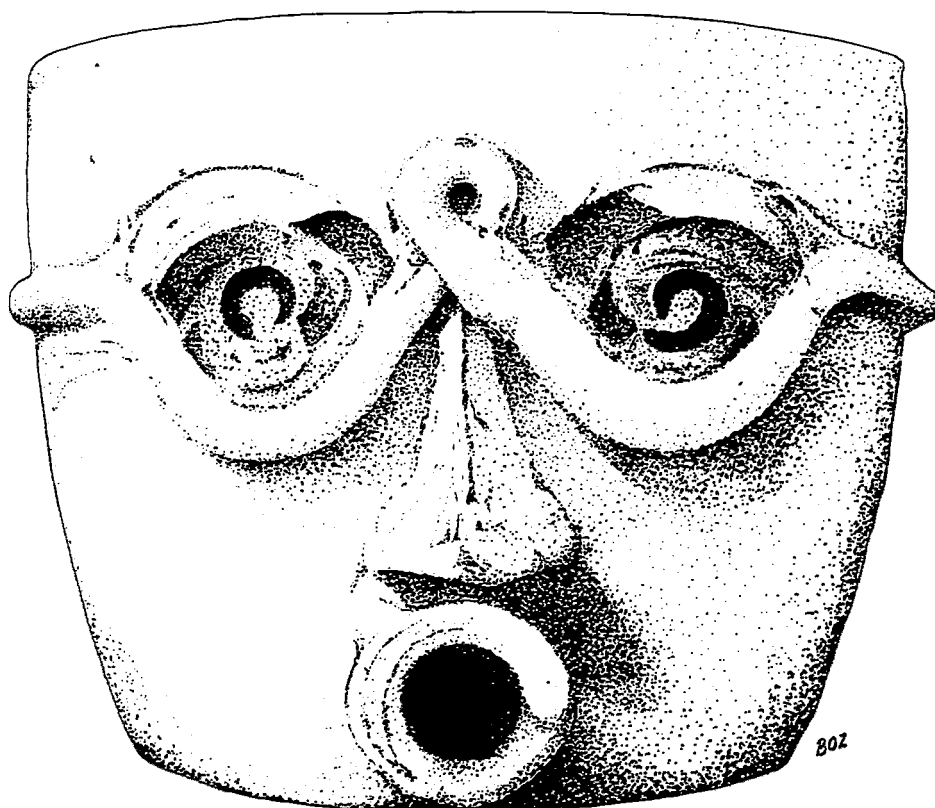


BELIZE VALLEY ARCHAEOLOGICAL RECONNAISSANCE PROJECT



PROGRESS REPORT OF THE SIXTH (1993) FIELD SEASON

EDITED BY

JAIME J. AWE

**INSTITUTE OF ARCHAEOLOGY,
UNIVERSITY OF LONDON, ENGLAND
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INTRODUCTION AND SUMMARY OF THE SIXTH (1993) FIELD SEASON AT CAHAL PECH AND BAKING POT

JAIME J. AWE

Introduction

The sixth field season of the B.V.A.R. Project was conducted between April and August of 1993. As in previous years, we continued to focus attention on the salvaging of information from mounds that were threatened by urban expansion, our settlement survey continued to concentrate on the 1 km X 2.5 km southern transect, and considerable energy was expended on the study of Middle Formative occupation, and in completing the 100% sampling of several peripheral settlement clusters. In addition to these research interests, special attention was directed towards the examination of "middle level" settlements, the role of sacbe termini complexes, the morphology and function of Middle Formative circular platforms, the extent of "linear field indentations" at Baking Pot, and the analysis of human remains. This paper will briefly summarise the results of this work, and detailed information on various topics is provided in the subsequent articles in this report.

The Study of "Middle Level" Settlements

One of the greatest advantages of long term, intensive, and extensive investigations at a site is that it allows the researcher to get a far more realistic perspective of ancient Maya settlement morphology than does a short term, research strategy based on random analysis. This has certainly proven to be true at Cahal Pech and, together with our 100% sampling (including horizontal and vertical excavations) of several settlement clusters, it has allowed us to compare and contrast both the diachronic development and synchronic differences of peripheral settlements and between the latter and the site core. Initially applied at Cahal Pech during the 1989 season, this research strategy has subsequently been employed by Jim Conlon at Baking Pot, and has been dramatically amplified, at the theoretical and analytical level, by Gyles Iannone's work at Zubin. Besides addressing the socio-political status and role(s) of these settlements at the intra-site level, Iannone's study also presents us with an excellent theoretical model that can be applied at the inter-site level.

The Role of Sacbe Termini Complexes

The reports by David Cheetham and colleagues address the function of architectural complexes located at the terminus of sacbeob. Their work at the Zopilote Group indicates that these sacbe termini complexes include large monumental architecture, vaulted tombs, carved monuments, and a wide range of elite-related objects. Some of these features are in direct contrast to the simpler characteristics of other peripheral groups, and suggest that the relationship between these complexes and site cores goes beyond the mere physical links that connect them. Indeed, the elite trappings and the nature of the human remains at Zopilote,

certainly indicate that important, community wide, politico-religious rituals were conducted at these complexes, and that many of these ceremonies may have been conducted by members of a site's ruling lineage.

Formative Period Circular Platforms

Previously considered as a rare form of Preclassic architecture, our investigations at Cahal Pech have demonstrated that circular platforms were constructed as early as the Middle Formative period, and that they are far more common than heretofore recognized. Powis' paper on the round structures at the Tolok Group further demonstrates that there are at least two distinct forms of Preclassic circular platforms, and it supports our previous argument that they may have functioned as early family shrines.

Linear Indentations at Baking Pot

During the 1993 season, Jim Conlon continued plotting the spatial distribution of linear indentations around the peripheral Bedran settlement cluster. These linear indentations are fairly extensive around Baking Pot and Floral Park, and are believed to represent ancient ditches that were used to drain excess rainy season water from agricultural fields. Although the ditches have yet to be excavated, the investigation of most mounds in the settlement cluster suggests that these features may have been operational by Early Classic times.

Other Investigations Conducted During the 1993 Season

As part of the 1993 field operations we decided to excavate another large unit in the central platform (Structure 1) at the Cas Pek Group. Sunahara and Awe's report notes that the results of this investigation confirmed the Middle Formative to Late Classic sequence of construction at this site. Furthermore, the discovery of numerous chert drills in association with a large number of conch shell fragments suggests that the initial inhabitants of this settlement may have been concerned with the production of shell ornaments.

Rhan-ju Song's analysis of human remains from the Tolok Group provides intriguing information regarding the significance of tooth caches in the Maya lowlands. Indeed, the discovery of the tooth cache in association with a skeleton with a shell on its back certainly suggests that these offerings were related to rituals concerning aged and toothless spirits or deities ("God N and D"). Norbert Stanchly's paper presents a preliminary report of his analysis of the animal remains from Zubin. By combining information derived from his study of faunal material from the site core and the peripheral settlements, Stanchly will eventually present an indepth report on the utilization of animal resources by the ancient Maya of Cahal Pech, and on the role of ritual fauna in the Belize Valley. Finally, the Chultun paper by Iannone et al. serves to remind us that the monster bulldozer continues to be our greatest nemesis at Cahal Pech.

ANCIENT MAYA SOCIAL ORGANIZATION AND THE CONCEPT OF MIDDLE CLASS: A CRITICAL REVIEW

Gyles Iannone
(University of London)

INTRODUCTION

Classic period (ca. 250-900 A.D.) Maya civilization provides one of the most fascinating cases for archaeological study. Not only did the Maya produce amazing monumental architecture and art, but also some of the most sophisticated mathematical, writing and astronomical systems known from prehistory. The remains of Maya civilization are to be found dotting the landscapes of modern day Belize, El Salvador, Guatemala, Honduras, and Mexico (see Figure 1). From the largest "major" centers such as Tikal, where the Maya constructed some of the tallest pre-Columbian structures in the New World, to the humble "housemound" clusters so reminiscent of some modern day Maya family compounds, the Maya legacy comes to us by way of a complex continuum of archaeological sites. This array of settlements, exhibiting such variability in size and complexity, has long stimulated archaeologists to attempt descriptions of ancient Maya social organization. However, a review of the current literature indicates that we are no closer today than we were one hundred years ago to achieving this goal. This lack of success stems from a number of factors. First, settlement pattern studies in the Maya area have not produced adequate data representative of all levels of the settlement hierarchy. This is mainly because research has tended to focus too much on the polar extremes of this hierarchy. Similarly, the limited nature of excavations, apart from those conducted in the larger centers, has hindered our ability to compare material culture assemblages from the various settlement levels. These restricted excavations have also failed to furnish us with a comprehensive diachronic perspective, something which is required for an understanding of social relationships. Second, within our interpretations the archaeological data has often been slighted in favor of the more inclusive ethnohistoric or ethnographic descriptions. Finally, we as Mayanists have often employed interpretive schemes and associated terms in an uncritical fashion. I will address the aforementioned problems through a critical summary of the most accepted model of ancient Maya social organization, the "multiclass" model. Specifically, I aim to assess the arguments made for the presence of an ancient Maya "middle class". In doing so I will touch on the various 'weakness' inherent in the study of ancient Maya social organization, and outline a program of analysis that should facilitate the formulation of a more accurate characterization of this society.

BACKGROUND: THEORIES OF MAYA SOCIAL ORGANIZATION

To put the multiclass model in perspective, I wish to begin by summarizing our present understanding of ancient Maya social organization. Arlen Chase (1992) has recently provided a succinct discussion of the three dominant interpretive schemes (see also Becker 1979a; Hammond 1982:179-197; Kurjack 1974:7, 23; Morley et al. 1983:225-226). The first, and least complex model portrays the ancient Maya as having had an egalitarian society (see Bullard 1960, 1964; Vogt 1964a, 1964b, 1968, 1969; Vogt and Cancian 1970; Willey 1956; Willey and Bullard 1965:375; Willey et al. 1965:580). The large centers are viewed as having

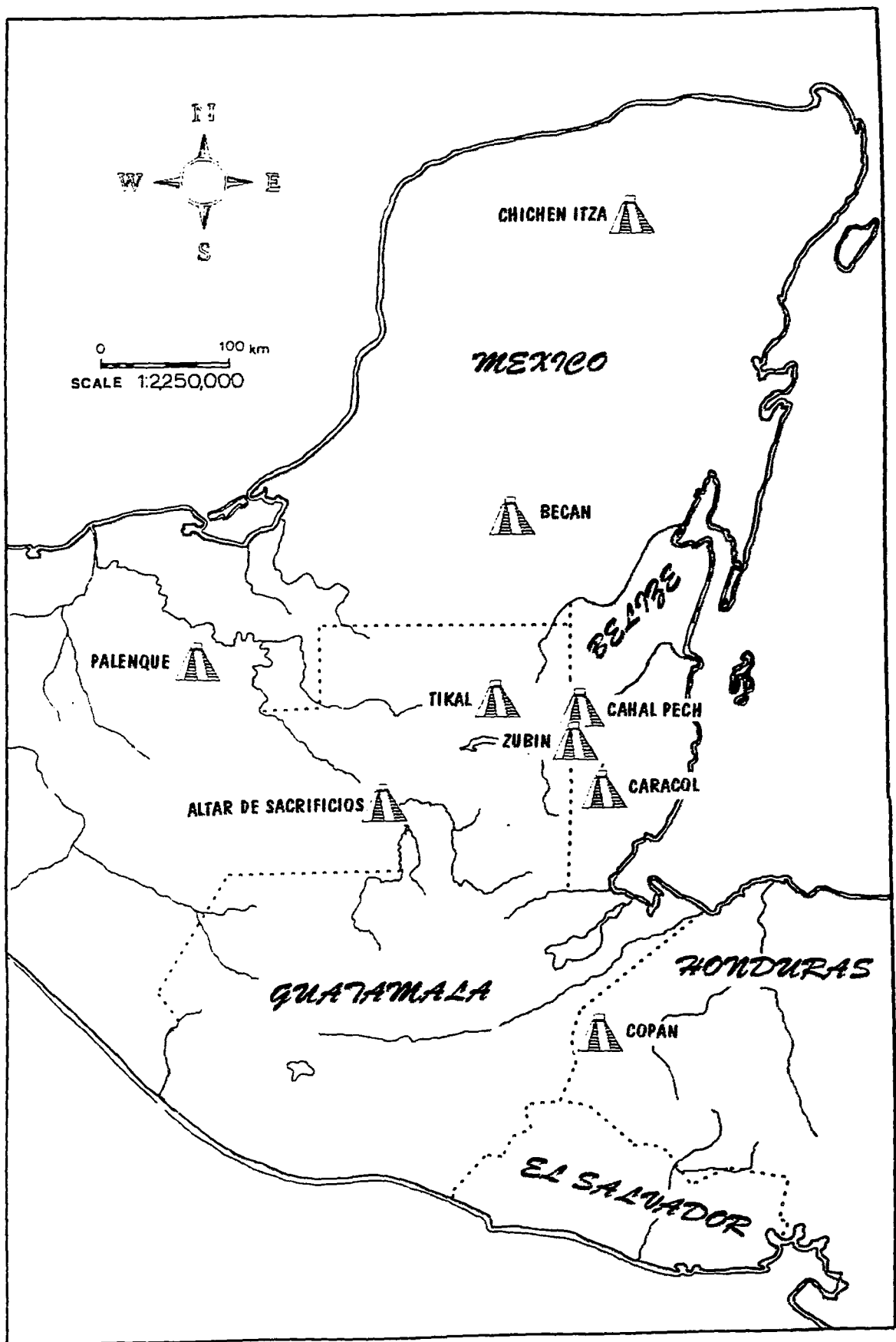


Figure 1. Some major Maya sites and those mentioned in the text.

been the seats of administrative and ceremonial power, and part-time homes for rotating officials and their retainers. Smaller, less complex clusters of architecture are perceived to have housed the majority of people, from whom the rotating officials were drawn at regular intervals. The rotating system of officials is interpreted as having been egalitarian in nature, with all individuals eligible to participate. This model was developed through the ethnographic study of contemporary Maya peoples, mainly in highland Guatemala. Special attention was given to the "cargo system" of rotating officials, and it is primarily the recognition of this system in the contemporary groups that prefaced the interpretation of the ancient Maya as an egalitarian society.

A number of factors argue against the utility of this explanation. For one, it is clear that the ethnographic data derives from the study of groups separated from the Classic period Maya by a time span of over 1000 years. Significant changes in social organization must have occurred in that time (Haviland 1968:95-96, 114). Similarly, it should also be stressed that the social organization studied by ethnographers may stem as much from Spanish influence as it does from its more pristine Maya roots (A. Chase 1992:31; Price 1974:461; Willey 1983:453). On a more theoretical level, given Bourdieu's (1977) cautionary tale, it is also imperative to distinguish between society as it "actually" works, and society as it is "ideally" perceived. According to Bourdieu (1977:18), an individual's "...experience of the social world never apprehends the system of objective relations other than in profiles ... Insofar as it is a discourse of familiarity, it leaves unsaid all that goes without saying..." Bourdieu continues by stating that what informants tell observers is not only affected by the ideal perception they have of their own society, but also the questions the ethnographer asks. For example, recent work by Hayden and Gargett (1990) shows that contemporary Maya society is not as egalitarian as it may seem. By asking different questions these authors were able to show that the cargo system could be manipulated to the advantage of certain individuals, especially during times of crisis (see also Haviland 1966a:628-630). This is not simply a case of emic versus etic interpretations. Even today I might have my own "ideal" concept of western society, knowing full well that in reality things are much more complex than we make them out to be. Thus it seems debatable that contemporary Maya peoples are as egalitarian as they may ideally perceive themselves to be, or as they seemed given the type of questions asked by early ethnographers. Thus one of the fundamental tenets of the model can be brought into question, that being the overly simplistic characterization of Maya society, contemporary or prehistoric, as being egalitarian. Coupled with the problem of time span and Spanish influence, it is evident that the "egalitarian" model cannot be applied directly to the ancient Maya without modification (Willey 1983:453), as it has often been (but see Culbert 1974:66; Haviland 1966a:629-630; Vogt 1983).

The major exponent of the second model was Thompson (1931, 1966, 1970; see also Brainerd 1956; Bullard 1960; and critiques in Becker 1973, 1979b). In typical form, he dismissed the egalitarian model by stating... "That the ancient Maya city was essentially a democratic organization is a pleasant thought especially to Americans whose faith in the general acceptance of democratic institutions by non-Europeans has been so rudely shattered in recent years, but I doubt its validity" (Thompson 1966:91). In its preliminary "Thompsonian" form, the two-class model presents a society with well defined priestly and peasant classes. Thompson (1931:334) conceived of the larger Maya centers as being purely religious or ceremonial in nature, rather than as proper cities. These centers were thus interpreted as the loci for priestly activity, and were thought to have housed only priests and

their retainers. The remainder of society, the peasants, would have inhabited the less complex architectural compounds scattered across the landscape. Maya society was thus a theocracy (Hammond 1982:179; Morley et al. 1983:226). It is clear that Thompson relied heavily on the ethnohistoric record, and his interpretation of ancient Maya settlement has strong resemblances to Bishop Landa's (see Tozzer 1941:62-64) concentric model for ethnohistoric Maya towns (A. Chase 1992:31; see also discussions in Arnold and Ford 1980; A. Chase and D. Chase 1987:50, 57-58; Folan et al. 1982, 1983:49; Hammond 1972, 1975:84-86; Haviland 1982; Kurjack 1974:94; Thomas 1981:113; Webster 1980:834). This model sees the core of the center as being purely religious/ceremonial in nature, the "elite" of society inhabiting residences directly surrounding this core, and commoners occupying the more peripheral locations. More recently the priest/peasant dichotomy has been transformed into the elite (noble)/commoner construct by advocates of the two-class model (cf. Folan 1983, Folan et al. 1982; Kintz 1983a:162-163; Leventhal et al. 1987:179; Marcus 1983a:469-470, 1992:221-226; 1993a:115; Roys 1943, 1965; Sanders 1981, 1992:280; Sanders and Price 1968; see also Thompson 1966:93), although many of the basic tenets remain the same. Proponents of this model continue to rely mainly on data derived from the ethnohistoric record (Kurjack 1974:7).

The two-class models are problematical for a number of reasons. First, many of Thompson's perceptions concerning the ancient Maya may have been clouded by his having grown up in Britain, with its large cathedral and church complexes. Thompson may have unknowingly transposed his eurocentric view of this type of architectural cluster directly on to the ancient Maya centers (see also Becker 1979a, 1979b). It is again significant that the Maya with which the Spanish were in contact were separated from the 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. (the infamous "Maya collapse", see Culbert 1973; 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). Similarly, the ethnohistoric accounts derive from observation of Yucatec Maya society, and it is unclear how representative this group was of other Maya peoples (D. Chase 1992:119). Recent authors have also noted that the concentric model discussed in Landa's ethnohistoric accounts simply does not fit the archaeological data (Ashmore 1981, 1988:160-161; A. Chase 1992:31; A. Chase and D. Chase 1987:57-58; D. Chase 1992:122). Some have gone so far as to question whether in fact Landa was actually describing a Maya town, noting the possibility that he may have been influenced by other writings describing groups located to the south of the Maya area (D. Chase 1986:362-363). In the end, it is clear that advocates of the two-class model adhere too rigorously to the ethnohistoric record. Too much reliance on these materials again leaves one open to Bordieu's "idealist" criticism. Given the questions that Landa asked, and the ethnohistoric Maya's "ideal" concept of their society, we must consider the possibility that the "actual" workings of the society were not recorded (see also D. Chase 1992:119, 121; D. Chase and A. Chase 1992:312-313). For example, there are sections in the ethnohistoric documents which point towards the existence of a much more complex society than that suggested by the noble/commoner model (see A. Chase and D. Chase 1992:7; D. Chase 1986:364; D. Chase 1992:121). I would suggest that we do not know for sure whether the noble/commoner dichotomy recorded by Landa refers to the actual make-up of contact period Maya society, or whether the informants were glossing over the complexities inherent in the system in order to

portray themselves as being either ruler (of divine birth), or ruled (of common birth) (see Marcus 1992:224).

Following Arlen Chase (1992:31-32), a number of other models can also be included within a discussion of the two-class perspective. Most of these derive from analogies originating outside the New World. They include various feudal (cf. Adams 1983; Adams and Smith 1981; Koenig and Williams 1985:259; Leventhal 1981:206-207; Willey 1980:261) and segmentary state models (cf. Ball and Taschek 1986, 1991), the majority of which are employed in interpretations which see ancient Maya society as consisting of two main classes of noble and commoner, subdivided into land-holding nobles, a farming peasant class, and craft specialists (see A. Chase and D. Chase 1992:9). Others see the control of labor to be more important than the control of land (e.g. Demarest 1992), but still argue for a basic two-class society. It is often the case that these models are applied with only limited reference to the archaeological data. Some also argue that when the archaeological data has been considered in a critical manner, it becomes evident that models such as the segmentary state construct have minimal explanatory value (D. Chase and A. Chase 1992:308-309). In addition, it is questionable whether these models even fit the ethnohistoric or ethnographic data (D. Chase and A. Chase 1992:310). Some of the advocates of the two-class model, particularly those who rely heavily on the ethnohistoric record, also argue that Mayanists should not borrow these analogies from outside Mesoamerica (Marcus 1983a:470-473, 1992:221-226; 1993a:114-115; Vogt 1983:104; see also D Chase 1992:118; D. Chase and A. Chase 1992:307).

A major criticism can be leveled against all of the aforementioned approaches. As more archaeological work is undertaken, it becomes abundantly clear that none of these constructs can be reconciled with the complexity apparent in the archaeological record (cf. Adams 1970; Becker 1973:397; A. Chase 1992; A. Chase and D. Chase 1992; D. Chase and A. Chase 1992; Culbert 1974:67; Freidel 1983; Green 1970:306; Hammond 1982:189-197, 1991:269-270; Iannone 1993a, 1993b; Kurjack 1974; Morley et al. 1983:225-226; Rice and Puleston 1981:155; Sharer 1993:94; Tourtellot 1983:51). It remains problematic that in all the previously discussed cases the ethnographic, or ethnohistoric materials have taken precedence over the actual archaeological data. As Sharer (1993:91) has recently stated "...the delineation of the social organization of the Classic Maya is fundamentally an archaeological problem." It is significant, therefore, that the multiclass model relies heavily on archaeological materials. This last framework has resurfaced many times in the past, and has only recently become vogue again. In its current form it has received much publicity, reaching the general public via newspaper articles on the Maya "Middle Class" (see Chase and Chase in Wilford 1993), or in glossier form in a recent *Time* magazine (Chase and Chase in Lemonick 1993). The most vocal champions of the multiclass model have been Arlen and Diane Chase (see A Chase 1992; A. Chase and D. Chase 1992; D. Chase 1992; D. Chase and A. Chase 1992). The Chases argue that neither the ethnohistoric nor the archaeological records suggest a rigid two-class system. Although the multiclass model proposed by the Chases and others seems to be a much more realistic view of ancient Maya society, the Mayanists who espouse it are still having a difficult time explaining how the various components of the "complex society" fit together. The key issue at this time seems to be whether in fact a middle class of people can be isolated in the archaeological record.

THE MAYA MIDDLE CLASS

Within Maya archaeology the recognition of a "middle class" has revolved around three main issues. The first concerns occupational specialists. Although there are at present varying opinions concerning the existence of such specialists among the ancient Maya, strong arguments have been forwarded for their existence (cf. Adams 1970; Becker 1973; Ford 1991; Fowler 1991; Gibson 1982, 1989; Hammond 1982:189-197; Healy et al. 1993; Hester and Shafer 1984; Iannone 1992:170-174; Kidder 1985; Kintz 1983b; McAnany 1993; Michaels 1989:175; Probst 1986; Shafer 1982, 1991; Shafer and Hester 1983, 1986, 1991; Valdez and Potter 1991:205; see also Tourtellot and Sabloff 1972:131). The implication is that the presence of occupational specialists indicates the presence of a middle class (A. Chase 1992:31-32; A. Chase and D. Chase 1992:12-13; Kintz 1983a:162; Morley et al. 1983:226; see also Willey and Bullard 1965:360; Willey et al. 1965:5). Even Thompson himself, the major advocate of the priest/peasant model, states in one passage that "... there seems to have been a smallish middle class ... including artists, craftsmen - makers of idols, for instance - and the religious and political functionaries of small towns and villages" (Thompson 1966:93). Thus this group, consisting of a variety of occupations such as bureaucrat, warrior, merchant, artist, architect, scribe, trader, to name a few, is seen to represent a middle class in Maya society in the sense that they are not rulers, nor do they toil specifically in food production (see A. Chase and D. Chase 1992:8). For although there is evidence to suggest that some Maya artists and scribes were of "high status" (Stuart 1993:322), indications are that they only acquired this status during the Late Classic, these occupations previously being reserved for "...lower- or middle-class specialists." (Stuart 1993:324, emphasis mine).

The second body of evidence utilized to argue for a middle class comes from research at the site of Caracol (see A. Chase 1992; A. Chase and D. Chase 1992). At this site the Chases have recognized both numerical and spatial trends concerning tomb interments. They suggest that "tombs" are too numerous within both the core and periphery of Caracol to be strictly attributable to an "elite" population (see especially A. Chase 1992). Following this observation, they postulate the presence of a "middle class" or "middle stratum" of individuals. This social standing is also implied by the relative abundance of "luxury or high status" items in both burial and other artifact assemblages throughout the Caracol settlement area (A. Chase and D. Chase 1992:10-11). Spatially, given the distribution of tombs, middle class individuals are thought to have resided not only in the Caracol site core, but also in the periphery. The latter groups are often found in association with agricultural terrace systems (A. Chase 1992:40-41). The suggestion being that these people oversaw the operation of the terraces. A. Chase (1992:38) admits that, with the exception of written texts, the presence of tombs or particular items of material culture do "... not appear to provide a simple correlation with status at Caracol." He concludes that the most profitable measure of status, at least for Caracol, may derive from a combination of data concerning spatial location, artifact inventory, and tomb volume, with the latter being the "best single indicator of status" (A. Chase 1992:40, 48, emphasis mine). The Chases have also gleaned a valuable bit of data from the ethnohistoric record. It comes by way of the Maya term *azmen uinic*, which translates as "middle men" or "middle status" (A. Chase 1992:42; A. Chase and D. Chase 1992:11; D. Chase 1992:121). They use this as confirmation that a middle group existed.

Finally, I have argued that minor centers and some slightly less complex architectural

clusters may have been inhabited by social groups akin to a middle class (Iannone 1993a, 1993b; see also Culbert 1974:67). The sites in question, which I have termed "middle level settlement units" (MLSUs), "are seen to comprise a loose but distinguishable set of settlement units lying in size and complexity, somewhere between the smaller housemound groupings and the larger major centers" (Iannone 1993b:3). I have ascribed them a mediary social position in that I interpret them as having been the "articulators" between the domestic and ruling populations (Iannone 1993a:5, 1993b:4). These sites contain larger and more numerous special function structures than do the smaller domestic groups, yet they fail to contain other features common at the larger major centers, such as ballcourts (see Ashmore 1981:57). This implies that an intermediary range of social activities were undertaken within the confines of the MLSUs. Similarly, excavations within MLSUs suggest that although the inhabitants of these sites had access to exotic and other high status goods, these items are generally fewer in number and less elaborate than those found in the larger major centers (see Iannone 1993a:17). It is significant that written texts, whether painted or carved on vessels or other malleable materials, are seldom encountered during excavations at MLSUs (see A. Chase 1992:38; Coe and Coe 1956:370; Culbert 1974:60; Leventhal 1981:201; see also discussions in Marcus 1992:224, 1993b; Stuart 1993). This is especially true with regard to the large carved stelae so frequently encountered at the major Maya sites. In addition, other material culture items commonly recovered from ritual deposits in major centers, such as eccentric lithics, rarely appear in comparable deposits within MLSUs (Iannone 1992, 1993c; Iannone and Conlon 1993).

Having said all this, I have recently outlined instances where high status items, such as stelae and eccentric lithics, have been recovered from MLSUs (Iannone 1992, 1993a:14-15, 1993c). Given these occurrences, I have argued that in special circumstances members of the middle class were able to obtain some high status material culture items which were normally rigorously controlled by the upper echelons of the society (Iannone 1993a:14; 1993c:9). However, I have concluded that rather than suggesting autonomy on the part of the MLSU, the presence of these items suggests dependency in that a close relationship with the ruling class is implied (Iannone 1993a:14). It may also indicate the existence of some limited social mobility (Iannone 1993c:9). In conclusion, I have suggested the presence of a mediary social group, or middle class, based not only on the intermediate range of activities inferred to have taken place within the confines of middle level settlement units, but also the mediary nature of the artifact assemblages. This data base suggests to me that the social groups inhabiting these architectural clusters were articulators between the lower level domestic population and the upper level ruling aristocracy. Thus, they were a "middle class" in the sense that they were situated in a medial position within the milieu of ancient Maya social relations.

This final approach builds on the Chases work as it continues to have a spatial emphasis, as well as a concentration on the presence or absence of specific artifactual and architectural features. However, I feel it to be a refinement in that it has stressed that the problem of social organization is best approached via the analysis of social relations. Specifically, by concentrating on social relationships between groups, and the differing roles that particular social groups may have played within the larger social system, the latter framework provides a more advantageous perspective with regard to social interaction. This focus ultimately facilitates the recognition of a "middle class" or "middle stratum" of individuals.

