone. A direct comparison of Cahal Pech Monument 9, especially the jaguar head, can be made with the stucco masks from Nakbe Str. 27 (Hansen 1992:7-11). Furthermore, the volutes under the head of the human figure on the Cahal Pech Stela find their counterpart in the three volutes emanating from the mouths of all the masks from Nakbe Str. 27 and from the mouth of the Sun God mask from Uaxactun Structure sub-12 (Valdés 1989:623). The same volutes are found under the chin of the Venus God masks from the upper level of Cerros Str. 5C-2a (Freidel 1981). Given these similarities we suggest that Lowland Maya stone sculpture from the Late Formative likely represent materialized experimental transformations of architectural stucco sculpture to a new medium. In the Late Formative, the form of stone stelae did not yet achieve great importance, despite the possible Late Middle to Late Preclassic dating of Nakbe Stela 2. In fact for most of the lowlands, the Late Preclassic medium for iconographic public statements was still decorated architecture, as has been suggested by Freidel (1979). Like Cahal Pech Stela 9, the uncarved stela from Cuello (Hammond 1982) may also represent a step in the development of classic forms of royal propaganda. That the Formative stelae, even the plain ones, are an evolutionary stage between stucco masks and stone sculpture is suggested by the fact that Nakbe Stela 9, a plain monument, still had traces of stucco on it (Hansen 1994:371). It is therefore possible that the Cuello Stela may have also been covered with stucco.

The motif of the Cahal Pech Stela, an anthropomorphic figure in a jaguar mouth, may be linked to the old pan-Mesoamerican concept of animal companion spirits, or way (Houston and Stuart 1989; Grube 1989; Freidel, Schele and Parker 1993). The concept of animal companion spirits that accompany the human soul is deeply connected to the shamanistic roots of Maya - and Mesoamerican - religion. The concept certainly is of great antiquity and can be traced back - at least - to Olmec iconography. In the particular case of the Cahal Pech stela, it is plausible that the jaguar was the animal companion spirit of the human in its maw. Alternatively, the iconography could be depicting an important ancestor within the mouth of an earth monster. Although it is difficult to accurately determine the identity of the human figure, the fact that the stela was venerated for several hundred years, as indicated by its heavy wear, and that it was ritually deposited in a tomb, suggests that the individual depicted on Stela 9 may have been an important member of the local dynasty, possibly one of the Preclassic founders of the ruling Cahal Pech lineage.

Conclusions

Investigations at Cahal Pech have produced substantial evidence for precocious cultural development in the Belize Valley during the Formative period. Between 1200 to 600 B.C. the early settlers of the site were acquiring exotic materials from both highland and lowland sources and had begun to manifest traits consistent with that recorded among other early Mesoamerican communities. By Late Preclassic times, monumental non-domestic architecture, often decorated with stucco masks, became a diagnostic feature of this and other lowland Maya centers. Stelae were eventually added to the regional cultural repertoire.

It is argued here that Cahal Pech Stela 9 represents an example of this early, lowland Maya stela tradition. The “wrap around” style of carving, its size, design and iconography all
indicate that the monument is of Preclassic date. While these characteristics reflect some of the artistic features of highland Maya carved monuments, the iconography of Cahal Pech Stela 9 suggests that lowland Maya sculpture was a local development, that it may have had its roots in stucco sculpture and thus was not a foreign import. Hopefully future discoveries of other early monuments will improve our understanding of the evolution of lowland Maya iconography from its possible Middle Formative origins in architectural sculpture to free standing stone monuments.

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Ethnographic and ethnohistoric models help us to understand the relationship between ancient people and their built and natural environment. Natural features are salient geographic markers defining both the geographic and spiritual boundaries of communities and geopolitical entities. Caves figure prominently in the foundation of communities serving to spiritually anchor the community by providing the most important ritual venue for the propitiation of local earth deities. In the past, this connection to the earth provided legitimacy to the ruling elite and bolstered their rights to rule. Based on ethnohistoric models we argue that Kayuko Naj Tunich, a cave site in southern Belize, served as a foundational shrine for the Ancient Maya polity of Uxbenka.

Introduction

In settlement studies archaeologists often seek to define “sites” at various scales and to classify them as types that may be used as heuristics for understanding the patterning found in the archaeological record. Visible architecture is the primary data source and analyses tend to focus on “hotspots” of occupation (Ashmore 2003). We are of course conscious of the fact that “sites” are our own analytical constructs and like all typologies may only partially, weakly, or may not express cultural realities, which has lead Wendy Ashmore to suggest that analytical models need to become more “socially informed” (2003:9) by including ideology, cosmology, and cultural logic. So, how does one go about creating more socially informed models? Years ago Joyce Marcus (1982) advocated the use of ethnohistoric and epigraphic data to create culturally specific models testable in the archaeological record.

When we begin to understand behavior it becomes apparent that decision-making processes are not based solely on functional or economic concerns but that underlying cosmological beliefs in a sacred and animate earth are salient guiding principles among Mesoamerican peoples. In Mesoamerican religion, the earth is not a neutral entity but a powerful force in the universe representing the nexus of all creation and destruction. The sacred earth can be represented in many features, such as rocks, trees, and rivers, and caves. Ashmore and James Brady (1999) have been instrumental in bringing to our attention the role of the landscape in settlement studies noting that archaeologists seldom consider natural landscape features in their formulations. They advocate for not only the inclusion but the primacy of natural features as focal entities in a cognized landscape.

Our research seeks to understand the process by which ancient communities were established and maintained. Rather than trying to define a “site” our goal is to incorporate an emic perspective in our attempts to understand the extent of the Ancient Maya geopolitical entity we refer to as Uxbenka. We argue that natural landscape features reify cosmological ideals and become vital symbols in the establishment of a Classic period community. To define the natural features that orient the community both spiritually and spatially, we have created expectations using Mesoamerican ethnographic and ethnohistoric examples of rituals that established and reinforced the geographic and cosmological boundaries. These traditional rites emphasized the importance of natural features in Maya constructs of spatial integrity that were necessary to the establishment of geopolitical entities.

Caves feature prominently in these constructs and were important in “rites of foundation” (García-Zambrano 1994). Foundational rituals spiritually anchored a community and helped establish a leader’s relationship with indwelling deities when defining and maintaining boundaries. Caves were selected by leaders to serve as ritual venues in the foundational rites that aided in establishing their right to rule. In this paper we argue that Kayuko Naj Tunich, cave with Early Classic period occupation near the mid-sized center of Uxbenka is a “foundational” shrine that
played a major role in early displays of power and authority.

**Modeling Geopolitical Units**

As both an agrarian and a profoundly spiritual people, the modern Maya are concerned with their ties to the land and the deities associated with it. The earth itself is “owned” by spirits that inhabit the land and its features. These spirits are neither good nor evil but must be treated with respect, honored, and propitiated as reciprocity for their good will. The work of William Hanks (1990) has been integral to our understanding of the relationship between the Maya and the earth deities. From his studies in Yucatan he found that the integrity of space is an important step in every Maya ritual act and refers to this as ritual “binding.” Binding serves to contain ambiguous spirits within a specified zone, functioning as a safety mechanism. Therefore, a space “without its perimeter, a place has no unity and is potentially dangerous” (1990:349). This principle is utilized at a variety of scales from the house, to the milpa, to the entire community. Circumambulatory rites produce a ritually bounded space for the entire community establishing a bond with indwelling earth spirits that serves to define usufruct rights to the land. Therefore, boundary marking is a ritually sanctioned imperative for the well-being of communities and an important community enterprise.

At Zinacantan in highland Chiapas, Evon Vogt (1969:375-391) reported that the sacred world is characterized by a strong emphasis on mountains, caves, cenotes, and sinkholes. Mountains are considered to be homes of ancestral deities and caves as the place where one communicates with deities of the earth. These features are visited by cargo holders during ritual circuits that circumambulate the community, boundary maintenance mechanisms within the social system. The circuit symbolically designates property rights and marks crucial space and functions.

Ancient geopolitical units may have operated similarly as is evident from ethnohistoric records. In his work on early Spanish land titles housed in the National Archives in Mexico City dating from AD 1520 to AD 1550, Angel Garcia-Zambrano (1994) clarifies how indigenous boundaries were established and maintained through ritual action. He began by describing the criteria used by immigrants in deciding where to settle. The ideal location was based on cosmological principles that mirrored the quincuncial model of the cosmos creating a primordial landscape where earth’s fundamental elements interacted. The most sought after landscape consisted of a valley surrounded by four mountains, one for each cardinal direction, irrigated by water holes, rivers, lakes, and/or lagoons. The horseshoe-shaped valley was called a rinconada or axomulli (water-corner) and marked the edges between the human and natural worlds. A fifth mountain representing the center of the model protruded in the middle of the valley. This central mountain ideally contained caves and springs. Within the central mountain a natural cave containing water provided the water used for community rituals. Natural features were circumambulated by the leader to mark the boundaries of a community. Once consecrated the cave became the heart of the new town providing “…the cosmogonic referents that legitimized the settlers’ rights for occupying that space and for the ruler’s authority over that site” (1994:218). It then became the ruler’s duty to guard and keep the territory. The special function of caves in the ideal cosmological landscapes helps to explain why cave symbols are often incorporated into Classic period toponyms or politically charged emblem glyphs of Maya sites (Vogt and Stuart 2005).

Clearly not every landscape was ideal so in practice the landscape could be modified to more closely resemble the model. For instance, the construction of pyramids could substitute as mountains. If there was no nearby cave, a clay olla could be buried in the town plaza to symbolize it. Additionally, natural caves could be modified to enhance their resemblance to the group’s mythological cave of origin. Further, in practice caves and wells were often located on the community’s peripheral boundaries at the corners of the north/south axis of the quincunx. Garcia-Zambrano (1994:223-227) suggests that this configuration related the north/south axis to water and the underworld whereas the east/west axis symbolized the sun’s path and the celestial
realm. He offers two examples, one from the town of San Mateo Ixtlahuacan (Estado de México) dating to AD 1530 and one from Santa Cruz Yaxkukul in Yucatan dating to AD 1540. In both instances cenotes and springs marked the north/south axis and in the southwest corner of each community was a cave. The documents from Yaxkukul clearly state that the cave contained water whereas at Ixtlahuacan García-Zambrano is unsure but thinks its name may have based on toponyms from surrounding towns containing the suffix apan meaning “near the water.”

Ethnographic examples and historical reports suggest a number of criteria that could be used to explore community boundaries in the archaeological record by examining natural features that may be “foundational.” In the case of caves there are some very specific features that one might expect to locate. First, a foundational site should show evidence of ritual use. Its earliest usage should be coeval or predate the site’s earliest deposits or possibly date to a later expansion assuming that there was a political reorganization initiated either by an incoming group (such as K’inich Yax K’uk Mo’ at Copan) or the rise of a local political faction. We also expect the foundational cave to be centrally located (within the site core) or as in the cases of Ixtlahuacan and Yaxkukul, found in a peripheral area to the south of the core. Finally, we might expect to find water or a water feature within the cave, though it is unclear as to whether the Ixtlahuacan site actually contained water.

Settlement and Chronology at Uxbenká

Uxbenká, is a medium-sized polity located at the base of the Maya Mountains along the eastern periphery of the Maya Lowlands in southern Belize. It is under investigation by the Uxbenká Archaeological Project (UAP), directed by Keith Prufer, University of New Mexico. Based on extensive radiocarbon dating (Prufer et al. in press), AMS dates are reported as conventional radiocarbon ages corrected for isotopic fractionation with measured δ13C values. Calibrations were made with Calib 5.01 using the IntCal04.

The Group A Plaza or the “Stela Plaza” is located on one of the areas highest points. Excavations conducted in the plaza suggest that when initially settled, Uxbenká was a small agricultural village with residential structures constructed of marl and dirt and capped with thin plaster floors. These buildings would have been situated around the perimeter of the hilltop, inside what was eventually modified into the Stela Plaza. Constructions using cut stone blocks began later, about AD 350 (Table 1). Excavations within structures in Group A produced a number of pre-AD 250 dates but the base of all stone structures dated to between AD 137 and AD 381. Charcoal collected from the base of a stone wall in the center of the plaza dated between AD 137 and AD 323. The base of Structure A6 dated to between AD 223 and AD 381, Structures A1 and A4 both to between AD 255 and AD 381. The context for the date from the base of Structure A1 is particularly compelling because it comes from a burned surface beneath the structure suggesting that this represented either the clearing of the surface or a ritual event in preparation for the building. We have suggested elsewhere (Prufer et al, in press) that the inception of the building program represents a new more complex social hierarchy and political reorganization.

Kayuko Naj Tunich

The Kayuko Naj Tunich is a relatively small dry cave site situated within a sheer limestone cliff face over 200m above the valley floor just 2.3 km due south of the Stela Plaza. It is easily viewed from the plaza and the plaza can be seen from the cave mouth. Secondly, the cave has undergone extensive architectural modifications despite its precarious location. The nature of the modifications that included infilling the cave floor, the construction of walls and steps, and plastering of the entire construction represented a tremendous amount of labor that is somewhat unusual for caves in general. Though caves
often contain small constructions, massive building projects are rarely found.

According to local people, the steep free climb to the cave mouth discouraged modern visitors from entering the site until approximately five years ago when the cave was heavily looted. Lotters destroyed most of the architecture and exposed large holes in the floor fill. Artifacts, rocks and plaster were thrown out of the cave entrance landing on the steep slope below. Salvage operations conducted by the Uxbenká Cave Project (UCP) during the summer of 2007 collected a number of radiocarbon samples for dating and virtually reconstructed the site.

To ensure the safety of the crew and allow us to carry equipment back and forth the cliff face was negotiated by a system of ropes and hand-made ladders constructed by Maya community members. Sherds lined the approach to the cave and Alcove 1 located west of the entrance contained a fragment of a copal cake that dated to between AD 538 and AD 601. The ladder system led to the cave mouth where a course of relatively intact steps led up a 48° to Chamber 1. The stairway was constructed of medium-sized unmodified tabular blocks clearly chosen for their flat surfaces from the Rio Blanco River located in the valley over 2 km from the cave.

The cave’s morphology is highly unusual in that it is lined with crystalline speleothems. Almost all of the stalactites have been broken either intentionally or by natural causes and some may have been used in rites within the cave. Heavy charring can be seen on the cave wall adjacent to the top step forming a small platform at the entrance to Chamber 1. Rubble on the platform contained charcoal and thousands of burnt crystals (spar) from broken stalactites. A charcoal fragment collected from the base of the pile dated to between AD 230 and AD 335.

The cave is oriented on a N/S axis and measures 19m from the terminus to the north-facing entrance and 2.5m at its widest point (Figure 1). It contains two chambers both of which were architecturally modified. Chamber 1 was the largest with the most extensive modifications. In the site’s initial construction, the Chamber 1 floor was leveled off with medium to large limestone boulders and tabular river stones. The stone fill was overlaid by cobbles and topped with a thick 10cm layer of plaster. Wood beams and stone retaining walls shored up the fill and fragment of a wood
beam (unburned) from the base dated to between AD 241 and AD 338.

Chamber 1 was partitioned into two or possibly three rooms (Figure 2). These had plaster floors and in Room 2 the walls were plastered as well. Eight vertical posts were set in the floor adjacent to the cave walls and corresponding to in situ stone alignments suggesting that these were part of the wall partitions. The tallest post was 2.2m high and they measured between 8-10cm. in width. Remnant wood was found at bases of the five of the posts. Three posts were radiocarbon dated, Post 1, Post 5, and Post 8. Post 5, located during excavations, was burned and appeared to have fallen from its plaster post mould onto the floor. It dated to between AD 257 and AD 392. Posts 1 and 8 were located adjacent to each other on either side of the cave indicating that they were a “pair.” However, Post 1 dated between AD 427 and AD 535 and Post 8 to between AD 541 and AD 601. There is no overlap in the radiocarbon ranges of the posts and due to their small diameters it is unlikely that the dates represent an old wood problem. We have therefore concluded that they were part of continual modification and maintenance of the site.

Structure 1 was a bench-type feature placed at the southern terminus of Chamber 1 at the highest point and the most remote area from the entrance of the chamber. The cave walls formed three sides of the roughly rectangular structure and 14 courses of stone blocks were stacked in front to create the fourth wall. It measured 1.3m to 2m in its N/S axis and spanned the width of the cave of 2.25m on its E/W axis. The structure was plastered on top and on the exterior of the stone wall, but no plaster was present inside. While initially the structure appeared tomb-like, the absence of human bone--even in such a looted context-- suggests that it was not. Rather, the structure served as a focal point in the shrine and was more likely to have functioned as an altar.

A wooden object sat on top of the shrine for a prolonged period of time. This was evident from a dark stain in the shape of the object on the surface of the remnant plaster as well as wood dust and small fragments. Locals, referred to the object as a “canoe.”. Indeed the object resembles a small canoe in that it was hollowed out from a single piece of hard wood. It measured 1.5m in length, 4m in width, and was 15cm in thickness and fit perfectly on the top of the bench suggesting that it was constructed specifically for the space as altar furniture. This is bolstered by the fact that the outside edge of the wood, which would be the outer tree ring suggesting the date at which the tree was harvested returned a radiocarbon date range between A.D. 231 and AD 359 contemporaneous with the initial construction of the shrine. Therefore we argue that the object is an altar piece that was integrated both symbolically and functionally into the shrine’s earliest design.

The wooden object does not correspond well to western models of a boat or to modern Maya examples of dugout canoes. Morphologically the altar piece is flat bottomed, shallow and smaller than most canoes. The object does however correspond in size and shape more readily to a batea or wash-basin. The confusion regarding the term can be explained by consulting the Diccionario maya Cordemex (Barrera Vásquez 1980), which lists Maya cognates of the Spanish word batea that include chem che’ a large basin for washing or in secondary definition-- a handmade wooden canoe used for crossing a river. Ethnographically, we find that similar objects are used in ritual contexts. Raphael Girard
Figure 2. Plan-view map of Chamber 1 showing locations of postholes and features.

(1995) reported that among the Chorti, a wooden basin filled with water referred to as a "canoe" is placed beneath altars during cosmological renewal rites.

The Kayuko altar piece may have been similarly employed. There are no visible residues to suggest that the vessel was a receptacle for offerings. If offerings of food were placed inside of the vessel one might expect some residue to be evident due to the excellent preservation of other organic material at the site. Although further analyses are warranted, we tentatively suggest that the altar piece may have held water and that this could easily have represented the interior water source so often associated with ritual cave sites.

Discussion

A number of features argue that Kayuko Naj Tunich was a foundational shrine constructed by the rising elite class of Uxbenká. First, the proximity to the site core and clear site lines created a natural connection between the cave and the Stela Plaza. Not only was there a distinct site line, but the cave is located due south of the site core, a pattern similar to that found in ethnohistoric settlements and recognized by García-Zambrano (1994) as a salient cosmological underworld symbolism in landscape use.

AMS radiocarbon dates from Kayuko Naj Tunich Cave and the site core suggest the construction of the shrine was contemporaneous not with the earliest known settlements at Uxbenká, but with the social and political reorganization that accompanied the building of the first stone architecture in what was to later become the Stela Plaza (Table 2). The most secure early date from the cave derives from the wooden retaining beam found in situ at the base of the floor fill (AD 241-338). It is supported by two additional dates, the outer edge of the wooden object (AD 231-359) and the charcoal found beneath the burned crystals on the step (AD 230-335). These dates fit nicely with dates collected from directly beneath structures in the Stela Plaza that range from AD 137 to AD 381. The wall in the center of the plaza may have been built slight prior to the three buildings (Structures A1, A4, and A6) which were most like begun between AD 223 and AD 360. With current the methodology we could not hope for a more solidly coeval match. This suggests that the cave shrine was well-integrated into the original building program. It is unlikely that the shrine could have been constructed without community labor and considerable organization. The importation of building materials alone attests to the human labor costs involved in the construction of the site.

Once constructed the cave was clearly maintained and possibly remodeled throughout its history. Non-overlapping radiocarbon dates for Posts 1, 5, and 8 are testimony to building episodes that occurred between AD 257 and AD 601. Post 5 may have been part of the original building episode but the others were not. Posts 1 and 8 may have then been replacements of the originals or may have been associated with walls that were added later. Post 5 was burned.
sometime between AD 257 and AD 392, though this most likely occurred in the later part of the range between AD 317-392. Two dates suggest that the shrine fell out of use by the end of the Early Classic period no later than AD 601.

Conclusions

We have argued that Kayuko Naj Tunich is a "foundational" shrine for the Uxbenká polity based the geographic position of the cave in relation to the site core, the presence of monumental construction program that required organized labor, and the coeval construction of the cave shrine with the building of the first stone architecture at the site core. Although an indigenous population lived in and around the site core prior to the erection of the shrine, the cave exhibited no use prior to the initial construction of Uxbenká’s site core. This may have implications for ethnicity and may even imply that ruling elite may have come from elsewhere along with their own masons and craftsman. While we might expect to find an interior water source within a foundational shrine, we suspect that the prominent wooden altar piece or “canoe” filled with water served as an acceptable substitute.

The political nature of the use of caves is slowly coming into focus and there is accumulating evidence suggesting that caves were not only sacred space but functioned in political arenas as well. As excavations continue at the site of Uxbenká and more is known of the site's history, it will be possible to link events occurring at the cave to a broader context. It is only through this kind of research that cave archaeologists can hope to understand the true function and meaning of archaeological caves and that those investigating surface sites may obtain a complete picture of both the ritual and political life of the cities they study.

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This paper presents a synthesis of recent work in the Caves Branch River Valley, which has focused on the many cave and rockshelter ritual sites and the core of the monumental center Deep Valley. These results are supplemented by data generated from prior investigations in that allows us to establish that small stable communities in the valley beginning in the Middle-Late Formative period and continuing through the Late Classic period were the norm. This pattern was abruptly broken in the Late-Terminal Classic with a brief period of annexation of the valley into a broader political and economic sphere. While the limited settlement data seem to point to increased population sizes during the late period, the main body of evidence comes from variations in the ritual use of caves and rock shelters, which increases dramatically and shows evidence for changes that can be interpreted as demonstrating increased social complexity within local populations and as reflecting less provincialism. In addition, the hastily constructed site of Deep Valley clearly reveals the late presence of some type of centralized administration. Taken together, these data suggest a late and significant influx of migrants into the valley, followed by a sudden depopulation concurrent with similar abandonment's at nearby centers.

Introduction

The last three years of work (2005-07) by the Belize Valley Archaeological Reconnaissance project in the Caves Branch River Valley has produced a diverse set of data from both settlement and ritual cave sites, adding significantly to the story based on previous studies in the Caves Branch Valley, as well as other valleys in the surrounding region. In the first phase of this research in which we focused on determining the basic chronology of human occupation, documenting the extent and variation of ritual cave use, and finding evidence for the rise of sociopolitical complexity. This paper will review our work in these areas, and will conclude with interpretations and future research directions. The data from our study come primarily from an extensive excavation of the Caves Branch Rockshelter cemetery site, testpit operations at several other non-mortuary rockshelters, and a mapping and testpit examination of the central plaza from Deep Valley (Figure 1).

Chronology

Chronological evidence for occupation in the Caves Branch Valley comes from caves. Earlier studies of cave sites in the valley include MacLeod and Puvelston's (1973) preliminary investigation of Petroglyph cave, research at Petroglyph Cave by Reents (Reents and MacLeod 1986; Reents 1980, 1981), Graham et al's (1980) studies of Footprint cave, and Juan Luis Bonor's (2002; Bonor and Martinez Klemm 1995; Glassman and Bonor 2005) salvage work at Caves Branch Rockshelter and several small caves nearby. Reents' (1980) thesis on Petroglyph cave has provided a ceramic sequence spanning the Protoclassic through Terminal Classic periods. At Footprint, Graham et al (1980: 156) report "intermittent cave use from Middle Preclassic to Postclassic times." This range of dates is typical of cave use in the area as documented by Awe's Western Belize Regional Cave Project in the Macal and Roaring Creek Valleys (Awe et al 1998) and Peterson's and McAnany's work in the Sibun (McAnany et al 2003, Peterson 2006), as well as most other researchers throughout the Maya region.

At Caves Branch Rockshelter, Bonor's (2002) preliminary analysis of the ceramics also showed a range of dates corresponding to the Formative through Terminal Classic periods, while ceramics from Pottery Cave and TeTun, small caves adjacent to the rockshelter, primarily dated to the Early Classic period. Hardy's ceramic analysis of the recent Caves Branch Rockshelter excavations matched Bonor's findings. Both Bonor and Hardy found a few Middle Preclassic sherds, which may be evidence for a slightly earlier start date of ritual use of the site. At Caves Branch Rockshelter, Hardy reported three examples of Jenney Creek complex ceramics: two Jocote.
Orange-Brown sherds and one Sayab Daub-Striated sherd. In 2006, we discovered a diagnostic Archaic Lowe point at the Caves Branch Rockshelter (Figure 2). This type of point dates to 2500 - 1900 BC (Lohse et al 2006) and could be offered as evidence for an even earlier occupation of the valley. However, in this case the point was not in situ in an Archaic context, but was instead placed with Burial 66, which provided a 2-sigma AMS date of AD 80-250, within the Late Preclassic period. We can speculate that this may represent a case of curation of discarded objects, perhaps for use as divining tools or personal sacra, as discussed by Brown (2000) for both ancient and modern Maya ritual practitioners.

Perhaps more interesting than the range of dates is the contextual and temporal distribution of ceramics, which give more specific information about activity patterns. Hardy’s recent analysis of the ceramics at Caves Branch Rockshelter and Deep Valley Rockshelter shows that the sequences are not as clearly defined in the Late Classic period, possibly suggesting a slight hiatus followed by a renewal in the Late - Terminal Classic transition period, represented by Spanish Lookout and New Town ceramic sherds. Caves Branch Rockshelter, in particular, evidences this Late Classic hiatus. Less than 3% of the ceramic sample was associated with the Late Classic period, compared to the 33% represented by Late-Terminal Classic sherds. No Late Classic sherds were present in the ceramic assemblage from Deep Valley Rockshelter, though 20% of the collection was identified as being of Late-Terminal Classic origin. The best represented Late-Terminal ceramic types at both
these sites were Cayo Unslipped, Paxcaman Red, and Mount Maloney Black.

At Petroglyph Cave (Reents 1980:269) and Actun Tunichil Muknal (Griffith 1998: 55), Early Classic ceramics were more restricted and very little Early Classic material was found inside the cave, but instead was focused around the entrance areas. In the Macal River Valley, Moyes’s (2006) work at Chechem Ha showed clearly that while ritual peaked in the Early Classic period, Late Classic ritual was more dispersed, including new areas of the cave, which were harder to reach and had not been used by earlier groups. The WBRCP cave survey of the Roaring Creek Valley suggests that while Late Classic populations continued to use sites with Preclassic and Early Classic components like Actun Uayazba Kab and Actun Tunichil Muknal (Griffith 1998), they also expanded cave ritual to include a number of smaller, less impressive rockshelters and caves ignored by earlier groups in the area (Awe et al 1998, Mirro et al 1999: 13). This pattern also appears to hold true in Peterson’s (2006: 62) survey of the Sibun River Valley. So, while Preclassic and Early Classic activity is ubiquitous, and in some cases quite intense, its distribution is more focused and thus not generally as extensive as Late Classic activity areas.

Cave Excavation and Analysis of Ritual Use

Much of the focus of the Caves Branch project has been on rockshelters, especially the Caves Branch Rockshelter, which was first investigated by Bonor in the mid-1990s (Bonor 2002, Bonor and Martínez Klemm 1996, Glassman and Bonor 2005). Bonor's investigations at the rockshelter revealed a diverse assemblage of material culture and human remains, including scattered bone and 32 primary burials. The large number of burials and the rather pedestrian quality of the ritual and grave goods led to an interpretation of the rockshelter as being "a ritual burial site used by lower-caste farming members of the neighboring areas" (Glassman and Bonor 2005: 289). The BVAR project began a bioarchaeology program at the Caves Branch Rockshelter in 2005 because of the extraordinary density of human remains and the relatively unique mortuary context of the site (Wrobel et al 2006). At present, over 100 primary burials have been excavated and, based on the size of the excavation area and the presence of scattered remains of dozens of more individuals throughout the matrix, this number likely represents only 1/3 or 1/4 of the total number of burials in the rockshelter.

Excavations were set up in different parts of the rockshelter to determine the extent of the cemetery and whether it grew radiating outward from a central point, as is typical of cemeteries (Figure 3). All excavations produced human remains, and thus the excavations did not manage to clearly define the cemetery's boundaries. An extensive excavation in the northern portion of the rockshelter (Ops 1A and 1F) revealed very dense and overlapping graves, as did the excavations in the central area (Ops 1B and 1E) around the cave entrance. In comparison, a 2m x 2m excavation in the southern section (Oper. 1C), revealed a looser, gravel matrix, with far fewer burials and less scattered bone, perhaps indicating the cemetery's southern limit.

Figure 3. Map of the 2005-07 excavations within the CBR. (Map by Bryan Haley)
A detailed analysis of the primary burials and the highly disturbed remains from bone scatters is underway, so no accurate age / sex profiles are currently available. However, preliminary analyses of the skeletal remains have identified individuals of both sexes and all ages represented in ratios that we would expect from a small rural population, and thus are consistent with Bonor's original assessment. The CBR burial population contains a relatively large number of infants (≤ 2 years) and comparatively fewer children (3-15 years). Among the adults, we see more young adults than old ones, and both males and females are represented. A possible influence on the mortality ratios is that neonates and infants are more often found placed against the rockshelter wall, which would seem to offer more protection from the elements. For this reason, it may be that the sampling from our excavations was not entirely random, since excavations rarely abutted the rock face. But overall, the population appears to be relatively healthy compared to urban populations: no severe infections, no healed trauma, very little and mild anemia, and mild caries rates.

The rockshelter excavations have also produced a sizeable collection of whole vessels. Including four vessels originally removed by Bonor, there are a total of 20 whole or at least nearly complete, vessels. All of the complete vessels encountered were Late Preclassic forms (Terry Powis, p.c.). Most are relatively simple, crude vessels, and few are slipped. With the exception of a single partial Sierra Red dish with a black cross on its base, described by Bonor and Martínez Klemm (1996: 253), all vessels were jars and bowls. Other examples of Sierra Red forms include three jars, Fowler's Orange-Red or Macal Orange-Red varieties, one of which has four nubbin feet and post-slipped striations. Vessel 14 is a rare example of a complete Flor Cream jar (Figure 4). Most of the vessels found with burials are unslipped and often are decorated with appliqués and incised lines (Figure 5). These styles can be described as Cocay Appliquéd (Reents 1980: 168-76) or Succotz Striated (Gifford 1976: 186-188). The jars typically have charring on the bottoms and sometimes the insides.

Since the whole vessels are the only chronologically diagnostic grave goods, our initial hypothesis was that mortuary use of the rockshelter was restricted to the Late Preclassic period and that later phases of the site's use were simply limited to ritual deposition of objects, including the large amounts of scattered ceramic sherds. However, a series of AMS dates on burials from different parts of the rockshelter showed fairly conclusively that the mortuary use of the entire site in fact spans the Late Preclassic through Late-Terminal Classic periods. On the surface, this longevity does show some support for a static model of Maya cave ritual with continuity in ritual over an extended period of time. However, there appears to be an interesting contrast between the burials in the early and late phases of the cave's use in that all of the grave goods come from Late Preclassic and Early Classic contexts. Other grave goods include a pair of bone hairpins with Burial 83, which dated to the Early Classic period. Another individual had a carved bone with the woven mat motif, but this too is early since it was intruded upon by a Late Preclassic burial with a diagnostic vessel. So, at the very least, the nature of the ritual does change over time, and this may indicate a change in who used the...
rockshelter and how this context was viewed differently by later inhabitants of the valley.

Figure 5. Vessel 16, a Cocay Appliqued jar, from the CBR

Settlement

Previous research on settlement in the Caves Branch valley has not been extensive. The earlier cave projects all mention the presence of housemounds, but none were investigated until the late 1970s, when Davis (1980) mapped an elite residential complex and a small plazuela of the Deep Valley site, which were discovered during the construction of the Hummingbird Highway. Later, David Goldstein and Cameron Griffith, working with Bonor, mapped a small plazuela group, called Xubzulima, near the Caves Branch Rockshelter (Goldstein, n.d.). A small cache at the base of the northern structure contained a Sotero Red Brown: Sotero Variety vessel dating to the Terminal Classic period. Following Davis’ work, and in response to the amount of Hermitage ceramics found in the caves around Cave Branch, Reents (1980: 236) speculated that further excavations at Deep Valley would eventually turn up evidence of Early Classic settlement. This project represents the beginning of the first formal survey to test this hypothesis.

Jill Jordan (2008) recently completed her thesis on Baateelek (Figure 6), the major plaza group of the Deep Valley site, located on top of a hill approximately 1 kilometer from the residential group documented by Davis (1980). Baateelek is a medium-sized ceremonial center composed of at least 24 structures surrounding 4 nucleated plazas, covering approximately 2.56 hectares. The core configuration and size are consistent with major sites in the Belize Valley, like Cahal Pech (Awe et al. 1991). Work during the 2008 field season focused on mapping the site core, noting building stratigraphy in the baulk of looters’ trenches, and conducting test excavations in several of the plazas.

Figure 6. Map of Baateelek, the central plaza of the Deep Valley site. (Map by Jillian Jordan)

The testpit excavations provided information concerning how Baateelek was constructed. The site was essentially built on a vacant landscape and does not exhibit historical accretion (Webster 1998) like sites that had been utilized over long periods of time. Data from excavations and looters’ trenches suggest that both the plazas and structures at Baateelek were constructed with large limestone boulders, a construction technique similar to the sites of Xunantunich (LeCount et al. 2002), Hershey (Harrison-Buck 2007) and Cahal Uitz Na (Ehret and Conlon 1999). Small, fist-sized rocks were tamped down atop the boulders in order to
provide an appropriate surface for plastering episodes. The structures consist of large boulders with a crudely cut limestone façade. The plaster floors were very eroded, or nonexistent in some cases, suggesting that the floors were thin and poorly constructed. Excavations in Plazas A and B and the clearing of two looters’ trenches (in Structures A2 and C3) revealed that Baateelek was likely constructed in only a few stages suggesting that the site was occupied for only a short amount of time. Also suggestive of a short occupation is the paucity of artifacts found on the surface and within the construction fill.

Only a few ceramics from Baateelek could be positively identified, and all dated to the Spanish Lookout Phase (670-900 A.D.), including Pine Ridge Carbonate, British Honduras Volcanic Ash and Uaxactun Unslipped wares. Types include Roaring Creek Red: Roaring Creek Variety (Gifford 1976: 240), Garbutt Creek Red: Garbutt Creek Variety (p. 230), Belize Red: Belize Variety (p. 226), Cayo Unslipped: Variety Unspecified (p. 279), and Alexanders Unslipped: Alexanders Variety (p. 283). These types are common in the area and are generally associated with late facet (ca A.D. 830-900) contexts (Harrison-Buck 2007: 230, 232, 401, 421-23). Though the majority of the dateable ceramics at Baateelek were from a single midden feature, it is unlikely that the structures date much before that time period as the excavations suggest quick construction and a brief occupation. The Late-Terminal Classic date for construction of Baateelek is consistent with the date of other surface sites in the Caves Branch River Valley (i.e., Deep Valley Lookout [Davis 1980] and Plazuela Xubzulima [Goldstein n.d.]), as well as the major sites in the neighboring Sibun Valley. McAnany et al (2003) report that settlement in the Sibun is similarly limited to the Late/Terminal Classic and was sudden and immediately complex, indicating a transplanted social hierarchy. She characterizes the area as "devoid of settlement" previous to this move. Peterson's (2006) later dissertation research on the caves and rockshelters in the Sibun was informative and like our research shows evidence for a much longer span of occupation than does the data from settlement.