The various approaches employed by supporters of the multiclass model remain open to critique. First, it is problematic that not all social scientists would ascribe to the conclusion that occupational specialization unquestionably implies the presence of a middle class (see Giddens 1979:109; Marcus 1992:221-222). For example, Raynor (1969:12) notes that although "middle class" occupations may exist within a given societal context, a "middle class" per se is only present when a "distinct class" is forged. The validity of this assumption must therefore be explored in a more rigorous fashion before the presence of occupational specialists can be accepted as representative of a middle class.

An initial criticism of the Chase's approach comes from Marcus (1992:224), who questions whether a convincing argument can be made for any tomb interment being "middle class". Marcus argues that some commoners may have been very successful, but in no way can they be considered a "third class - endogamous stratum" (emphasis mine). As will be stressed below, however, Marcus confuses class relations with kin relations. Thus whether tombs and their contents can be considered accurate indicators of a middle class remains open for investigation.

A more critical concern revolves around the Chases analytical handling of the tomb data. A. Chase (1992:37) employs the concept of tomb provided by Loten and Pendergast (1984) in their *A Lexicon for Maya Archaeology*. This lexicon defines a tomb as simply "An elite interment" (Loten and Pendergast 1984:14, emphasis mine). A much more rigorous definition has been provided by Welsh (1988:18) in his definitive examination of lowland Maya burials. In this analysis tombs are considered to have a specific size and degree of structural elaboration, and are contrasted with a number of other interment types, such as "crypts", which are smaller in size and less elaborate in construction (Welsh 1988:17). It is clear that we must distinguish between a "tomb" as simply an "elite interment", and a "tomb" as a grave type with a recognizable amount of elaboration and labor investment involved in its construction. The latter is a far superior analytical construct as it permits finer comparisons to be made between interments. It is evident from Figure 3.2 in A. Chase's discussion that interments as large as 20 cubic meters in size and as small as 1-2 cubic meters have been lumped together as "tombs". Clearly, any analysis of social structure which relies so strongly on grave volume to isolate a middle class would benefit from a more rigorous classification scheme, such as the one proposed by Welsh.

As I have shown before, in a study focusing on the periphery of Cahal Pech, intersite comparisons based on grave elaboration and labor investments are profitable avenues with regard to the analysis of social relationships (Iannone 1993a:17). Such comparisons may provide further insights concerning social status, if in fact patterns can be recognized suggestive of the use of sanctions in relation to the type of interment a given individual may receive. For example, at the minor center of Zubin numerous burials have been uncovered from an ancestor shrine (Iannone, in press). Even though the majority of interments are associated with substantial modifications to the structure itself, only crypt burials have been uncovered (using Welsh's definition of crypt). The most elaborate crypts are often intrusive into earlier construction levels, and the size of some of the chambers surrounding the crypt proper are substantial enough to be considered "tomb" size, although they are not walled and plastered. Thus, given the size of these intrusive cuts, and the labor involved in the associated architectural construction, it is apparent that enough labor was present to build a tomb if it was desired. I would suggest, therefore, that the type of interment present relies as much on social

sanctioning as it does on the ability to marshal labor for its construction (see also discussion in Haviland and Moholy-Nagy 1992:53-54). This theory can only be tested through the use of a more discrete grave classification than the one employed by Chase.

Both the Chase's approach and my own framework can be criticized for their lack of rigor with regard to the use of terminology. It is problematic that terms such as "middle class" and "bourgeoisie" are employed without adequate definition in both instances (see A. Chase 1992; A. Chase and D. Chase 1992:11, 16; Iannone 1993a:1-6, 1993b:4, 1993c:233). Even the Chases argue that the term "class" may be problematical in this context as "we do not know whether Mesoamerican society was truly a class system" (A. Chase and D. Chase 1992:11). Similarly, whether the use of such "eurocentric and modernist" terms will facilitate social analysis has been questioned by some (G. Marcus 1992:293; J. Marcus 1983b:241-242, 1992:224). J. Marcus (1992:225-226) has also proposed that the historic term *azmen uinic* may not necessarily imply the presence of a "middle class". She states that such a term could refer to "...a male member of a minor nobility ... removed from the direct line of royal descent", "...a male commoner who held some significant elected or appointed office", or "someone of mixed ancestry." In the end, I concur with Marcus when she argues that the term *azmen uinic* must be isolated in more contexts before we can adequately assess its true meaning. However, contra Marcus, I believe that it remains open as to whether the possible social status's implied by the term *azmen uinic*, as outlined above, can or cannot be defined as "middle class".

The major criticisms of the multiclass model come from those who rely primarily on the ethnohistoric record (cf. Marcus 1983a:470, 1992: 221-226, 1993:114-115). For example, Marcus postulates that there were various "ranks or categories" within ancient Maya society, but that all of these ranks were subsumed under the two broad classes of noble or commoner. She argues that these are the fundamental societal divisions because these two groups had "separate descent". With reference to the multiclass model, Marcus (1992:221) states that "such reconstructions are inaccurate in light of what is known ethnohistorically," and "As disappointing as it may seem to some of my colleagues, no known Mesoamerican state had more than two strata: an upper stratum of hereditary nobility and a lower stratum of commoners." Marcus concludes that "None of [the] differences in rank and profession ... was as significant as the institution that provided the gulf between the two strata: class endogamy." Although Marcus' observations must be considered, it is important to stress that we are in no way certain as to what extent the Classic period elite were endogamous (Sharer 1993:94). Similarly, I would like to reiterate that the absence of certain social classes or strata during the ethnohistoric period does not inevitably rule out their presence during the prehistoric period. Nor should the kinship material be treated as a completely accurate description of the "actual" workings of historic Maya society (see above). According to Bourdieu (1977:35) "...representational kinship is nothing other than the groups self-representation and the almost theoretical presentation it gives of itself in accordance with that self-image."

It is also important to stress that, unlike Marcus, the majority of social scientists would not consider kinship and class to be the same thing. McGuire (1992:184) argues that in archaeology there "...is a desire to treat kinship and class as things, instead of the outcome of underlying relationships." According to McGuire, it is essential to recognize that classes and kin groups are based on different relationships. Kin groups derive from relationships of "human reproduction". Within these groups social relationships exist, and therefore power relationships are also present. However, the "elite" that develop in kin based societies are

regulated by obligations to the larger kin group (McGuire 1992:186). In contrast, McGuire defines class as "...social groups that are based on relations of exploitation and surplus extraction between groups" (McGuire 1992:185). He notes further that ... "With class the elite are no longer embedded in the kin group, but form their own kin groups; this removes products (surplus) from the kin groups of direct producers and does away with a major limitation on the exercise of power." McGuire (1992:186) does concede, however, that "In many incipient cases of class formation, kin relations still structure production, and surplus extraction requires that class relations be masked as kinship". Bourdieu (1977:85) has argued that "...social class, understood as a system of objective determinations, must be brought into relation not with the individuals or with the 'class' as a population, i.e. as an aggregate of innumerable, measurable biological individuals, but with the class habitus, the system of dispositions (partially) common to all products of the same structure" (emphasis mine). Thus, although class and kinship are always interwoven (McGuire 1992:182), they are not the same thing. Contra Marcus, the presence of two kin groups cannot be taken as evidence for the presence of two classes. It is apparent that classes may exist within broader kinship groupings, as well as crosscut kinship boundaries (see also discussions in B  teille 1965:186; Hendon 1991:913).

The main issue of contention between advocates and opponents of the multiclass model continues to be the presence of an actual middle class. In order to negotiate this impasse, it is essential that a proper definition for this term be provided. The focus of attention must therefore turn to the broader social sciences. This problem is not just a matter of semantics. If we as Mayanists, and archaeologists, strive to add to the greater understanding of society and social interaction, we must pursue questions relevant to the broader interests of the social sciences. Specifically, if we are going to attempt to address questions such as the presence of "classes", we must remain cognizant that such concepts have been the topic of study in other disciplines for a significant while longer. In order to make our findings comparable we must therefore strive to employ these terms in as rigorous a manner as possible, and in a way reflective of the body of work already produced by these other disciplines (see also Kowalewski et al. 1992:259).

TOWARDS A DEFINITION OF MIDDLE CLASS

According to Abercrombie (1983:1), the term "middle class" was coined by the Reverend Thomas Gisborne in 1785 with reference to "...the propertied and largely entrepreneurial class located between landowners on the one hand, and urban-industrial workers and agricultural labourers on the other..." In the years preceding the appearance of the term "middle class" in the Oxford English Dictionary of 1812, Western society was understood to consist of two classes, "gentlemen" and "non-gentlemen", "with various ranks and orders within each of these two main groups" (Raynor 1969:3). However, according to Raynor, prior to the Industrial Revolution "middle orders" existed "between the nobility and the common people." In addition, occupational specialists existed at this time who could be considered "middle class", however, no distinct classes had formed (Raynor 1969:12). In contrast, Raynor (1969:3) suggests that with the Industrial Revolution a "new terminology" was required to describe mediary groups which did share similar "interest[s] and attitudes[s]", hence the invention of the term middle class.

Within the broader social sciences there are two streams of thought concerning the term "middle class" (Giddens 1982:33). The first has its roots in Marx. McGuire (1992:263) has recently stated that "A class is middle in a Marxist sense when it stands between other classes or mediates between classes in a structure of relations. In capitalism the middle class are the managers, administrators, professionals, and small-business owners who do not control the means of production, but do have significant control over their own labor, and direct the labor of the working class" (emphasis mine). Similarly, Cohen (1978:86) has portrayed the middle class in the following manner: "he owns his labor power, but he does not sell it to another. If he owns the means of production, then he does not do so on a scale which enables him to live without labouring. Thus he is forced to labor, although not forced to labor for another." It is clear that within the Marxist definition of middle class economic relationships are key.

Similarly, those who follow more closely the thinking of Weber (cf. 1947, 1962), argue that "middle class" results from one's position in the market. According to Weber (1947:391), the middle class comprises "...groups who have all sorts of property, or of marketable abilities through training, who are in a position to draw support from these sources." According to those who ascribe to Weber's position, it is imperative to distinguish between, class, status, and power (Raynor 1969:5-6). Within this tripartite division, class continues to refer to one's economic or market position, status to one's social position (i.e. prestige, "style of life"), and power to one's ability to influence "communal action" on a social level (see Raynor 1969:5-6). These three aspects are interrelated (see Raynor 1969:5-6; Weber 1947:393-394). Raynor (1969:5-6) states that "Whatever the middle class is ... it is composed of subgroups which will be different according to whether one is analyzing it in terms of social class, social status or power; It is far better to think of it in terms of a stratum ... But this social stratum should not be regarded as an actual group functioning in society" (Raynor 1969:7). It is preferable "...to use the term middle stratum rather than middle class, because its components are not a solid or homogeneous group" (Raynor 1969:11). Raynor concludes that this middle stratum "do share a broad economic orientation that distinguishes them from the working class, and they do share different life-styles, levels of prestige and power that distinguishes them further."

It is clear from the foregoing discussion that in both the Marxist and Weberian traditions the term "class" is employed solely within the analysis of economic relationships.

Thus the term "middle class" is utilized in both instances to refer to groups or individuals situated in a mediary role within the economic sphere. In fact, given the importance attributed to economics and the ownership of "the means of production" within the Marxist approaches, some analysts assume that class society, and by association a "middle class", can only develop within a capitalist system (Giddens 1979:110, 162). This link between class analysis and economics has recently been stressed within the field of Maya archaeology by Culbert (1991:287) and Yoffee (1991:287; see also Sanders 1992:291). Given the postulated presence of occupational specialists among the ancient Maya, in Weberian terms an economic "middle class" may have existed. However, it is evident that in our studies of ancient Maya social organization we are interested in much more than purely economic relationships. The Weberian approach, with its emphasis on economics, status, and power may therefore be a profitable approach to adopt. In conclusion, Mayanists must discard the economically oriented term "middle class", and take up the term "middle stratum" as a more accurate label for the mediary groups under investigation.

According to Weber (1947:394) "A social "stratum "... is a plurality of individuals, who,

within a larger group, enjoy a particular kind and level of prestige by virtue of their position and possibly, also claim certain special monopolies." Weber deems the most important aspects of strata development to be "...a peculiar style of life, including, particularly, the type of occupation pursued ... hereditary charisma arising from the successful claim to a position of prestige by virtue of birth ... [and] ... the appropriation of political or hierocratic authority as a monopoly by socially distinct groups" (see also Cowgill 1992:206-207). The various data bases presented by the advocates of a Maya multiclass model do seem indicative of a "middle stratum". There is evidence in all three instances for "a peculiar" lifestyle, whether it be suggested by occupational specialization, treatment in death, or habitation within the vicinity of special function architecture, the latter suggesting specialized social roles or activities. The data also indicate "prestige by virtue of birth". This is especially clear with regard to those inhabitants of the larger, multifaceted minor centers. Finally, the presence of specific status items, and the lack of others, seems indicative of a "socially distinct" group with some limited political authority (Iannone 1993a:14, 1993c; Iannone and Conlon 1993). That the inhabitants of minor centers controlled, or at least managed intensive agricultural land (A. Chase 1992:40-41) also implies some political authority. As does the suggestion that these groups may have served a variety of administrative roles (cf. Culbert 1974:60, 66-68; Ford 1991:40), or at least acted as mediaries or "articulators" between the ruling aristocracy and the farming population (Iannone 1993a:5, 1993b:4). Thus it seems probable that, by definition, a "middle stratum" did exist in ancient Maya society. With reference to this possibility, G. Marcus (1992:293) has recently stated that "The existence of such groups certainly will not be a surprise to any anthropologist or historian who has studied classic kingship and aristocratic societies globally."

Having concluded the possibility that such a group was present among the ancient Maya, it becomes important to stress that the current data base is still too limited to enable us to characterize this "middle stratum" with any accuracy (see also Culbert 1974:59). In order to promote an understanding of this mediary group we as Mayanists must not only alter our methodological, but also our theoretical approach to ancient Maya social organization. As I have argued elsewhere (Iannone 1993a, 1993b, 1993c), Mayanists have failed to produce an adequate data base from which the topic of social organization can be broached. Outside of a few projects focusing on some of the major centers, investigations have often included only a limited excavation component. It is all too clear that middle level settlement units have rarely been explored in a systematic fashion. Slightly more effort has been concentrated on the lower level housemound groupings, although in no way have these efforts been sufficient. This unhealthy focus on the polar extremes of Maya settlement has promoted the reification of the two class, noble-commoner model (see also Iannone 1993c:9). It is inevitable, given these research design problems, that Mayanists have failed to produce a data base representative of all the levels of the social hierarchy. Thus our ability to compare material culture assemblages from the various settlement levels is limited, and as a result few insights concerning the distribution of artifact types or architectural forms can be made. Concomitantly, few conclusions can be made concerning the social activities undertaken within the various settlement units, nor the social relationships between the groups inhabiting these various units. It is also evident that we require more intensive excavations in order to flesh out our diachronic perspective, a necessity for any analysis of social relations (see Bourdieu 1977; Cohen 1978:270; Giddens 1979:53-55). In summary, a spatially and diachronically representative data base must be produced before any valid interpretations of social organization can be formulated.

The limited information produced through archaeological research has meant that within Maya archaeology, models, rather than data, have been at the forefront of social analysis (Kowalewski et al. 1992:259, 264; see also Sabloff 1983). Ethnohistoric and ethnographic Maya models, as well as old world ethnographic models have been employed uncritically, often with little regard for the archaeological record. Even with the limited data produced through archaeology, it remains questionable whether these models are applicable to the ancient Maya. Finally, we as Mayanists must make a concerted effort to properly define the terms which we employ in our analyses. Only through this process will our observations be of use to other disciplines within the social sciences. This last point has been made abundantly clear with regard to the casual usage of "middle class" within the approaches outlined above.

Having said all this, I wish to outline what I believe to be a more profitable program of analysis, one which should not only promote the recognition of the middle stratum of society, but also facilitate the overall study of ancient Maya social organization. Although the following should only be considered a summary of the approach, it should enable other researchers to assess the potential of the framework.

CONTINUUMS OF SETTLEMENT, CONTINUUMS OF POWER

I propose that Mayanists adopt a three-stage program of social analysis. The first priority continues to be the need for more extensive research in order to provide data representative of all levels of the settlement continuum. Until such a data base is produced only limited insights can be generated concerning social organization, as the comparative data required for such analyses is currently lacking except in a very few instances. This requirement implies that projects undertake multifaceted regional investigations, including both extensive settlement survey and intensive excavations. I cannot emphasize enough the importance of providing a thorough spatial and diachronic understanding of material culture distributions, something which can only be achieved through excavations. As has been made clear by Bawden (1982:181) "...those research projects that attempt to reconstruct prehistoric social systems primarily through examination and interpretation of corporate architecture and simple identification of settlement composition can only gain superficial understanding of the structural patterns that prevailed within those settlements."

When a firm grasp of the distribution of settlement units and artifact types has been realized for a particular region, analysis can begin. As has already been made clear, the process of pigeonholing data into loosely constructed, overarching models continues to be an ineffective approach to ancient Maya social organization. Instead, I suggest that we concentrate on social relationships as a means of approaching the question of social organization (see also Hendon 1991). In doing so, it is particularly profitable to focus on the concept of "power". This follows recent comments by G. Marcus (1992) in his critique of the various approaches to the study of Mesoamerican "Elites" (see D. Chase and A. Chase 1992, editors). The analysis of power is "integral" to the study of social relations (Giddens 1979:53-54). In fact, some social scientists, such as Giddens (1979:68), see power as the central "concept" in social theory. Unfortunately, according to Giddens, power as a focus of investigation has rarely received the attention that it deserves. It is important to stress at this juncture that I do not ascribe to the strict definition of power employed by some, who see

power as purely a process of domination (e.g. Weber 1962:117, see above; see critiques in Boulding 1989:16; Giddens 1979:69, 89, 92). Rather, I prefer to use power in a broad, multidimensional sense, following the thinking of social analysts such as Boulding (1989), Bourdieu (1977), Foucault (1977; see also Foucault in Rabinow 1984:60-61), and Giddens (1979, 1982).

According to Boulding (1989:16), it is misguided to associate power strictly with force, and thus domination. He outlines that force and domination are only limited aspects of power. Foucault (in Rabinow 1984:60-61) concurs, arguing that "what makes power good, what makes it accepted, is simply the fact that it doesn't only weigh on us as a force that says no, but that it traverses and produces things, it induces pleasure, forms knowledge, produces discourse." Foucault stresses that power "...needs to be considered as a productive network which runs through the whole social body, much more than as a negative instance whose function is repression." Boulding (1989:15) states that power, in its "widest meaning" refers to the "potential for change." Giddens (1979:91) adds that "The exercise of power is instantiated in action, as a regular and routine phenomenon". According to Giddens (1979:88) "Action involves intervention in events in the world, thus producing definite outcomes, with intended action being one category of an agents doing or refraining. Power as transformative capacity can then be taken to refer to agent's capabilities of reaching such outcomes". He argues further that, "Power in social theory ... is centrally involved with human agency; a person or party who wields power could 'have acted otherwise'; and the person or party over whom power is wielded, the concept applies, would have acted otherwise if power had not been exercised" (Giddens 1979:91). Giddens (1979:6, 88-94, 1982:32) therefore sees power as being fundamentally linked to the processes of autonomy and dependence.

Boulding (1989:24) postulates that the "consequences" of power can be separated into three broad categories; "destructive power", "economic power", and "integrative power". A similar tripartite construct has recently been suggested by Yoffee (1991:287). It is essential to emphasize here that all three aspects of power are closely linked (Boulding 1989:9, 80). Boulding (1989:24-25) defines destructive power as "the power to destroy", economic power as the power to produce, and integrative power as the ability to "build organizations, to create families and groups, to inspire loyalty, to bind people together, to develop legitimacy." The importance of integrative power has previously been implied by Durkheim (1984 [1893]) in his discussion of the division of labor, Bourdieu (1977:177-179) in his summary of alliance networks, and Giddens (1979:76) in his overview of "interdependence of action". It is integrative power, suggests Boulding (1989:10), that is not only the least studied, but also the "most significant form of power". This is because integrative power creates legitimacy, something which the other forms of power are unable to do. Boulding (1989:32) sees integrative power as "...a matter of communication." He suggests that as groups get larger communication becomes "increasingly difficult", which in turn leads to inequalities in decision making and knowledge distribution (Boulding 1989:42-43; see also Bourdieu 1977:165). These processes create hierarchies of power "...which cannot survive unless [they] can be legitimated" (Boulding 1989:44). He concludes that "Legitimacy applies to persons, to roles and occupations, to organizations, customs, habits, means of communications, institutions - indeed there is hardly any aspect of society the development and future of which are not profoundly determined by its position in the constantly changing structure of legitimacy" (Boulding 1989:113).

It should be clear, given the aforementioned statements, that power is both a universal and multidimensional element within social interaction. Two key issues should be stressed here. First, it is generally accepted that power (in its broadest sense) is inherent in all social relationships (cf. Foucault 1977; Foucault, in Rabinow 1984:60-61; Giddens 1979:6, 53-54, 80-82, 88; Miller and Tilley 1984:5-9). Second, although all agents are perceived to have power in all relationships (Giddens 1979:6, 93, 1982:32), it is assumed that over time power has become unequally distributed (Boulding 1989:21). In summary, because power is inherent in all social relations, and due to its unequal distribution, any analysis which focuses on power will promote the characterization of social relations. Ultimately, such an understanding increases our ability to address the broader question of social organization.

What remains to be discussed is a method for applying the concept of power to the archaeological data. In order to approach the analysis of power relations, and by association social relations, in a rigorous manner, I suggest that we employ Easton's (1959:239) concept of bundled continua. This makes a great deal of sense, since the data we are looking at does not come in discrete units, but rather by way of a series of continuums (cf. Adams and Jones 1981:308; Grove and Gillespie 1992:191; Haviland 1965:23, 1966a:627-628, 1966b:31, Iannone 1993a:1, 1993b:1-3, 1993c:8; Sharer 1993:94). The bundled continua approach has been employed with some success in the Maya area by de Montmollin (1989) in his recent study of the Rosario Polity. The focus of de Montmollin's (1989:16-17) examination is primarily political, and therefore his analysis concentrates on the following "bundled continua of variation": 1) segmentary vs. unitary structure, 2) pyramidal vs. hierarchical regime, 3) group vs. individual stratification, 4) mechanical vs. organic solidarity, and 5) segmenting vs. non-segmenting organization.

As the examination of social organization is concerned with more than just politics, de Montmollin's bundled continua are not adequate for the current analysis. As outlined above, I believe that any social analysis should begin on a very basic level. Given this stance, I suggest that we "scale" our continua in varying degrees of "power to" and "power over" (Benton 1981:176; see also McGuire 1992:132; Miller and Tilley 1984:5-9). Secondly, rather than limit our analysis to a few continua, I propose that an inductive approach is exercised, whereby the continua arise from the data base itself. This procedure will provide a much more multifaceted characterization of the series of social relationships under investigation. I have recently outlined the results of a preliminary analysis of the minor centers surrounding the site of Cahal Pech, in the Belize Valley (Iannone 1993a). Within this inquiry I concentrated on a few of the more obvious continua suggested by the data. To summarize, social relations were assessed along the following continua of variation: 1) the "power to" obtain items usually controlled by the ruling stratum, 2) the "power to" construct surface features joining the minor centers to the site core, 3) the "power over" the labor (autochthonous or allochthonous) to construct such features, 4) the "power to" construct special function structures, 4) the "power over" labor (autochthonous or allochthonous) to construct such features, 5) the "power to" restrict access to certain areas of the center, 6) "power over" the labor (autochthonous or allochthonous) required to construct the restrictive features, 7) the "power to" construct elaborate residential structures, 8) the "power over" the labor (autochthonous or allochthonous) required to produce such structures, 9) the "power to" attract and retain a population, 10) "the power to" construct and furnish elaborate burials, 11) the "power over" the labor (autochthonous or allochthonous) required to construct such interments, 12) the "power to" obtain high status or exotic items, 13) the "power over" the production of such items. Having

looked at the data along these initial continua of variation, I concluded that the minor centers within the Cahal Pech periphery "...exhibit evidence for diverse social relations with both their surrounding domestic populations and the larger major centers in the area" (Iannone 1993a:17). This analysis emphasizes the variability in these social relationships, and in turn provides a much more accurate description of social organization within this region.

In summary, I would argue that in our endeavor to characterize ancient Maya social organization we are better off focusing initially on fundamentals, rather than allowing our analyses to be governed by the tenets of overarching explanatory models. Power relationships are fundamental to social relationships, and social relationships are fundamental to social organization. Such a focus carries with it less conceptual baggage than do the models currently being employed by Mayanists. We need to concentrate on regions in their entirety, situating each settlement cluster in turn along the various "power" continua which emerge from the data. Then "power to" and "power over" comparisons can be made between the various social groupings within a given region. Only through this process will Mayanists be able to characterize the "middle stratum" in a reliable way, and in turn address the broader question of overall social organization.

CONCLUSIONS

Through this discussion I have attempted to broach the topic of ancient Maya social organization in a constructive manner. Two points of contention have been emphasized. The first concerns the explanatory potential of the multiclass model, and the postulated presence of a middle class. It is concluded that in fact a mediary group probably existed within the ancient Maya social hierarchy. However, it is argued that the title *middle class* should cease to be employed as a label for this group, given its inherent economic connotations. Rather, the more pluralistic term *middle stratum* is considered to be a more correct designation. Following this position, the *multiclass* descriptor must also be considered a misnomer, and the term *multistrata* should be adopted. It must be stressed that the presumed middle stratum did not form "an actual group functioning in society" (Raynor 1969:7). Nor should it be considered "a solid or homogeneous group" (Raynor 1969:11, emphasis mine). Rather, the posited middle stratum of ancient Maya society consisted of a heterogeneous assemblage of social players and groups which shared similar economic, status, and power characteristics (power in Weber's restricted sense). This heterogeneous middle stratum is thus best viewed as consisting simply of individuals and groups situated in a mediary position within the milieu of ancient Maya social relations. Clearly, due to this mediary position, these groups would have shared a similar habitus (see Bourdieu 1977). In suggesting the presence of such a stratum I am in no way implying that the ancient Maya social hierarchy can be rigorously divided into three separable social levels. In contrast, I am arguing that the boundaries between any social divisions existent within ancient Maya society, except for possibly the very upper echelons (the hereditary ruling elite exhibiting "devine" birthrite), were much more fluid than has previously been implied. However, I do believe that there were enough economic, status, and power differences to question whether the term "commoner" should be employed as a catchall for all those individuals and groups who could not claim devine birth. Given this stance, I must argue against the simplistic noble/commoner model for ancient Maya social organization. Although a dichotomy may be a fairly accurate description of kinship, as reflected by devine vs

commoner birth (although this may still be slightly "idealist"), it cannot be considered a satisfactory representation of the ancient Maya social hierarchy. In the end, I strongly believe that a middle stratum can and will be recognized archaeologically.

Through this paper I have also striven to address some basic methodological or theoretical problems. It has been suggested that the study of ancient Maya social organization has been impeded by an overemphasis on explanatory models, at the expense of archaeological data. However, it has also been implied that much more archaeological work needs to be undertaken before rigorous social analysis can be taken up. More regional studies, with intensive excavation components, are required to produce comprehensive data from all settlement levels. Only then can reliable comparative analyses be initiated. Finally, this comparative data should be approached in an imaginative way through the use of bundled continua of variation, with an emphasis on power relations. An understanding of power relations will facilitate the characterization of social relations, which in turn will stimulate the formulation of a more accurate portrayal of ancient Maya social organization.

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MORE TIME AMONG THE THORNS: RESULTS OF THE 1993 FIELD SEASON AT ZUBIN, CAYO DISTRICT, BELIZE

by

Gyles Iannone

The following report summarises the results of the second season of archaeological investigations at the minor centre of Zubin, undertaken between May and September, 1993. Zubin is situated on an east-west running limestone ridge, approximately 2 km south of the larger centre of Cahal Pech (see Figure 1). The Zubin site core consists of two well defined plazas on the north, and a raised platform to the south (Figure 2). Architectural remains include pyramidal, range-type, and other low-lying structures. Surrounding this focal architectural assemblage are numerous smaller mounds, forming a continuum beginning with small solitary structures and concluding with a number of larger patio and plazuela-type configurations (see Ashmore 1981).

I have previously discussed at length the rationale behind the Zubin investigations (Iannone 1993a, 1993b, see also Iannone, this volume), and will only summarise the major goals of the research at this time. For over a century archaeologists interested in Central America have striven to characterise the social organisation of the ancient lowland Maya. Three contrasting theories are currently being employed (see Becker 1979; Chase 1992; Hammond 1982:179-197; Iannone, this volume; Kurjack 1974:7, 23; Morley et al. 1983:225-226). The first portrays the Maya as having had an egalitarian society, with the large centres functioning both as the locus for administrative and ritual activities, and part-time residences for a series of rotating officials and their retainers. Smaller, less complex clusters of architecture are perceived to have housed the majority of people, from whom the rotating officials were drawn at regular intervals. The second model, in its preliminary form, argued that ancient Maya society consisted of two classes, priests and peasants. The large ceremonial centres were thought to have housed only priests and their retainers, whereas the rest of society (read peasants), resided in the various unimposing architectural groups scattered across the landscape. More recently the priest/peasant model has been transformed into the elite (noble)/commoner construct, although many of the basic tenets remain the same. Unfortunately, neither of the above approaches can be reconciled with the social complexity apparent in the archaeological record. The third model relies heavily on archaeological data, and argues for a complex Maya society, containing many "classes" of people. This last framework has resurfaced many times in the past, and has only recently become vogue again.