Discussion

The recent work in the Caves Branch River Valley has been informative in that it has provided the basis for reconstructing the cultural history of the area. Not surprisingly, there are many parallels to the neighboring regions, such as the Sibun and Roaring Creek River Valleys. The sudden construction of a large ceremonial center, Deep Valley, in the Late Classic period suggests that this time is obviously a period of major change for the inhabitants of the Caves Branch Valley. Though no substantive settlement surveys have yet been undertaken, data from the Xubzulima plazuela indicates the presence of a contemporaneous social hierarchy extending beyond the new city into the rural landscape. Future settlement work will focus on the many housemounds dotting the river valley to determine the nature of this Late Classic transition and whether the sudden construction of Deep Valley was fueled by long term local population growth or by an influx of urban migrants into a sparsely populated, rural hinterland.

The extensive cave archaeology surveys conducted in West-Central Belize also point to a cultural transition in the Late Classic, which has generally been attributed to growing population pressure and increasing social complexity in the region. In the Late Classic there is an increase in the complexity of cave ritual with a focus on the deeper segments of larger caves and an expansion of ritual locations to include even the smallest of overhangs and crevices. The current popular cave model suggests that the ritual use of caves was dictated by social status, with elites having access to ("appropriating") the larger caves and non-elites relegated to small caves and rockshelters (Peterson 2006: 13). According to the initial settlement data, complex social hierarchies did not seem to exist in the valley until the latter half of the Late Classic period, suggesting that previous to this time patterns of cave use did not reflect status.

The recent rockshelter data from the Caves Branch region show continuity in the use of larger sites, such as Caves Branch Rockshelter and Deep Valley Rockshelter, and only later use of the smaller caves, rockshelters, and crevices nearby. This pattern may be interpreted as evidence of a greater number of
rituals being performed by the larger number of residents, and perhaps even as an indication of the appropriation of ritual sites by the new elite class and the subsequent marginalization of commoners. In addition, the data from the larger sites show variation in the nature of their use over time, which also may relate to this cultural and demographic transition. For instance, ceramic sherd counts point to a sudden escalation in the use of these sites during the brief Late-Terminal Classic period, a time when complex ritual is well documented in some of the larger, more impressive caves in the area. The fact that burials at Caves Branch Rockshelter no longer contain grave goods, even the types of non-exotic and inexpensive objects found there with earlier interments, more likely suggests a change in mortuary symbolism, rather than an indication of the relative wealth of the individuals buried there.

Conclusions
Diverse pieces of evidence taken from both natural and constructed ritual environments in the Caves Branch River Valley all point to a radical transition occurring during the Late-Terminal Classic period. While the cave and rockshelter sites show that permanent populations were present in the area at least by the Late Preclassic period, the earliest convincing evidence for the appearance of socioeconomic complexity dates to the latter portion of the Late Classic period. This cultural sequence is similar to those reported for the neighboring Roaring Creek (Awe et al. 1998) and Sibun (McAnany et al. 2003, Peterson 2006) River Valleys. Analyses of patterns of cave use generally support a model of culture change over time, likely related to the introduction of a larger, more diverse population in the Late Classic. Future work in the valley will focus on developing a broader picture of both cave and settlement sites by continuing and expanding investigations at Deep Valley and the surrounding settlement zone and by supplementing the rich tradition of cave archaeology in the area with data from a wider variety of cave sites.

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21 THE 2007 FIELD SEASON OF THE MOPAN VALLEY ARCHAELOGICAL PROJECT: BUENAVENTURA DEL CAYO'S EAST PLAZA AND NEAR-PERIPHERY SETTLEMENT

Jason Yaeger, Bernadette Cap, Meaghan Peuramaki-Brown

In this contribution, we report on the 2007 season of the Mopan Valley Archaeological Project. The 2007 season had two goals. First, it sought to better understand Buenavista del Cayo’s East Plaza, including its layout, use, and history. To accomplish that, we employed shovel testing, remote sensing, extensive excavations, microartifact analysis, and soil chemistry analysis. The results show the plaza was significantly remodeled during the Late Classic period to create zones of low cobbble platforms, some organized around walkways, that were demarcated by large linear stone features. Macroartifact patterning reveals that the highest densities of ceramic and lithic materials were found in different areas, suggesting distinct activity zones within the plaza. The season’s second goal was to understand the history and socioeconomic composition of the settlement zone immediately south of Buenavista’s site core. Mapping and testing revealed 19 mapped sites, including housemounds, terraces, and possible check-dams. The artifacts and architecture revealed through testing suggest a range of socio-economic status. Occupation of this zone begins in the Preclassic; peaks in the Late Classic, reaching a maximum in the early part of that period; declines slightly into the later Late Classic; and drops precipitously in the Terminal Classic.

Introduction

Maya lowlands during the Classic period (AD 300-900) were home to a mosaic of polities connected in shifting political and economic networks. Our models of their political organization can be characterized in terms of two distinct models, as summarized succinctly by Gyles Iannone (2002) a few years ago. Unitary models see Maya society as strongly centralized and highly stratified, possessing an elaborate bureaucracy and a complex economy that fostered a high degree of interdependency among its members. In contrast, decentralized models view Classic states as decentralized or segmentary polities composed of functionally redundant social and political entities, loosely integrated largely through ritual activities.

The Mopan Valley Archaeological Project (MVAP) seeks to better understand Maya social and political organization and dynamics from the perspective of smaller Maya centers in the Mopan River valley. Clearly, smaller polities had an important role in regional political dynamics (Iannone and Connell 2003; LeCount and Yaeger 2009), but we know little about the processes by which such polities were incorporated into larger regional states, nor the local ramifications of such incorporation.

MVAP focuses on Buenavista and the hinterland zone between Buenavista and Xunantunich (Figure 1) to address the following issues: the interaction and competition between Buenavista and Xunantunich as the latter grew in size in the 8th century; the role of hinterland communities and households in shaping that interaction and the ways it affected them; and the role of the larger kingdom of Naranjo in the Mopan valley during that period. The initial phase of the project combines settlement survey and excavations to assess whether the social, political, and economic organization of the

Figure 1. Archaeological Sites in the Mopan Valley
Buenavista polity was similar to that of Xunantunich, and to identify shifts in the location and organization of the valley’s settlements that correlate with the rise of Xunantunich. Our goals for the 2007 season included studying Buenavista’s East Plaza with remote sensing and sub-surface testing, and mapping and testing residential complexes in the settlement zone immediately south of Buenavista’s site core.

**Investigations of Buenavista’s East Plaza**

Our research in Buenavista’s East Plaza (Figure 2) sought to understand the spatial distribution of artifacts and subsurface features from the Late Classic period in order to assess whether this space was used as a marketplace. This research question forms the heart of Bernadette Cap’s dissertation at the University of Wisconsin–Madison. Previous investigations by Joseph Ball and Jennifer Taschek’s Mopan-Macal Triangle Project (MMT) and the Mopan Valley Archaeological Project led us to suggest that the Buenavista community would have benefited from a marketplace. Three lines of evidence provide support for this inference. First, the environment around Buenavista includes several environmental zones with different local resources and agricultural potential. Second, the MMT project recovered ample evidence of specialized production of both utilitarian and prestige goods (Ball and Taschek 1988; Kelsay 1985; Reith 2003). Finally, Buenavista’s hinterland was densely populated. Given these factors, a marketplace would have been an efficient mechanism to bring together consumers from the densely settled and diverse hinterland zones with the specialized producers who transformed local and exotic raw materials into valuable finished products.

The East Plaza is an ideal location for a marketplace at the site. It is Buenavista’s largest plaza, and it has the least restricted access. The area surrounding the plaza is relatively flat, in contrast to the steeper terrain surrounding the rest of the site center that would have hindered access. One could enter the East Plaza directly from the surrounding countryside through wide gaps between the structures that form the plaza’s perimeter or via a causeway located off the southwest corner of the plaza.

While the combination of these factors presents a context in which a marketplace would allow for efficient exchange of goods, one cannot use logic alone to argue convincingly that a marketplace existed. It must be empirically demonstrated.

To accomplish this, Bernadette Cap has developed several archaeological correlates related to the types of activities that take place in marketplaces, their spatial organization, and built environment. Observations in modern marketplaces and an examination of historical documents suggest that the following activities are common in marketplaces: 1) exchange of goods; 2) preparation of food to be eaten in the marketplace; 3) manufacturing steps that constitute end-stage production or involve lightweight, portable raw materials and tools; 4) storage of finished goods and raw materials.
between market days; 5) maintenance of marketplace facilities; and 6) marketplace administration such as granting permission to exchange goods and resolving disputes. These activities can be identified using the archaeological correlates listed in Table 1.

Because plazas were likely used for a variety of purposes, robust support of any functional interpretation of the East Plaza must rely on multiple lines of independent evidence. Consequently, we are gathering a variety of forms of data, such as remote sensing, macro- and microartifact patterning, soil micromorphology, and soil chemistry, to make our interpretations.

Last year, Bernadette Cap began to test this marketplace hypothesis using ground penetrating radar (GPR) to identify subsurface anomalies (Haley et al. 2007), a shovel test program to test the findings of the GPR survey, and excavation of large areas in specific sectors of the plaza to understand the size, shape and types of activities that took place on and around subsurface architectural features identified by the shovel tests and GPR (Cap 2007). Data collected thus far indicate the plaza was remodeled and resurfaced in the Late Classic, a conclusion also reached by Ball and MMT (Joseph Ball, personal communication, 2007). These modifications buried earlier features that date as far back as the Middle Preclassic.

The 2007 research also lends support to the hypothesis that the East Plaza was a venue for a marketplace. One line of evidence is the distribution of goods by material type. A comparison of chert chipped stone debris with ceramics collected from shovel tests shows that the highest frequencies of ceramics and stone debris are found in different areas. Additionally, obsidian is predominately found in the northern sector of the East Plaza. These patterns are compatible with a separation of vendors by the type of goods they sold. However, the data derive from shovel tests represent only a small portion of the plaza space. Data from excavations of larger areas is needed to confirm or reject these provisional patterns.

We began horizontal excavations to understand artifact distributions in specific areas of the plaza and to uncover subsurface architectural features revealed through the remote sensing survey and subsequent shovel testing. The remote sensing survey, supervised by Bryan Haley of the University of Mississippi, covered an area of 11,200 m² and revealed several anomalies across the plaza. To test these anomalies we excavated 102 shovel tests distributed across the entire plaza area and then conducted larger excavations in three areas of the plaza where either the remote sensing or shovel test data indicated the existence of subsurface features.

In the southern sector of the plaza, we uncovered an area of 11 m² and what appear to be three very low platforms, represented by a dense 10 cm layer of small limestone cobbles, separated from each other by gaps of about 50 cm. Ceramics recovered from these excavations dated to the Preclassic and Late Classic periods. The small area exposed in these excavations and the fact that no platform was cleared in its entirety limits our ability to infer the form of these platforms, their function(s), or the types of activities that took place on and around them at this time.

The second area investigated was a remote sensing anomaly in the center of the plaza that was marked on the modern ground surface by an alignment of large limestone rocks. Our excavations showed the large stones to be separated from each other by gaps of 20-70 cm, and thus they do not form a continuous constructed wall. What this feature represents remains unclear, but it may have been used to direct the flow of traffic and demarcate space in the plaza.

The third area excavated in more detail was in the southwest corner of the plaza. Our work revealed the edge of a more deeply buried platform that was circular or apsidal in shape and was used in the Early Classic period.

Overall, the methods used during the 2007 season provided the data we needed to begin to assess the history and use of the East Plaza. The data in hand are consistent with our expectations for a marketplace, although such a conclusion remains quite tentative pending the results of work completed in the 2008 season.
The second major program of research in the 2007 season was the investigation of a block of settlement south of Buenavista’s epicenter (Figure 3). This study represents Meaghan Peuramaki-Brown’s dissertation research, which examines the role of group agency and changing household identities in the processes of decline and abandonment of Buenavista. It is the first step in the project’s larger goal of creating a contiguous block of mapped settlement between Xunantunich and Buenavista, connecting areas mapped by the Xunantunich Archaeological Project and the MMT project.

The settlement zone Peuramaki-Brown is studying measures roughly 850m x 600m, and it is located on an elevated portion of land situated between two streams approximately 200 m southwest of the Buenavista epicenter. Its geographic delimitation - the Mopan river to the west, streams to the north and south, and an ancient causeway to the east - suggests this zone could represent an ancient community. Most architectural groups in the area appear to be residential given their form and associated surface materials, and their variability suggests they represent a sample that cross-cuts Buenavista’s socio-economic diversity.

Investigations in this area began with three goals: (1) to conduct a reconnaissance of the area to relocate structures and other settlement traces mapped by the MMT; (2) to re-survey the area to identify additional settlement traces not on existing maps; and (3) to test mapped groups in order to obtain occupational and architectural information. Ball and Taschek (Ball 1993) tested settlement mounds in this area with summit test pits during the 1980s, but they did not expose the facings of platforms (Ball, personal communication, 1997). Given that architectural investment strongly correlates with household wealth (Smith 1987), we felt it was worth the effort to return to the groups mapped by MMT to place testpits that exposed substructure facings.

The initial reconnaissance of the area revealed some disparities with the MMT map which we believe are largely due to changing ground cover in the area. While cattle pasture covered the area in the 80s, today it is dominated by low secondary scrub, which burned in a wildfire in 2007, exposing the bare soil under the scrub. This permitted far greater visibility of ground surface, lower mound features, and non-mound settlement traces that would have been hidden under the pasture’s dense mat of grass.

In a systematic compass and pace survey, we identified and mapped 19 sites in the eastern part of the settlement zone (described in detail in Peuramaki-Brown 2007). These ranged from possible check-dams and terraces, to single mounds and small patio groups. Many of these low platforms and relatively inconspicuous settlement traces like stone lines and terraces are not found on maps made by MMT. Furthermore, it is clear that Classic architecture in this zone is often deeply buried, as we found house platforms that were two courses high that were identifiable only by a few lines of rocks protruding from the ground surface. These discoveries have allowed us to tailor our survey and testing strategies to the local conditions, and they led to the use of ground penetrating radar and conductivity survey in the following 2008 season. Our research suggests that the settlement density around Buenavista is somewhat greater than indicated on the MMT settlement maps. It is also apparent that tightly organized patio-focused groups do not seem to be the norm in this area, as has been noted elsewhere in the Mopan and Belize River valleys (Ford 1990; Ford and Fedick 1992; Neff et al. 1995; Willey et al. 1965).

In order to obtain information regarding the occupation chronology of these groups and activities that occurred there, we excavated test units in five of them. These were positioned to the side or back of all mounds in hope that such placement would sample habitation debris, as well as information concerning architectural form and technique. These test units present thought-provoking initial patterns that will prove useful in characterizing the decline of the center from the view of settlement residents. Several observations follow.

First, the residents of this area appear to represent diverse socio-economic strata, based on architectural investment and associated cultural material. This is an important consideration, given that mound heights rarely exceed 1 m. Second, occupation began in the Preclassic period, with peak occupation during
### Table 1: Archaeological Correlates of a Marketplace

<table>
<thead>
<tr>
<th>Marketplace Activity</th>
<th>Architectural Evidence</th>
<th>Artifact Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Exchange of goods</strong></td>
<td>Stalls represented by cobble surfaces or rocks and/or postholes outlining their edges.</td>
<td>Dense but discrete concentrations of macroartifacts and microartifacts of the same material type (e.g., lithics, ceramics).</td>
</tr>
</tbody>
</table>
| **Preparation of food to be sold to market goers** | Cooking pits  
Hearths                                                                                   | Discrete concentrations of artifacts and ecofacts like butchered and/or burned bones, charred plants, sherds from cooking vessels, and grinding stone fragments. |
| **Craft Production**                      | Cobble work surfaces. Production features like loom posts.                               | Debris from production steps involving lightweight materials and/or finishing stages of production. |
| **Storage of goods**                      | Storage pits                                                                            | Although their contents would likely have been removed during abandonment, they might contain stray finished utilitarian goods, raw materials and/or tools used in production. |
| **Maintenance**                           | Successive resurfacing of the plaza surface.  
Overlapping postholes from repair to structure walls.                                     | Concentrations of artifacts on the edges of the plaza space representing swept-up debris from the main activity area. |
| **Administration**                        | Special buildings or facilities adjacent to the vending area.                           | No specific artifact correlate.                                                   |
Archaeological Investigations at Buenavista, Cayo District

the Late Classic period. There is a substantial occupation in the early half of the Late Classic period, as is common in most residential zones of the Mopan valley, and a steep decline in population density entering the Terminal Classic period (see also Yaeger 2008). This is in line with Ball and Taschek’s (2004) findings within the site core concerning peak occupation and eventual decline. The chronologies also suggest that the descendents of first occupants of the area were the latest to vacate, suggestive of a sense of place and long-term investment in locale, as Yaeger (2000; also McAnany 1995) documented at San Lorenzo, near Xunantunich.

Peuramaki-Brown’s preliminary analyses of recovered artifacts indicate this settlement zone was the scene for a wide range of activities, including agricultural pursuits, food preparation and serving, craft activities, and ritually focused activities. The data also suggest an increase in craft production by households in the later Late Classic phase. Further analyses of these assemblages and additional assemblages from the 2008 season will allow for a more in-depth understanding of such activities and preliminary patterns, as will large horizontal excavations scheduled for 2009. Together they will permit a richer understanding of life in this zone of Buenavista’s settlement and help us understand its decline and that of the larger Buenavista polity.

Conclusions

MVAP’s research in Buenavista and its hinterland settlement zones is in its early stages, but the results to date have been interesting. Our investigation of the East Plaza has yielded evidence consistent with our hypothesis that it was a central marketplace that facilitated the procurement of necessary items by its polity’s residents. A central marketplace suggests a complex economy in line with more centralized models of Maya polities, and it would have created an opportunity for rulers and administrators to enrich themselves through taxes, rent, and fees. Further excavations and additional analysis, particularly the soil chemistry and microartifact analyses, promise to allow us to more fully evaluate this important aspect of the organization of the Buenavista polity.

Investigations in the Buenavista near-periphery hinterland suggest a complex tapestry of wealthy and poor residents engaged in a variety of different economic pursuits. The settlement history of the area investigated to date seems to follow Buenavista’s trajectory of growth and decline, although our sample size is limited. Upon completing our survey and testing of adjacent settlement zones and excavating a sample of the residential complexes found there, we will have a robust dataset for understanding in more detail how different members of the Buenavista polity contributed to the polity’s rise and fall, and how their fortunes changed with the larger ebb and flow of political and economic currents in the Mopan valley.

Acknowledgments

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Yaeger, Jason
2008 Charting the Collapse: Late Classic to

Maya elite rituals, commonly described ethnohistorically as occurring in the semi-exclusive contexts of temple summits, have long been an archaeological research concern. However, this exclusive focus on the temple locales has resulted in a neglect of research on public participation and its implications. In this regard, our excavations during the 2008 Valley of Peace Archaeology (VOPA) field season at Yalbac revealed significant evidence for extra-temple, or non-temple-summit, ritual activities – even within a site dominated by large temples. In this article, we explore these non-temple-summit ritual activities in regards to public participation and the construction of social memories and histories.

Introduction

Halbwachs’ (1992) concept of communal memory, as something that resides within each individual yet is shared among other members of a social group, has been re-invented in archaeology through practice theory. The concept of social memory is now understood as actively and continually (re)created through the practices of social actors, rather than something that is passively absorbed. Among the actions through which social memories are created, public ritual is generally considered to be an important, though not exclusive, means. As such, ritual practices that occurred in more inclusive spaces, such as plazas or platforms, rather than on temple-summits, would likely have been more effective in the creation and dissemination of broader historical memories.

We draw our discussion from Paul Connerton’s (1989) performatie understanding of social memory through his use of ‘incorporating’ – or bodily - practices and ‘inscribing’ – or writing - practices – though we also approach these concepts as not mutually exclusive (sensu Mills and Walker 2008). We discuss the construction, use, and commemoration of inclusive ritual spaces at the center of Yalbac as a means by which broad historical memories were created through inscription on the landscape, and recreated through incorporative practices.

Structure 2F Excavations

The original goal in 2005 of the 2 x 2 m test unit on the Structure 2F platform was to search for stelae (Figure 1). Excavations revealed several plaster floors superimposing and abutting the corner of a platform. We continued excavations in 2008. At c. 1.5 m below surface, we came upon what appeared to be a jumbled series of floors and platforms that at first did not make sense. As we excavated deeper, we saw in the southern profile wall a truncated wall and series of fills (Figure 2) indicating an empty chamber. This chamber had clearly been a focus of ritual commemorations based on the numerous associated floors (many burned) – activities that would have been largely public as they were located on the most accessible plaza at Yalbac.

Having reached sterile ground in a portion of the excavation pit, we were are able to devise a construction sequence from plaza-level through final platform level – a sequence that appears to have covered a span of nearly 1000 years (Jenny Creek phase of the Middle Preclassic through the Late Classic). Ceramics from the lowest excavated level (L12) of the 2001 Plaza 2 center 2 x 1 m test pit date between 100 B.C. and A.D. 250; however, the earliest dates from Plaza 2 range between 300 and 100 B.C. based on ceramics recovered from Level 9 (Conlon and Ehret 2002). The ceramics recovered from what was likely the lowest cultural level of the Str. 2F test pit date to the Jenny Creek phase of the Middle Preclassic. This may suggest that the Structure 2F area was either used for a period of time prior to the use of Plaza 2; Plaza 2 had been ‘cleaned’ and reconstructed/replastered at some point prior to or during the Barton Creek phase of the Late Preclassic; or the Plaza 2 test pit did not reach sterile ground.

The early use at the platform is unclear as the earliest deposits come from a 50 cm x 50
Figure 1. Yalbac with excavation units mentioned in text

Figure 2. Platform 2F east and south profile walls
cm test pit within the test pit. In this ‘mini test pit’, a dark-brown fill that yielded ceramics dating to c. 900-300 B.C superimposed the sterile level. A thin plaster floor superimposed this dark fill; this floor had some light burning, small pieces of charcoal and burnt limestone and also dated to the Jenny Creek phase. Upon this plaster floor a thin layer of dark brown compact fill was spread across the test pit – possibly in anticipation of or in preparation for the next major construction episodes.

It appears that large rocks were piled in the southern portion of the test pit with loose dark brown sandy-clayey fill between. Part of this boulder configuration appears to have included deliberately stacked boulders used as support foundations, which clearly can be seen in the south wall profile. The loose fill deposited between the support foundations contained ceramics from the Late Preclassic (300-100 B.C.) and Protoclassic (A.D .0-300). This time range appears to be due to a mixing of stratigraphic layers during excavations; in plan view, there was no apparent difference between fill from the southern ¼ of the unit, which was the boulder platform, and the northern ¼, which appears to have been added to the exterior of the boulder platform at a later date. Once this difference became apparent in the profiles, it would appear that the fill from the boulder platform in the southern portion of the unit dates to the Late Preclassic.

This boulder platform does not appear to have been the intended final product, but rather was meant to support a chamber which we believe may have been a possible burial crypt. What appears to have been one of the floors of the chamber (Stratum 140) contained ceramics that date to the Floral Park phase (A.D. 1-260). A series of plaster floors abutted the western side of this chamber (Strata 142, 138, 137, 112 and 111) that created a series of platforms that, over time, extended further to the north and possibly to the west (unknown as they extend beyond the test unit). The lowest platform floor (Stratum 142) contained ceramics dating to the late facet of the Jenny Creek phase (600-300 B.C.) – later than Stratum 114, which it superimposes. This is problematic and may suggest either: 1) there is an earlier portion of Stratum 114 which lies under Stratum 142 from which we did not recover dateable ceramics, while the ceramics we did recover were from a portion of Stratum 114 which was not superimposed by Stratum 142; 2) Stratum 142 ceramics are from the latest part of the Middle Preclassic and Stratum 114 ceramics are from the earliest part of the Late Preclassic; therefore both types of pottery were in use during the construction this platform; or 3) Stratum 142 was constructed using fill from an earlier deposit elsewhere. In any case, this portion of the structure, together with the chamber wall (Stratum 134 on Figure 2) yielded ceramics suggesting construction and use during the later part of the Middle Preclassic (600-300 B.C.), while the dark sandy fill to the east of the chamber (Stratum 113) have both Middle and Late Preclassic ceramics.

This chamber or crypt, which may have been at least 90-100 cm from floor to ceiling, likely originally contained one important person. The importance of its contents is inferred based on the series of floors or platforms that were constructed around the chamber. Beginning in the Protoclassic (A.D. 1-260), the Maya constructed a series of thin floors to the east of the chamber directly on the sandy fill containing Late Preclassic ceramics. These floors, beginning with an orange-brown soil – similar to that which had been used to ‘cleanse’ the floor under the boulder platform, were thin and many were burned. These included, from lower to higher, Strata 135, 131, 121/126, 122, and 120; each were 2-4 cm thick and at times discontinuous across the western side of the unit. Stratum 131 was a very even, smooth and heavily burned plaster floor, which included a circular, more-heavily-burned area north of the chamber area. The Maya placed a thin plaster floor directly on top of this stratum, which they also burned (Stratum 121/126). The northern portion of this floor was partially plastered over with another thin floor of clean plaster containing few ceramics and some fire cracked rock (Stratum 124), followed by another even, thin floor of smooth plaster – Stratum 120. Stratum 120 was sterile and had small drying cracks on its surface, suggesting little foot traffic on this floor and its brief usage. This entire
series of floors dated to the Protoclassic (A.D. 1-260), suggesting a rapid depositional sequence.

The Maya then capped these thin floors along the eastern side of the chamber with a series of thick additions and smaller floors, creating what appears to have been a shifting series of platforms. One such addition during the Protoclassic (Stratum 119) was a light-colored ballast consisting of small pebbles covered by a thin plaster floor. A similar floor, also dating to the Protoclassic, was added to the south of this stratum to create an even floor. On top of Stratum 119, another fairly thick ballast covered with thin plaster floor (Stratum 115) was added to create a small platform, which was then matched to the south by two thinner floors (Strata 107 and 106), creating a nearly level, larger platform. Finally, Stratum 115 was capped with Stratum 104, completing the smaller platform. Although no diagnostic artifacts were recovered from Strata 115 or 104, Stratum 107 produced Protoclassic dates, suggesting that Stratum 115 at least was a Protoclassic construction.

During this same time period, a series of floors were also constructed along the west side of the chamber, creating a series of progressively larger platforms, which were thicker than the floors to the east. This series began with Stratum 137, a floor that superimposed the late Middle Preclassic floor (Stratum 142), which may have formed the first floor of the chamber. Stratum 137 also dated to the Protoclassic and appears to have connected to a roughly stacked line of large boulders, which ran east-west across the northern part of the unit, creating a platform along the southwestern portion of the unit. This platform was superimposed by another plaster floor (Stratum 112) which appears to have originally reached as far north as Stratum 137 but was then extended 60 cm further north – reaching to another apparent line of stacked boulders and creating a larger platform. This extended floor was then capped by another floor (Stratum 111), which mirrored the extent of Stratum 112 and contained ceramics dating to the Protoclassic. Finally, a thicker platform (Stratum 109B) was added to Stratum 111 but did not extend as far north, creating a smaller platform or step. There were no diagnostic artifacts recovered from this step; however, subsequent evidence would also suggest a Protoclassic construction.

At some point during the Protoclassic period (A.D. 1-260), the Maya dug into the chamber and removed its contents. This re-opening is indicated by a truncation of the chamber wall as well as Strata 118, 107, and 106. The original contents of this chamber remain unknown, as the Maya completely emptied it, re-plastered the floor and burned it twice, and then refilled it with loose soil (Strata 128 and 132). One such re-plastered floor, Stratum 140, yielded Protoclassic ceramics, as did the loose fill which was mounded inside of the re-excavated crypt, clearly demonstrating that the re-excavation episode and removal of either the remains of an important figure or some important ritual object occurred during the Protoclassic.

The Maya cut through floors abutting the east side of the chamber, as well as the platforms abutting the west. After its contents were removed and loose fill was mounded inside, the Maya capped the re-excavated area with a thin plaster floor – ceramics from this floor date to the Late Preclassic, overlapping in time with the Protoclassic ceramics from the chamber fill. This area appears to have undergone a subsequent re-excavation along the east side of the chamber, including deposition of sterile soil and another thin plaster floor (Strata 152 and 147, respectively).

After this re-excavation process, the Maya continued re-visiting the chamber; construction continued with the addition of another series of platforms. A ballast and plaster floor (Stratum 105) was added at the same level as the top level of the small eastern platform in order to create a larger platform. This platform either covered the top of the re-excavated chamber or may have been truncated in a subsequent re-excavation into the area. The addition creating the larger platform contained ceramics dating to the Early Classic (A.D. 300-600). The Maya then capped it with another, extensive, addition of ballast and plaster floor (Stratum 103) that covered the smaller platform and the floors added to expand it, thus extending it to the north. This larger platform was constructed during the Late Classic (A.D. 600-850), as were two subsequent platform additions.
Melissa R. Baltus and Sarah E. Otten

This series of platforms appears to have possibly been cut through by another re-excavation into the chamber area.

To the west of the chamber area, fill and plaster floor were also added during the Late Classic (Spanish Lookout phase A.D. 700-900). This fill and floor created a slope up to the re-excavated chamber area, using a short wall of rocks to support this floor within the re-excavated area. In profile, this floor appears to have been the same as Stratum 102B.

The Maya added another series of platforms to the pre-existing structure after the Late Classic; since diagnostic artifacts were not recovered, dating these strata is not possible. A thick fill deposit, consisting of loose dark soil, was added to the northwest of these platforms to level out the area and support what may have been a ‘flagstone’ level. This consisted of a number of flat rectangular rocks and boulders that extended from the area over the chamber to the west and north. Two final platforms were added to the east side, possibly at the same time as the latest abuts the ‘flagstone’ level.

The construction of the platforms built after the first re-excavation episode, appears to have occurred at longer time intervals than earlier additions to this structure. Floor and platform constructions at and around the chamber during its use, as well as the initial re-excavation of the chamber, all occurred in within the 260 years of the Protoclassic. After the initial re-excavation of the chamber and the removal of its contents, construction activity occurred over the 600-year range of the Early and Late Classic. Perhaps the chamber’s contents had been an important focus of public and communal memory/history – one that remained important enough to continue commemorating, but which was no longer physically commemorated on a regular basis.

Structure 3C Excavations

We focused our efforts at Structure 3C because of its size (7 x 7 m) and location on a semi-restricted plaza between two large temples as a possible priest’s house. However, it seems more likely that Structure 3C functioned as a public ritual space, indicated by the unusual assortment of artifacts including two cached vessels, a burial, and additions to the west side of the structure, and several burned plaster floors that the Maya had cut through on the east side of the structure.

Structure 3C sits betwixt Temples 3D and 3B oriented 20° off of north with the front and back wall oriented east to west. Its front faces the interior of the semi-restricted Plaza 3, while the east side is relatively aligned with the west edge of Temple 3D. This structure is easily visible from the plaza, from the tops of all Plaza 3 temples, as well as from behind below the raised plaza. It is a rectangular building with a central staircase (Stratum 108) and a staircase and dais on the west side (Stratum 104, 103, 122) (Figure 3). Its east side had been cut through at least three times by the Maya, as evidenced by the exposed partial plaster floors and burned surfaces. The lower floor was intact and expands past the east wall to the probable exterior of the structure. The north side of the structure sat on the edge of the raised plaza, making it difficult to locate the back wall. The lack of cut limestone blocks forming the back wall could be due to the blocks falling off the backside.

The front (south side) of Structure 3C consisted of a three-course cut stone staircase (108) with a later circular platform added to the summit of the stairs (122). We also found a concentration of sherds near the stairs on the east side that largely consisted of large jars, bowls, and serving vessels dating to the Late Classic. The vessels were broken and presumably part of a termination ritual, although no burning was obvious. Two sharp angled large jar sherds with fingernail impressions around the shoulder, one with red slip and one with no slip, were recovered on either side of the central stair (possibly a McRae Impressed). It appears that the Maya placed the one sherd each on either side of the central stair, and another one on top of the northeast corner of the building.

A cache was uncovered directly at the base of the front central staircase (Stratum 108A). It consisted of a complete inverted Yalbac Smudged Brown: Yalbac Variety (Spanish Lookout) bowl with red slip interior, with a perfectly circular 8 cm diameter base. Small chert flakes, one obsidian blade, burned bone, and a turtle neck bone were found.
associated with the vessel. One chert flake and a flaked piece of limestone were located in the interior of the bowl. The vessel was in pristine condition without a kill hole, suggesting that it was made specifically for the purpose of caching. Associated sherds included a painted vase fragment with a hieroglyph. No other portion of the vase was recovered suggesting that the Maya curated this particular piece for a specific ritual purpose. However, the hieroglyph is badly eroded and indecipherable.

Another inverted vessel was found on the north side of the building near the center axis in line with the cache 108A. This second vessel, a Kaway Impressed bowl with a red slipped interior, was associated with a burial. The skull was located 20-25 cm to the east of the vessel and was associated with a small red and blue chert flake pushed up against the exterior of the cranium. The skull was in very poor condition and crumbled to the touch. There was a small circular superficial puncture mark on the top of the skull, probably post mortem. The skull was close to the surface and only covered by a few centimeters of soil making it susceptible to post mortem damage.

The burial was associated with a limestone cap that at one point probably plastered entirely over the now partially exposed burial. Two large limestone blocks were imbedded in the cap and were located directly west of the skull. The Kaway Impressed vessel was located directly north of these limestone blocks. With the burial being so close to the surface, it may have served as the final termination episode, however the burial was only partially excavated due to time constraints and none of the evidence was conclusive.

On the west side of the structure, the Maya added a stepped dais and circular stair (Stratum 103, 104) to the exterior of the west wall along with a large, later possible platform (Stratum 132). This platform likely was a later addition to the structure, but due to the lack of diagnostic artifacts, we could not determine a secure date. However, the lack of cut stone and the use of large rough boulders to build this addition suggest that it was added later than the
dais or circular stair which was constructed using faced and cut stone limestone blocks.

The east side of the structure was cut through by the Maya multiple times to reveal three separate floor and ballast sequences with multiple burned areas. Few artifacts were found directly upon any of these floors. The Maya excavated through floor 105 in order to reach floor 107 evidenced by the fact that it was not dug through and only a specific part of floor 105 was excavated through to reach floor 107. No artifacts were found associated with floor 107, suggesting that the Maya removed whatever was present, burned the area and then refilled it. Floor 105 also has a concentrated burned section near the area that was excavated through to reach floor 107. Burned sherds were recovered on its surface and from the fill above, not none were diagnostic enough for dating purposes.