Although it seems to be a much more realistic view, given the archaeological data, the Mayanists who espouse it are still having a difficult time explaining how the various components of the "complex society" fit together.

My Ph.D. research focuses on the apparent multifaceted socio-economic and socio-political interaction implied by the "complex society" model. Specifically, I am currently exploring what, given the tenets of the model, can best be considered members of the ancient Maya "middle stratum". The archaeological sites that correlate with these social groups, what

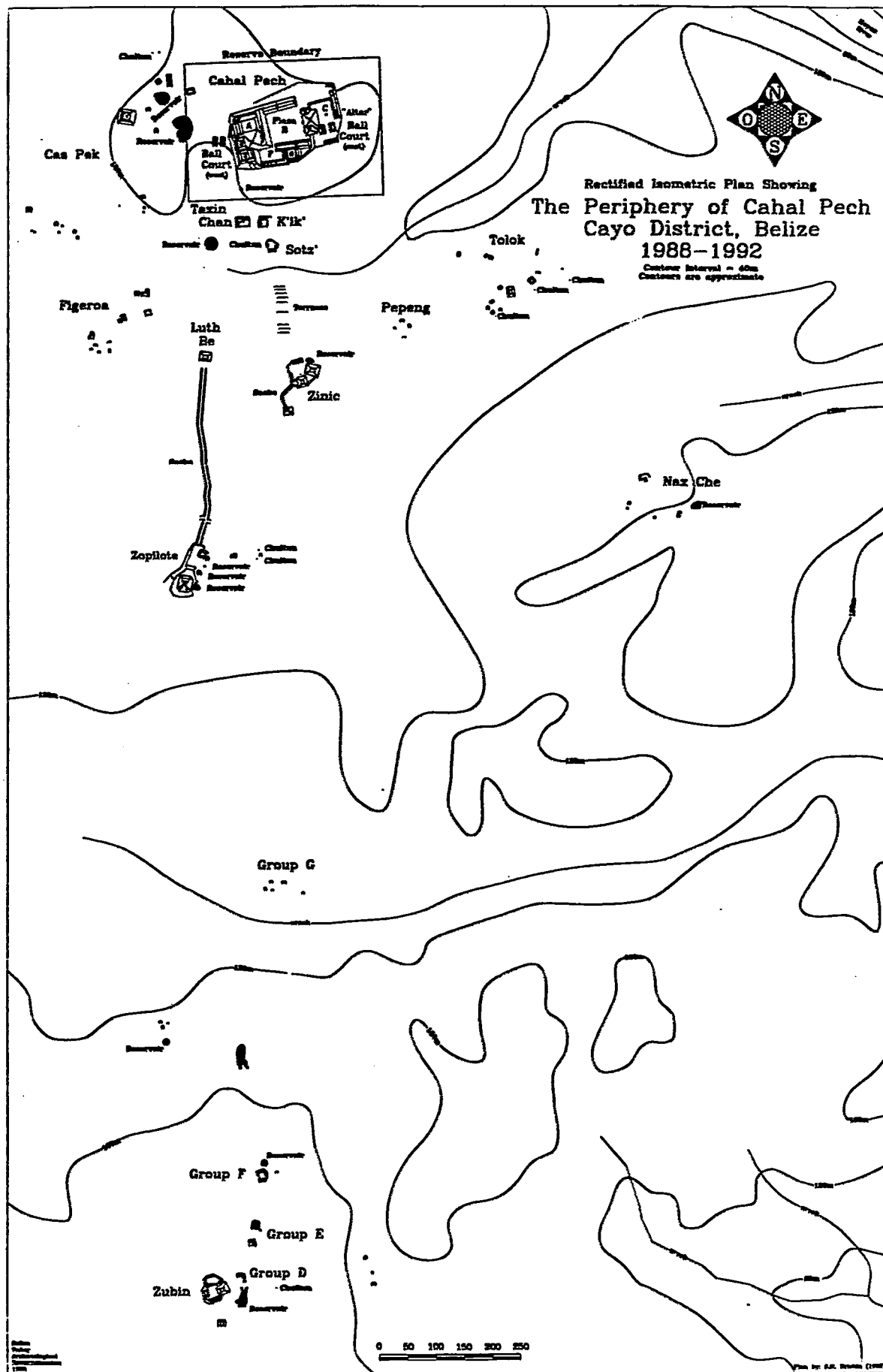


Fig. 1. Map of Cahal Pech showing the location of Zubin

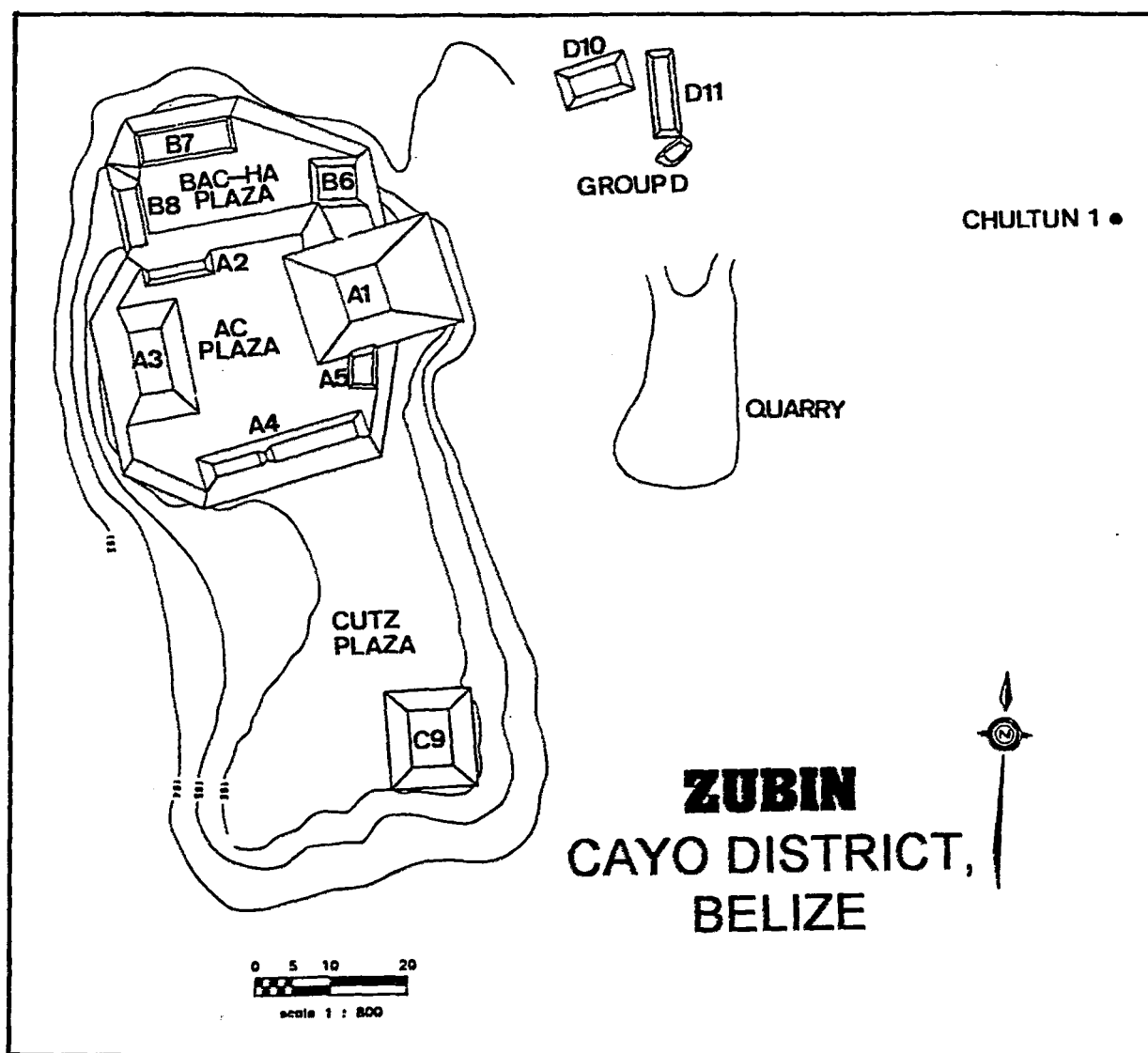


Fig. 2. Rectified Plan of the Zubin Site Core and Group D.

I have termed "middle level settlement units" (Iannone 1993a, 1993b), are seen to comprise a loose but distinguishable set of settlement units lying, in size and complexity, somewhere between the smaller residential groupings and the larger major centres. In the past the most complex middle level settlement units, designated "minor ceremonial centres" or simply "minor centres", have been interpreted as having provided many of the services of the major centres, but on a more localised level. However, the nature of power relations between these mediary groups and the lower and upper levels of the social hierarchy have never been investigated in a critical manner. Such an investigation has clearly been hampered by the limited scope of Maya settlement pattern studies, which have tended to focus primarily on the polar extremes of the settlement hierarchy, at least with regard to actual excavations.

Stimulated by this problem, I initiated archaeological investigations at Zubin in order to obtain data reflective of this settlement level. Zubin was seen to provide the perfect locus for such investigations. The group was considered "moderately complex" given the presence of some special function features (three pyramidal structures), and the absence of others (ballcourts, stelae). The existence of a relatively large peripheral population was seen to provide an excellent opportunity to explore the character of power relations as they existed between these social groups and the minor centre. Similarly, the nature of Zubin's socio-economic and socio-political relationships with more powerful and multifaceted social groupings remained open for investigation, given its clear spatial separation from the nearby major centre of Cahal Pech. Valuable comparative data also exists as a result of past and present research by other project members within both the core of Cahal Pech, and in peripheral groups representative of all levels of the settlement hierarchy.

A previous season (1992) of investigations was aimed at initial exploration of the Zubin site core and its periphery. A preliminary settlement survey was begun, and test units were excavated within some of the structures and plazas, both within the site core and in a few of the peripheral locales (Iannone 1993a; see also Hodgson 1993; Sunahara 1993). During the 1993 season intensive excavations were undertaken primarily within the site core, with only one peripheral operation occurring. From the outset horizontal and vertical excavations were implemented in order to acquire a temporally sensitive sample of architectural and material culture remains. The 1992 and 1993 investigations provided information pertaining to: 1) the duration of site occupation, 2) architecture type, elaboration, and sequence of modification, 3) the contents and location of ritual deposits, 4) the nature of the overall material culture assemblage, and 5) the location, structural elaboration, and inventory of burial deposits. Such data was deemed necessary for appraising the nature of activities undertaken at the site. Concomitantly, this information was also considered essential for the accurate assessment of labour relations and investment, and access to exotic and status goods. Subsequently, this data will be employed in a program of intra- and intersite comparisons embracing all settlement levels in the immediate settlement hierarchy. This program will allow power relations to be viewed along a series of "bundled continua" (see Easton 1959; de Montmollin 1989; and Iannone, this volume). Finally, the knowledge of power relations produced through this comparative analysis will facilitate the characterisation of social relations within the micro-region. This understanding of micro-regional social organisation will in turn provoke broader insights concerning ancient Maya social organisation as a whole.

EXCAVATIONS AT ZUBIN: THE 1993 SEASON

Seeing as the artifact analysis is still underway, the forthcoming discussions emphasise architecture, special features, and chronology, with the exception of a few significant artifact finds. Horizontal and vertical excavations were employed throughout, using trowels and geologists picks. Smaller wooden tools and dental instruments were taken up to complete more intricate excavations. All deposits were screened through 1/4 " mesh in order to provide consistent artifact samples for analysis. Soil samples were obtained from all floor levels and any other deposits which were deemed fitting. Size classifications for sedimentary clasts conform to the Wentworth scale. Architectural descriptions follow Loten and Pendergast's (1984) *Lexicon*. All faunal identifications have been made by B.V.A.R. Project faunal analyst Norbert Stanchly (see this volume). Grave classifications comply with those outlined by Welsh (1988) in his definitive analysis of Lowland Maya burials. Analysis of the human remains is being undertaken by Dr. David Glassman of Southwest Texas State, and his results will be reported at a future date. Artifact terminology generally conforms to that utilised in the Altar de Sacrificios (Willey 1972), Barton Ramie (Willey et al. 1965), Piedras Negras (Coe 1959), Seibal (Willey 1978), and Uaxactun (Kidder 1947) reports. Ceramic classification was done by the author, and Gifford's (1976) Barton Ramie typology was employed throughout. All dates herein derive from this typology, although modifications have been made when necessary to reflect the more pertinent chronology developed by Ball (Ball and Taschek 1986; see also Awe 1992) for Buena Vista and Cahal Pech, as there are clear temporal differences between these sites and Barton Ramie with regard to the duration of use of some ceramic types. All dates related within the forthcoming discussions take precedence over those outlined in the 1992 report. This is primarily due to the larger samples produced during the 1993 excavations, although in some instances it also reflects the superior preservation of floor levels encountered (i.e. less mixing of assemblages as a result of floor deterioration, root action, bioturbation, etc.).

Excavations in Plaza A or Ac

Plaza A or *Ac* (Male Peccary), the focal architectural assemblage at Zubin, is a highly restricted plaza configuration (see Figure 2). The eastern mound, Structure A1, is a pyramidal structure with at least one small flanking mound abutting its south side (Str. A5). To the north, between Structure A1 and Structure B6, a formal entrance into the plaza is hypothesised to exist. A very low-lying mound, Structure A2, partially closes off the plaza to the North, although there appears to be an access to the adjacent Plaza B (*Bac-ha*) to the east of this mound. An additional, yet smaller pyramidal mound, Structure A3, is located directly across from A1, and defines the western border of the plaza. A long, unvaulted, bi-level range-type construct, Structure A4, closes off the plaza to the South. A second formal entrance into the plaza is postulated to exist between Structures A3 and A4. Another more restricted access point possibly exists between Structures A4 and A5. The dominant mound, Structure A1, rises approximately 5 m above the plaza surface, and roughly 9 m above the normal ground surface to the East. There are no indications that any of the *Ac* Plaza structures were ever vaulted. However, Structure A3, the western pyramidal mound, has evidence for low masonry walls on its summit. This construct rises approximately 2.75 m above the *Ac* plaza courtyard, and substantially above the ground surface to the West of the site core. Eleven excavation units

were placed in the *Ac* plaza during the 1992 field season, four in Structure A1 and seven in Structure A3 (see Figure 3).

Excavations in Structure A1. Much of the 1993 excavation season focused on axial trenching of the A1 pyramidal mound. The reasons for these investigations were two-fold. First, we wished to acquire data concerning the construction sequence in order to outline the development of this special function structure and its associated plaza, as well as assess the quality of the architecture. Such information will facilitate intersite comparisons with regard to the timing of major structural modifications, and the amount of labour marshalled for such constructions. Second, the trench was placed along the primary axis in order to uncover any burials or ritual deposits which are normally deposited in this position. Such information was considered necessary for intersite comparisons to be made with reference to labour investment in burials and caches, and access to exotic or other high status items. All levels were excavated in natural or cultural levels in order to maintain the vertical integrity of the artifacts recovered. Horizontal control over the spatial distribution of artifact assemblages was provided through the use of smaller units within the larger trench. Specifically, an 11x2 m axial trench, running east-west, was subdivided into four contiguous units (see Figure 3). Unit A1-2, a 3x2 m unit, was placed on the platform of the mound, and had previously been excavated down to the penultimate architecture in 1992. To the west of this Units A1-3 and A1-4, both 3x2 m units, were situated along the A1 stairs. Unit A1-5, a 2x2 m unit, constituted the western extent of the trench, although only minimal excavations were undertaken within its boundaries. Within the following discussions the larger trench will be considered the unit of analysis except when it is profitable to specify individual units with regard to the location of particular architectural components, artifact finds, or ritual deposits. All measurements of depth are below the trench datum, which was situated in the southeast corner of Unit A1-2. It should also be noted that due to the large, dry-stone core employed during the various A1 constructions, the walls of the trench soon became unstable, especially after heavy rains. Thus we were unable to excavate the entire trench down to bedrock (see Figure 4). Where applicable it will be stressed that excavations were confined to specific units.

Level 7b, located at a depth of ca. 6.50 m below the trench datum, was only excavated within Unit A1-4 (see Figure 4). This deposit represented the original, undulating land surface (paleosol), as it rested directly on limestone bedrock. Varying from 10-14 cm in thickness, this deposit consisted of fine silty clays interspersed with small percentages of pebble sized (0.4-6.4 cm) sedimentary clasts. Compaction was moderate to high. Other than ceramic sherds, faunal remains, and lithic debitage, the only artifact of note recovered from Level 7b was the proximal section of an obsidian blade. Sherd content was moderate throughout the deposit. All ceramics date to the Middle Formative, Jenney Creek phase (800-300 B.C.). Members of the Savana and Joventud Ceramic Groups dominated the sample. A date of 600-350 B.C. is suggested for initial occupation of this land surface.

Level 7a, a subsequent ca. 20-34 cm thick sediment deposit, capped the initial 7b surface (see Figure 4). This deposit was again only exposed and excavated in Unit A1-4. It was encountered ca. 6.36 m below the trench datum. Like Level 7b, 7a consisted primarily of silty clays, however moderate as opposed to small percentages of pebble sized (0.4-6.4 cm) clasts were now contained within the matrix. This deposit appears to represent an initial effort to provide a level living surface, although only minimal efforts were made to achieve this goal,

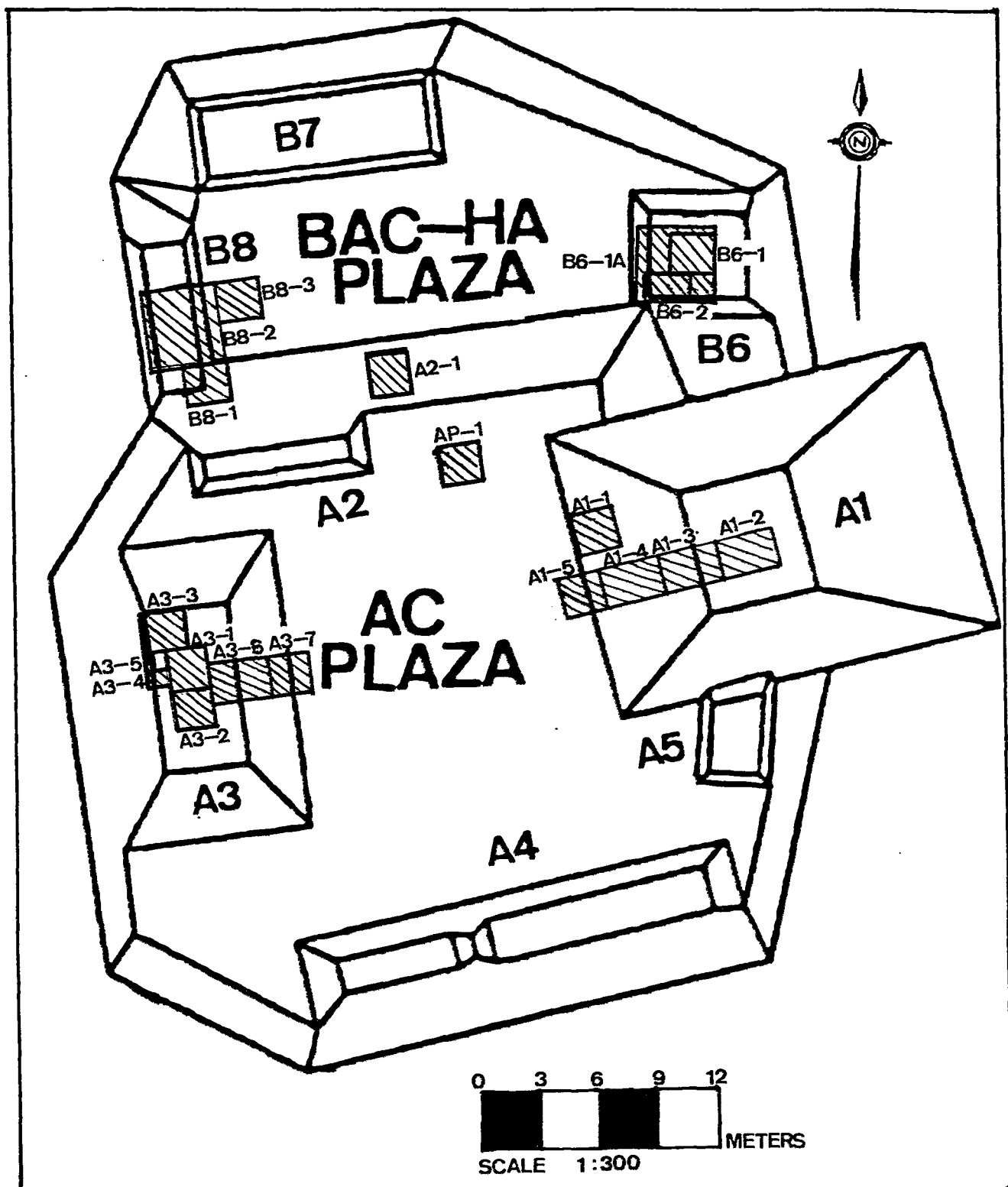


Fig. 3. Rectified Plan of the Zubin Site Core Showing the Location of Excavation Units.

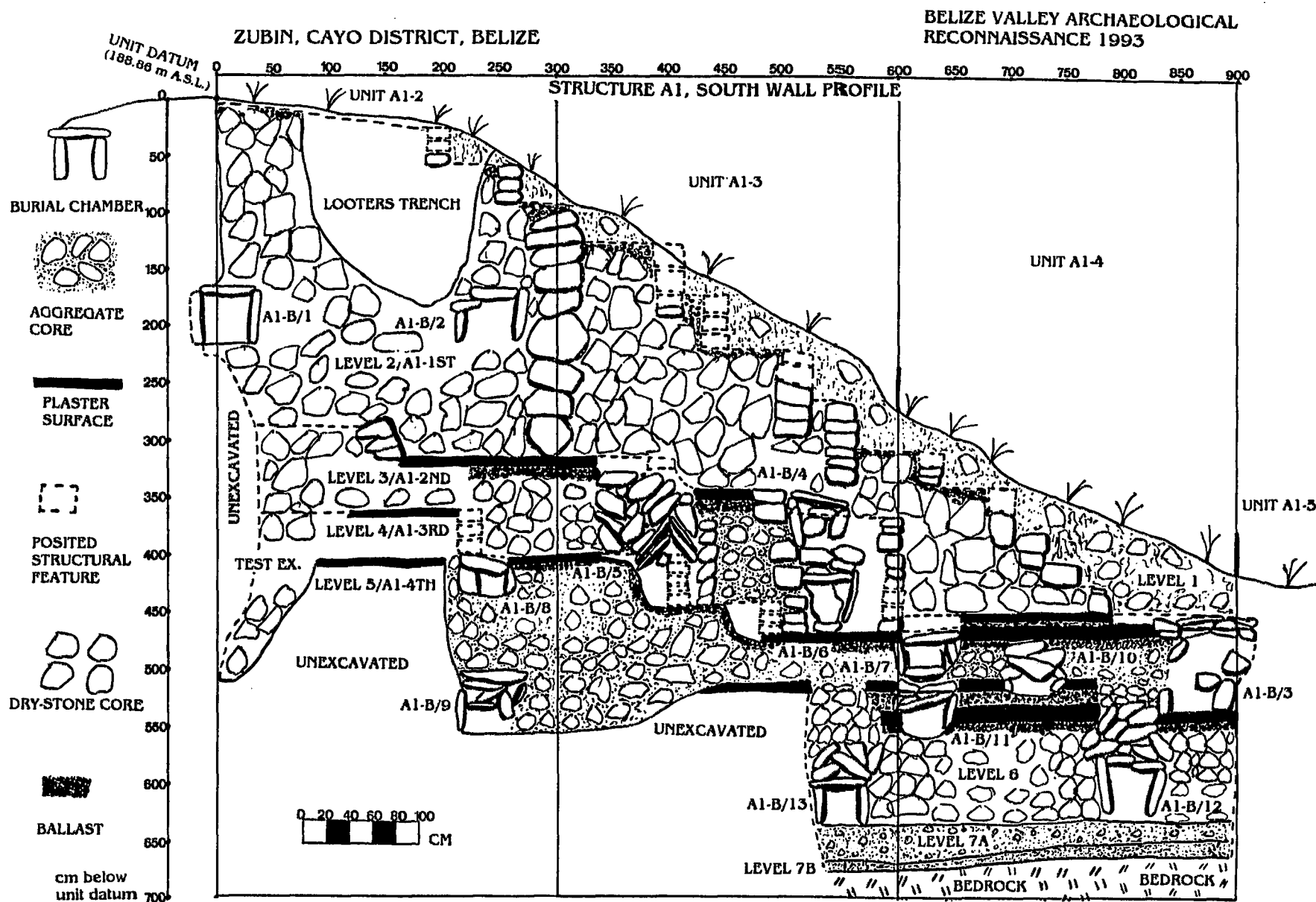


Fig. 4. Post Excavation Profile of Structure A-1, Looking South.

as the inhabitants of Zubin were satisfied to employ simple sediments and refuse for this purpose. Besides numerous sherds, faunal remains, and lithic debitage, only the distal section of an obsidian blade (A1-SF/252) was recovered from this deposit. Ceramics from the Middle Formative, Jenney Creek phase (800-300 B.C.), including representatives of the Savana and Joventud Ceramic Groups were found in moderate percentages. Further transitional types, related more closely to the Late Formative, Barton Creek phase (300-100 B.C.), Sierra, Polvero, and Flor Ceramic Groups were also present in moderate to high numbers. This assemblage suggests that a transitional Middle Formative/Late Formative date of 350-300 B.C. is likely for the construction of this living surface.

Level 6 symbolises the first major construction phase at the A1 locus. As with the two earlier deposits, this construction was only excavated in Unit A1-4 (see Figure 4). Level 6 consists of a ca. 97-100 cm thick plaza floor, and represents a substantial construction effort. This highly compact plaza surface was exposed ca. 5.33 m below the trench datum. Floor preservation was good to excellent except for where it had been cut through by intrusive burials (Figure 5). A large rodent run had also been cut into this surface. The floor itself consisted of a ca. 10 cm plaster surface, underlain by ca. 5-10 cm of ballast (primarily pebble sized materials [0.4-6.4 cm]), and a ca. 80 cm dry-stone core deposit (mainly cobbles [6.4-25.6 cm]). The basal core materials had been set directly upon the earlier Level 7a sediments. Other than the floor itself, no further architectural features could be identified for this construction stage. A figurine fragment (A1-SF/249), consisting of a partial torso and one leg, was recovered from the core materials during excavations. No other significant finds were encountered, except for numerous pieces of lithic debitage, ceramic sherds, and some faunal remains. Middle Formative, Jenney Creek phase (800-300 B.C.) sherds, representing the Savana, Joventud, Pital, Jocote, and Chunhinta Ceramic Groups were recovered in low to moderate percentages. Late Formative, Barton Creek phase sherds (300-100 B.C.), including transitional representatives of the Sierra, Flor, and Polvero Ceramic Groups were also present in moderate to high percentages. Taken together, these sherds suggest a date of 350-300 B.C. for the construction of this plaza. It is evident that this much more elaborate construction stage either followed quickly on the heels of the slightly earlier 7a effort, or that the 7a deposit represents initial preparation for the Level 6 floor construction. In the end no conclusive interpretation can be posited. The well preserved nature of the Level 6 floor surface indicates that it was either constantly kept up, or utilised for a limited portion of time. Given that no evidence for refurbishing was evidenced, and that the next floor is postulated to have been laid sometime soon after the Level 6 construction, the latter seems the most likely explanation.