Floor 115 was the upper most floor with two burned sections, one on the north east end of the floor, the other under the rocky limestone cap (Stratum 121) in the north central area of the floor. Floor 115 presumably continues under the limestone cap that tops the burial at the north, central end of the structure. The clay fill (Stratum 114) between floor 105 and floor 115 dates to the Late Classic. The sequences of burning, excavating into the floors, and burning again suggest that the Maya returned to these specific areas at a particular, possibly important point in time to retrieve or remember some essential part of their past.

Underneath the front staircase was a possible molded and plastered bench (Stratum 139, 135), which demonstrates that the Maya had been building in this spot at least since the Late Classic. However, time constraints did not allow us to excavate further. Orange paste and volcanic ash sherds were recovered from this context suggesting a long occupation throughout the Late Classic. The possible molded bench is oriented east-west and sits atop the lowest plaster floor exposed during excavations (Stratum 134). The Maya appeared to have excavated through the bench to this floor. The bench has two distinct phases resulting in a stepped façade; however, the upper level was dug through in antiquity presumably before constructing the front, central staircase.

The overall artifact assemblage from Structure 3C consisted of sherds of large, thick walled storage jars and serving vessels (some over 2 cm thick), and a few finely made and painted vase sherds, large bowl sherds, and fragments from plates. Mano and metate fragments were also recovered from topsoil and back dirt contexts, but were not directly associated with any specific context. Nephronaias and ridged and smoothed jute shells were commonplace among the assorted jumble of cut and uncut limestone blocks, fill, and plaster floors. Red laterite, pink quartzite and blue chert cobbles were also found consistently throughout the units along with chert blades, cores and flakes. Fire cracked rock was also recovered. Complete and incomplete obsidian blades were collected from topsoil and the assortment of material associated with the central stair cache. One serpentine celt was also recovered from the topsoil.

Overall, Structure 3C appears to have served as a ritual space more accessible to the public, visually and physically, than the surrounding temples. This building may have functioned as a place of memory for Maya priests or as a public space to gather or to bring and store large vessels full of organic material or offerings. This place may have functioned as a place of remembrance, revisited by both commoners and elites who deemed this structure relevant to public or private ritual. Importantly, this space is part of non-summit temple ritual that is made more available to the commoners who gathered at Yalbac.

Discussion and Conclusions

For the Maya, rituals of life, death, and renewal appear to have been performed by commoners, elites, and royals alike – at least in practices of ancestor veneration, dedication, and termination rites (Lucero 2008). Iconography and inscription indicate that it was atop the temple that priests and rulers performed rites for public or private view. Archaeologists have explored Maya ritual as practices of memory-making, though often focusing on either commoner or elite/royal contexts separately. In our 2008 field excavations at Yalbac, we attempted to investigate memory creation in non-temple summit ritual spaces –
Non Temple-Summit Rituals at Yalbac

spaces that would have been more inclusive and may have been viewed by commoners and elites/royals alike.

While the ritual spaces we explored were no doubt related to, and may have even referenced, the sizeable temples surrounding them, they would have been more widely accessible to a greater number of individuals of varying status – the platform at Structure 2F creating a fairly low stage facing the most inclusive plaza at Yalbac, and Structure 3C doing the same facing the semi-restricted plaza between two larger temples. It was through ritual practices in these places that memory was embodied, enacted and recreated, forging broader social histories – ones which may have included commoners, elite and royals alike. Perhaps it was in these spaces where emerging elites used “traditional” household practices of ancestor veneration, termination and dedication to “promote political agendas” (Lucero 2008:190), thereby creating new political histories.

For Structure 3C, memory was enacted in the building, deconstructing, caching and burying of a possible important person in a presumably public ritual space between two large temples. This space was accessible from the plaza and could have easily been viewed from the temple tops and the area below. The uncharacteristic assortment of artifacts and the addition and removal of stairs, floors, and platforms suggests that Structure 3C was important in the everyday ritual and practice of remembering of the people of Yalbac during the Late and Terminal Classic periods.

When the Maya excavated and burned three plaster floors, and perhaps removed objects, they were returning to this space to remember some important past. The assortment of artifacts, including massive jar sherds, red and blue stones, obsidian blades and inverted cached vessels, relates to the history of this structure and the activities that take place between two traditional temple-summit ritual spaces (Temples 3C and 3D). The caching of the two vessels, with the burial and in front of the stairs, suggests episodes of commemoration to the structure itself or in direct relationship to the act of interring an important individual.

Social memories are constructed during the interactions between ritual participants, commoner or elite, and the objects they are utilizing at that particular moment in space and time (Mills 2008). Mills suggests that part of the act of commemorating or terminating a space with a cache of objects or a burial is also an act of forgetting. It is in the act of placing these objects out of sight during ritual moments that allows people to remember their history. At Structure 3C this performance of caching incorporates the public and allows them to remember that particular place while inscribing onto the landscape a visual marker of a past history. The practice of caching functioned as the physical embodiment of memory onto the space that was accessible by both elite and commoners at the Maya center of Yalbac.

The Structure 2F platform, on the other hand, provides us with a means for understanding how the Maya inscribed social histories onto the landscape through the creation of place, simultaneously (re)creating and incorporating these memories through commemorative practices. The construction of a chamber, presumably for the interment of some important figure – perhaps an early leader at Yalbac – created an important space. The importance of this chamber, and the ancestor figure within, is commemorated through the construction of plaster floors and platforms around this chamber – practices through which the history of that place would have been incorporated and embodied.

The construction of the chamber at Structure 2F appears to have occurred during the late facet of the Jenny Creek phase during the Late Preclassic (600-300 B.C.). It was not until perhaps 300 years later, during the Protoclassic, that the most frequent commemorative practices surrounding the chamber, including the layering and burning of thin plaster floors, occurred. It was also during this period that the Maya re-excavated the chamber and removed its contents—perhaps this period was one of social or political change in which the ancestor interred in the chamber was ‘reanimated’, and perhaps used in the creation of a new social history. Given the location of the chamber, these activities would have been largely public,
including not just royals or elite, but likely including commoners as well.

Commemorative constructions did not end with the removal of the chamber’s contents, but continued with a series of platforms built over and around the location of the chamber. These building episodes continued with varying rapidity for at least another 600 years, indicating a continued historical importance of this location for the community of Yalbac – perhaps a history that was enacted during the addition of each new platform.

The recent excavations at Yalbac have provided a unique view of non-temple summit rituals and how they may have been an important component in the creation and dissemination of social histories. Through the use of rituals that were similar in practice, though not necessarily in material, among commoners, elite and royals, social histories may have been created and performed in these inclusive spaces. The findings from Structures 2F and 3C, though preliminary, demonstrate the importance of considering spaces and contexts in which social memories are created for broader portions of the population through which communities and their histories were constructed.

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The Programme for Belize Archaeological Project (PfBAP) remains an interdisciplinary and collaborative research program with a regional approach. The 2007 season marked the addition of the prehistoric Maya site of La Milpa as a significant effort among the PfBAP’s research objectives. La Milpa will hold a prominent research focus for at least five seasons of investigations. Among the last season’s research at La Milpa were investigations near the South Acropolis, significant excavations in Plaza B, and studies at three locations in Plaza A. Of great importance to understand La Milpa in the regional context are continuing studies in surrounding areas as represented by efforts at Medicinal Trail, the escarpment zones, and other Maya centers including Say Ka and Maax Na. Specialized studies of flora and fauna are also of relevance within the PfBAP as they provide a particular insight concerning economic activity as well as diet indicators.

Introduction and Background

The Programme for Belize Archaeological Project (PfBAP) has continued to conduct archaeological investigations in northwest Belize with the intent of producing an integrated view of the history and cultural evolution of the region. This region, also known as the Rio Bravo Conservation and Management Area (RBCMA) includes urban Maya centers as well as towns, villages, and hamlets (Figure 1). Early historic locations are also known near Hill Bank and at Qualm Hill. The Hill Bank area has a historic site known as Holotunich and was the subject of investigations several seasons ago.

The primary focus of the PfBAP is the prehistoric Maya component. A desired result of the research effort is an understanding of the structure, functions, and development at least for this region of the Maya area. An important part of our integrated research design is a cultural-ecological perspective that may provide information on ancient agriculture as well as land modifications.

The Rio Bravo area is at various portions a very rugged climb onto the escarpments that define the region. Reaching heights of several hundred meters above sea level, northwest Belize is marked by features that range from haystack knolls to very rough escarpment faces. The region was an area densely populated by the prehistoric Maya in part because of available resources. The significant forested areas observed today were likely open regions utilized and exploited by the ancient Maya.

This paper briefly reviews the PfBAP research methodology. Research summaries from various areas of the program are summarized from the 2007 field season with some mention of data from the 2008 season. A significant focus from the last two seasons has been an effort at La Milpa with continuing research within the La Milpa realm, along with the regional research. La Milpa, the third largest ruin in Belize, was added to the PfBAP’s research focus in 2007.

Research Methods

Survey techniques include utilizing mapped roadways, logging paths, and oil exploration transects as the starting points for surveys and mapping grids. Reconnaissance survey from known points is also utilized as a strategy. The sampling strategy is a version of site-based procedures, but operates on a larger scale.

The broad research goals of the PfBAP, as reported elsewhere (Valdez 2007), remain two-fold: 1) to define regional patterns of cultural development and decline within the study area as reflected in the individual histories of cities, towns, and smaller sites, and 2) to use these patterns to provide insight into several major research problems in lowland Maya archaeology. The regional approach is a valuable strategy for investigating processual and culture-historical questions because it allows us to see Maya urban centers and their supporting infrastructure in a more comprehensive fashion than has traditionally been possible with a single-site focus.
Investigations at La Milpa and Programme for Belize Archaeological Project


Regional Research

Areas outside of the La Milpa realm include the 2007 investigations along the Rio Bravo Escarpment by Walling. Numerous terrace modifications as well as a large ball court, which is unusual because it is not associated with an urban area, have been investigated. The many water management features, possible agricultural activities, as well as ritual interactions, as indicated by the ball court, make this area of the PfBAP research particularly interesting and valuable.

Hageman’s (2007) excavations for investigating consumption of flora and fauna have provided data that is somewhat perplexing. While the flora are extensive and in some cases indicative of feasting, the fauna data are nearly absent. The latter is particularly disturbing as we seem to have no indication of meat consumption in the excavation thus far completed. Perhaps testing farther away from structures or the possibility of the extra-processing of bone, as well as preservation conditions, may help explain the paucity of faunal remains to date.

King and Shaw (2007) have remained an active research team at Maax Na, just south of La Milpa. Excavations have continued at various locations including the central ball court. Additionally, survey has demonstrated a very dense population in the surrounding countryside.

The La Milpa Realm

The “La Milpa Realm” includes all research within the site of La Milpa as well as the areas surrounding La Milpa that may have been (or considered to be) part of the site’s support zone. This section of the paper provides commentary on the Medicinal Trail Site, La Milpa East, and excavations at the site center.

Medicinal Trail Site

The Medicinal Trail Site has been the focus of excavations for several seasons. Among the research conducted in the 2007 and 2008 seasons were excavations at Group A and B. Excavations at the Medicinal Trail Site have centered on identifying the occupation history, site function, and the socio-economic and ritual relationship between its occupants and those in the rest of the community (Grazioso Sierra 2007; Hyde 2005; Hyde et al. 2006; Hyde and Atwood 2007; Hyde and Martinez 2007; Hyde and Valdez 2007).
The Medicinal Trail Site is a “hinterland” community comprising a few formal courtyard groups, numerous informal clusters of mounds, and multiple landscape modifications/features including terraces, depressions, chich structures, and linear features. Located approximately 6 to 8 km east of the major site of La Milpa, the Medicinal trail Site is one of numerous sites that form the La Milpa realm.

Medicinal Trail dates from the early Late Preclassic through the Terminal Classic. There is some indication of Middle Preclassic presence, but this aspect remains very weakly represented. The presence of a Late Preclassic round structure and platform with associated caches imply the importance of the ceremonial function of this locality. The 2007 and 2008 seasons included a series of 1 x 1 meter test pits to establish a chronology of the courtyard at Group B of the Medicinal Trail Site. Group B consists of four structures placed to form a shared courtyard. As with Group A, this group seems to have Preclassic and Late Classic occupations.

La Milpa East

The La Milpa Archaeological Project (LaMAP), directed by Norman Hammond and Gair Toutellot, discovered and mapped La Milpa East in the late 1990s (Tourtellot et al. 2003). La Milpa East is found on the summit of a steep hill and its plaza is surrounded by three range structures and a temple (in the east). Ceramics recovered indicate a long occupation or use history from at least the Early Classic through the Terminal Classic (Weiss-Krejci 2007). La Milpa East serves as an example of yet another “hinterland” group that serves the La Milpa realm.

La Milpa (Site Center)

While LaMAP and associated projects produced significant data concerning La Milpa and its environs (Hammond and Tourtellot 2004; Sagebiel 2005; Scarborough et al. 1995; Tourtellot et al. 2003), the Program for Belize Archaeological Project (PfBAP) plans to build upon LaMAP’s research through extensive excavations and continuing survey efforts. One significant research effort has been at the acropolis overlooking Plaza A. The monumentality of the structures at this court group with the limited access and the artificial rise on which the court group is located, suggests that this was an elite complex. The acropolis is currently known to date from the Late Preclassic through the Late Classic. Excavations into the plaza area of the acropolis have revealed Late Preclassic constructions including a chultun that was abandoned and sealed during the Late Preclassic. This finding is from our 2008 season and is still under study.

As part of the 2007 PfBAP season, Brett A. Houk of Texas Tech University conducted preliminary excavations in the Plaza B area of La Milpa, Belize (Figure 2). Plaza B is the second largest plaza at La Milpa, but is less than half the size of the Great Plaza. The plaza is surrounded by long range structures and Structure 21, the fifth largest pyramid at La Milpa. South of Plaza B are two small and enclosed courtyards, and to the southwest is Plaza C.

Little work had been done in the Plaza B area prior to 2007; therefore, our expectations were based on rather limited data. Hammond and Tourtellot (2004:292) had concluded that the surface of the plaza was “a sloping natural land surface lacking floor construction” and that the large pyramid, Structure 21, was never completed, having apparently been abandoned during construction. Based on these observations, a key hypothesis guiding the first season of work was that the southern plazas were built in a single Late Classic construction episode and perhaps unfinished. The initial field season proved that hypothesis to be incorrect (Houk 2007).

The 2007 Texas Tech investigations discovered two previously unrecorded monuments and two caches indicating a program of ritual deposits was incorporated into the plan of Plaza B. Cache B-1, beneath a small altar in the middle of the plaza, was an extensive and complex cache deposit (Figure 3). The total artifact assemblage included nearly 5,000 pieces of debitage, five ceramic vessels, and a variety of greenstone beads, pieces of shell or coral, and other artifacts. Most notable among the ceramics was a jar-and-lid pair with a mat design incised on the lid (Figure 4).
Pending radiometric dates, we believe this deposit is Tepeu 2-3 in age. Cache B-2, which was only partially excavated in 2007, was found at the base of the stairs to Structure 22. The cache included obsidian blades, marine shells, coral, one obsidian eccentric biface, one chert eccentric biface, two Spondylus shell pendant fragments, shell beads, jade beads, and four unidentified spines. Several of the shell fragments are incised, one with an image of the Maize God (Houk et al. 2008).

To test the hypothesis that the structures in and around Plaza B may not have been completed, other excavations focused on
defining the condition and nature of the final architectural phases of several buildings. Our investigations determined that in general the terminal architecture is very poorly preserved and often difficult to recognize; we were unable to determine if Structure 21, the large pyramid, was ever finished or not given time constraints in 2007. However, the excavations did determine that the smaller range structures had not only been finished, but had undergone one or more remodeling episodes during the Late Classic. Most importantly, in 2008, we discovered a buried Late Preclassic building beneath the Late Classic Structure 27 in Courtyard D.

Therefore, our work has shown that much of the initial observation about the construction history of La Milpa’s southern groups needs to be examined more carefully. Our limited excavations determined that the range structures surrounding Plaza B were in fact finished and had been remodeled one or more times during the Late Classic. Furthermore, as our 2008 work has shown, there is evidence that the visible architecture is concealing older buildings from the Late Preclassic period. Rather than being constructed late and perhaps not finished, Plaza B now appears to have had a much longer history of occupation. It is our belief that the large pyramid, which will be the subject of excavations in 2009, likely has a significant Late Preclassic temple buried beneath the Late Classic rubble veneer.

**Summary Comment**

The number of large sites and their relative proximity has remained an intriguing discovery since the start of the PfBAP. A large support population is indicated by the number of large and small sites, but the significance of the dense population is unappreciated until one considers the requirements of basic societal needs such as food, housing, support, protection, etc.

A related significant issue is that of having large centers in close proximity to each other, many are only 8 to 12 km apart. The PfBAP is forced to contend with the issue of what did the elites control and how did they maintain their polities? More than 15 years of survey and mapping makes it very clear that all available space around these centers was utilized in some capacity, extensively and/or intensively.

Issues of livelihood in the prehistoric northwest Belize remain a significant research concern for reconstructing ancient Maya behavior. Smaller sites and rural settlements provide some of the best insights at the integrated nature of prehistoric Maya life. The northwestern Belize area is a highly complex system of microenvironments providing varied resources that lead to broad settlement (Scarborough et al. 2003). Some locations are sources of chert used for making stone tools while other areas were ideal for specialized agricultural activity such as hillside for terracing. Some areas, although settled and active, have not readily revealed the primary focus of activity.