Level 5 excavations provided the first solid evidence for the presence of an actual structure, as a 1.00 m high platform section (A1-4th) and associated plaza floor were encountered (see Figure 4). Unfortunately, little remained of this construction level, as the placement of numerous intrusive burials almost obliterated not only the entire plaza floor, but also the majority of the platform itself (Figure 6). Poorly preserved remnants of the Level 5 plaza floor were encountered at ca. 5.04 m below the trench datum in Unit A1-4, and in the extreme western sector of A1-3. The only other construction feature attributable to Level 5 was a small section of the platform itself (A1-4th), which was encountered at ca. 4.05 m below the trench datum in Unit A1-2. Due to the potential for wall collapse, we were unable to excavate this platform section. Indications are, however, that it was employed as either an

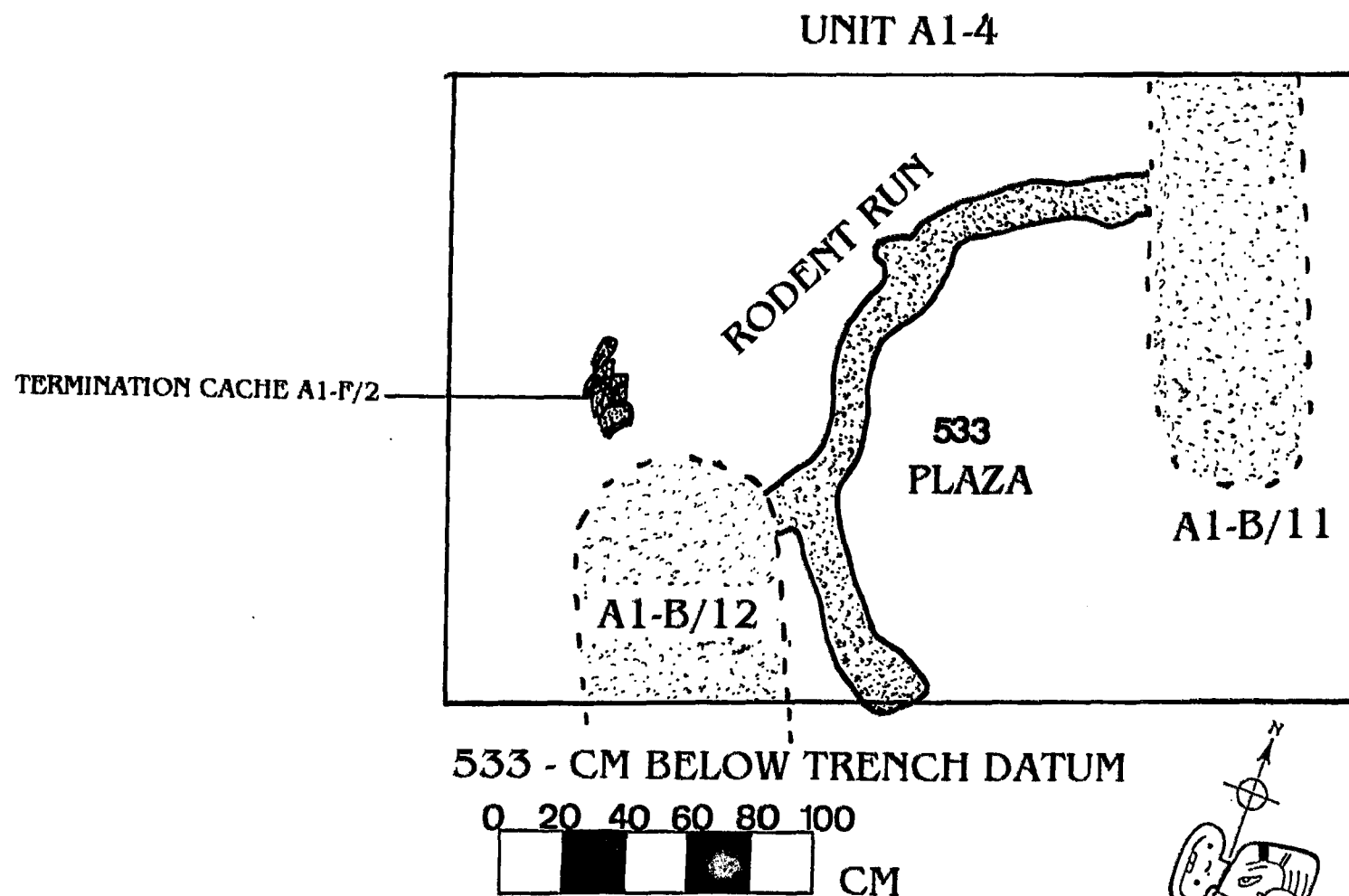


Fig. 5. Top Plan of Level 6 (Str. A-1), Showing Intrusive Burials and Rodent Run.

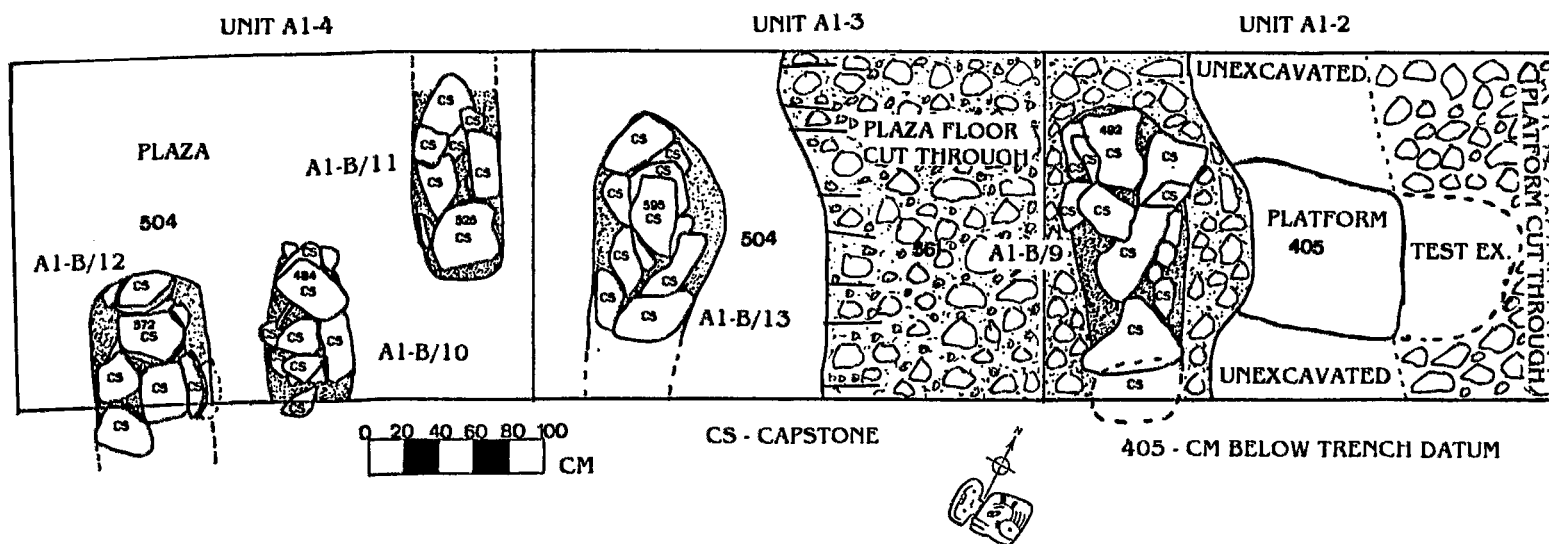


Fig. 6. Top Plan of Level 5 (Str. A1-4th), Showing Intrusive Burials.

open activity area, or was surmounted by a pole-and-thatch superstructure. It was also considered of little use to excavate the minuscule plaza floor remnant in Unit A1-3. In the end we had to be satisfied with excavating the poorly preserved plaza floor in Unit A1-4. The floor, which was ca. 24 cm thick, consisted of a ca. 10 cm plaster surface, capping a ca. 14 cm thick ballast layer (primarily pebble sized clasts [0.4-6.4 cm]), which had been laid down as a wet mass (small aggregate). No artifacts of note were recovered from this level. Lithic debitage, ceramic sherds, and faunal remains were encountered in moderate to high percentages. Ceramics from this level were again a mixture of Middle Formative, Jenney Creek phase (800-300 B.C.) and Late Formative, Barton Creek phase (300-100 B.C.) materials. Sherds from the Savana, Joventud, and Pital Ceramic Groups represented the Jenney Creek Ceramic Complex, whereas the Barton Creek Complex was represented by members of the Sierra, Hillbank, Polvero, Sapote and Flor Ceramic Groups. Some apparently transitional types were again present in this assemblage, and a date of 300-250 B.C. seems likely for the construction of Structure A1-4th and its associated plaza floor. Subsequent to the construction of A1-4th, no further Late Preclassic structural elaborations occurred at the A1 locus. Due to the poor preservation of the plaza floor, it seems likely that long term use of this surface did take place. However, it is problematic that no floor refurbishing efforts seem to have been undertaken. Whether this actually represents a significant period of inactivity at Zubin, or whether in fact construction efforts focused on other areas of the site, will have to be evaluated following further investigations.

Cache A1-F/2, a termination cache, was found within the Level 5 ballast deposit, near the western extreme of Unit A1-4. This cache, situated ca. 5.15 m below the unit datum, consisted of a cluster of broken pottery. The majority of the sherds (14) belonged to a single Sampopero Red/Sierra Red transitional vessel. Other sherds included singular representatives of the Middle Formative, Jenney Creek phase (800-300 B.C.) Savana and Jocote Ceramic Groups, and Late Preclassic, Barton Creek phase (300-100 B.C.) Flor, Sierra, and Sapote Ceramic Groups. This assemblage reaffirms the transitional 300-250 B.C. date already outlined for the construction of the Level 5 plaza floor. The cache probably represents a termination offering focusing on the earlier Level 6 floor.

Level 4 signifies the next major construction effort at the A1 locus. At this time a new structure, A1-3rd, and an associated plaza floor were constructed (see Figure 4). Remains of this architecture were exposed and excavated in units A1-2, A1-3, and A1-4 (Figure 7). As with the preceding A1-4th structure, the placing of intrusive burials and the recycling of some architectural components during subsequent constructions had destroyed large sections of the A1-3rd structure and plaza floor. Within the extreme western section of Unit A1-3, and throughout Unit A1-4, the A1-3rd plaza floor was encountered at ca. 4.61 m below the trench datum. This floor was 46 cm thick in total, and preservation was good to excellent. The floor consisted of a ca. 8-17 cm thick plaster surface, underlain by a thin ca. 5 cm ballast layer, and a ca. 32 cm core deposit, the latter made up primarily of aggregate core (mainly cobble [6.4-2.5 cm] and pebble [0.4-6.4 cm] sized clasts), interspersed with lime mortar and lenses of dark brown sediments. There is evidence for at least three refloorings of the plaster surface. Moving to the east, sections of the actual A1-3rd structure were encountered. The platform of this structure was exposed in unit A1-2 at ca. 3.61 m below the trench datum. It had been cut through on the east by an intrusive feature, and on the west by a burial (A1-B/8, see below). The platform itself had been raised ca. 46 cm above the previous A1-4th platform, and its

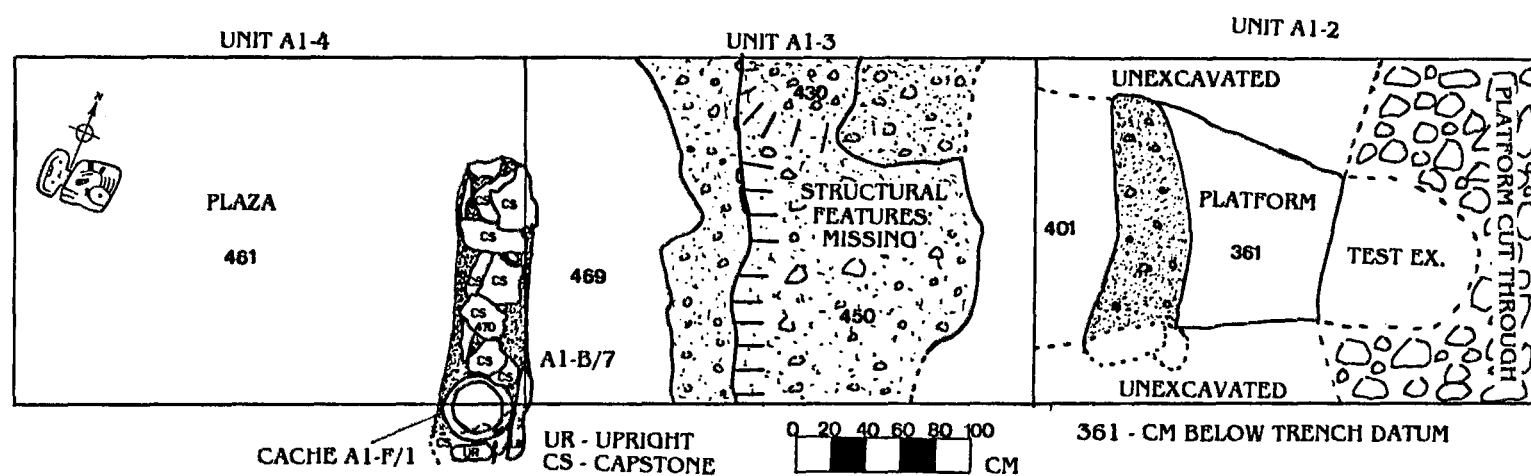


Fig. 7. Top Plan of Level 4 (Str. A1-3rd), Showing Intrusive Burials.

thickness and construction elements corresponded almost exactly with those already outlined for the associated plaza floor. No evidence for a masonry superstructure could be found, implying that A1-3rd was either surmounted by a pole-and-thatch building, or more likely existed as an unadorned platform. Between the platform and the plaza floor a section of terrace was encountered near the juncture of Units A1-2 and A1-3, at approximately 4.01 m below trench datum. To the east this terrace seemingly intersected with the toe of a 40 cm riser, although placement of intrusive burial A1-B/8 (see below) had subsequently destroyed this feature. To the west the terrace verge probably met a ca. 50 cm high riser. From this point a tread, ca. 80 cm in depth, and a subsequent ca. 30 cm high riser would have led down to the plaza floor. These latter two features are only suggested based on the presence of other features, as they were dismantled during the ensuing construction phase (see below). What does remain is an undulating backing masonry surface (small aggregate) suggestive of the presence of the two postulated risers. Taken together, these architectural remains indicate that A1-3rd was a ca. 1.00 high structure, its platform having been accessed via three stair risers.

Lithic debitage, ceramic sherds, and faunal remains were recovered in moderate to high numbers throughout the Level 4, A1-3rd excavations. All other artifacts of note were obtained from burial excavations (see below). Unfortunately, the ceramic sample retrieved from this level was of an extremely mixed nature. This was due in part to the long occupation, and subsequent continual reflooring of the surface. Contamination is also partially attributable to the number of intrusive burials placed not only throughout the occupation of Structure A1-3rd and its associated plaza, but also during subsequent construction phases. Luckily, the initial construction of Structure A1-3rd can be provided with a fairly accurate temporal determination given the ceramic assemblage provided by Burial A1-B/9 (see below). The vessels from this interment suggest a transitional Late Preclassic (Mount Hope phase)/Early Classic (Hermitage phase) date of 200-300 A.D. for initial construction of this structure. The remaining ceramics recovered from this level point towards continuous occupation and refurbishing of this structure and its associated plaza floor through the remainder of the Early Classic, Hermitage phase (300-600 A.D.) and Late Classic, Tiger Run phase (600-700 A.D.). Five burials recovered from excavations into the A1-3rd structure and associated plaza floor are attributable to this long time period.

Burial A1-B/9, classified as a simple crypt following Welsh (1988), was encountered in Unit A1-2 at ca. 4.92 m below the trench datum (see Figure 4). This axially aligned interment had been placed during the construction of the A1-3rd platform. The grave itself was oriented approximately north-south, and consisted primarily of a small chamber formed by roughly cut limestone uprights covered by a layer of similarly unelaborate capstones (see Figure 6). Above this chamber more rough-cut limestone slabs had been used to cover the grave proper. Due to the weight of this overlying mass of stones a number of the capstones had collapsed, although indications are that the chamber was originally ca. 40-50 cm in height, ca. 190 cm in length, and ca. 40-50 cm wide. The bottom of the interment was encountered at ca. 5.62 m below the trench datum. The interred individual was moderate to poorly preserved, due primarily to the aerobic conditions of the open chamber (Figure 8). An area containing numerous cranial fragments and teeth was isolated, as were sections of many of the other major bones. The distribution of these remains indicate that the individual had been placed in an extended, prone position, with arms at the side and head to the south. Six inlaid

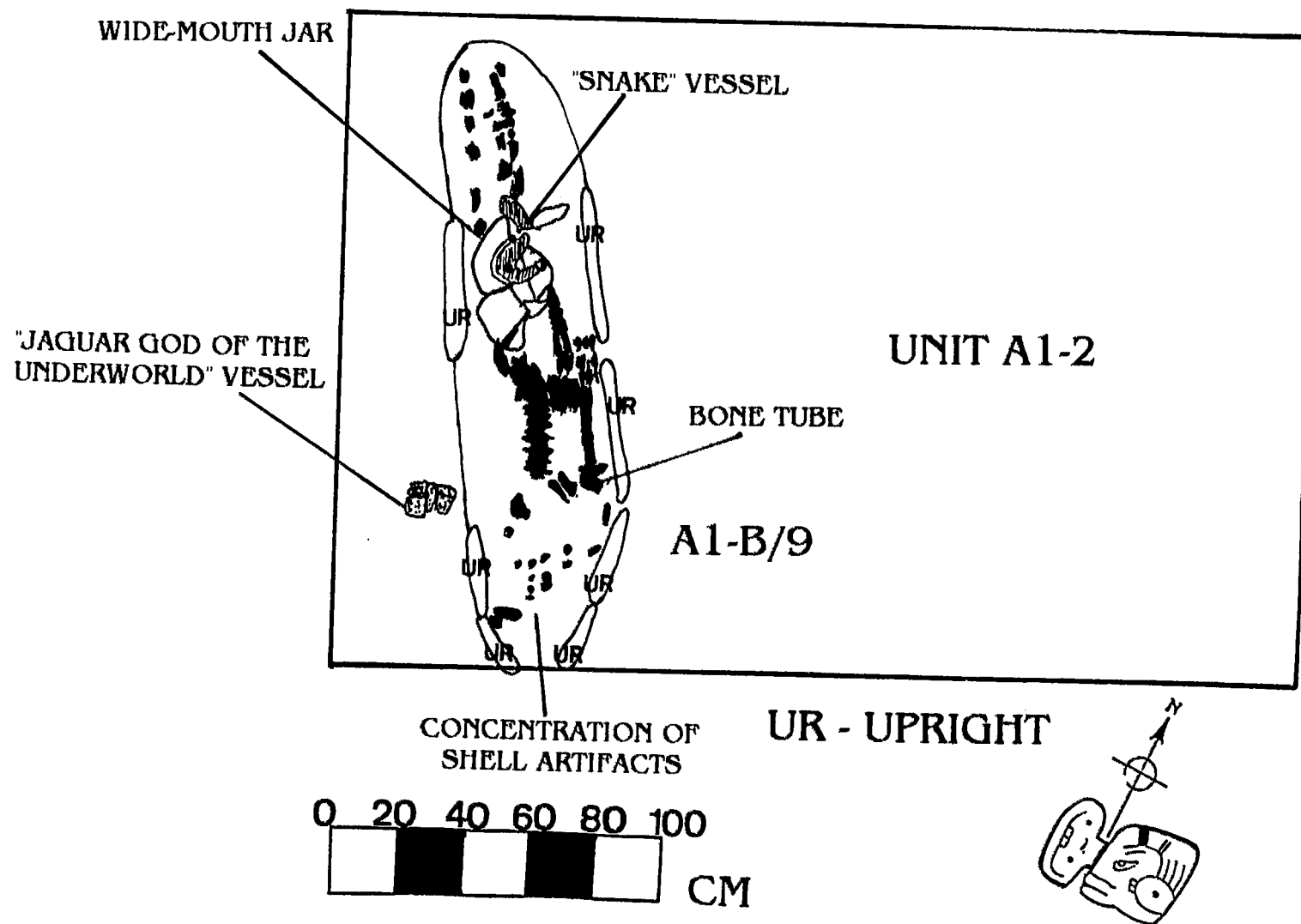


Fig. 8. Top Plan of Burial A1-B/9.

teeth were recovered, two of which no longer contained the inlay itself. Of the four that did, one contained a jadeite inlay, the others bearing red/brown inclusions, possibly hematite?

Grave goods were relatively abundant, and were recovered from outside as well as inside the simple crypt. One section of incised deer metapodial (*Mazama americana*; A1-SF/226), and a similar incised avian long bone (A1-SF/227), possibly from a turkey, were discovered on top of the capstones covering the grave. Also recovered from outside of the chamber proper was a small bowl (A1-SF/248) with slightly flaring sides (Figure 9). This vessel was located immediately outside of and adjacent to the western uprights. At some point this bowl had been broken, although we could not determine if this was done at the time of deposition or not. Given the vast amount of rubble that overlay the sherds, it seems likely that the weight of this overburden was at least partially responsible for the breakage. Reassembly indicated that this vessel was of no known type reported in the major ceramic volumes, although its mottled red-brown slip is suggestive of the Hermitage phase Pucate Ceramic Group (Early Classic, 250-600 A.D.). An appliqué depiction present on one side of the vessel was originally identified by Wendy Ashmore (personal communication 1993) as "The Jaguar God of the Underworld". Subsequent research seemed to uphold this identification. Schele and Miller (1986:50) have outlined that GIII as Jaguar God of the Underworld, is characterised by the presence of a "Roman nose", spiral eyes extending "upward from the lower lid", and especially "a twisted device, called a 'cruller'...placed between and under his eyes." All of these criteria are satisfied by the Zubin vessel. In contrast, according to Schele and Miller, this god usually exhibits a pointed front tooth, whereas the Zubin example has a protruding, funnel-shaped mouth. It is thus possible that this is a special representation of this deity (see below).

The Jaguar God of the Underworld is the most common portrayal on Late Classic incensarios (see Schele and Miller 1986:50). This is intriguing, given other characteristics of the vessel. Upon reconstruction it was noted that a permanent cover had once enclosed almost the entire orifice of the bowl (Figure 10). This cover did not join with the rim proper, but was situated slightly lower, running into the vessel wall. While the clay was still wet vertical perforations had been made into the cover at the juncture with the wall. These perforations were found around almost the entire circumference of the cover/wall interface. The only location where these perforations did not exist was directly opposite from the actual facial representation. In this area a smooth section was present, implying that this was the locus for pouring substances. The slip ran down the inside of the vessel wall to the juncture with the cover, where it appears to have then ran over the cover itself. Beneath the wall/cover intersection (i.e. within the interior of the bowl), the vessel was unslipped, exhibiting a bright orange-red paste with large calcite? inclusions. Of particular interest is that this cover had been removed prior to deposition, as if to obtain something originally contained within the vessel, something too large to have been removed through the pouring "spout". Taking all this into consideration, the Zubin vessel seems like a possible Late Preclassic/Early Classic precursor to the Late Classic censers.

Within the confines of the simple crypt two more vessels were discovered. Both had been broken during the collapse of the capstones. One vessel was a large jar (A1-SF/246) with a slightly outflared neck (Figure 11). Its mottled red-brown slip and orange-red paste duplicates that of the "Jaguar Lord of the Underworld" vessel. Although no exact equivalent of this vessel could be found in the ceramic reports, its slip does seem similar to that of the



Fig. 9. "Jaguar God of the Underworld" Vessel from Burial Al-B/9.

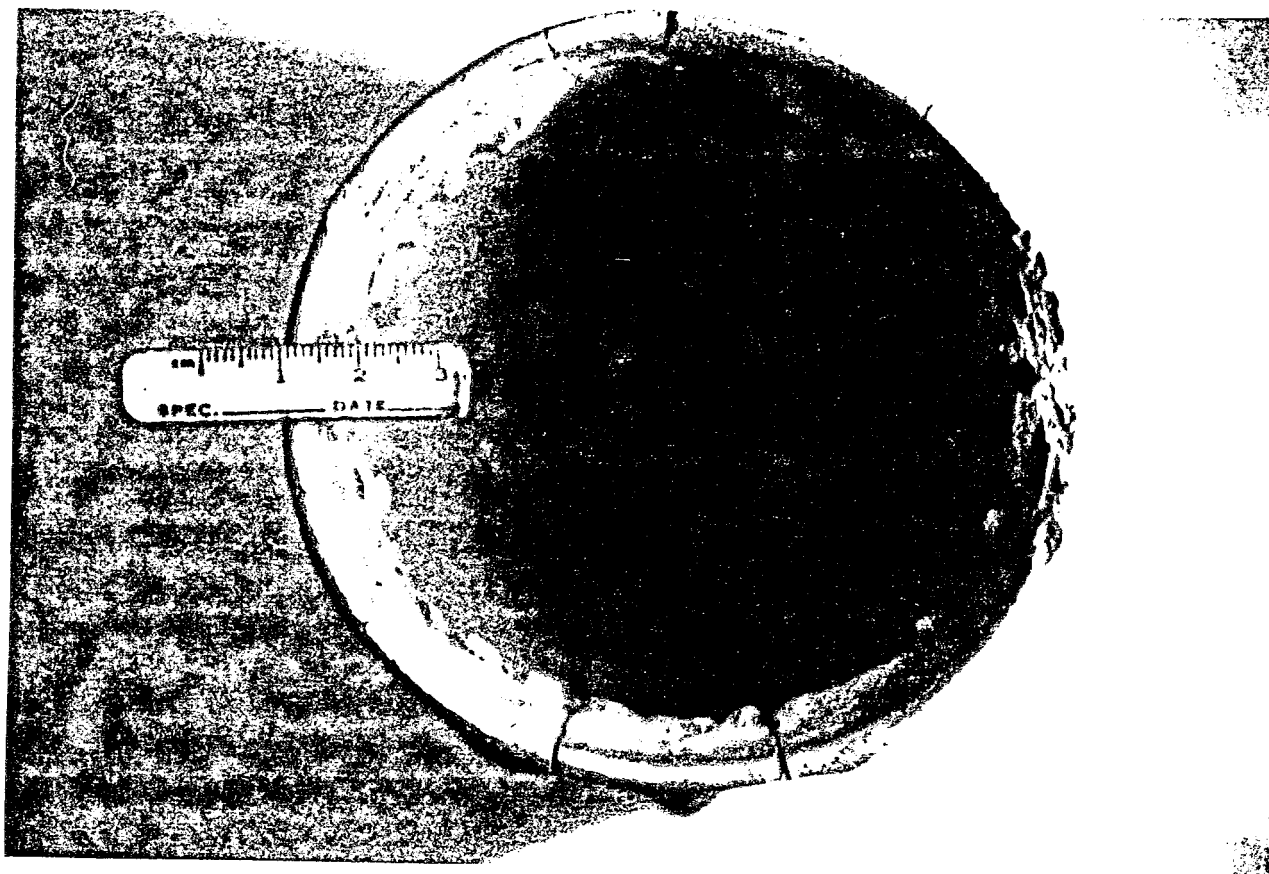


Fig. 10. Top View of "Jaguar God of the Underworld" Vessel from Burial A-B/9.



Fig. 11. Pucte Brown Vessel from Burial A-B/9.

Hermitage phase (250-600 A.D.), Pucte Ceramic Group. Formally, it is suggestive of some transitional Late Preclassic/Early Classic jars, primarily those in the Pucte, Fowler and Aguila Ceramic Groups (see Culbert 1993: Figures 21-k, 25-g, 28-b1; Gifford 1976: Figures 80-1, 90-1, 91-j; Hammond 1984: Figure 3, Vessel 19). This jar had been placed upright in the interment, covering the knees of the individual. The accompanying vessel (A1-SF/247) had been inverted, and placed within the orifice of the larger jar (Figure 12). Its mottled brown slip grades from dark brown to tan, the latter bringing it into the range of colours on the other two vessels. Its paste also corresponds with that described for the aforementioned vessels. The bowl appears to depict a snake?, whose tail and head protrude from a small, medially positioned bowl with a direct rim. The bowl is situated so as to appear to rest on the body of the snake. The head is slightly higher than the tail section, the former coming to rest on the tip of the latter. Both the tail and head segments are hollow except for the very terminal sections. Preslip incising had been used to form the eyes and nostrils, whereas gouging and modelling had been employed to produce the mouth portion. This last vessel is again best interpreted as a special, as an exhaustive literature survey failed to produce anything quite like it. Taken together, the three aforementioned vessels indicate that burial A1-B/9 was deposited sometime around the Late Preclassic (Mount Hope phase)/Early Classic (Hermitage phase) transition, ca. 200-300 A.D. It is interesting that they seem to have formed a distinct group even prior to their deposition within the grave. Given their lack of correspondence with other known types, and similarities in slip and paste, they appear to have been produced and subsequently employed as a set. Further insights into the role of these vessels will be briefly discussed below.

Additional grave goods recovered from within burial A1-B/9 included one barrel-shaped jadeite bead (A1-SF/224). This item may have been placed in the individuals mouth at the time of interment, a common practice among the ancient Maya (see Coe 1993:170). Also discovered were one obsidian blade (A1-SF/225), four cut and polished conch (*Strombus*) shell segments, rectangular in form (A1-SF/46, 47, 48, 49), one large conch shell (*Strombus*) section (A1-SF/45), cut but unpolished (possibly a blank), one complete bivalve (*Nephronaias ortmanni*, freshwater clam) drilled twice (A1-SF/51), one unmodified freshwater clam, right valve (A1-SF/50), and one section of drilled avian bone (A1-SF/44), possibly a turkey humerus. The latter is likely connected to the two tubular bone sections recovered from outside the crypt proper. These artifacts are commonly found in burials (e.g. Willey 1972:234-235; Willey et al. 1965:496). Coe (1993:180-181) has argued that such tubes were probably utilised during the administration of ritual, hallucinogenic enemas. He suggests that they may in fact have been employed as the enema syringe, or clyster (see also de Smet 1985:57; Hellmuth 1985:139-140). Coe notes further that depictions of this practice on funerary ceramics often include "a wide-mouthed" jar with a "froth on top", implying that this vessel contained the liquid employed during the enema ceremony (see also Hellmuth 1985:137-138). Given its wide orifice, and formal similarities to some of the vessels depicted in scenes related to the enema ritual (see de Smet 1985, Plates 3a, 26), the large jar from burial A1-B/9 may have been an "enema jug". Another recurrent piece of equipment in these representations is a cup, which is used both for dipping the intoxicant from the larger jar, as well as for drinking of the beverage (Hellmuth 1985: 142-143; see de Smet, Plates 7a, 9a, 9b, 10, 13a, 13c, 14a, 14c, 19a, 20a, 20b27, 28, 3441a, 41c). Hellmuth (1985:142) notes that these drinking cups appear "in a variety of sizes and shapes." It is possible that the Jaguar God of the Underworld vessel and the "snake" vessel could have been employed as drinking cups.



Fig. 12. "Snake" Vessel from Burial A-B/9.

In connection with the above, it is of interest that because the intoxication ritual is often portrayed in scenes representing Xibalbá and the gods that inhabited this underworld (see Coe 1993:180; Hellmuth 1985:144-145), the Jaguar God of the Underworld would have probably participated in the rite. This possibility is reaffirmed by the previously mentioned uncharacteristic mouth depiction on the Zubin vessel. Stross and Kerr (1990:356-358) have suggested that "howling" is connected with the hallucinogenic experience, and they illustrate a number of mesoamerican depictions of "howling" (see Stross and Kerr 1990, Figures 15, 16), some clearly connected with the enema ritual (see Stross and Kerr 1990, Figure 20). In all of these the depicted individuals exhibit mouth features identical to that of the Jaguar God of the Underworld on the Zubin vessel. Thus the Zubin depiction is possibly a representation of the Jaguar God of the Underworld in the midst of the intoxication ceremony. One other possibility is that this is actually a representation of another god (Simon Martin, personal communication 1994). Thompson (1962:458) does depict a portrait glyph (T# 1077) which exhibits many of the characteristics of the Jaguar God of the Underworld, as well as the odd mouth depiction. Unfortunately, the identity of this god remains a mystery, and we cannot be sure if it is simply a depiction of the Jaguar God in the intoxicated state outlined above, or whether it might be a verb for such a state or ritual. If in fact it is a separate, rarely depicted deity, we are again limited in our ability to assess whether or not this entity was connected to the intoxication ritual, although the mouth depiction and Zubin assemblage suggests such a affiliation. Further research will have to be conducted before a positive identification can be provided.

Taking the burial assemblage as the unit of analysis, particularly the "Jaguar God of the Underworld" vessel, wide-mouthed jar, and bone tubes, it seems likely that a large portion of this collection can be interpreted as ritual intoxication paraphernalia. This equipment may have been employed in ceremonies aimed at interfacing with the inhabitants of Xibalbá. The individual interred within this grave may therefore have been actively involved in such a ritual, and thus may have been a shaman of some sort, or at least an important person intricately associated with the rituals practised by such people. It is clear, however, that given the importance of this ritual, and the elaborateness of the equipment involved, this individual was a consequential personage at Zubin during the Late Preclassic/Early Classic time period. This is reaffirmed by the fact that the death of this individual probably stimulated the termination of activity associated with Structure A1-4th. The primary architectural focus of Burial A1-B/9 was thus the A1-4th structure. However, the interment and its associated rituals, as well as being associated with "termination", may also be considered "dedicatory" with reference to the new A1-3rd construction (see Becker 1992).

Burial A1-B/10, classified as a simple crypt following Welsh (1988), was encountered during excavation of the A1-3rd (Level 4) plaza floor. Located within Unit A1-4, the top of the capstones for this grave were ca. 4.84 m below the trench datum (see Figures 4 and 6). The axially aligned burial cut had intruded through the earlier A1-4th floor, suggesting the possibility that it was placed as a termination ritual involved with the abandonment of that living surface, although it might also be considered dedicatory with reference to the new A1-3rd construction (see Becker 1992). The grave itself was oriented north-south, and consisted of a number of roughly cut capstones resting on a series of crude limestone uprights. These formed a ca. 35 cm high interior space. The base of the grave was ca 5.24 m below the trench datum. Overall length of the chamber was ca. 1.00 m, and its width was ca. 30 cm. The

interment itself was poorly preserved, due primarily to the aerobic conditions of the chamber (Figure 13). The sections of bone that were present indicated that the individual had been placed in a supine position, with the head to the south. They also suggested that the arms and legs were extended. The size of both the grave itself, and the remaining bones, imply that this was a child burial. Grave goods consisted of four perforated olive shell "tinklers" (A1-SF/40, 41, 42, 43). These were recovered from beneath the cranial fragments. Due to the lack of ceramic offerings, and the mixed nature of the Level 4 ceramic assemblage, dating of this interment is difficult. However, it is apparent that burial A1-B/10 was capped by three refloorings, suggesting that it was placed sometime during the earliest occupation of the A1-3rd plaza floor. A date of 300-600 A.D. is therefore likely.

Burial A1-B/13 was placed sometime later, as only two refloorings were discovered above it. Although no solid date can be provided, this stratigraphic information suggests that this burial occurred sometime between 300-600 A.D. The axially aligned interment, classified as a simple crypt following Welsh (1988), was located fully within the boundaries of Unit A1-3 (see Figures 4 and 6). This grave had been cut through both the A1-4th (Level 5) and Level 6 plaza floors, its base corresponding with the Level 7a surface (ca. 6.39 m below the trench datum). As the burial was placed during the occupation of Structure A1-3rd, it is best interpreted as non-dedicatory (Coe 1959:78). The chamber itself, having a ca. 40 cm high interior space, was formed by a series of cut limestone uprights, surmounted by a number of similarly unelaborate capstones. The orientation was roughly north-south. The top the capstone cover was ca. 5.95 m below the trench datum. Unfortunately, this burial could not be excavated as it was not discovered until the final day of excavations. A cursory investigation did show that the individual had been interred in a supine position, with the head to the south. Preservation of the remains appeared to be good. No grave goods were noted.

Burial A1-B/11, another axially aligned simple crypt (Welsh 1988), was discovered within Unit A1-4 (see Figures 4 and 6). The capstones of this burial were encountered at ca. 5.25 m below the trench datum. This interment was capped only by the last reflooring, indicating that it had been placed during or coinciding with the last occupation of the A1-3rd plaza floor. Thus a date of 600-675 A.D. is likely for this burial. The burial cut intruded through both the earlier A1-4th (Level 5), and Level 6 plaza floors. Given that the interment was placed during the occupation of A1-3rd, it is best interpreted as non-dedicatory. The chamber itself, oriented north-south, consisted of a number of cut limestone uprights covered by a series of roughly placed capstones. These formed a ca. 30 cm high interior space. A further layer of cobbles (6.4-25.6 cm) had been deposited above the crypt proper. The legs of the individual extended into the north wall of the unit, and due to the unstable nature of this area of the trench no excavations could be undertaken below the individuals knees (Figure 14). For this reason a length for the grave cannot be provided. The floor of the burial, encountered at ca. 5.59 m below the trench datum, was roughly 54 cm across. Preservation of the remains was good to excellent. The individual had been placed in a supine position, head to the south, arms and legs extended. No grave goods were discovered.

Burial A1-B/12, the top of which was encountered at ca. 5.72 m below the trench datum, was discovered in Unit A1-4 (see Figures 4 and 6). This axially aligned simple crypt (Welsh 1988), oriented north-south, had been cut through both the earlier A1-4th (Level 5) and Level 6 plaza floors. Its base coincided with the top of the Level 7a surface (ca. 6.30 m below

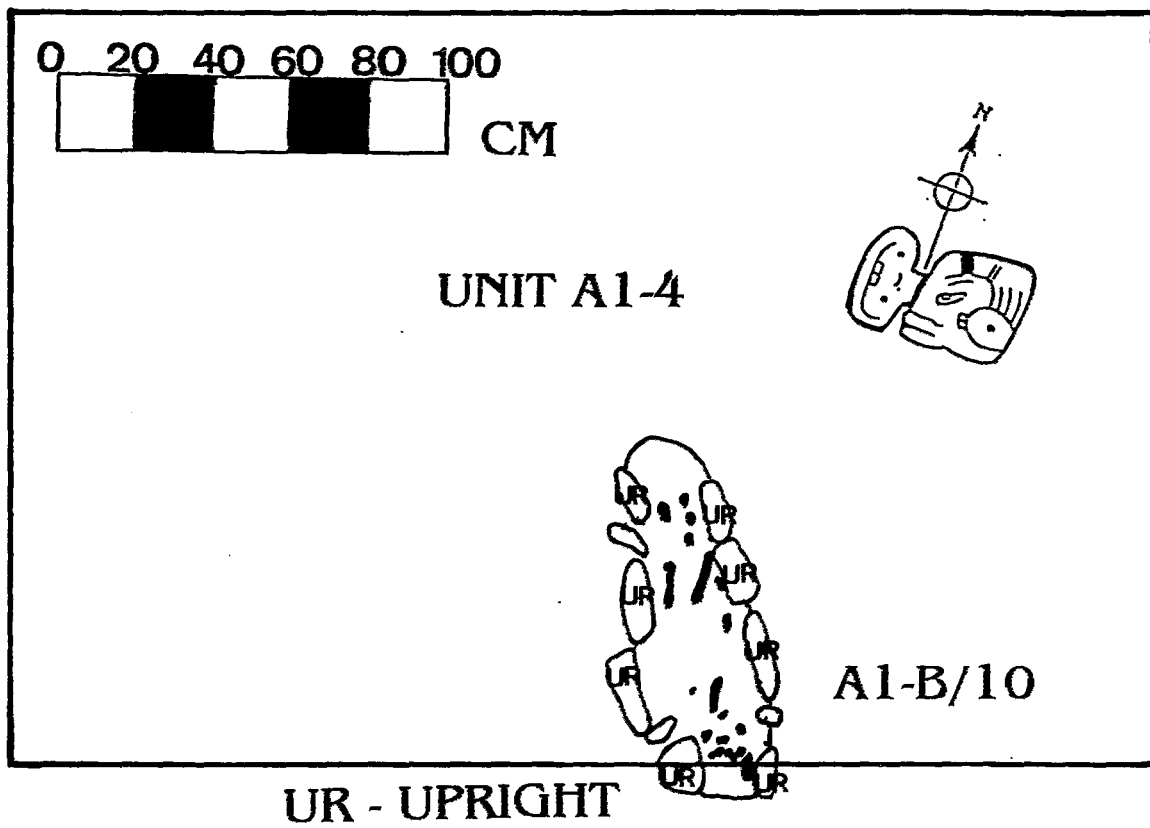


Fig. 13. Top Plan of Burial A1-B/10.

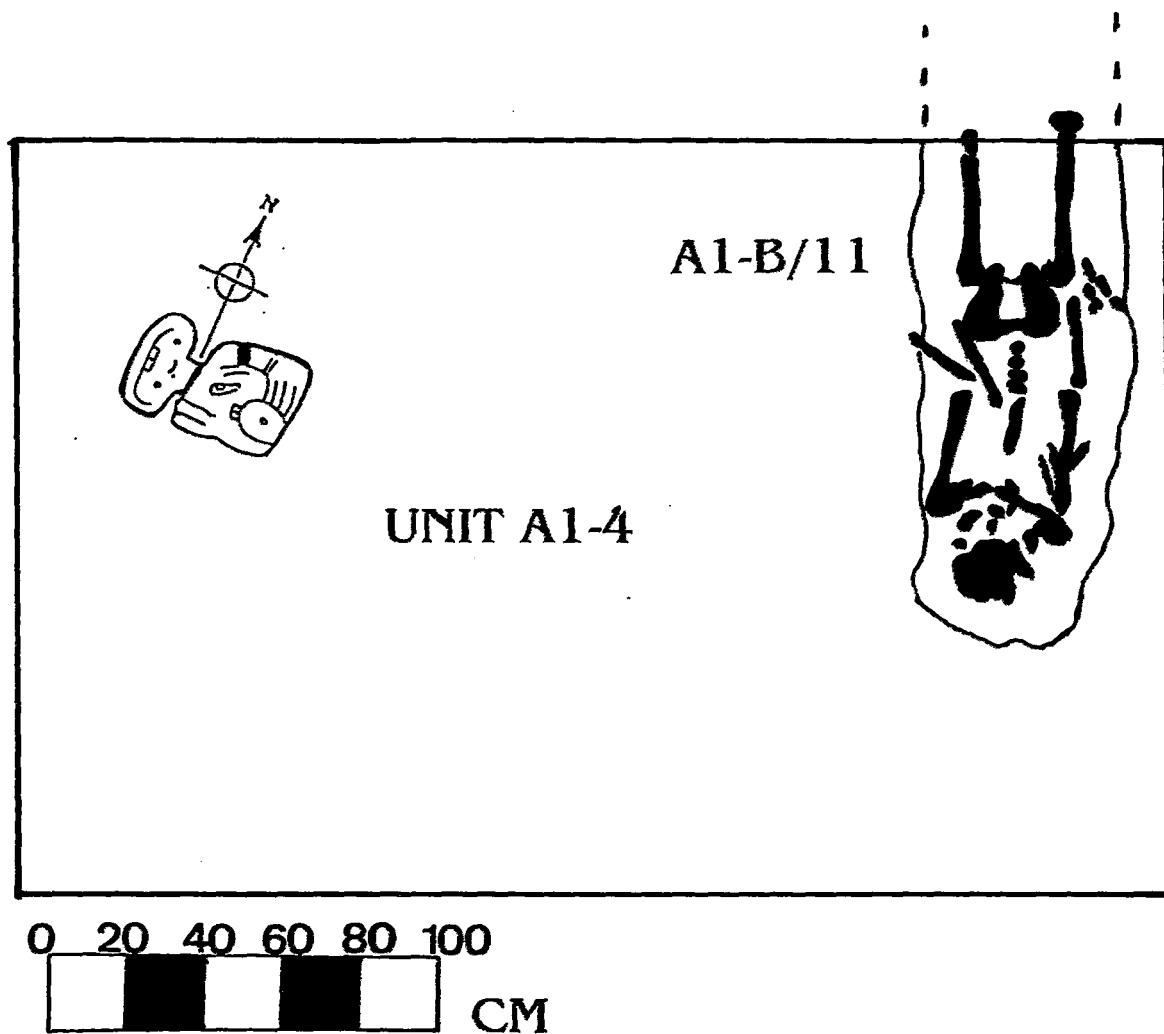


Fig. 14. Top Plan of Burial A1-B/11

trench datum). Only the final reflooring capped this interment, indicating that it had been placed near the end of the A1-3rd occupation (ca. 675-700 A.D.). Once again, the timing of deposition for this interment suggests that it was non-dedicatory. The chamber itself, ca. 45 cm in height, consisted of a number of roughly hewn uprights capped by a series of similar capstones. Above this a number of large, cobble sized (6.4-25.6 cm) limestone slabs had been deposited. This haphazard cluster of rocks was ca. 45 cm thick, the top of which was exposed at a depth slightly above the Level 6 plaza surface (ca. 5.30 m below trench datum). The floor of the simple crypt was ca. 1.90 m in length and ca. 38 cm wide. The interred individual was poor to moderately well preserved, with sections of the legs exhibiting the best state of preservation (Figure 15). The aerobic conditions of the chamber undoubtedly hastened the decay of the bone material. Additionally, rodent activity is indicated by the presence of a run cutting across the Level 6 plaza floor, joining Burials A1-B/11 and A1-B/12 (see Figure 5). The sections of remaining bone suggested that the individual had been interred in an extended, prone position, arms at the side, head to the south.

Burial A1-B/12 grave goods included two whole obsidian blades (A1-SF/236, 238), four proximal sections of obsidian blades (A1-SF/233, 234, 235, 237), two cut and polished conch (*Strombus*) shell disks (A1-SF/229, 230), two perforated and incised conch (*Strombus*) shell "adornos" (A1-SF/232, 231), and one perforated freshwater clam (*Nephronaias ortmanni*) valve (A1-SF/228). Ceramic offerings included a large Mountain Pine Red: Mountain Pine Variety dish (A1-SF/244), a Late Classic, Tiger Run phase (600-700 A.D.) type. This vessel had been placed on the interred individuals knees. A second vessel was recovered from an area slightly to the south of the postulated head position. This poorly preserved polychrome cylinder vase (A1-SF/245) has a cream slip on the outside, and an orange slip on the interior. Decorations include red bands encircling the interior and exterior vessel rim. A similar band appears to have encircled the basal portion of the vessel. A glyph band, executed in red, black, and orange, occurs on the jar neck. This consists of a repetitive series of representations (see Figure 16), six in total, and one smaller item, the latter probably being a space filling element (Simon Martin, personal communication 1994). Given the repetitive nature of the depiction, these were originally interpreted as "psuedoglyphs". At most they were thought to provide minimal textual information. The epigrapher, Simon Martin (personal communication 1994), agrees with the psuedoglyph interpretation. Although poor preservation ruled out accurate identification of other decorations, remnants of red and black slip on the body of the vessel imply that further glyphs or psuedoglyphs had originally existed. The vessel exhibits the ash paste characteristic of the British Honduras Volcanic Ash Ware, and it is clearly a member of the Belize Ceramic Group. It fits Gifford's (1976) description for Montego Polychrome: Montego Variety exactly. Thus the vase dates to the Late Classic, Spanish Lookout phase (700-875 A.D.). Given that the accompanying vessel is solidly attributable to the preceding Tiger Run phase ceramic complex, and that no obvious Spanish Lookout sherds were recovered from the fill above the crypt, a date of 675-700 A.D. for this interment seems reasonable. The presence of the polychrome vessel also indicates that interred individual was of some importance within the Zubin community at this time. It is also likely that the final reflooring of the A1-3rd plaza floor is directly associated with the placement of this burial.

Level 3 represented the construction of a new, larger structure at the A1 locus (see Figure 4). This structure, A1-2nd, constitutes the penultimate A1 architecture. A1-2nd and its associated plaza floor were excavated within Units A1-2, A1-3, and A1-4. Preservation of

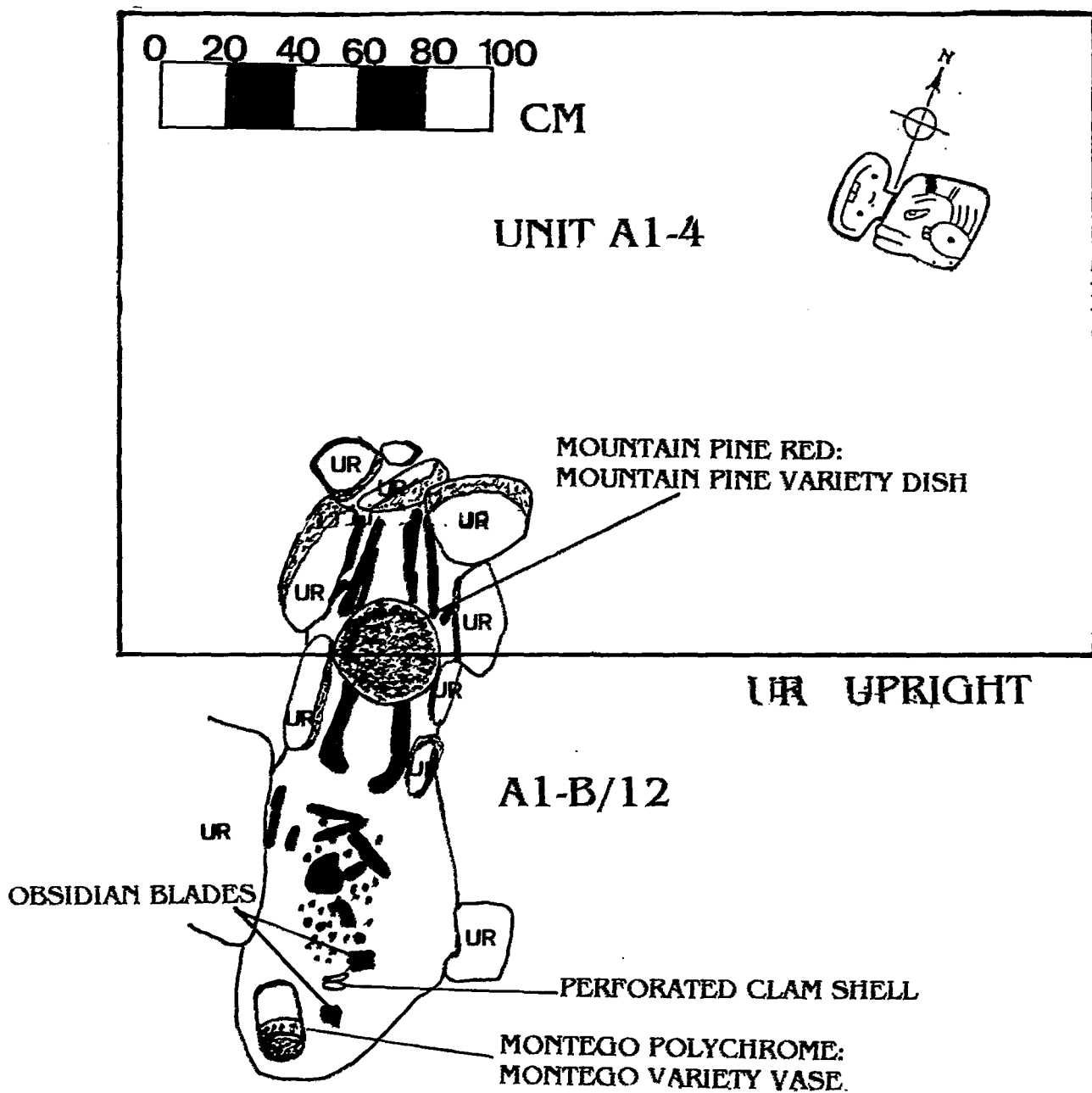


Fig. 15. Top Plan of Burial A1-B/12

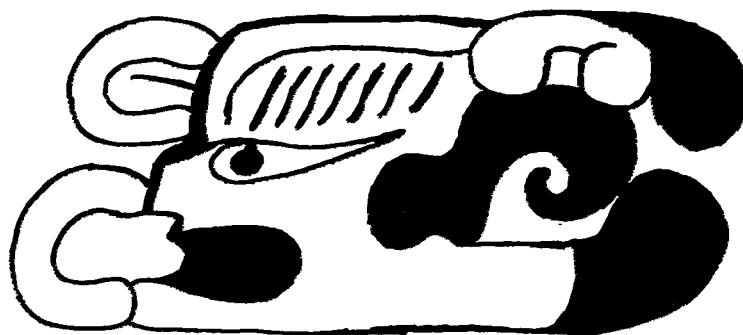


Fig. 16. Composite Rendering of Repetitive Glyph from the Polychrome Vessel Recovered from Burial A1-B/12 (drawing by Fernando Cruz).

the structural components was good to excellent, although the placement of intrusive burials had unfortunately destroyed many sections of the platform, stairs, and plaza surface (Figure 17). The platform itself had been completely removed by a large intrusive cut attributable to the terminal construction. Thus, whether the platform was originally surmounted by a superstructure or not cannot be determined, although indications are that if a superstructure had existed it was only of pole-and-thatch. All that remained to suggest the former height of the platform was the upper riser section. This step consisted of a three course, ca. 30 cm high riser. The nose of the step was encountered in Unit A1-2 at ca. 2.85 m below the trench datum. Sections of plaster still adhered to the facing stones. Moving to the west, the toe of this riser intersected with a terrace. The top of this terrace was encountered at ca. 3.15 m below trench datum. This feature ran approximately 2.40 to the west, where a lower step was encountered at ca. 3.45 m below trench datum. The terrace verge to foot height was ca. 30 cm. The tread of the new step ran ca. 94 cm to the west, where one final step was encountered at ca. 3.63 m below trench datum. This last step ran ca. 1.00 m to the west, where it terminated at the juncture with a poorly preserved, nine course platform facing wall (ca. 93 cm in height). The A1-2nd plaza floor provided the sustaining surface for this feature. This plaza was ca. 4.56 m below the trench datum. The plaza surface had been resurfaced at least once, and where it ran into the base of the platform facing wall a plaster turn-up was recognised. The placement of this facing wall indicates that the series of steps and terraces leading to the A1-2nd platform were probably reached via two stairs adjacent to, but not directly on the primary axis. This platform would have risen ca. 1.70 m above the plaza floor.

With reference to A1-2nd construction methods, excavations indicated that the plaster surface covering the platform, terrace, and steps was ca. 8-10 cm thick, and was underlain by ca. 10-20 cm ballast layer (primarily pebble sized clasts [0.4-6.4 cm]), and a dry-stone core layer of variable thickness (mainly cobble [6.4-25.6 cm] and pebble [0.4-6.4] sized clasts). Excavations within the platform exposed a thin lense of wood charcoal, situated between the ballast and the plaster. This was collected for C14 dating. The terrace verge was formed by a large cutstone, the foot by a ca. 20 cm thick deposit of small aggregate. Within Unit A1-3 a ca. 90 cm thick fill retaining wall had been constructed in order to resist the lateral pressure of the A1-2nd platform fill. This retaining wall would have been a necessity given that the platform facing wall would not have been able to withstand this pressure on its own. During the construction of this feature the facing stones from the earlier Structure A1-3rd stair had been extracted and employed. These were utilised to form a block facing on the west of the retaining wall. This construct was seven courses and ca. 1.25 m high. The eastern portion of the wall consisted of a rubble facing (primarily cobble sized clasts [6.4-25.6 cm]). Finally, the wall body was made up of a thick mass of aggregate core. The A1-2nd plaza floor was little more than a resurfacing of the earlier A1-3rd plaza surface. A ca. 2-3 cm ballast layer (mainly pebble sized clasts [0.6-6.4 cm]) had been deposited first, followed by a ca. 8-10 cm plaster layer. This surface was very well preserved in most areas.

Numerous lithics, faunal, and ceramic remains were recovered from Level 3, Structure A1-2nd. One notable find, a conch shell (*Strombus*) *adorno* (A1-SF/39), was recovered from the construction fill in Unit A1-3. All other significant artifactual materials were recovered from the two burials associated with this level (see below). The sherd sample recovered during excavations was dominated by representatives of the Late Classic, Spanish Lookout phase (700-875 A.D.), including members of the Belize, Dolphin Head, and Chunhuitz Ceramic groups.

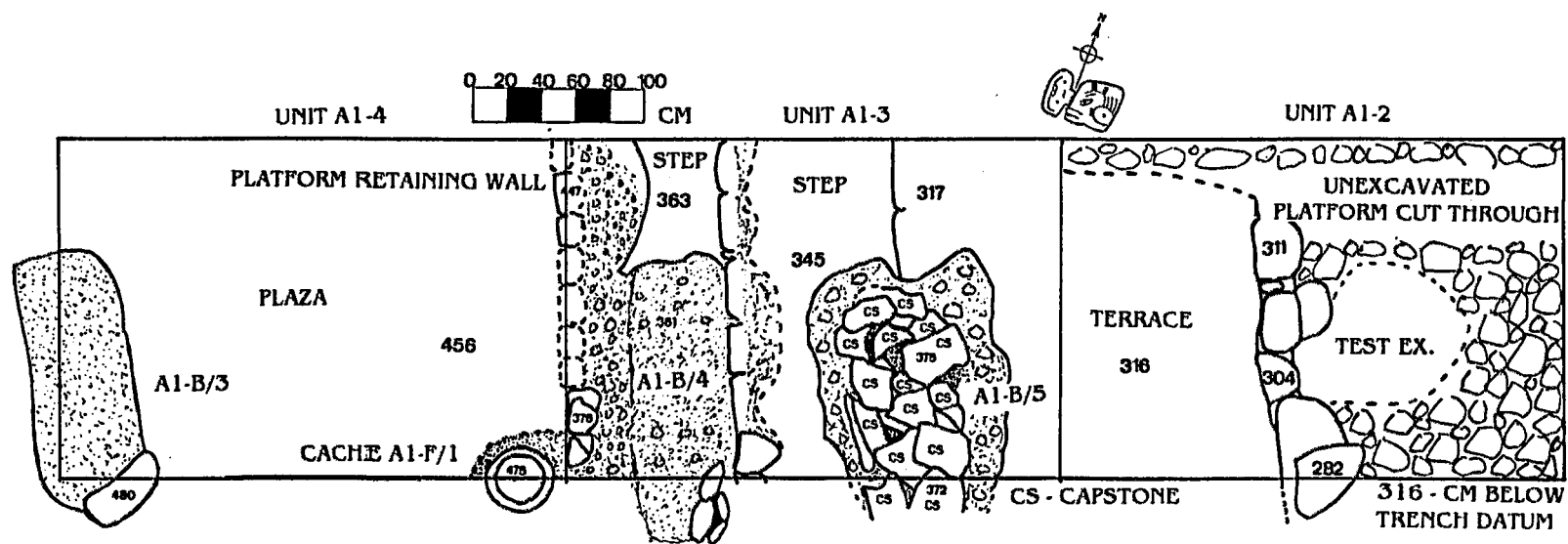


Fig. 17. Top Plan of Level 3 (A1/2nd) Showing Intrusive Burial.

However, also present in considerable numbers were members of the earlier Tiger Run phase (600-700 A.D.), Sotero, Macal, and Mountain Pine Ceramic Groups. Seeing as Gifford (1976) considers the Sotero Ceramic Group to be transitional, and the Dolphin Head Ceramic Group to belong to the early Facet Spanish Lookout phase, a date of 700-725 for the construction of Structure A1-2nd seems warranted. This date is reaffirmed by the grave assemblages associated with the construction of this architecture.