New (for PfBAP) procedures for analysis are being applied including geophysical applications to understand what’s below ground without, or at least before, excavating. Other specialized studies include botanical and faunal analyses that may help to contextualize both the environment and the exploitation by the Maya of northwest Belize.

Social archaeology has also been investigated by the PfBAP (see Trachman 2007). Research concerning gender and identity are vital if we are to understand the significance of ancient Maya social order. How does society reproduce itself, and what are the various roles
undertaken in the process? These new questions require new methods of analysis as well as the consideration of differing models for interpretation.

Research by the PfBAP has provided an opportunity to view a topographically different area as compared to much of northern Belize. Intensification of production in northwest Belize is obvious in terms of some channelized fields as on the lower parts of certain rivers (including Irish Creek), as well as the development of slope terracing on numerous hillsides and knolls. Remarkable has been the discovery (or realization) of the density of population in this northwestern Belize region, which was far greater than that found today, indicating the high potential of productivity for the region.

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24 PRECLASSIC POWER SHIFTS AND POSTCLASSIC VISITATIONS: THE HINTERLAND ELITE AT THE MEDICINAL TRAIL SITE, NORTHWESTERN BELIZE

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In this paper we test models related to pioneering households, ancestor veneration and pilgrimages using data from two formal courtyards of the Medicinal Trail Site, a dispersed hinterland community east of La Milpa. We propose that the inhabitants at these two formal groups represent Maya commoners whose economic and socio-political status is elevated above most of the community’s inhabitants providing them with limited social power. We believe community power was held first by Group A during the Late Preclassic and later shifted to Group B, where it was held until abandonment. Evidence for Postclassic pilgrimages at Group B substantiates the later importance of this group. Studies have demonstrated that good agricultural land is limited in the Maya Lowlands, and pioneering households that settled early on this prime land had a basis for wealth that those who arrived later could not replicate. The monopolization of this land lead to inequality and was maintained through the construction of ancestral shrines. Pilgrimage theories have proposed that these journeys combined veneration with a social means to transcendence and temporary relief from social structure. Postclassic pilgrimages are of particular interest in light of the collapse of the southern and central lowlands around AD 900.

Introduction

In this paper we present data from two formal courtyard groups of the Medicinal Trail Site, a dispersed Maya hinterland community east of La Milpa, in northwestern Belize and for the interpretation of this data we use models related to pioneering households, ancestor veneration and pilgrimages.

Numerous studies have demonstrated that good agricultural land is limited in the Maya Lowlands (Brokaw and Mallory 1989; Furley 1974; Furley and Newey 1979; Gentry 1982), and pioneering households that settled early on this prime land had a basis for wealth that those who arrived later could not replicate (Fedick and Ford 1990; McAnany 1995). The monopolization of this land leads to inequality and is maintained by these pioneering populations through the construction of ancestral shrines (McAnany 1995). Pilgrimage theories have proposed that visitations to abandoned sacred places provided temporary relief from social instability through the veneration of ancestors (Hammond and Bobo 1998). We propose that the inhabitants at these two formal groups represent Hinterland Elites, Maya commoners whose economic and socio-political status is elevated above most of the community’s inhabitants, providing them with limited social power. Specifically, we will argue that community power at Medicinal Trail was held first by the inhabitants of Group A during the Late Preclassic and later shifted to Group B, where it was held until abandonment at the end of the Terminal Classic.

Site Background

The Medicinal Trail Site is a dispersed hinterland community consisting of a few formal courtyard groups, numerous informal clusters of mounds and multiple landscape modifications such as terraces, depressions, and linear features presumed to be related to agricultural intensification and water management (Hyde 2005; Hyde et al 2006; Hyde and Valdez 2007). The site is situated in the La Lucha uplands approximately 6 to 8 km east of the major site of La Milpa, and best characterized as a terraced community (Scarborough and Valdez 2003) due to the extensive terraces, linear berms and water management features located throughout the settlement. Based on survey and excavation data from the eastern periphery of La Milpa, it is clear that there is considerable variability in settlement size and occupation history throughout the community (Everson 2003; Farnand 2002; Ferries 2002; Hughbanks 2005; Hyde and Valdez 2007; Jesperson-Tovar 1996; Lewis 1993, 1995; Muñoz 1997; Robichaux 2007). The two largest formal courtyards, Group A and Group B, have been investigated at the Medicinal Trail site, as well as a number of smaller informal groups and terraces (Figure 1).
Theoretical Ideas

This research builds off of, and contributes to, three bodies of archaeological research that are relevant to understanding the role of the occupants at Medicinal Trail’s Group’s A and B in the hinterland community. These topics include: 1) pioneering households and agricultural potential; 2) ancestor veneration; and 3) pilgrimage models.

Pioneering Household

Studies have shown that the initial occupation of the Maya lowlands appears to have occurred where the agricultural potential was greatest and as populations grew and expanded less desirable microenvironments were settled (Fedick and Ford 1990; Scarborough and Valdez 2003). McAnany (1995) explains that one of the ways to control access to land is to be the initial occupant of it
and thus claim it. In this way the monopolization of a limited amount of prime agricultural land allowed these households to exchange agricultural surplus for items of wealth, leading to inequality. The pioneers maintain their claim through the construction of ancestral shrines which can double as ceremonial structures utilized for household as well as community wide ceremonies, leading to the development of hinterland elites.

This theoretical model leads to a number of archaeological expectations. These settlements would have a long occupation history predating much of the settlement in the community. There should be evidence for intensive agricultural production related to high agricultural potential. Indicators for the increased wealth and social status of these pioneering settlers include the presence of public architecture, labor intensive structures, preferential location of settlement such as on ridge tops, and the presence of exotic items like jade, obsidian, granite, sea shell and coral (Marcus 2004).

Ancestor Veneration

Among the many ritual practices the Maya engaged in was ancestor veneration (McAnany 1995; Tozzer 1941; Welsh 1988;), the remembrance of individual and named ancestors (Fortes 1987; McAnany 1998), which allowed the living direct benefits in the form of status and rights due to heritage (Humphreys 1981; McAnany 1995). The Maya incorporated the ancestors into their built environment by physically including them into the architecture as burials and using their likenesses in various art forms.

McAnany (1995; 1998) states that ancestor veneration defined residence and bolstered political importance of sites and that it “validated political power, status, and access to resources (1998:272).” Veneration of the ancestors builds a connection to the past (Pearson 1993; McAnany 1998) which facilitated land claims and use, allowing the descendants to use the past to legitimize their claim to valuable and limited resources (Freedman 1966; McAnany 1998).

Archaeological correlates for ancestor veneration include temple structures that contain a burial, or multiple burials, with indications of significant care in their interment, time and resource investment, and may include offerings or grave goods of luxury and trade items.

Pilgrimage Models

The third theoretical idea we employ in this study is the use of pilgrimages, a social process or an act of visiting a sacred place for practical and/or spiritual purposes, combining veneration with a social means to transcendence and temporary relief from social structure (Hammond and Bobo 1994; McAnany 1993; Turner 1974). There are many examples of Maya pilgrimage such as to caves during the Classic Period (Brady 2003), and journeys to abandoned sites (e.g. La Milpa) in the Postclassic (Hammond and Bobo 1994; McAnany 1995).

Postclassic pilgrimages are of particular interest in light of the collapse of the southern and central lowlands, a time of complete social upheaval with migration away from the large site centers and centralization that organized the Maya hierarchy. At the time of abandonment, ancestors were left in their tombs at the large ceremonial site centers as well as in the hinterland communities, necessitating pilgrimages to both connect with and venerate them. After the abandonment there was a break from the behavioral tradition of exhuming ancestors at times of migration to be interred later within a new residence. Pilgrimages served as a reminder of old ceremonial relationships and contributed to the preservation of lineages among a widely scattered population. Even if the details of a sacred locale were long forgotten, the pilgrims were still able to associate it with the power from the past and use the long abandoned site as a hopeful conduit of aid for the instability of the present (Hammond and Bobo 1994).

Evidence of pilgrimage would include offerings, such as broken ceramics (pots, censers, or plates), at the base of temple structures, particularly along the front face (McAnany 1995; Walker 1990), and since pilgrimages generally originate from other locales, ceramics of non-local manufacture also would be expected.
Investigations at the Medicinal Trail Site, Northwestern Belize

Group A

Group A is the largest group so far identified at the Medicinal Trail site and consists of six mounds distributed around three contiguous courtyards aligned on a north-south axis and one additional mound to the north, all situated on top of a ridge (Figure 1). Four depressions have been identified in proximity to Group A, and there are many terrace features extending across the slopes moving away from the group. The focus of this paper is on the Northern Courtyard.

On the surface, the Northern Courtyard consists of a mound on the west, north, and east sides around a shared space, while the south side is bounded by the Middle Courtyard. Although Late Preclassic remains have been recorded in nearly all areas of Group A, there are two significant construction phases below the plaza in the center of the Northern Courtyard that date to this period. The earlier Late Preclassic phase consists of a round platform and a small T-shaped platform, both of which are resting on the same plaster floor.

Located in the south center portion of the Northern Courtyard the Late Preclassic round structure, designated A-Sub-1, is approximately 3.5 m in diameter, 40 cm tall, has a retaining wall consisting of three to four courses of cut stone masonry that taper slightly inward as it moves from bottom to top (Figure 2). No postholes, plaster surface, or masonry architecture was found on top suggesting that the platform was exposed and similar to those found at Cahal Pech (Aimers et al 2000), Xunantunich (Yaeger 1996), and El Pilar (Ford et al. 1995). Recovered inside the platform, resting on bedrock was Burial 1. This primary burial contained a young adult, aged 20-30 years, sex unknown, with a small vessel placed over the head, another loosely flexed on their left side, head to the east and hips to the west, with the body wrapping around a second vessel. The recovered bones and ceramic vessels were very fragmented and poorly preserved.

Approximately 50 cm south of A-Sub-1 is the T-shaped platform, designated A-Sub-2 (Figure 3). It is slightly less than 1.5 meters to a side and approximately 50 cm tall. In some places the plaster floor rolls up partially over the base of the square platform, where remnants of red pigment were preserved. The platform is approximately 30 cm longer north-south on the eastern half, giving the platform a “T-Shape.” Based on internal excavations the western half appears to have been constructed as a complete rectangle and the eastern side was attached to it at a later date.

On the east side of A-Sub-2, Burial 2 was uncovered. This individual was placed in a flexed position, the head to the south and facing west towards the platform. The head rested inside a Late Preclassic Sierra Red vessel and a near identical ceramic vessel was placed upside down over the head. Osteological analysis is ongoing but preliminarily, the individual has been determined to have been an adult.

To the west of A-Sub-2, off the southwest corner were three caches (Caches 2-4), each consisting of lip-to-lip Sierra Red vessels, placed in a triangular arrangement, each slightly overlapping one another. No artifacts were recovered from within the caches although archaeological matrix samples were collected and analysis is ongoing.

South of Caches 2-4, Burial 3 was uncovered, a cist burial, placed directly on the plaster floor, face down, head to the north, and legs crossed in a pattern similar to those found in the Belize Valley (Figure 4). At least four incisors were recovered with corner notched dental modification, Type B-4 in the Romero typology. Artifacts associated with Burial 3 include a marine shell placed next to the head; modified shell, most likely Spondylus shell, to the sides of the skull which may have been part of a necklace or ear spools, and a biface fragment with some chert flakes next to the left side of the body. Based on
Figure 2. Photo of A-Sub-1, Group A, Medicinal Trail Site

Figure 3. Photo of A-Sub-2, the T-Shaped structure, Group A

Figure 4. Photo of Burial 3, Group A, Medicinal Trail Site
dental eruption sequences, this individual was estimated to be a juvenile, aged 14-20.
At some point later in the Late Preclassic all of these features were covered over by a plaster floor, Floor 2, which covered an area of at least 20 square meters in the center of the courtyard and extended underneath Structures A-1 and A-3. At least two intentional intrusions were made through the floor, both associated with the small T-shaped platform. Holes were punched through the floor over the northwest corner and at the center of the southern edge of A-Sub-2, and two caches were placed in each intrusion: Cache 1 consisted of two nested vessels, the other, Cache 5, lip-to-lip. The location of the Cache 5 corresponds with the southeast corner of the originally constructed rectangular platform. Inside Cache 5, at the southern end of the platform was one piece each of worked jade and coral. All four vessels consist of the same Late Preclassic Sierra Red vessels as were recovered in the triadic arrangement of caches as well as the flexed burial.

**Group B**

Located approximately 200 m northeast of Group A is Group B. Like Group A, numerous depressions, linear berms, and what appear to be various water management features (Hyde and Valdez 2007) are located nearby. This formal courtyard group appears to be built on an artificial platform and consists of four mounds, situated in the cardinal directions with the eastern structure (B-1) being the largest and pyramidal in shape (Figure 1). This mound has a wide looter’s trench penetrating the front center the mound, with extensive looters’ debris located to the left and right of the trench. The south structure is long and from surface indications is possibly supporting two superstructures (B-2a and B-2b), while to the east and north are Structures B-3 and B-4.

Investigations at Group B have been limited relative to Group A, consisting primarily of cleaning up the looter’s trench located in Structure B-1 and the removal and examination of extensive debris located both inside and immediately outside the trench, which based on its size and pyramidal shape it is believed that to have been a temple. Some limited test pitting in the courtyard was also completed. Based on recovered ceramics from the trench and test pitting the group dates back to as early as the Late Preclassic and was occupied through Terminal Classic with Postclassic visitation.

Clean up work inside the looter’s trench indicate at least five construction phases based on the presence of as many floors. Other material recovered from the trench included four unused obsidian blades which had been removed sequentially from a single core and human remains. Located in front of and to the left of the looter’s trench, just below the humus layer were fragments from two Postclassic censers, one with preserved Maya Blue and matte red paint, as well as small pieces of appliqués.

**Discussion**

The architectural elaboration, remodeling, and ceramic data all indicate that Group A has a long occupation history, at least by the early Late Preclassic and through the Terminal Classic. This is in contrast to some of the smaller less formalized groups investigated which are essentially Late Classic (i.e. Ferries 2002; Jesperson-Tovar 1996). Although the soils have not been tested the location was probably chosen based on the agricultural potential of the surrounding slopes based on the presence of large numbers of terraces, depressions, linear berms, and other landscape modifications which suggest great agricultural potential (Brewer 2007; Chmilar 2005a, 2005b; Figueroa 2001; Weiss-Krejci and Sabbas 2002).

Evidence from Group A indicates important ceremonial activity occurred there in the early part of the Late Preclassic in the form of A-Sub-1, A-Sub-2 and the other associated features. Round structures are known from numerous sites in the Maya Lowlands, including many in Belize. The function of these platforms is debated although most agree that those that lacking a superstructure or postholes were likely exposed platforms and therefore more liable to be ceremonial than residential (Aimers et al 2000; Brown 1996; Hendon 2000). Additionally, the individual of Burial 1 inside A-Sub-1 was likely an important founding lineage figure and may have functioned as a way to legitimize their claim to and control over the land which was
settled early when populations were relative small (McAnany 1995).

A-Sub-1 likely was utilized, with A-Sub-2, in ceremonial activities. The importance of these features and the space overall is indicated by the placement of the three caches and two burials on the same plaster surface at the time it was buried with fill. There appears to have been an event at Group A in which Burials 2 and 3 and Caches 2-4 were all were buried and sealed beneath a plaster floor. Then later in the Late Preclassic, A-Sub-2 was revisited with the offerings of Caches 1 and 2, indicating that this feature and place were still important.

The early occupants of Group A appear to represent an important household in the Medicinal Trail community based on the the Late Preclassic ceremonial space located in the middle of the Northern Courtyard. As the population increased in the area these early settlers were able to parlay control over the land into economic wealth and possibly some degree of social power (McAnany 1995). Rare and exotic materials recovered from Group A include jade, coral, sea shells, granite, and obsidian. The round structure, with the ancestor buried inside, likely was used for local ceremonial activities for the Medicinal Trail community.

Once these features were sealed the Northern Courtyard was reorganized and the Middle Courtyard becomes the ceremonial focus of Group A. The Middle Courtyard consists of two structures on an artificially elevated plaza. One of the mounds is a presumed residential structure while the other is a large temple structure located on the east side of the courtyard facing west. The courtyard space is small with access restricted to a narrow passageway leading from the Northern Courtyard. As a location for ceremonial activities it would have only been able to facilitate a small number of individuals, most likely the immediate residents of Group A.

Reasons for the burial of these features and reorganization of the space at Group A are not currently known; however, with excavations now underway at Group B it is possible that there was a power shift within the Medicinal Trail community. Unlike Group A, the courtyard space in Group B is a relatively large, open plaza capable of facilitating a large number of people for community based ceremonial activities. Based on recovered Chicanel ceramics, Group B was occupied in the Late Preclassic, at the same time that Group A’s early ceremonial space is sealed and reorganized into a residential space. Archaeological data from the looters’ trench of Structure B-1, the largest at the group, include evidence of multiple burials, with associated luxury goods, including shell and obsidian, suggesting it functioned as a shrine.

We interpret the event at Group A in which Burials 2 and 3 and Caches 2-4 were sealed as a moment in which community power was lost at this location and shifted to Group B, where it likely remained until abandonment. This later interpretation is based on evidence for at least one pilgrimage to Group B in the Postclassic. In front of and on the back corner of Structure B-1, Postclassic ceramics censer fragments were found, common for pilgrimage offerings. Ceramic forms include jars as well censer fragments from two different censers, one with Maya Blue and matte red paint, and small pieces of appliqués (Figure 5). It is important to note there is no evidence for Postclassic pilgrimage at Group A.
Conclusions

We have presented data that we feel provides evidence for a transformation of social power during the Late Preclassic at a small hinterland community in northwestern Belize. Localized social power was achieved first at Group A and later by Group B. The shift in power appears to have been abrupt based on the seemingly simultaneous placement of Burials 2 and 3 and Caches 2-4 which together with the round and T-shaped platforms were all buried as a single event. Whether the shift was internal or external, violent or relatively peaceful remains to be seen as analysis is ongoing. Continued work at Groups A, B, and elsewhere at the Medicinal Trail site will provide valuable data and information regarding the complex nature of the social, economic, and religious organization of hinterland communities.

If this interpretation regarding a power shift is correct it raises an important question regarding the relationship between the residents of Group A and Group B. Specifically whether this shift was internal, between different factions within the same lineage, or external, between non-related households. Our research hopes to test this through DNA analysis of individuals buried within the ceremonial structures at Groups A and B, to determine the relatedness of individuals.

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In an earlier paper (Aimers 2007), I discussed some common concerns with type-variety classification in Mesoamerica, particularly problems related to the ware category. At that time I advocated the adoption of ceramic systems in Belize to address some of these issues. In this paper I present preliminary results of the application of ceramic systems classification to a sample of about 50 000 Terminal Classic to Late Postclassic sherds and vessels from Lamanai, conducted in the summer of 2007. In this paper, I describe some of the major slipped and unslipped ceramic systems at Lamanai, and some of the methodological challenges and advantages of ceramic systems classification as a first step in type-variety classification. I also discuss the possible significance of these ceramic systems as indications of interaction across the Yucatan peninsula after the Late Classic.

Introduction

What are we going to do with type-variety? Very few people seem to like it, yet almost everyone uses it. People continually note its shortcomings, but people rarely if ever offer viable solutions. In Volume 4 of this series, I discussed some of my concerns with type-variety, particularly problems related to the concept of ware (Aimers 2007). In that paper I advocated the adoption of ceramic systems to address some of these issues. Systems were part of the original formulation of type-variety in the 1950’s but to my knowledge I am the first person to use them in Belize. In this paper I present preliminary results of the application of ceramic systems to a sample of about 50 000 sherds and vessels from Lamanai in 2007. I believe that systems have helped me deal with some difficult taxonomic issues at Lamanai, and like the characters in the film from which this paper takes its title, I am cheerleading for the systems approach.

Why Classify?

It is worth repeating that type variety was never meant to be, and patently cannot be, a one-size-fits-all answer to every question we have about ceramics. Classification is not an end in itself, it is a means to an end. Thus, Brew’s advice from 1946 is as timely as ever:

_We must classify our material in all ways that will produce for us useful information... We need more rather than fewer classifications, always new classifications, to meet new needs. We must not be satisfied with a single classification of a group of Artifacts or of a cultural development, for that way lies dogma and defeat (Brew 1946:65)._ 

I am currently using type-variety at Lamanai because, despite the complaints I hear about it, it is still the single most comprehensive and sophisticated system for the efficient classification and comparison of ceramic assemblages for the elucidation of temporal and spatial relationships.

My work at Lamanai has been directed particularly towards clarifying the site’s role in the Postclassic Maya world through ceramic data. Simply put, how was the pottery of Lamanai similar to other sites, and how was it different, and what do these comparisons suggest about the site’s social, political, economic, and religious affiliations through time? There are many other interesting questions one could ask of the Lamanai pottery, not the least of which is “What was this pot actually used for?” Somewhat surprisingly, type-variety does not answer that question particularly well, but not because the system itself is flawed but because the people who developed type-variety, and those who have used it, have not been particularly interested in that question. There are ways to incorporate functional analysis into type-variety, and people have, but unless they are part of your research goals, type-variety will not automatically address function for you.

My point here (and Brew’s, above) is that there is no reason to do a type-variety classification unless you have a particular research question or questions in mind, and the nature of your research goals will determine
exactly how you structure your type-variety classification, or if type-variety is the best method to use. This simple observation has caused me endless angst since what I want to do—spatiotemporal comparison—is a clear strength of type-variety but is also thwarted by a traditional component of type-variety: the ware category.

The Curse of the Ware

In the standard hierarchical system of type-variety, ware is a broad category near the top. Wares typically comprise multiple ceramic groups, which include types as defined by their component varieties. A key point when considering ware is that surface finish and fabric were originally combined in the concept of ware (e.g., Gifford 1976:14). As Rice (1976:539) pointed out over 30 years ago, however, surface finish and fabric are “technologically independent” and do not consistently co-vary. In a few cases (e.g., Fine Orange Ware, Plumbate Ware) fabric and surface do reliably co-occur, but the majority of ceramic types in the Maya region were produced in a range of macroscopically different fabrics that crosscut similarities in surface, and thus are not easily organized hierarchically into wares which by definition combine fabric and surface.

Show Me Your Taxonomy: Production Versus Consumer Choice

The Curse of the Ware has resulted in varied reactions. People who are interested primarily in ceramic production place fabric variation at the top of the hierarchy (i.e., at the traditional place of ware) resulting in many types. People who are interested primarily in stylistic interaction and consumer choice place fabric variation at the bottom of the hierarchy (i.e., at the variety level), or ignore it entirely, resulting in fewer types. Still others consider fabric variation a modal attribute and simply include it in type descriptions, like variation in surface colour or form. There are other typological options as well, including redefining ware strictly in terms of surface finish and creating a separate category for fabric (e.g., Rice’s “paste wares”). Rice (1976) summarizes these complex issues but I can sum up the basic problem in a simple cheer:

If paste and surface aren’t separated...
I’m going to have to be sedated!

Because type-variety is a taxonomic approach (that is, a specific form of classification which is hierarchical and created to address specific questions) (Rice 2006), none of these approaches is definitively wrong, and arguably each has advantages and disadvantages. Nevertheless, I do think that we are in danger of making our typologies incomparable especially because so many of us neglect to explicitly state how we are structuring our classifications and designating types. Almost no one does this, but as I have tried to emphasize, we are not all doing the same thing and we should not assume that we are, or even that we should. Furthermore, we must recognize that the results we are getting from different methods are, of course, different.

Ceramic Systems

Ultimately, the varying classifications of similar ceramics by archaeologists as a result of the ware problem led me to explore ceramic systems as a precursor to type designations. Ceramic systems group broadly contemporaneous types over relatively large areas based on similarities in surface finish and form without reference to their fabric: “The concept of the ceramic system refers to a cultural image which the people were trying to produce in a class of ceramics during a certain interval of prehistoric time” (Wheat, et al. 1958:42). Like wares, systems designations indicate intersite and interregional stylistic interaction but unlike wares, they imply little about similarities in technology, issues that may be resolvable through materials analysis (although not nearly as easily as many people seem to think). It is worth noting that adoption of a ceramic systems approach does not require changing or abandoning previous approaches to type-variety classification, although it does draw attention to inconsistencies in the ways in which type-variety classifications have been derived from ceramic data. Systems classifications can be added to, and removed from, existing classifications. Furthermore, systems classifications appear to me to be most useful in the Terminal Classic and the Postclassic periods,
where similar styles have been given different names (especially at the type level).

I have argued since 2003, and I still believe, that ceramic systems designations can provide a preliminary classification of individual pots or sherds while more detailed type-variety designations are pending. When faced with a new sample, the analyst can simply sort the sherds into piles that look like known types. One can base these preliminary systems designations on published descriptions but under no circumstances should one ever try to assign a final type name to a sherd based simply on publications. I cannot emphasise this strongly enough: assigning a type name to a sherd if you have not seen and handled other examples of the type will, and has, and continues to, lead to confusion. Identifications based on publications are causing problems across the Maya world, not just in Belize. In the words of Indiana Jones in *The Kingdom of the Crystal Skull*: “If you want to be a good archaeologist, you’ve got to get out of the library.”

A minor point is that “In naming a ceramic system Colton’s rules of taxonomic priority are followed... and the system takes the designation of the first-named type in the system” (Wheat, et al. 1958:42). This does not mean that the type for which the system is named represents the first version of that style to be produced by the Maya. I regret that in my 2007 paper I carelessly referred to Helmke and Reents-Budet’s (2008) Ahk’utu’ Molded-carved as “imitation” Pabellon Molded-carved. They may well be copies, but they may also be contemporaneous or even earlier versions of Pabellon Molded-carved, as they correctly pointed out. Nevertheless, I stand by my central point that Pabellon Molded-carved, Sahcaba Molded-carved, and the new Ahk’utu’ Molded-carved are part of the same ceramic system. Pabellon is simply the first type name published and thus gives the system its name.

A strength of systems is that they can allow us to categorize sherds which lack the information Helmke and Reents-Budet require for their specific type designation (which includes form and iconography). So, many more sherds in any collection can be put into a system than can be put into a type. Since Helmke and Reents-Budet did not provide broader integrative categories like Group or Ware designations, systems are very useful for the efficient and, indeed, systematic, communication of relationships among ceramics from different sites and regions.

**Systems as Starting Points**

One of the people who formulated type-variety, Phillip Philips, commented on the utility of ceramic systems as a preliminary stage in type-variety classification:

*If it does not do anything else, it will force the archaeologist to give thought to the nature of his ceramic formulations before throwing them out on his helpless colleagues. What generally happens now, in the East [of the U.S.] at any rate, is that the archaeologist judges whether a variation is of sufficient importance to warrant a new type, or he ignores it entirely. This has the merit of simplicity and freedom from restraint, but the result of 20 years of such untrammelled activity is a condition bordering on anarchy. Types have been set up and certified by publication on the basis of all sorts of technological variations from the most minute to the most pervasive, with geographical and temporal dimensions to match (Phillips 1958:122).*

What surprises me is how applicable these comments are to our current situation, 50 years later, in the Maya area. We are in danger of creating so many new types that communication is hindered and the recognition of broad stylistic similarity is slowed, especially for those who are not visiting collections and handling pottery. Systems can slow this onslaught until more data are collected and the utility of new types are assessed. Conversely, systems do allow for the infinite expansion of type names (which now seems unstoppable, even though the formulators of type-variety clearly believed it undesirable) yet provide a way for archaeologists to efficiently talk to each other about broad similarities. Having, hopefully, made a case for systems let me briefly introduce some ceramic systems at Lamanai and their possible significance as indications of interaction across the Yucatan peninsula after the Late Classic.

**The Navula Unslipped System**

At Lamanai we find unslipped jars similar to what were called Navula Unslipped at Mayapan (Smith 1971) and Santa Unslipped at Santa Rita (Chase and Chase 1988) (Figure 1).
Debra Walker (personal communication, 2007) told me that she found both types at Cerros, and vessels in this style have been called by both names at Caye Coco. So, what should the Lamanai ceramics be called? Probably Santa Unslipped since Santa Rita is closer than Mayapan, or perhaps they should be given a new Lamanai name. I hesitate to decide until I have more closely compared the Lamanai sherds with sherds from Santa Rita (which I have handled) and Cerros (which I have not), and because the Lamanai examples are in fact so similar to Navula Unslipped that I have examined in the Mayapan collections that they could conceivably be imported from Mayapan. It is possible that both types may be present in the Lamanai collection, and Linda Howie’s ongoing materials science investigations of the Lamanai pottery may also help to determine this (see e.g., Howie 2006). In any case, until a more thorough analysis is made I can assign the Lamanai ceramics to the Navula Unslipped System. This tells me what I want to know: Lamanai was in an interaction system with Mayapan, Santa Rita, Cerros and Caye Coco (and of course probably many other sites). The important point for my research is that these are northern and coastal connections, not southern lowland ones.

The Pozo Unslipped System

However, at Lamanai, we also have pots that look very similar to both Rio Juan Unslipped and Maskall Unslipped as defined at Barton Ramie (Gifford 1976). They also resemble what Rice (1987) has called Pozo Unslipped at Macanche and she noted that this type probably incorporates what has been called Rio Juan and Maskall Unslipped by Gifford. Again, what should I call these at Lamanai? Many people would simply chose the type they know best, which I think is a mistake, or create a new name since unslipped ceramics are likely to have been made locally. Still, some of these -- even most of them -- could very well be imported. I simply do not know yet, but type designations imply that I do. Until the petrography is done, I am placing these ceramics in the Pozo Unslipped System which currently includes Maskall Unslipped, Rio Juan Unslipped and Pozo Unslipped (and possibly other types with which I am not yet familiar; systems can be expanded easily).

In some cases I am already reasonably confident that I can distinguish between these three types and even their varieties since I have seen and handled them in collections from Baking Pot, Tipu, the Peten Lakes and the Mopan drainage collections. So, for some of these sherds I can pretty confidently assign the original type names. For example. Maskall Unslipped is thin, hard, vesicular, and nearly black in colour with angular calcite and some quartz temper and occasionally flecks of mica (Sharer and Chase 1976:305). Forms in Maskall Unslipped tend towards collared jars. Rio Juan Unslipped: Rio Juan Variety is similar but reddish with no calcite; surfaces are rough and sandpapery because of the quartz temper. Rio Juan Unslipped: Variety Unspecified has quartz and calcite like Maskall Unslipped but is also characterized by lug and effigy handles on hemispherical bowls. But, in ambiguous cases (such as isolated rim sherds), I can simply assign the sherds to the Pozo Unslipped System and again, this system tells me that in the Early Postclassic Lamanai maintained fairly strong stylistic ties to the south as it had in earlier periods. Lamanai doesn’t reorient entirely to the north in the Postclassic; it was still maintaining older connections to the south.
Here you might notice that I have named the system after the type designated by Rice (1987), not after either of the types established earlier at Barton Ramie. These sorts of nomenclature issues are minor but should be addressed as my use of systems—and hopefully its use by others—develops. I had originally called this the Maskall Unslipped System but since Pozo Unslipped by definition includes the range of variation of all three types this seems to be the most useful and descriptive system name even if it is not the most correct methodologically.

Issues of nomenclature aside, the fact that both the Navula Unslipped System and Pozo Unslipped System are present at Lamanai demonstrates ceramically Lamanai’s position geographically and culturally between the southern and northern lowlands as what John Morris has called a “Mesoamerican Constantinople” (personal communication, 2007). I have the information I wanted without misleading people with speculative type designations.

Other Unslipped Jar Systems

There are several other unslipped jar systems at Lamanai that I have not yet fully defined or named. The large number of unslipped jar systems at Lamanai is striking, and suggests that Lamanai was in contact with areas all over the Maya lowlands, possibly as a transhipment point for commodities in the jars. One system includes types that would be designated as Sisal Unslipped, Tu-Tu camp Striated, Dumb Cane Striated, and possibly Calderitas Heavy Plain. These outcurving jars often have ridged rims. Another system includes striated jars with bolstered rims that would be called Progresso Striated or Burgos Striated. Yet another system includes jars with “arrowhead-shaped” rims and vertical striations usually called Freshwater Striated or Blue Creek Striated (personal observation, ceramic collections at INAH Merida; see also Fry 1987; 1989; Gifford 1976; Masson and Rosenswig 2005; Sanders 1960).

The Chen Mul Modeled System

Late Postclassic “Mayapan Style” effigy censers (Figure 2) are some of the most easily recognized ceramics in the Maya world and because of this many people call them Chen Mul Modeled after their type name from Mayapan. However, these effigy censers are extremely varied across the peninsula, and as part of a recent article (Milbrath, et al. 2008), I argued that we need to name new types as D. Chase (1984) did with Kol Modeled at Santa Rita, Rice (1987) did with Patojo Modeled and Idolos Modeled at Macanche, and Adams (Adams 1971) did with Maculis Modeled: Human Effigy Variety at Altar de Sacrificios. In effect, many other people have been using the Chen Mul type name very much like a system name—to describe broad stylistic similarity across a wide area. I have not yet decided whether all the censers in the Chen Mul Modeled System at Lamanai are sufficiently distinct to warrant new type designations, but some certainly are. In the meantime, by not choosing any of the type names above, I am intentionally avoiding the implication that the censers at Lamanai are identical to or imported from Mayapan, or Santa Rita, or Macanche, or Altar de Sacrificios, which any of these type names would imply. This is very important since my research is targeted at mapping Lamanai’s affiliations through style. A systems designation simply says that Lamanai was connected to a pan-
peninsular stylistic interaction system in the Late Postclassic. In this case we need to break down the broad, system-like use of the Chen Mul Modeled type name through the designation of distinct types in order to be more specific about which sites were like interacting with which.

**Red-Slipped Supersystems**

The best known ceramics from Lamanai are the Buk phase varieties of Zakpah Red and Zalal Gouged-Incised (Figure 3), both defined at Cerros (Walker 1990). In the Cib phase, Lamanai redwares most closely resemble types defined at Mayapan and Tulum including Payil Red/ Palmul Incised and Mama Red/Papacal Incised (Smith 1971). I believe that many of these types can be placed in systems based on types in the Silho and Maillas groups of Fine Orange. Thus, these red-slipped systems can be grouped into Silho and Matillas “Supersystems.” These relationships are extraordinarily widespread and complex to trace out and describe but suffice it to say here that the presence of ceramics in these Fine Orange-related systems indicates to me the key role of coastal interaction for Lamanai, probably related to trade that links the site to areas as far away as coastal Veracruz and Honduras. I will discuss these the red-slipped systems in a paper I am preparing but these extensive coastal and riverine connections through systems related to Fine Orange are among the most surprising and productive findings to come out of my adoption of the systems perspective so far. Type designations alone would not have done this.

**Bring it On… Home**

I'll leave it there but, like a cheerleader, I would like to once again encourage all archaeologists to catch the spirit of ceramic systems, particularly in the early stages of analysis. They are easy to use, they do not mislead, they facilitate communication, and they tell people a great deal. Even if you do not adopt systems, I hope archaeologists working with type-variety become more explicit about their methods of classification. We work in Belize where type-variety saw its most important refinement in the work of Gifford and his colleagues and we have inherited a great legacy. Belize should be the place where type-variety is finally perfected.