Burial A1-B/7, classifiable as a simple crypt (see Welsh 1988), was encountered in Unit A1-4 directly in front of the A1-2nd platform facing wall (see Figures 4 and 17). This axially aligned burial had been cut through the A1-3rd (Level 4) plaza floor, and was capped by the later A1-2nd (Level 3) plaza surface. Indications are that this interment is associated with the termination of the earlier A1-3rd structure, and the dedication of the new A1-2nd construct. Whether the death of the individual prompted the new construction cannot be determined with any certainty, although it is likely related given the richness of the postulated grave offerings (see below). With reference to this it should be noted that Burial A1-B/7 was reopened at a time corresponding to the termination of the A1-2nd structure. Some of the grave goods appear to have been removed, and new offerings made. Thus the burial recovered archaeologically reflects at least two separate offertory events. The chamber itself, oriented north-south, consisted of a series of roughly hewn capstones overlying a number of similarly crude limestone uprights (see Figure 7). The top of the capstones were exposed at ca. 4.60 m below the trench datum. A number of these had collapsed in on the interment. The base of the burial was ca. 5.19 m below the trench datum, indicating that prior to the capstones collapsing the interior height of the chamber would have been ca. 59 cm. Overall length of the simple crypt was 1.74 m, and its average width was ca. 60 cm. The individual interred within the A1-B/7 grave was poorly preserved, due not only to the collapse of the capstones, but also rodent activity (Figure 18). The sections of bone that were present indicated that the individual had been placed in an extended, prone position, with the head to the south and arms extended at the sides. No teeth were recovered, and only two cranial fragments were discovered near the knee and foot area. It seems likely that the skull of this individual had either not been deposited during the initial burial, or that it had been removed at a later time (see below).

During the initial deposition of the burial, two San Pedro Impressed: San Pedro Variety dishes (A1-SF/239, 240) had been placed near the head region. The presence of these Late Classic, Tiger Run phase (600-700 A.D.) vessels, coupled with the postulated timing for the construction of the associated A1-2nd architecture, suggests a date of 700-725 A.D. for the deposition of this interment. Due to some later intrusive activity (see below), one cannot be sure as to the original positioning of these vessels (i.e. lip-to-lip). It is also impossible to ascertain whether the dishes had been inverted over the cranium, whether the cranium had been deposited within the dishes, or whether in fact a cranium was ever present. The only other artifact recovered from Burial A1-B/7 was a small, jadeite disk bead (A1-SF/223). The bead was also discovered near the postulated head region. This may represent the Maya ritual whereby a solitary jade bead is placed in the mouth of the individual at the time of interment. However, a more complicated scenario can also be offered (see below). Confusion over this, as well as over the actual placement of the head and the artifacts is primarily a result of the intrusive deposition of Cache A1-F/1. This feature will be discussed in detail below, within an overview of the A1-1st occupation.

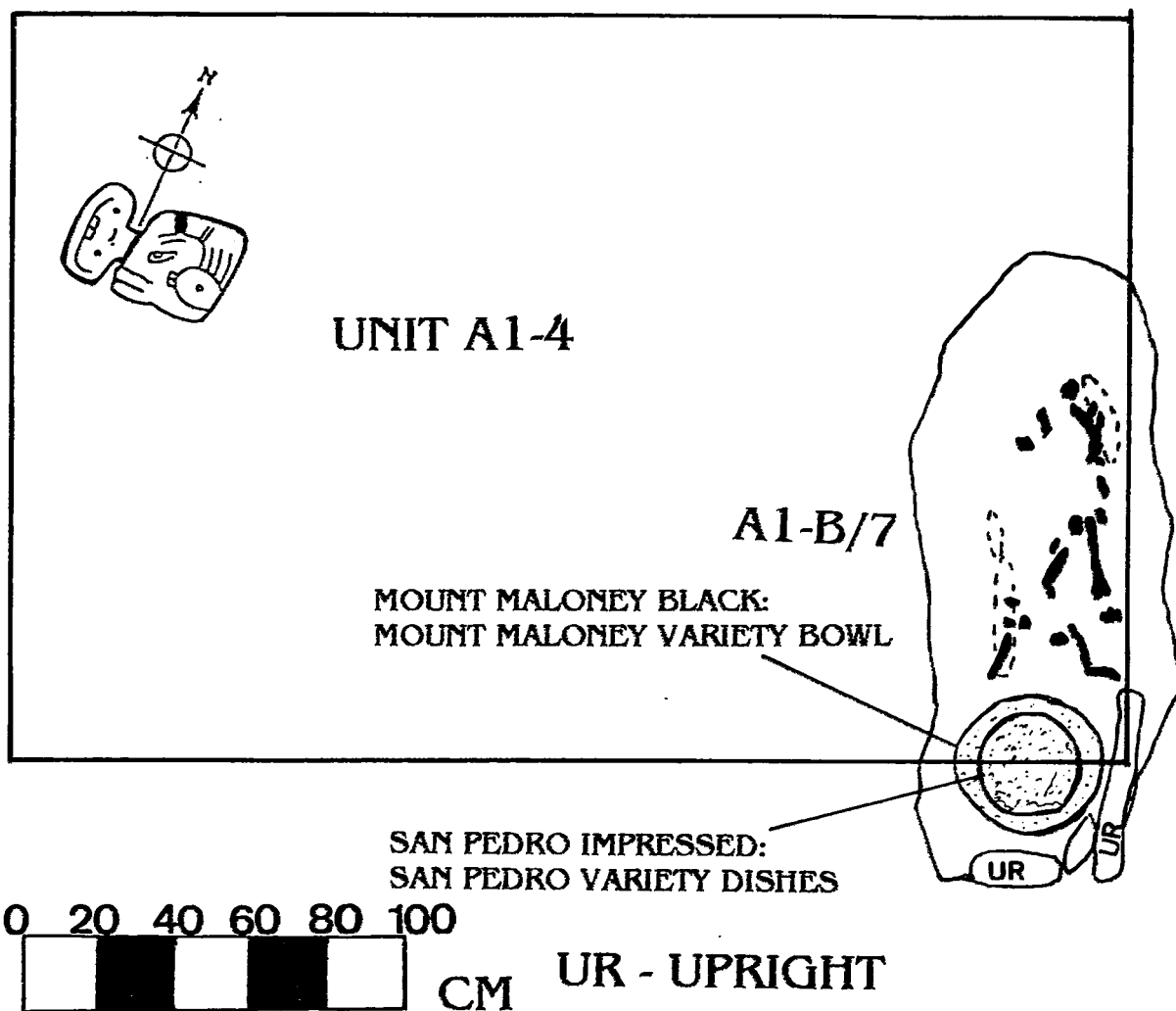


Fig. 18. Top Plan of Burial A1-B/7.

Burial A1-B/8, classified as a capped pit following Welsh (1988), was deposited during the termination of A1-3rd occupation, and construction of the A1-2nd structure (see Figure 4). Thus it is contemporaneous with the placement of the previously discussed Burial A1-B/7 (700-725 A.D.). This axially aligned grave was located within Unit A1-3, and had been cut into the previous A1-3rd structure at a point suggested to have originally been the location of a stair riser leading up to the earlier platform. The grave itself consisted of a haphazard arrangement of capstones positioned atop a few very roughly hewn uprights (see Figure 7). This covering, the top of which was ca. 4.01 m below trench datum, was only found above the chest of the individual. To the south the grave was cut beneath the A1-3rd terrace surface, this earlier feature functioning as protection for the cranium. The bottom of the grave was encountered at ca. 4.38 m below trench datum, thus the "chamber" section was ca. 37 cm in height. The floor of the chamber was ca. 2.00 m in length, and ca. 45 cm wide. A simple dry-stone core deposit, mainly larger pebble [0.4-6.4 cm] and cobble sized [6.4-25.6 cm] clasts, had been employed to cover the lower extremities. The interment itself exhibited good to excellent preservation, the lower limbs being in particularly good condition as a result of the anaerobic conditions provided by the moderately compact core deposit (Figure 19). The grave was oriented north-south, and the remains indicate that the individual had been interred in an extended, supine position, head to the south, arms folded under the body beneath the face. This burial was probably placed as a termination ritual focusing on Structure A1-3rd, although it might also be considered dedicatory to the new A1-2nd construction (see Becker 1992). The only artifact recovered from this burial was a small, barrel-shaped, spondylus (*Spondylus* sp.) shell bead (A1-SF/52). This was discovered near the head area, and following what is known about the deposition of singular jadeite beads, it is plausible that this item may have originally been deposited in the individual's mouth. The paucity of grave goods, and the supine position of the individual, suggests that Burial A1-B/8 was not the "significant" interment at this time, but rather reaffirms the importance of the individual discovered within Burial A1-B/7.

Burial A1-B/6, the final burial associated with the A1-2nd architecture, was recovered from the area between the western retaining wall facing and the platform facing wall (see Figure 4). The grave itself is best classified as a simple crypt (see Welsh 1988). The axially aligned chamber, oriented north-south, was formed by a series of capstones which rested on a series of limestone uprights along the western boundary, and abutted the retaining wall facing on the east (Figure 20). The top of the capstones was encountered at ca. 4.14 m below the trench datum. The base of the chamber was ca. 4.65 m below the trench datum. The chamber was thus ca. 51 cm in height. The floor of the grave was ca. 45 cm wide, and ca. 1.90 m long. Due to the aerobic conditions of the chamber, preservation of the human remains was poor. The sections that were exposed indicated that the individual had been placed in an extended, supine position, arms extended at the sides, head to the south (Figure 21). Grave goods consisted of one cylindrical jadeite bead (A1-SF/222), possibly having originally been placed in the mouth of the individual, one distal section of an obsidian blade (A1-SF/35), located near the left hand, and one whole obsidian blade (A1-SF/36), recovered from the area adjacent to the feet. The beaks of two "perching birds" (Passeriformes) were also discovered. Although it is difficult to ascertain for certain, it is likely that these remains also constituted grave offerings. Indications are that this interment was placed as a dedicatory offering, focusing on the A1-2nd structure. This postulation reflects the fact that the burial appears to have been constructed at the same time as the both the retaining and platform facing walls. In actuality, the retaining wall was employed not only to form one side of the chamber, but also to partially

UNIT A1-2

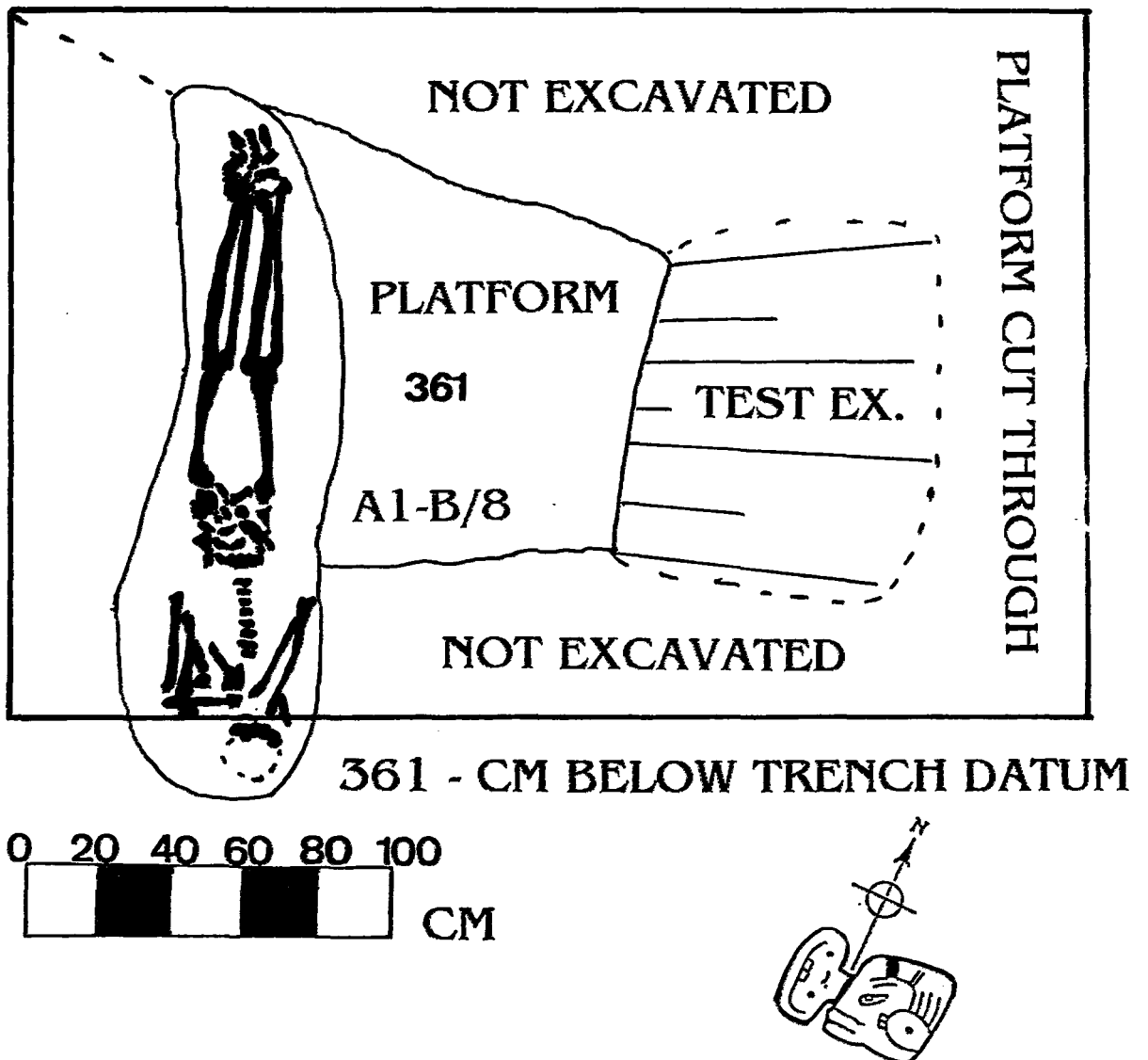


Fig. 19. Top Plan of Burial A1-B/8.

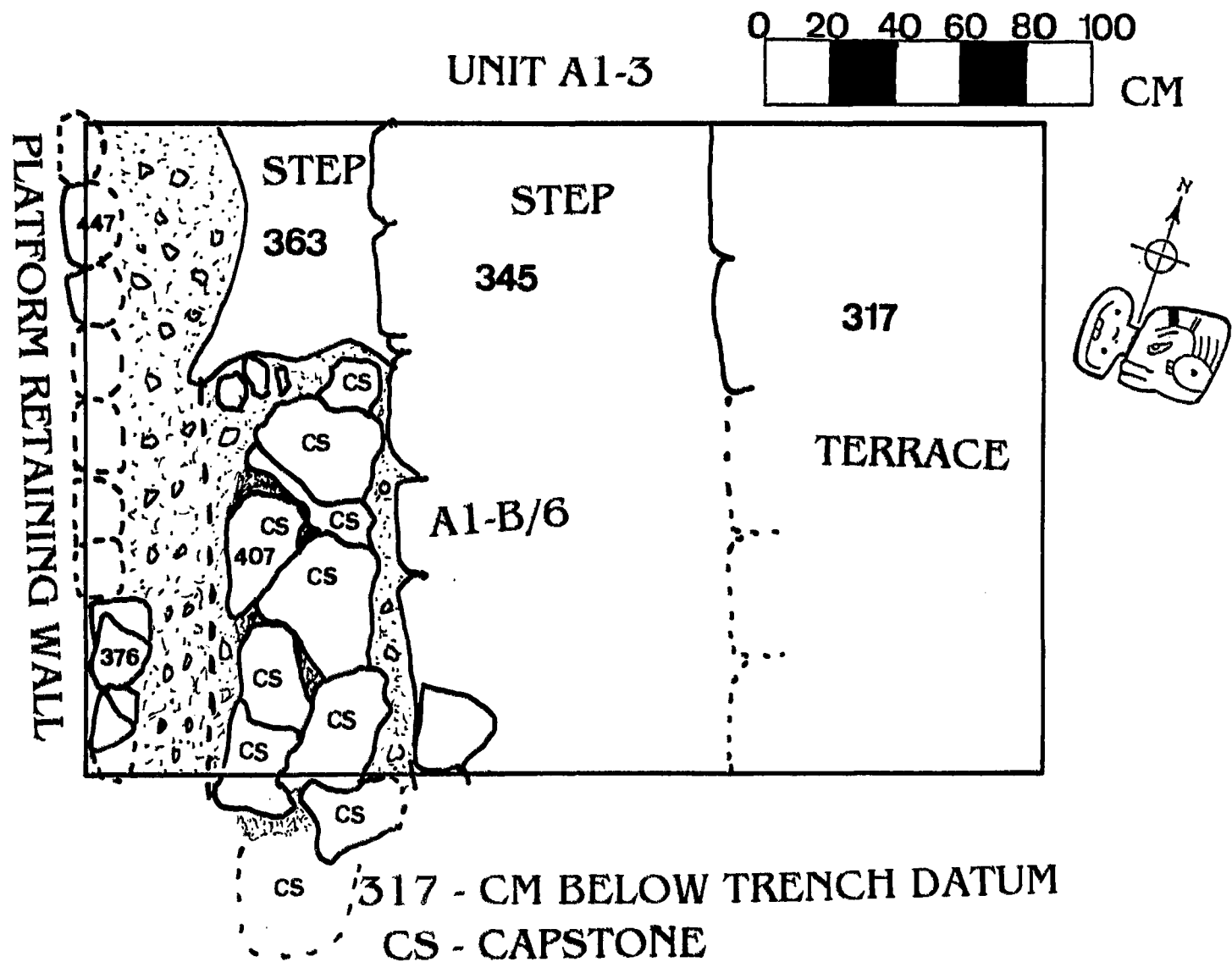


Fig. 20. Top Plan of Burial A1-B/6 Capstones.

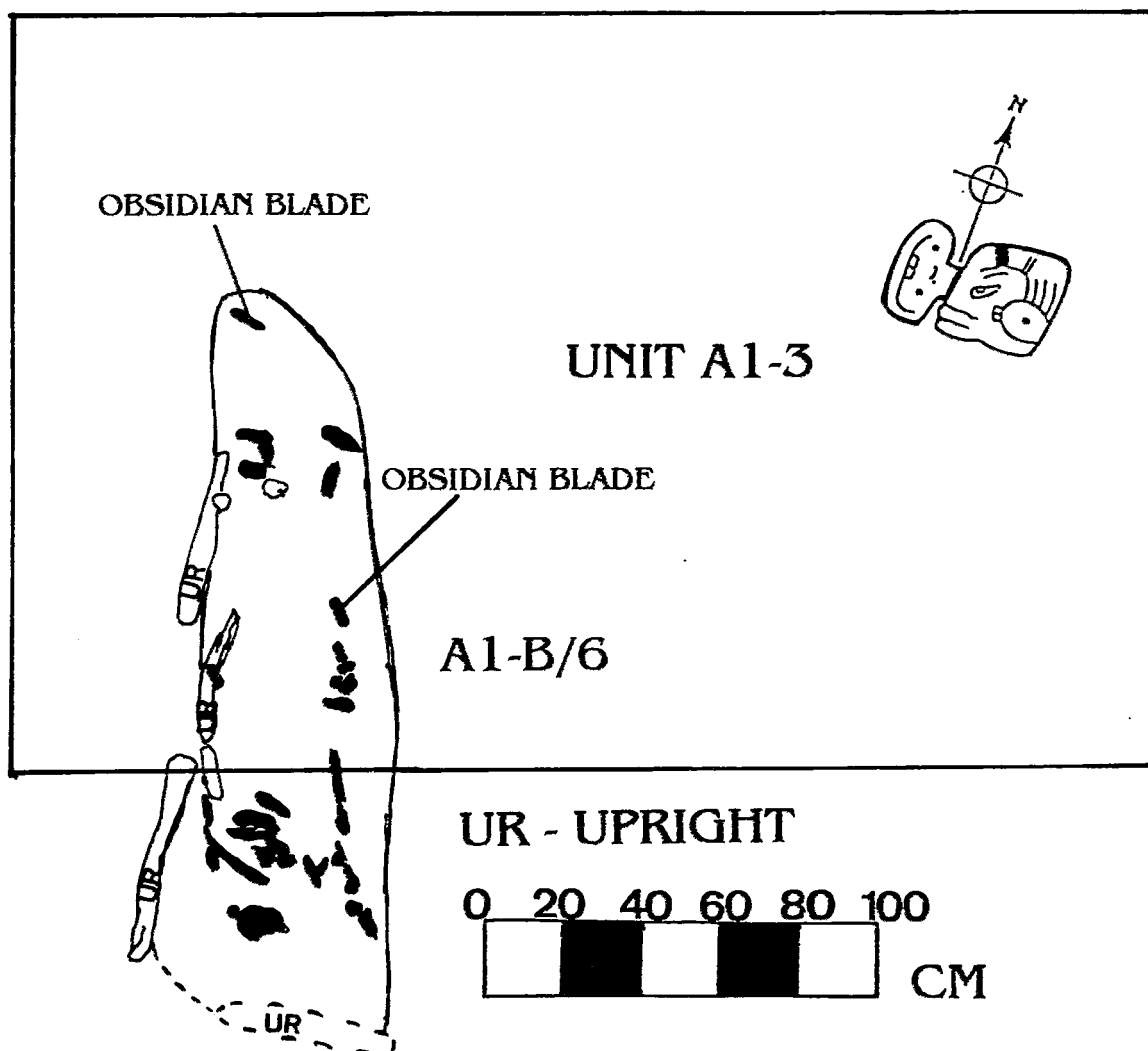


Fig. 21. Top Plan of Burial A1-B/6.

support the capstones. Concomitantly, the grave was not intrusive into any of the earlier floors. Thus it is highly likely that this interment was explicitly associated with the A1-2nd structure, and can therefore be considered dedicatory in relation to it. Whether in fact the individual interred within this grave was a sacrifice cannot be determined with any certainty.

Level 2, representing the terminal occupation of the A1 locus, consisted of Structure A1-1st and its associated plaza floor (see Figure 4). The construction of A1-1st easily doubled the height of the earlier A1-2nd platform. That A1-1st represents a slight change in architectural type is also clearly evident, A1-1st being a true steep sided pyramidal structure, as opposed to the lower platforms which preceded it. A1-1st was excavated in Units A1-2, A1-3, A1-4, and in the extreme eastern portion of Unit A1-5 (Figure 22). It should be noted that much of the A1-1st terminal architecture within Unit A1-2 had been excavated during the 1992 field season (see Iannone 1992a). All other excavations are attributable to the 1993 season. In general, the A1-1st architecture was poorly preserved, due to the long period of exposure to weathering and erosion. In addition, the steep-sided nature of the structure promoted the effects of gravitational processes. Finally, past cattle grazing and pasture clearing had led to the partial or full denudation of vegetation, a factor which would have accelerated the effects of erosion and weathering. However, the architectural remains that did exist allowed a fairly accurate description of the architecture.

The terminal A1 platform surface, encountered in Unit A1-2 at ca. 1-2 cm below the trench datum, was represented by a ca. 5 cm thick ballast layer containing mainly pebble sized materials (0.4-6.4 cm in size). The underlying deposit, consisting of a ca. 2.90 m thick dry-stone core deposit, was made up of very loosely consolidated cobble (6.4-25.6 cm) and boulder sized (> 25.6 cm) limestone rubble. A sizeable looters trench had destroyed a large portion of the platform, as well as sections of the upper stair riser. No evidence for a superstructure was discovered during excavations, and if A1-1st was surmounted by a smaller building it must have been a pole-and-thatch construct. To the west the platform abutted the nose of a three course, ca. 35 cm high stair riser. The toe of this riser intersected with a ca. 60 cm deep tread. Although variations did exist, this formula of riser height and tread depth was generally repeated through Units A1-3 and A1-4. In total, the stair appears to have originally consisted of at least eleven steps. Sections of balustrade were recognised along the northern border of the trench. Given the exposed section of stairs, and the overall shape of the A1 mound, it is likely that these remains represent an inset stair. Excavation through the stair face exposed a ca. 30 cm layer of backing masonry, mainly pebble [0.4-6.4 cm] and cobble [6.4-25.6 cm] sized clasts interspersed within a mortar matrix, and a dry-stone core deposit of variable thickness (mainly cobble [6.4-25.6 cm] and boulder [>25.6] sized clasts). At the boundary of Units A1-2 and A1-3, a large fill retaining wall was encountered. This was required to withstand the lateral pressure of the loose dry-stone core deposit beneath the A1-1st platform. The A1-2nd terrace tread formed the sustaining surface for this wall. Further down the stair, near the eastern boundary of Unit A1-3, two further fill retaining walls were exposed. These were of minimal size, and in reality constituted the basal courses of two stair risers which intruded into the backing masonry. However, they would still have sufficed to retain the fill between them and the larger wall to the east. It is of interest that the massive A1-1st construction effort did not correspond with a raising of the plaza surface. Rather, the earlier A1-2nd plaza floor continued to be used, except for where it was covered over by A1-1st

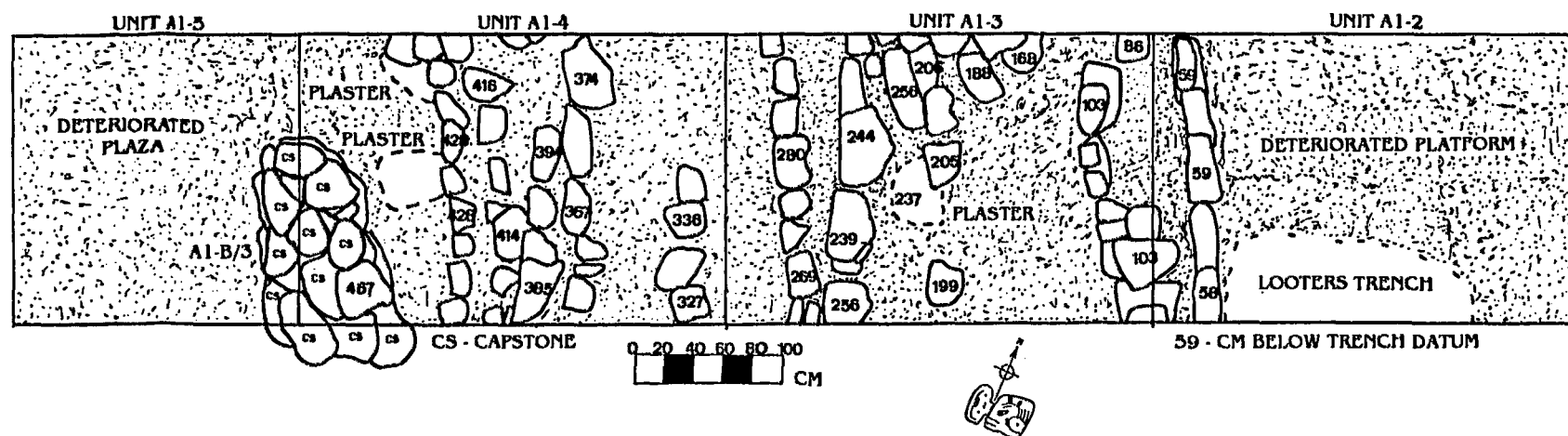


Fig. 22. Top Plan of Level 2 (A1-1st) Terminal Architecture.

construction, in which case it acted as the sustaining surface (ca. 4.56 m below trench datum).

Ceramic sherds and lithic debitage were abundant in Level 2, A1-1st, and freshwater shells were also present. The only artifact of note recovered from within the dry-stone core deposit was an unperforated potsherd disk (A1-SF/7). This was obtained from within the boundaries of Unit A1-2. A possible axially aligned cache, containing three whole obsidian blades (A1-SF/3, 4, 5) and one medial section (A1-SF/6) was also exposed in Unit A1-2. All other significant finds were recovered from caches and burials (see below). Due to poor preservation of the A1-1st architecture, it is inevitable that some mixing of the ceramic assemblage has occurred. Analysis indicated that types representing of the Tiger Run phase (600-700 A.D.) Sotero Ceramic Group, and the Spanish Lookout Phase (700-875 A.D.) Dolphin Head, Belize, Mount Maloney, and Chunhuitz Ceramic Groups were dominant. Seeing as Gifford (1976) sees the Sotero Group to be transitional, and the Dolphin Head Group to be an early facet member of the Spanish Lookout Ceramic Complex, a date of ca. 725-750 A.D. is likely for the construction of Structure A1-1st. This date is reaffirmed by the ceramic assemblages retrieved from the excavation of burials and caches associated with this structure.