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Riverine transport and trade played a critical role in ancient Maya society. Little direct evidence has been found, however, of harbours or port facilities. A possible harbour was identified in the 1970s at Lamanai, on the New River in northern Belize, but harbour-focused excavations were not conducted until the late 1990s. Here we report on the archaeological and geological testing that was carried out to determine whether the feature we identified comprised the remains of a harbour or port facility.

Introduction

The ancient Maya site of Lamanai is located on the New River Lagoon, at the headwaters of the New River in northern Belize, approximately 80 kilometers from the Caribbean Sea (Figure 1). Archaeological research was carried out at Lamanai from 1974 to 1986 (Graham 1987; Graham et al. 1989; Pendergast 1981a, 1981b, 1985, 1986, 1991, 1993, 1998; Pendergast et al. 1993) and since 1997 under the auspices of the Lamanai Archaeological Project (Graham 2000, 2001, 2004, 2006; Howie 2006; John 2007; Meadows 2001; Powis 2002; Shelby 2000; Simmons 2002; White et al. 1993). Results show occupation from ca. 900 B.C. through the Spanish (16th and 17th centuries) and British (19th century) colonial periods. Ongoing excavations (Graham et al. 2007, Wiewall 2007) add support to Pendergast’s original contention that Lamanai was founded next to the New River Lagoon not only owing to abundant supplies of water and food, but also because such a location was strategic relative to routes of transport and communication.

Pendergast (1981a:40) suggested that a relatively deep topographic re-entrant along the western shore of the lagoon at the site (Figure 2) might be a harbour facility where cargo and passengers could dock under official control, and from which Lamanai's exports, perhaps freshwater resources (e.g., fish and turtles), could be shipped. The inhabitants of Lamanai would also have utilized a harbour to facilitate trade and transport, although the importance of such trade at Lamanai and at other communities along the waterways of northern Belize is not well documented (Andrews 1990:160, 166; Pring and Hammond 1985:528).

According to Andrews (1990), numerous Maya sea ports have been identified along the coasts and offshore islands of Yucatan and Belize (Andrews 1990:159). He proposed three categories of specialized ports: ports of
embarkation, trans-shipment ports, and seaports of inland polities (Andrews 1990:163-164). Examples of trading ports along the Yucatan Peninsula include those at Jaina (Piña Chan 1968), Isla Cerritos (Andrews and Gallareta 1988), Cozumel Island (Sabloff and Rathje 1975), Xelha (Robles 1981), Uaymil (Cobos 2003), Vista Alegre (Rissolo 2004), and Tulum (Sanders 1960). In northern Belize, prominent examples include Ambergris Caye (Graham 1989, Graham and Pendergast 1989; Guderjan and Garber 1995), Cerros (Friedel 1978, 1986), and a suite of sites along the northern coast (Mock 1994, 2005). Cerros, located at the mouth of the New River on Corozal Bay, has yielded evidence of long-distance trade and trade networks as early as the Late Preclassic period (400 BC-AD 250) (Freidel 1978).

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Farther south, sites engaged in coastal trade have been identified at Moho Caye (McKillop 1989), and in southern Belize at Colson Point and Placencia (Graham 1994; McKinnon 1985). Intensive and long-term research along the southern Belize coast has revealed a suite of coastal sites engaged in trade (Andrews 1983; McKillop 1989). Although numerous coastal ports have been identified, few inland or riverine ports are known in the Maya area. The site of Nohmul (Pring and Hammond 1985), located in northern Belize, provides a possible example of a trading port founded on the Hondo River.

The identification of actual harbours has lagged behind the identification of sites where transport of goods was facilitated. This is partly due to research bias, in which the focus of excavations lies with architectural remains, but also owing to sea level rise. In the last two thousand years in northern Belize, sites have been inundated by rising sea level (Dunn and Mazzullo 1993; Mazzullo 2006), and accordingly, harbour features may lie submerged and/or buried beneath sediment.

**Approach of the Study**

The present study is a detailed, three-year joint archaeological and geological investigation into the archaeology and geology of the (dry) topographic re-entrant that Pendergast (1981a:40) suggested might be a harbour. The term “harbour” is defined here as any part of a body of water, and the human-made structures surrounding it, that sufficiently shelter vessels from wind, waves, and currents, and which enable safe anchorage for the discharge and loading of cargo and passengers. Specifically, our goals were to: (1) locate and characterize artifacts that might indicate the feature’s use as a harbour; (2) determine, based on the artifacts, the span of time in which the facility was used; (2) locate architectural remains that might possibly have been associated with a harbour, such as a docking platform or some other supporting evidence showing cultural modification; and (3) conduct a surface and shallow subsurface, core-based geological study of the re-entrant, and immediately surrounding area, to determine its origin and geological history.

**Topography and Origin of the Presumed Harbour**

The re-entrant that Pendergast (1981a:40) considered might be a harbour is a linear, relatively narrow, steep-sided valley developed in limestone bedrock that intersects the western shore of New River Lagoon at an acute angle (see Figure 2). It is approximately
250 meters in length and 100 meters wide, and it has an irregular but roughly concave bottom with scattered small, dissolution-rounded limestone outcrops. Surface elevation in the valley ranges from 13.68 meters above sea level on the western side, directly abutting a structure designated as P9-25, to 5.0 meters on the eastern (lagoonward) side. The easternmost edge of the valley is barely higher than the water level in the lagoon, and accordingly, the valley could be inundated if water level in the lagoon were to increase, or if water level was higher-than-present sometime in the past. During dry seasons, the valley floor is relatively dry and the groundwater table is below the surface. In contrast, the ground becomes saturated and the groundwater table locally rises to intersect land surface for brief periods after heavy rains. The northeast trend of the re-entrant is consistent with bedrock structural fabric in this area of mainland Belize, which includes prominent northeast-striking faults, joints and fractures (e.g., Purdy et al. 2003: Figure 1). This attribute, as well as the relative steep-sidedness of the re-entrant, its straightness, its occurrence in a limestone terrain, and the presence of dissolution-rounded limestone blocks and scattered blocks of calcitic travertine (flowstone) indicate that the feature is a valley that formed naturally by dissolution of limestone along a fracture or fault. The formation of valleys by such a process is common in limestone terrains where rain and shallow groundwater, which initially are undersaturated with respect to calcium carbonate (comprising calcite, the dominant mineral in limestone), dissolve rocks in a process known as “karstification”. Over time, karst-formed valley bottoms tend to trap sediments and soil eroded from adjoining higher ground. The New River Lagoon itself appears to reside along a northeast-trending fault, and the valley adjoins it as a small off-shoot fault or fracture. Archaeology of the Presumed Harbour

Pendergast’s (1981a:40) contention of a possible harbour at Lamanai was based partly on the presence of the valley, its relationship to the site, and its location along the lagoon shore. Additionally, there were corn-pollen frequencies that were many times normal in sediments cored in the valley of the presumed harbour, which suggested that the area was a relatively stable, high-preservation environment in which post-accumulation disturbance was minimal (Pendergast 1998:56). A radiocarbon date of 1500 BC was derived from wood stratigraphically associated with the corn pollen (Pendergast 1998:56). According to Pendergast (1998:56), such a high-preservation environment could have existed in the protected waters of a harbour. His excavation of structures surrounding the valley indicated that this part of the site contained deposits spanning the Preclassic (1500 BC – AD 250), Classic (AD 250-1000), and Postclassic (AD 1000-1540) periods. It seemed possible, therefore, that the presumed harbour had a long history of use. Archaeological testing of the feature was carried out by the senior author between 1999 and 2001 as part of the Lamanai Archaeological Project (Graham 2004). A number of narrow trenches (01-04-2 through 01-04-4) and 1 by 1 meter test excavation units (00-3-1, 00-3-2, 01-04-1) were placed on the top, bottom, and slopes of the valley to reveal the stratigraphic profile and to determine if the bedrock had been culturally modified (Figures 3 and 4). Units placed on the north and south slopes revealed little stratigraphy, likely due to soils eroding down the sides and onto the valley bottom. No artifacts were found in any of the units placed on the north and south slopes. No architectural remains or any bedrock modification was observed in any of these units. The units placed on the bottom, near Structure P8-12, provided a different picture. In Unit 99-2, a complex sequence of natural and cultural horizons was recorded to a depth of three meters below present land surface (Figure 5). Significant quantities of artifacts were found in these valley bottom units, including ceramic sherds, lithic material, animal bones (e.g., deer and peccary), freshwater snails (primarily Pomacea), marine fish (e.g., parrotfish), plant remains (e.g., nance), and notched sherds (possibly net sinkers) (Powis 2002:314-315). The earliest pottery was found directly on bedrock in Unit 99-2, and it dated to the early facet of the Late Preclassic (400-100 BC) period (Powis 2002:314-320), a millennium later than the corn pollen found in the same vicinity.
Figure 3. Contour map of Lamanai, with locations of archaeological units/test pits and cores referred to in the text.

Figure 4. Generalized SW-NE longitudinal cross-section showing elevation from Structure P9-25 to the lagoon shoreline.
presence of artifactual material on the western slope indicated that this area had been culturally modified in the Late Preclassic.

Additional excavation units were placed on the western side of the valley to determine the nature and extent of the modified slope (Figure 6). Excavation units 01-04-5 through 01-04-11 were dug specifically to locate any architectural evidence of a docking platform that might be present, like the platform of rough-hewn stones present at Cerros (Freidel 1986:51) and Nohmul (Pring and Hammond 1985:527-551). Unlike the other slope areas in the valley, construction fill was found in each of the units located on the western slope. The fill ranged from 1.2-1.8 meters deep near the top of the slope to 45-80 cm near the bottom of the slope. It was initially thought that this fill might have been laid down to support a platform that extended southward from Structure P8-12 or eastward from P9-25. All of the sherds in the core material date exclusively to the Terminal Preclassic (100 BC – AD 250) period.

A core face measuring 75 cm in height, constructed of hard limestone, was found in Unit 01-04-11 near the base of the slope (see Figure 6). Excavations revealed that the platform terminated at this core face. This platform indicates that the Late Preclassic inhabitants of Lamanai had modified the western slope of the valley, but the significance and likely use of this feature are unclear. That it was a docking facility cannot be conclusively stated owing to insufficient archaeological evidence. Hence, in order to test the hypothesis that the platform was part of a docking facility, corroborative geological evidence was required.

Geological Assessment of the Hypothesized Harbour

The “valley” that Pendergast (1981a:40) considered might be a harbour is now dry. If the feature once served as a harbour, then that implies that water level in the New River Lagoon must have been higher in the past than at present. If such was the case, there should be geologic evidence of the presence in the valley feature of lagoonal waters – that is, the same types of sediments present in the lagoon should be present in the valley. To test this contention, two shallow cores (2 m deep) were taken along the shore of the lagoon, one about 2 meters offshore (Lam-SJM-1) and the other on land at shore’s edge (see Figure 3). A third core (Lam-SJM-7) was taken on the eastern side of the lagoon directly opposite the site to ensure representative sampling of lagoonal deposits. Sediments recovered in the cores were analyzed to determine their mineralogy (by X-ray diffractometry), sediment texture (by sieving), and biotic composition. These attributes were then compared to those of sediments similarly recovered in additional shallow cores and in selected archaeological pits along a longitudinal transect within the valley (Figure 7).

Lagoonal sediments – The sediments in cores Lam-SJM-1 and Lam-SJM-7 are light tan to gray (2.5Y 6/2), muddy, fine-grained calcium carbonate sand and sandy mud with abundant aquatic gastropod fragments (various genera).
Ancient Harbour at Lamanai

**Figure 6.** Generalized SW-NE longitudinal cross-section showing location of core face in Unit 01-04-11.

and accessory pelecypod fragments (*Nephronaias* sp), ostracodes (crustaceans), dissolution-etched limestone rock fragments, and minor quartz sand. The terrestrial (pulmonate -- air-breathing) gastropod *Pomacea* sp. also is locally present at 33-42 cm and 73-95 cm below water level in this core. Aside from the limestone fragments and minor quartz sand, the sediments and all component skeletal fragments are composed entirely of calcium carbonate, specifically the mineral calcite (*CaCO₃*). The basal ~13 cm in core Lam-SJM-2 are composed of fragments of heavily dissolution-etched limestone in a matrix of blue-gray clay (7.5YR 5/0 to 2.5Y 5/0). This section represents a buried regolith (very incipiently-developed soil). Overlying sediments are also of calcite mineralogy, and include dark gray (10YR 4/1) muddy, fine-grained calcium carbonate sand to very sandy mud with abundant aquatic gastropod shells (as in the other cores), as well as peaty material, organic matter, and also some quartz sand and limestone rock fragments. *Pomacea* also is present in the sediments at 11-68 cm below the surface. Peaty material and *Pomacea* in the cores are indicative of a near-shoreline, very shallow-water to perhaps locally emergent setting. As in core Lam-SJM-1, many of the *Pomacea* shells likely were washed into the lake sediments after snail death. The upper ~11 cm of sediments in Lam-SJM-2 comprises modern peat with surficial live and buried (dead) *Pomacea*.

In summary, sediments below water level in the lagoon are composed almost entirely of the calcitic shells of aquatic molluscs and crustaceans, and similarly calcitic sands and muds derived from the breakdown of these skeletal fragments. Accordingly, if the adjoining valley indeed was a water-filled harbour at some time in the past, then valley-floor sediments should be similar to those recovered in lagoonal cores.

**Valley-floor sediments** – Most conspicuously, the sediments comprising the valley floor are not of calcium carbonate composition (Figure 7), nor do they contain shells of aquatic organisms. Rather, they are dominantly light gray to mostly dark gray (2.5Y 2/0 to 4/0, 10YR 2/1 to 3/1; locally they are greenish-gray to yellowish-brownish gray), incipient clay-soils and rare, humic-rich clay-soils, both with scattered dissolution-etched limestone rock fragments and locally, shells of the pulmonate gastropod *Pomacea*. Sediments locally are stained with iron or contain small iron, and locally, calcite concretions; both are of secondary origin. Thin regoliths like those at the base of core Lam-SJM-2 are present directly above limestone bedrock in cores Lam-SJM-4, 5 and 6. Peat or humus with surficial live and buried (dead) *Pomacea* caps the surface at many of the core locations and archaeological test units. Shells of other high-spired and planispiral terrestrial gastropods are present locally throughout valley-floor sediments, as are archaeological artifacts.

**Discussion**

Valley-fill sediments are mostly naturally-occurring deposits eroded over time from higher areas around the feature. It is possible that some of the sediment may have purposely been dumped into the valley, or modified thereafter, by humans. Regardless, as each increment of sediment was deposited in the valley it was then subjected to initial stages of pedogenesis (soil development) over time, the result being the development of numerous, stacked, pedogenically-altered units comprising valley-fill deposits (Figure 7).

As shown in Figure 7, in order for the valley to have been a navigable harbour at some time in the past, it would have to containe water,
which would mean that lagoon water level was higher in the past (that is, the lake was deeper and more areally extensive) than it is today. If so, then there should be a record, thin or otherwise, of such a lagoonal highstand in the valley. Yet, there is no geological record of lagoonal deposits in valley-floor sediments. We therefore conclude that water levels in the lagoon likely were never higher than at present, and accordingly, that the valley feature did not serve as a harbour in the past.

To further test this contention, we dug an additional three test pits (LAM-SJM 7-9) located to the south of the valley, near the modern Visitor’s Centre (see Figure 2). These pits were located from 35 meters to 70 meters west of the shoreline of New River Lagoon along a west-to-east traverse (Figure 8). The stratigraphy of the section here comprises artifact-bearing incipient soils on the landward side and beach deposits toward the lagoon. As expected, these beach deposits are composed of a mixture of quartz sand and calcite sand and mud with both terrestrial and aquatic shells. There is no indication along this section of typical lagoonal deposits either above present lagoon water level or farther landward than the present shoreline. Such findings corroborate our contentions regarding past lake levels.

Conclusions

The archaeological and geological data from our study at Lamanai provide two different datasets, each potentially offering different interpretive scenarios if not examined together. On one hand, the archaeology reveals that a platform was constructed on the western slope of the proposed harbour sometime during the Late Preclassic period, possibly associated with either Structure P8-12 or P9-25. Without any other kind of investigative work, specifically a geological assessment, we may have concluded that this platform indeed functioned as a docking facility (as opposed to an unrelated function such as an activity area associated with either structure) for the discharge and loading of cargo and passengers. Furthermore, we might have concluded that the harbour was deep enough to be navigable by canoe. Thus, we may have concluded that this natural feature did indeed serve as a harbour facility for the Lamanai community throughout its occupational history.

The geology of the area reflects a different scenario. That is, water levels in the lagoon were not higher than at present at any time during Maya occupation of the site, with the implication that a harbour could not have existed in the area of the valley feature. Evidence indicates that the valley is a natural feature that formed as a result of karstification of bedrock limestone in a humid climatic setting. The abrupt termination of the valley on its southwestern end, beneath Structure P9-25, suggests that the valley may have been enlarged not only by rain water, but also by springs seeping out from beneath P9-25. The rapid declivity from the base of this structure into the valley supports this contention.

Although we have disproved the hypothesis of the existence of a harbour in this particular locale, other possible harbours may have been situated somewhere along Lamanai’s vast waterfront. For example, there is ceramic data (e.g., imported wares) from the south end of Lamanai which indicates that the site’s inhabitants were accessing transport canoes from the shore during the Terminal Classic and Postclassic periods (Howie 2006, Wiewall 2007). Therefore, it should be made clear that Lamanai was indeed a trading center, but our investigations of the valley feature at the north end of the site, first recorded by David Pendergast more than twenty five years ago, have strongly suggested that it never served as a harbour facility.

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