Cache A1-F/1 is key to the interpretation of a series of offertory events associated with Structures A1-2nd and A1-1st. Specifically, it provides an all important link between two burials, each associated with a different construction event. Cache A1-F/1 was encountered during the excavation of the basal section of the A1-1st stairs in Unit A1-4 (see Figure 17). Excavations had removed the A1-1st stair facing, and associated backing masonry and dry-stone core, in order to follow the A1-2nd plaza floor east, where it eventually abutted the previously discussed A1-2nd platform facing wall. At this point a large, axially aligned circular cut through the A1-2nd plaza floor was isolated in front of the platform wall, adjacent to the south wall of the trench. This was clearly a subfloor cache. The offering had obviously been made in combination with the construction of A1-1st. The cache fill consisted of a layer of dark grey sediments, the top of which corresponded with the surface of the A1-2nd plaza floor (ca. 4.56 below the trench datum). Excavation of this ca. 10 cm thick deposit revealed a large limestone slab ca. 9 cm thick. Removal of this "capstone" exposed the base of one of the San Pedro Impressed: San Pedro Variety vessels (A1-SF/239) previously mentioned in the discussion of Burial A1-B/7 grave goods (base at ca. 4.75 m below the trench datum). Further excavations indicated that the upper vessel had been positioned lip-to-lip with the other aforementioned San Pedro Impressed: San Pedro Variety dish (A1-SF/240). Both of these Tiger Run phase (600-700 A.D.) vessels had in turn been placed within a large Mount Maloney Black: Mount Maloney Variety bowl (A1-SF/A1-SF/241), characteristic of the late facet Spanish Lookout phase (ca. 750-875 A.D.; see Gifford 1976). The base of the Mount Maloney bowl rested upon a deposit of fine sediments, the top of which was encountered at ca. 5.06 cm below trench datum. Upon removal of these vessels we first realised that the cache was intrusive into the earlier A1-B/7 burial (see Figure 18), associated with the construction of Structure A1-2nd (see above). Given that the vessels could not be considered contemporaneous, and the obvious differential timing of the A1-B/7 interment and A1-F/1 intrusive cache, it was deemed likely that the two San Pedro Impressed dishes had been initially deposited with the A1-B/7 burial during the construction of Structure A1-2nd. Upon termination of this occupation, Cache A1-F/1 was cut into the burial, and the Mount Maloney

bowl was deposited, the San Pedro Impressed vessels placed lip-to-lip within it. This activity would have occurred immediately prior to the construction of Structure A1-1st. What remained puzzling was the intention behind the A1-F/1 offering. Was it a termination ritual focusing on the A1-2nd structure, and the individual interred within the confined of Burial A1-B/7? Or was something more complicated represented by this action? The clue that eventually implicated the latter possibility was the small jadeite disk bead (A1-SF/223) previously discussed as having come from the area beneath the three vessels. This lone object provides a tenuous but intriguing link to Burial A1-B/5, an interment coeval with the A1-F/1 cache.

Burial A1-B/5, classified as a simple crypt following the Welsh (1988) system, was placed at the same time as Cache A1-F/1. This axially aligned grave, exposed in Unit A1-3, was intrusive into the earlier A1-2nd structure, having been cut through the terrace riser (see Figure 4). The grave, oriented north-south, differed from the other simple crypt burials at Zubin in that uprights and capstones were not used to form the sides or cover of the chamber (see Figure 17). Rather, a series of large limestone slabs had simply been arranged vertically around the body, the tops of which rested on each other to form a fairly substantial, "triangular-shaped" chamber. The top of this arrangement was encountered at ca. 3.72 m below the trench datum. The bottom of the burial was ca. 4.49 m below the trench datum, the chamber thus being ca. 77 cm high. This inner chamber was ca. 80 cm wide and ca. 1.90 m in length. Above and around these numerous limestone slabs had been haphazardly deposited, the top of which corresponded with the surface of the A1-2nd terrace (ca. 3.15 m below trench datum). After removal of this overlying deposit, the initial cut into the A1-2nd terrace was measured to be ca. 1.12 m wide, 2.00 m in length, and ca. 1.34 m deep. Skeletal material was very poorly preserved, due primarily to the aerobic environment of the chamber (Figure 23). The locations of teeth, and some sections of arm and leg bones, indicate that the individual was interred in an extended position, with the head to the south. There is no sure way to determine whether this burial was prone or supine, but given the richness of the grave goods, and the overall trend exhibited by the more elaborate A1 interments, it is suggested that the individual was in a prone position. Seeing as the interment was cut into the A1-2nd architecture, and corresponded with the construction of the A1-1st structure, Burial A1-B/5 might best be interpreted as a termination ritual in that it focuses on the earlier structure, although it must also be considered dedicatory to the new architecture (Becker 1992). The richness of the grave goods (see below) implies that this was a person of consequence at Zubin, and suggests that the construction of Structure A1-1st may have been stimulated by the death of this individual.

Grave goods were abundant in Burial A1-B/5. Two vessels were encountered. To the north of the head a large Garbutt Creek Red: Paslow Variety bowl (A1-SF/243) had been deposited. A Sotero Red: Sotero Variety vase (A1-SF/242) had also been placed near the feet. The latter vessel was broken, but fortunately all the fragments were still present, thus reassembly was possible. Other grave goods included a small limestone spindle whorl (A1-SF/57), and a spondylus (*Spondylus* sp.) shell bead (A1-SF/55). One of the teeth recovered from the postulated head region contained a jade inlay (A1-SF/58). Also discovered in this area were seven small jadeite (A1-SF/60, 61, 62, 63, 64, 65, 66) and two spondylus (*Spondylus* sp.) shell inlays (A1-SF/53, 54). These all appear to have come from a mosaic of some sort, probably originally having been set in a perishable backing. 155 small jadeite disk beads (A1-SF/67...227), probably from a necklace, were also concentrated around the head region. A large subspherical jade bead (A1-SF/56), possibly from the same necklace, was also recovered

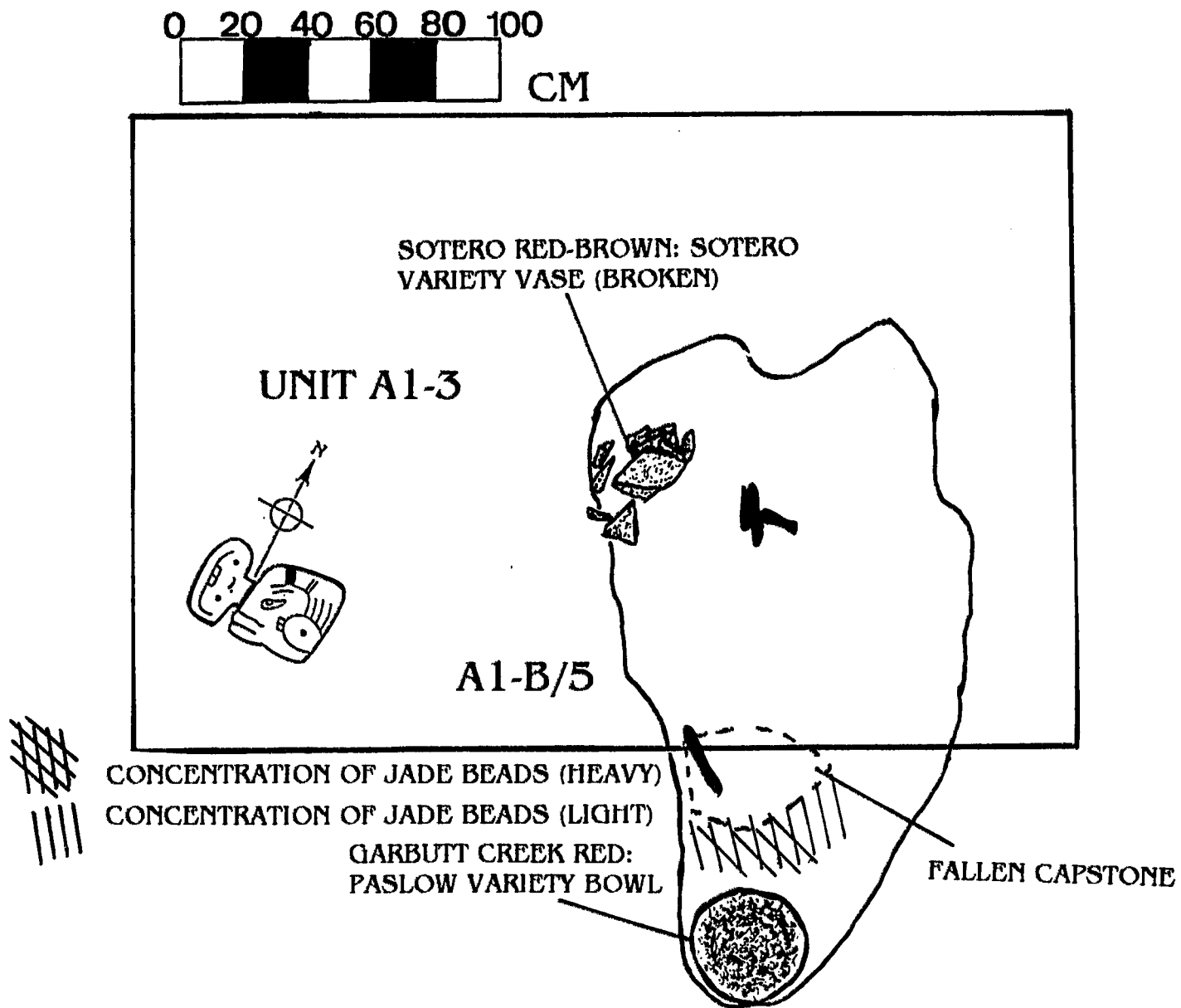


Fig. 23. Top Plan of Burial A1-B/5.

from this location. Whether the mosaic and shell bead were components of the suggested necklace cannot be determined with any degree of certainty. Finally, a number of armadillo teeth were also discovered. The animal may have been placed with the individual as part of the grave offerings.

The presence of the small jadeite disk beads in Burial A1-B/5 is integral to the hypothesised connection between this interment, Cache A1-F/1 and Burial A1-B/7. These beads were manufactured from a very distinctive "mottled" jadeite. Colour ranges from dark green, blue, white, to translucent, often on the same bead. This mottled jadeite is identical to that of the solitary bead recovered from Burial A1-B/7. In addition, this bead is exactly the same size and shape as those recovered from Burial A1-B/5. Given this connection, a likely scenario is that the death of the individual interred in Burial A1-B/7 stimulated the termination of Structure A1-3rd and the construction of A1-2nd (ca. 700-725 A.D.). Original grave goods included the two San Pedro Impressed vessels, and a jadeite disk bead necklace. Whether the other beads or mosaic pieces were part of this same necklace cannot be determined. Some time later, in conjunction with the termination of Structure A1-2nd, and the construction of A1-1st (ca. 725-750 A.D.), Burial A1-B/7 was reopened via the Cache A1-F/1 cut. At this time the jadeite beads were removed, except for one, and the Mount Maloney bowl was deposited, the San Pedro dishes now being placed lip-to-lip inside this vessel. Whether the singular jadeite disk bead was left for a reason, or by accident remains unanswered. However, it is clear that the jadeite beads obtained through the A1-F/1 cache cut were redeposited with the A1-B/5 interment. This scenario suggests that the inhabitants of Zubin new exactly where to dig in order to obtain the beads. Given that the time between the two interments does not appear to have been too long, it does seem likely that some of the Zubin residents would have retained this information. A degree of respect for the A1-B/7 individual is implied given that the Mount Maloney bowl was deposited in exchange for the beads. In sum, there is a potentially close connection (e.g. kinship) between the individuals interred within burials A1-B/7 and A1-B/5. The overall richness of these burials also suggests that their deaths stimulated both the termination of their contemporaneous architectural occupations and the construction of new Structures. These individuals should not be unquestionably linked to the primary Zubin family, but such a connection does seem conceivable.

Burial A1-B/4, an axially aligned head cist (see Welsh 1988), was recovered from Unit A1-3 from the area directly above the earlier A1-B/6 interment (see Figure 4). This grave had been cut into the A1-2nd architecture between the fill retaining wall and the platform facing wall (see Figure 17). Contemporaneous with the previously discussed Burial A1-B/5, this associated burial was far simpler with regard to construction. The grave itself, oriented north-south, consisted of a series of small limestone uprights surmounted by capstones. These components were arranged around the head and shoulders of the individual, the rest of the body being covered by a moderately compact deposit of grey-brown sediments containing medium percentages of pebble sized clasts (0.4-6.4 cm). The top of the capstones was ca. 3.51 m below the trench datum. The base of the interment was encountered at 3.94 cm, thus the head cist was roughly 43 cm high. A ca. 20 cm deposit of greyish sediments, containing medium percentages of pebble sized clasts (0.4-6.4 cm) was discovered between the base of Burial A1-B/4 and the capstones for the earlier A1-B/6 burial. The floor of Burial A1-B/4 was ca. 1.74 m long and ca. 52 cm wide. Even though the sediment deposited over much of the body would have provided an anaerobic environment, preservation of the remains was poor (Figure 24). However, enough bone remained to indicate that the individual had been placed

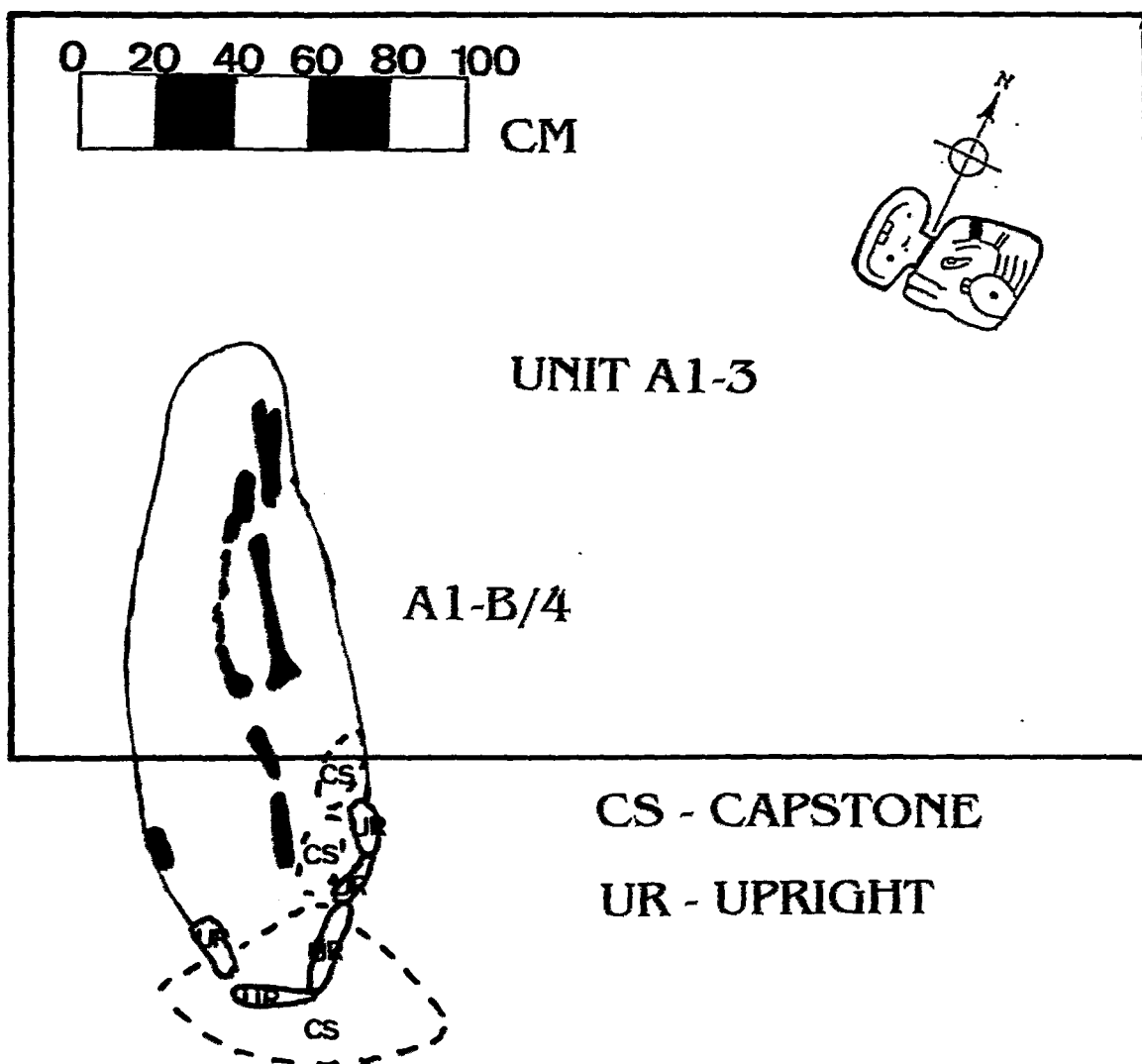


Fig. 24. Top Plan of Burial A1-B/4.

in an extended, supine position, head to the south, arms at the sides, legs possibly crossed at the ankles. No grave goods were recovered from this burial. The supine position, lack of grave goods, and association with Burial A1-B/5 may indicate that this was a sacrificial offering. As the grave was intrusive into the earlier A1-2nd structure the offering may be considered terminal, although the ritual involved must also be considered dedicatory to the new A1-1st construction (Becker 1992).

Burial A1-B/3 seems to represent a non-dedicatory sacrificial deposit focusing on Structure A1-1st (see Figure 4). This axially aligned interment, classified as a haphazard cist following Welsh's (1988) definitions, was a multiple burial capped by the terminal plaza floor. Consisting of five individuals (see Figure 25), this grave was oriented north-south in front of the A1-1st basal stair (see Figure 22). The grave itself consisted of a haphazard arrangement of roughly hewn limestone slabs placed over and around the upper individual (Individual #1). The top of the capstones was encountered at ca. 4.67 m below the trench datum. The grave cut intruded through the A1-1st/A1-2nd, A1-3rd, and A1-4th plaza floors, its base coinciding with the Level 6 plaza surface (5.33 m below the trench datum). The burial was thus 66 cm in height. Outside of the burial, to the east, two large sections of a sizeable Belize Red: Belize Variety bowl were discovered (at ca. 4.60 m below the trench datum). This partial cache was placed in association with the A1-B/3 burial, as is attested by the fact that other sections of the same vessel were interspersed amongst the human remains within the grave proper. Considering the proximity to the surface, the human remains were rather well preserved. The upper individual (Individual #1) was exposed directly beneath the capstones, covered by a compact layer of greyish sediments. Individual #1 was in an extended, supine, position, head to the south and hands near the pelvis. The face rested upon a large limestone boulder. Sections of the Belize Red bowl were recovered from near the feet and adjacent to the right shoulder.

Individual #2 directly underlay Individual #1. Preservation was again very good. The second individual had been placed in a similar extended, supine position, head to the south. However, the arms were extended at the sides. The upper portion of the cranium intruded under, and was thus slightly protected by the large limestone boulder which has previously been discussed. Sections of the Belize Red vessel were again found interspersed with the human remains. Individual #3 lay closely beneath Individual #2. Preservation of the remains was again quite good. The individual was in a similar extended, supine position, head to the south and arms at the sides. The cranium was fully covered by a large limestone slab, the head of the previous individual having intruded partially beneath the same. Portions of the Belize Red bowl were again encountered. Individual #4 lay directly beneath Individual #3, within a smaller cist outlined by cut limestone cobbles (6.4-25.6 cm). The body itself was well preserved, and had been placed in an flexed, supine position, the lower legs having been bent backwards at the knees. The arms were extended at the sides, and the cranium was partially covered by the previously mentioned limestone block. Sections of the Belize Red bowl were again recovered. The final individual (Individual #5) was found laying on the Level 6 plaza floor, within the confines of the smaller cist which had surrounded Individual #4. These remains were fragile, but can still be considered well preserved. Only a fraction of the bones were present, suggesting that this basal interment is best classified as a secondary burial. Indications are that the head was to the south. No Belize Red sherds were found in proximity to this lower individual.

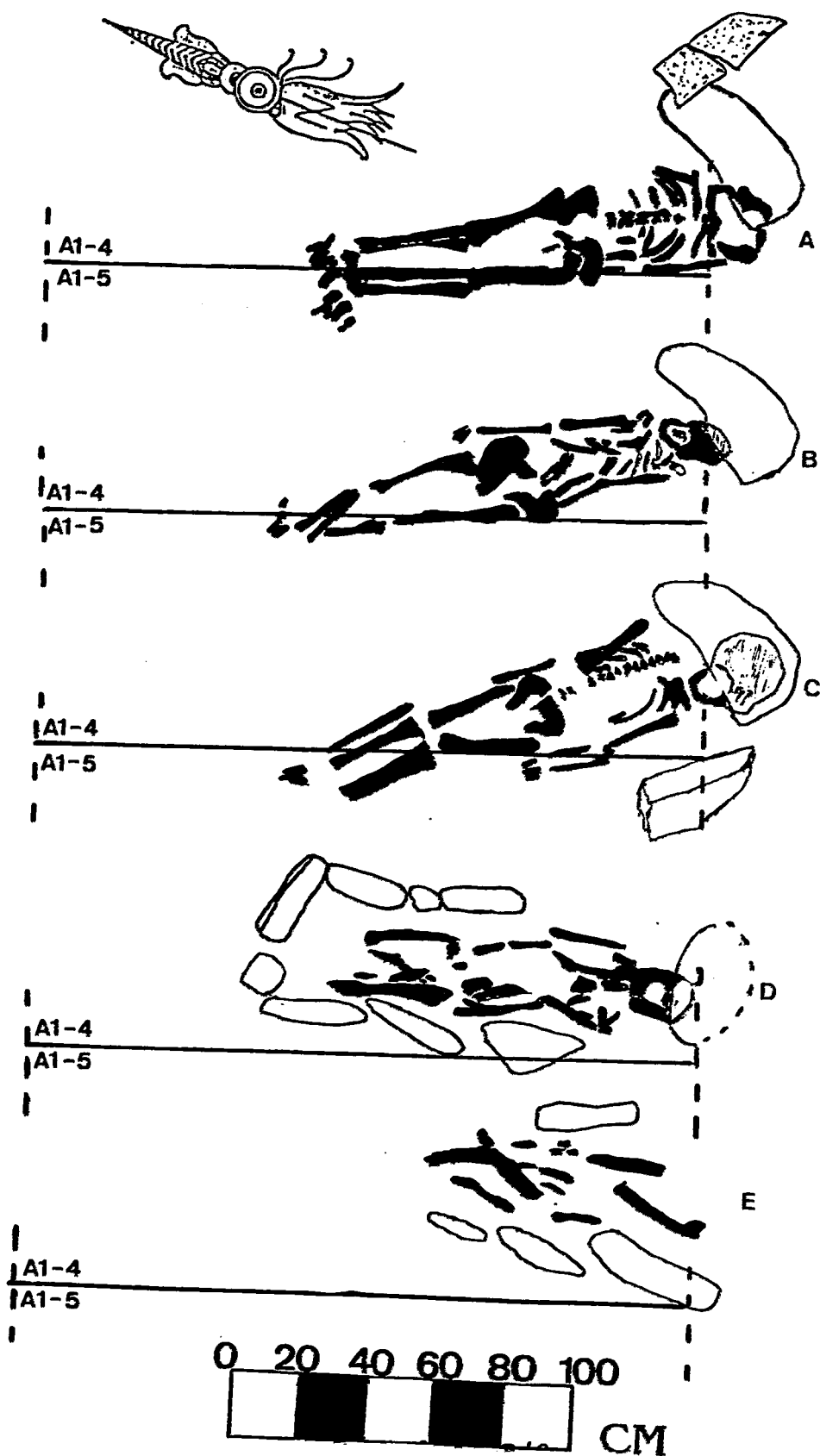


Fig. 25. Top Plan of Burial A1-B/3, Showing Superimposed Individuals (A Individual #1; B-Individual #2; C-Individual #3; D-Individual #4; E-Individual #5).

Besides the sherds associated with the Belize Red partial cache, the only significant finds were two jaguar or puma (*Felidae*) lower third molars, laterally drilled (A1-SF/37, 38). These were probably worn as part of a necklace by one of the upper three individuals. Unfortunately, the close proximity of the upper three bodies, and vertical displacement of some of the smaller bones, made it impossible to assign these finds to a specific body. Also found interspersed within the three upper individuals were seven filed teeth. These included Romero's (1958, Figure 2) A1, B4, and C3, types. Again, the proximity of the bodies and the potential vertical displacement of the teeth meant that we could not assign them to a specific individual. The Belize Red partial cache associates the placement of this A1-B/3 sacrificial offering with the Spanish Lookout phase (700-875 A.D.). A narrower time span is suggested based on the fact that the offering must have been placed after the construction of Structure A1-1st. Thus a time period of 750-875 A.D. is implied. Unfortunately a tighter chronological determination cannot be provided.

Two further axially aligned burials, A1-B/1 and A1-B/2, were placed side by side within the dry-stone core deposit beneath the A1-1st platform sometime after its initial construction (see Figure 4). These were excavated in 1992 and the reader is directed to last years progress report for a description of these two interments (see Iannone 1993a). The ceramic assemblage from these interments suggests that they were placed sometime shortly after the construction of A1-1st (ca. 725-750 A.D.). One final potential ritual deposit was identified but could not be excavated during 1993. The existence of this deposit was suggested by the presence of a large cut through the A1-2nd, A1-3rd, and A1-4th platforms. A cursory exploration of this cut indicated that it had probably been made during the termination of A1-2nd occupation, in association with the A1-1st construction. The instability of the trench walls did not permit excavations to proceed beyond the exploratory level, and thus we cannot be sure as to what lay at the bottom of the cut.

Level 1 was a surface deposit of variable thickness (1-70 cm), consisting of humus and fall materials (see Figure 4). Naturally, due to the steepness of the mound, this deposit was thicker near the base of the structure. Erosional activity was undoubtedly promoted by the fact that the site was cleared for cattle grazing up until three years before our arrival. The partial or full denudation of vegetation from the surface of the mound would have accelerated erosional processes, thus much of the original surface cover may have been washed downwards towards the base of the mound in the form of colluvial and gravitational sediments. Ceramics from this level represent late Spanish lookout phase occupation (ca. 750-875 A.D.). Lithic debitage and ceramic sherds were recovered in moderate quantities. Numerous, large Spanish Lookout phase (700-875 A.D.) sherds were recovered in abundance directly in front of the basal step, suggesting that their deposition was part of a termination ritual of some sort. Unfortunately, the depositional integrity of this assemblage remains questionable, as earlier ceramics may have been deposited in this vicinity due to the movement of materials derived from the deterioration of the A1 terminal architecture. Thus this cluster of sherds cannot provide an accurate date for the termination of A1 occupation. Significant finds included the distal section of an obsidian blade (A1-SF/29) recovered from Unit A1-2, a figurine head (A1-SF/31) and the medial section of an obsidian blade (A1-SF/30) from Unit A1-3, the proximal section of an obsidian blade (A1-SF/34), and a drilled/carved sherd (A1-SF/250) from Unit A1-4, the distal section of an obsidian blade (A1-SF/33), and a perforated sherd (A1-SF/32) from Unit A1-5.

In summary, excavations in Structure A1 produced a complicated picture of construction events and ritual deposits. Further insights will undoubtedly arise after the human remains have been examined. That A1 provides one of the best examples of an ancestor shrine excavated in the Maya area cannot be questioned. Undoubtedly, A1 was the single most important architectural manifestation at Zubin. Its role as an integrative feature, one which bound together the inhabitants of the Zubin site core and its peripheral population, cannot be stressed enough. Such features, and the ritual activity associated with them, ultimately permit the production and reproduction of large, cohesive social units.

Excavations in Structure A3. Structure A3 is located on the western side of the *Ac* plaza, directly across from the previously discussed Structure A1 (see Figure 2). As with A1, A3 is a special function structure, being pyramidal in form. However, its overall configuration, being less steep, with a proportionately larger base and summit, suggests that this piece of architecture was both functionally and symbolically different from the aforementioned A1 ancestor shrine. During the 1992 season a single unit, A3-1, was opened on the summit of Structure A3 (see Figure 3). Its purposes were to expose the terminal architecture in order to; (1) assess what type of superstructure had existed on the summit, and (2) aid in recognition of the primary axis. It was hoped that this latter information would in turn facilitate the placement of an axially aligned trench scheduled to be dug during the 1993 season. Unfortunately, Unit A1-3 did not provide us with the information required to achieve the previously mentioned goals. During the 1993 season we resumed our exploratory efforts at the A3 locus. These efforts continued to emphasise the exposure of terminal architecture and the isolation of the primary axis. The reasons for these investigations were two-fold. First, we endeavoured to acquire data concerning the A3 construction sequence in order to outline the development of this special function structure and its associated plaza, as well as assess the quality and type of architecture present. With this information a temporal understanding of the timing of major structural modifications could be provided. Concomitantly, assessments of labour investment could also be made. The axial placement of the trench was also considered necessary to uncover any burials or ritual offerings which are normally deposited in this position. Intrasite comparisons could then be made with the A1 structure concerning architectural function and symbolic significance. Similarly, intersite comparisons could also be made, furthering our understanding of local labour investment in burials and caches, and access to exotic or other high status items. The 1993 excavations were carried out in a series (7 in total) of articulated units (see Figure 3). This provided horizontal control over the spatial distribution of artifacts. These units varied in size, and were positioned in order to expose large portions of the A3 superstructure and substructure, and the medial section of the axial stairs down to plaza level. Vertical control was again maintained through the excavation of levels with natural or cultural integrity. As further excavations will occur at the A3 locus during the 1994 season, only a brief description of the exposed architecture will be provided at this time.

Level 1, the only level excavated within the series of units in 1993, consisted of a humus/fall deposit (see Figure 26). Primarily humus materials interspersed with fine, limestone derived sediments, this deposit ranged from 44-54 cm in depth. Moderate percentages of pebble (0.4-6.4 cm) and cobble (6.4-25.6 cm) sized sedimentary clasts were also present throughout. Compaction was medium, and roots and rootlets were prominent in the upper 10-20 cm. Ceramics, and lithic debitage were recovered in small percentages. The only artifact

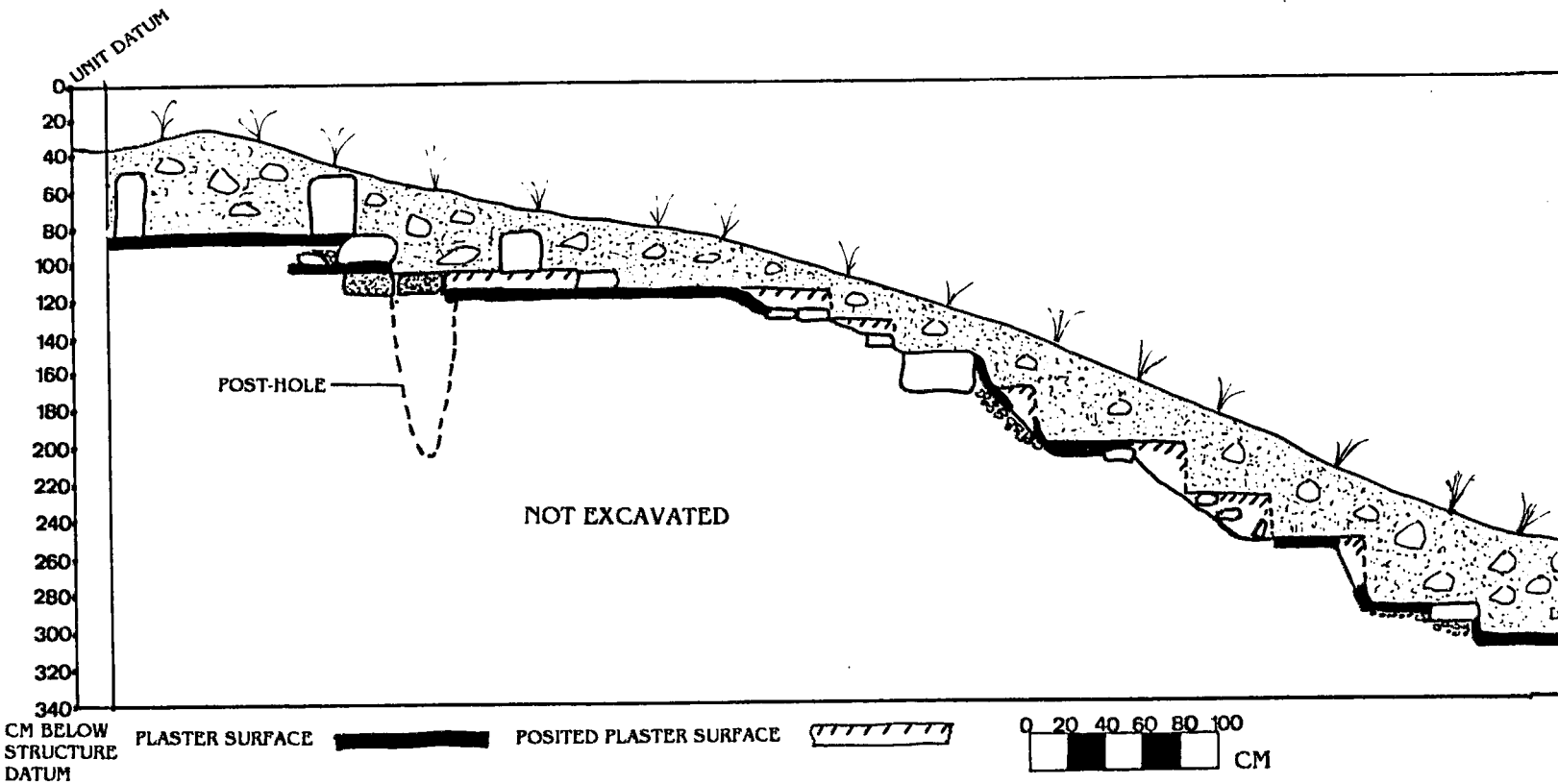


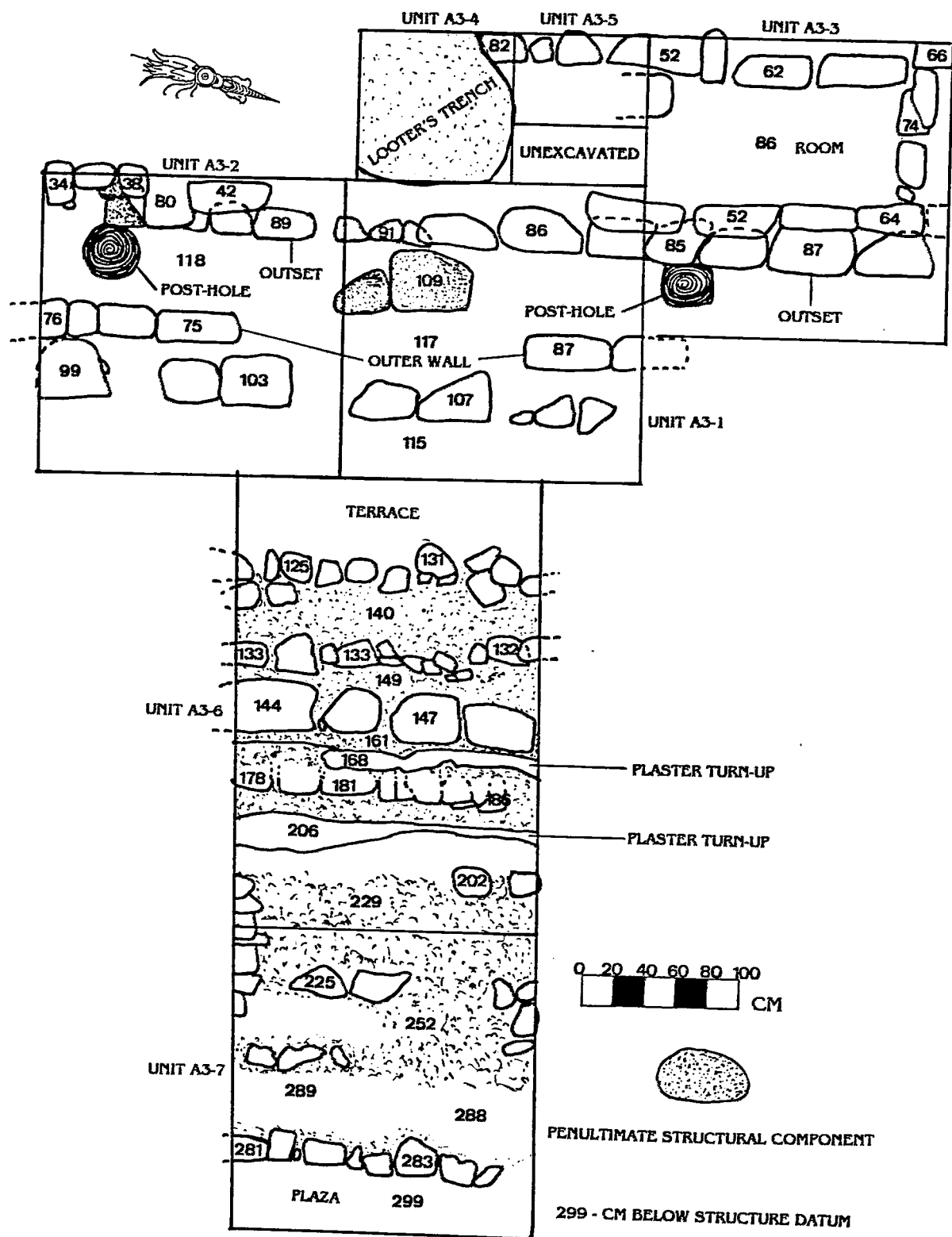
Fig. 26. Profile of Structure A3 Terminal Architecture, Looking North

of note recovered from Level 1 was the medial section of an obsidian blade (A3-SF/1), discovered in Unit A1-3. A comprehensive analysis of the A3 sherds awaits the completion of excavations, however a cursory overview suggests occupation of the A3-1st structure during the late Spanish Lookout phase (750-875 A.D.).

The exposed terminal architecture (A3-1st) consisted of a large substructure surmounted by a long, narrow room (Figure 27). The room itself was not vaulted, but rather had low cut stone walls (ca. 36 cm high). Indications are that the upper walls were made of poles, as no briquettes were recovered which would suggest the presence of a wattle-and-daub superstructure. The base of the exterior wall included an outset, which was level with both the nose of the upper stair riser and the room surface (ca. 88 cm below the structure datum). This outset was aligned with the face of the upper stair riser. A second wall, situated 76 cm to the east of the outset, ran parallel to it. The top of this low wall again corresponded with both the upper stair riser nose and the interior room surface, as well as the top of the outset (ca. 88 cm below structure datum). This wall had an opening along the primary axis which was aligned with the entrance to the room. Between the outer wall and the room wall two large postholes were encountered to the north and south of the medial stair. These may have originally held large wooden poles (ca. 36 cm in diameter) which could have supported the weight of a beam-and-mortar roof. If a simple pole-and-thatch structure had surmounted A3 there would have been no need for such large supports. The outer wall would have acted to screen the base of these poles, possibly for purely aesthetic reasons. The stair itself was fairly well preserved, consisting of a core face, covered by a thin lense of small aggregate, capped by a thick plaster surface. Facing stones were not common, and in most instances the plaster surface had been modelled to form both the stair treads and risers. A complete description of Structure A3 will be provided upon completion of the 1994 excavations.

Excavations in Plaza B or Bac-Ha

Plaza B or *Bac-ha* (white crane), the northern group of mounds in the site core (see Figure 2), consists of an unvaulted range-type structure on the west (B8), a low-lying mound on the north (B7), and a special purpose structure on the east (B6). The *Bac-ha* plaza is substantially lower in elevation than the *Ac* plaza, its courtyard being over 2.25 m below its counterpart in *Ac*. Entry into the *Bac-ha* plaza was achieved via a central stair located at the boundary with the *Ac* plaza. Three units were opened in the *Bac-ha* plaza during the previous 1992 field season (see Figure 3). Two of these, Units B6-1 and B6-2, were located within Structure B6. They exposed sections of the terminal architecture and plaza floor. The goal of the 1993 excavations was to fully expose the B6 terminal architecture, and axially trench it down to bedrock. Similar plans were scheduled for structure B8, where one unit was opened (Unit B8-1) in 1992 in order to expose the terminal architecture and associated plaza floor. During 1993 we reopened the 1992 excavations, as well as three new units (B6-1a, B8-2, B8-3; see Figure 3). Vertical control over artifact distributions was maintained by excavating in levels with either natural or cultural integrity. Where finer horizontal control was required levels were subdivided into smaller spatial entities. For example, Level 2 (fall deposit) in the 4x4 m B8-2 unit was divided into Level 2a (in front of the wall), and Level 2b (materials resting on top of the structure itself). This method is profitable in that it is easily recognised that both levels are "fall deposits", yet the affix indicates that these deposits were spatially separable. One need not know if these deposits are different at the outset, and in fact a deposit



such as "fall" is often quite homogenous due to the processes involved in its formation. Nonetheless, laboratory analysis may indicate that the field separation was of relevance. The ease with which the separation can be made, and the connection between the two deposits retained, makes this a much more malleable and understandable system than the cumbersome "lot" method. In fact, in the majority of architectural investigations Level 2 will always be a fall deposit, thus this recording method also provides information far quicker than the lot system.

Excavations in Structure B6. In 1992 a 2x2 m unit (B6-1) had been placed in the centre of the B6 structure in order to expose a large section of the terminal architecture. Adjacent to this a 1x2 m trench (Unit B6-2) had been opened at the juncture of the B6 southern wall and the retaining wall separating the *Ac* and *Bac-Ha* plazas. This unit also exposed a portion of the terminal *Bac-Ha* plaza floor. These excavations suggested that B6 was a "special" function structure, although we continued to be unsure as to exactly what type of construct B6 represented. In 1993 a larger 4x4 m unit (B6-1a) was excavated. This encompassed the area of the two earlier excavations, and exposed not only a substantial portion of the B6 terminal architecture, but also sections of the terminal plaza floor (Figure 28). The goal of these excavations was to clarify what type of structure was represented by the B6 remains, something which could not be determined after the 1992 exploratory excavations. Excavations within the larger 4x4 m B6-1a unit proved that the terminal B6 structure was a small construct, with masonry walls of medium height, the upper walls and roof having been made of pole-and-thatch. Almost the entire structure interior was taken up by a large "c-shaped" bench. A further sub-unit, B6-1b (.80 m x 1.50 m) was located within the confines of Unit B6-1a, between the north and south benches, along the primary axis. This was excavated down to bedrock in order to assess the development of architecture at the B6 locus, as well as expose any offerings normally located in this position. The results of these excavations are detailed below. In order to maintain horizontal control within the large 4x4 m B6-1b unit, each vertical level was subdivided into spatially distinct levels. All excavations within the southern bench area received an "a" affix (i.e. Level 3a). In contrast, excavations within the northern bench received a "b" affix (i.e. Level 3b, Level 5b). Finally, all excavations in the centre of the structure, within the B6-1b subunit (between the two benches), received a "c" affix (i.e. Level 3c, Level 5c). The summary will proceed from the earliest architectural manifestation to the latest (see Figure 29). Where necessary particular units or levels will be specified with reference to the spatial location of significant artifact finds or architectural features.

Level 6, encountered at ca. 1.20 m below the unit datum (see Level 6), consisted of a brown/grey, silty clay deposit of variable thickness (4-16 cm). Pebble (0.4-6.4 cm) content was low throughout. This overlay bedrock in the western portion of the B6-1b trench (bedrock at 1.24 m below unit datum). In the eastern portion of the trench no sediments were present. Rather, a relatively flat bedrock surface was exposed at ca. 1.25 m below the trench datum. The bedrock outcrop and sediment deposit combined to form a relatively level living surface. However, there was no evidence for intentional modification of the substrate. That a structure (B6-4th) was associated with this surface was indicated by the discovery of a section of east-west running facing wall (see Figure 28), exposed after removal of Level 5b (B6-3rd northern bench materials, see below). This wall rested on the aforementioned soil surface, and is likely the northern facing wall of a postulated B6-4th structure. The "clean" bedrock may have acted as the interior surface for this structure. The depth of the sediment/bedrock sustaining surface

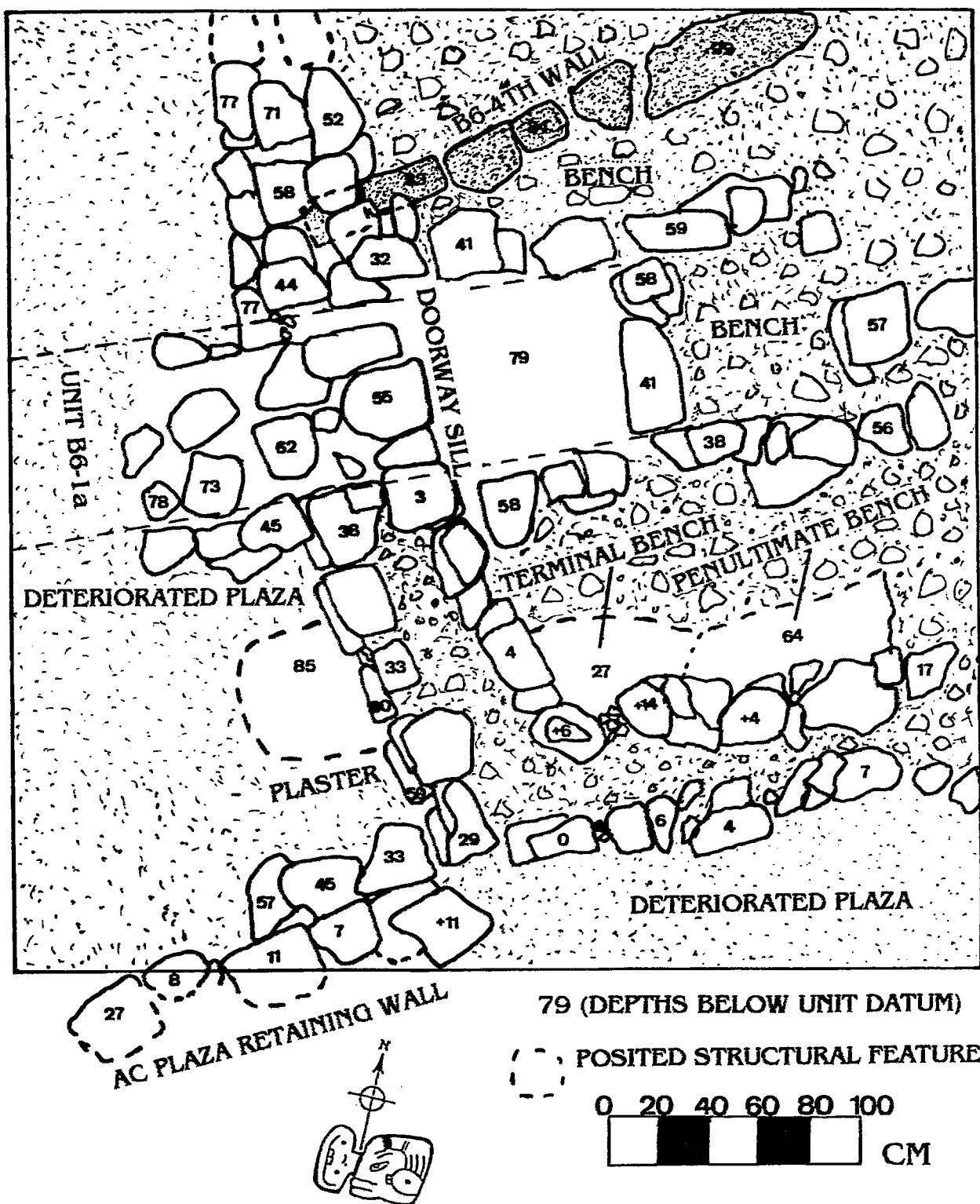


Fig. 28. Top Plan of Level 3 (B6-1st), Terminal Architecture

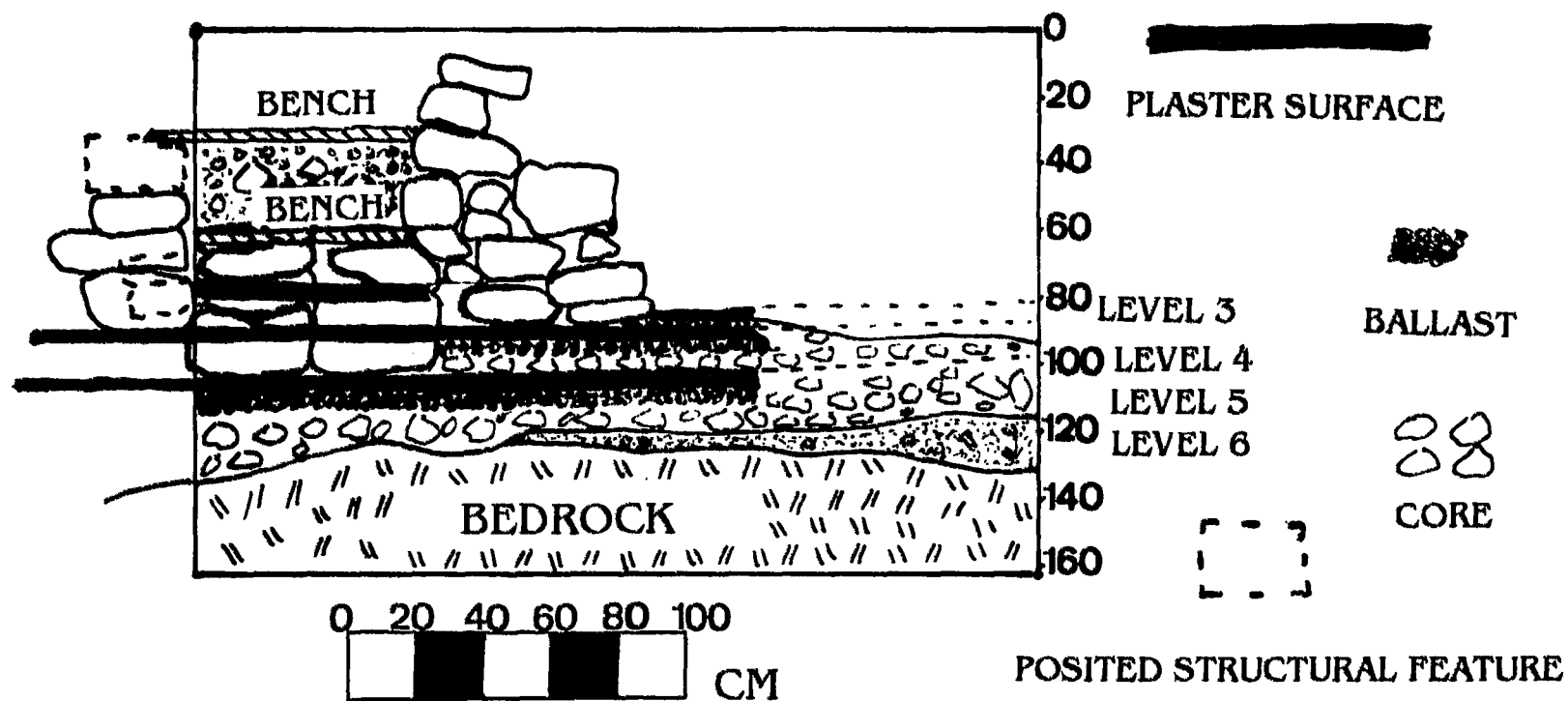


Fig. 29. Profile through Structure B8, Looking South.

for this hypothesised structure coincides quite closely with the depth for the original plaza surface exposed in Units A2-1, near the juncture of the *Bac-ha* and *Ac* plazas (see Iannone 1993a), and in Unit B8-2a (see below). Lithic debitage was encountered in small percentages, and faunal remains were rare. Sherds were abundant. No significant artifacts were recovered. The ceramic assemblage was made up primarily of Late Classic, Spanish Lookout (700-875 A.D.) types, mainly representatives of the Cayo and Belize Ceramic Groups. Additional sherds were of the transitional Sotero Ceramic Group. The assemblage indicates that a construction date of 725-750 A.D. is likely for B6-4th. This date corresponds with the first evidence for a "structure" at the B8 locus, and indications are that plaza B reached its maximum size by this time. In sum, B6-4th appears to have been a small structure with masonry lower walls, pole upper walls, and a thatch roof. The underlying bedrock appears to have been employed without alteration as the initial living surface for this structure.

Level 5 (B6-3rd) was excavated in the central trench (Unit B6-1b, Level 5c), and in the southern (Unit B6-1a, Level 5a) and northern (Unit B6-1a, Level 5b) benches (see Figure 29). Indications are that B6-3rd is a substantial modification to, and slight enlargement of the earlier B6-4th construct. Within the B6-1b (Level 5c) trench the B6-3rd floor surface was isolated at ca. 1.01 m below the unit datum. This moderately well preserved floor was ca. 20-32 cm thick, and consisted of a ca. 4 cm thick plaster surface overlying a ca. 8 cm ballast layer (small aggregate), and a ca. 20 cm core deposit (mainly cobble sized clasts [6.4-25.6 cm] within a dark grey matrix). To the east this deposit directly overlay the previously mentioned limestone bedrock deposit (at ca. 1.25 m below the unit datum). To the west the aforementioned lense of silty clays (Level 6, B6-4th) occurred between the core deposit and the bedrock. The basal courses of the southern and northern benches rested directly on the Level 5, B6-3rd floor surface, implying that these features were initially constructed at this time. During the B6-3rd occupation these benches had been ca. 44 cm high, and ca. 1.00 m wide. The plaster surface of the benches, encountered at ca. 62 cm below the unit datum, exhibited poor to fair preservation. Three course walls faced each bench. Excavations within the southern (Level 5a) and northern (Level 5b) benches indicated that they were comprised of a 9 cm plaster surface, ca. 10 cm ballast layer (small aggregate), and a ca. 25 cm aggregate core deposit. The earlier B6-4th facing wall had ceased to be employed at this time, entirely new walls having been constructed. These walls consisted of two parallel faces encasing a moderately compact fill deposit of silty clays, interspersed with high percentages of pebble sized (0.4-6.4 cm) clasts. On average these walls were ca. 70-80 cm thick. The base courses of the inner wall face were sustained by a deposit of aggregate core, the latter being level with the bench surface (ca. 62 cm below unit datum). The outer facing wall had a two course basal outset, and was sustained by the plaza surface (at ca. 1.01 m below the unit datum). In sum, the B6-3rd structure initially comprised a small building with low masonry walls, and two parallel benches. The upper walls and roof were probably of pole-and-thatch. The poles themselves probably intruded into the wall fill between the two wall faces. Ceramic sherds and lithic debitage were recovered in small numbers, and faunal remains were rare. No significant finds were recorded. The small ceramic sample contained sherds of the Spanish Lookout phase (700-875 A.D.), Cayo, Dolphin Head, Meditation, and Belize Ceramic Groups. The transitional Sotero Ceramic Group was also represented. This suggests a date of 725-750 A.D. for the construction of B6-3rd.

Level 4, the penultimate construction at the B6 locus (B6-2nd), consisted of a series of

modifications to the earlier B6-3rd structure (see Figure 29). Excavations were concentrated within the axial B6-1b trench. These efforts exposed a new, well preserved interior floor surface at ca. 91 cm below the unit datum. This floor had a ca. 1-2 cm thick plaster surface which was painted red. Underlying this a ca. 9 cm ballast layer, primarily small aggregate, and a ca. 4 cm aggregate core deposit were discovered. The 14-15 cm uplifting of the interior floor apparently corresponded with the raising of the *Bac-ha* plaza (to ca. 91 cm below unit datum), although this event may have been restricted to the immediate B6 locus. The red painted surface was only encountered within the confines of the B6-2nd structure. Whether this results from differential preservation, or whether the plaza surface was not finished in this manner cannot be determined, given the poor preservation of the latter. The red painted surface ran to the east, where it met a two course wall. This wall, the top of which was exposed at ca. 61 cm below the unit datum, formed the facing wall for the new central bench addition (see Figure 28). This act completed the "c-shaped" bench feature. The base courses of the central bench facing wall rested directly upon the new floor surface. The red paint was only exposed to the west of the wall. Behind this wall the floor was poorly prepared, indicating that it had not been surfaced for occupation, but rather as a sustaining surface for the new bench. The top of the new central bench corresponded with those of the previous B6-3rd southern and northern benches, implying that these features were not modified at this time. Similarly, there is no evidence for any modifications to the structure walls. In sum, other than the raising of the interior and adjacent exterior living surfaces, B6-2nd modifications focused primarily on the interior of the structure, with the addition of a central bench and the new red paint floor. As with the earlier constructs, it appears that the lower walls of B6-2nd were masonry, and the upper walls poles. A thatched roof was probably also present. Ceramic sherds and lithic debitage were recovered in very small percentages, and faunal remains were extremely rare. No significant finds were recovered from these excavations. The small sherd assemblage consisted primarily of Late Classic, Spanish Lookout (700-875 A.D.) phase ceramics, of the Cayo Ceramic Group. A precise date is difficult to provide given this limited evidence. However, taking into consideration the earlier B6-3rd assemblage, and the postulated date for the following terminal architecture (see below), a date for the B6-2nd modifications of 750-775 A.D. seems probable.

Level 3 (B6-1st) symbolizes the terminal architectural feature at the B6 locus (see Figures 28 and 29). Excavations into this structure were carried out within the B6-1b axial trench (Unit B6-1b, Level 3c), and a small test into the southern bench (Unit B6-1a, Level 3a). As with the previously discussed B6-2nd construct, B6-1st represents a series of modifications to an earlier structure, rather than an entirely new construction. Preservation of the B6-1st architecture was relatively poor. Much of the plaster floor surface had deteriorated, and the majority of the three bench surfaces and associated facing walls had disintegrated and/or collapsed. In order to provide the clearest summary of the B6-1st modifications it is profitable to begin with the exterior alterations. In conjunction with the B6-1st modifications the associated plaza was raised by ca. 6 cm. The top of this new plaza surface, exposed at ca. 85 cm below the unit datum, was in an extremely poor state of preservation. Only isolated patches of plaster remained to suggest its original height. This effort resembles a reflooring event rather than an actual construction effort. The reflooring raised the plaza midway up the base courses of the earlier B6-2nd basal outset. Thus a one-and-a-half, rather than two course outset now existed at the base of the B6-1st facing walls. Interestingly, where the B6-1st structure met the retaining wall separating the *Bac-ha* and *Ac* plazas a small series of steps was

discovered. These steps, built into the plaza retaining wall, would have facilitated quick access into or out of the *Bac-ha* plaza. However, these did not comprise a "formal" stair per se.

In association with the elevation of the plaza, alterations to the structure entrance were also made. These alteration included the construction of a three riser stair, which led from plaza level (85 cm below unit datum) to the door jam (ca. 50 cm below unit datum). Each riser was ca. 10 cm in height, and ca 40-45 cm in depth. This step was bordered by low balustrades. The ultimate stair riser formed a doorway sill (ca. 50 cm below the unit datum), which was faced on the eastern side. The interior floor surface was ca. 29 cm lower than this sill (ca. 79 cm below the unit datum). As previously mentioned, the interior plaster surface had completely deteriorated. All that remained to suggest the height of this new floor was the underlying ballast layer, which consisted primarily of small aggregate with a few cobble sized (6.4-25.6 cm) inclusions. This interior surface had been raised approximately 14 cm above the corresponding B6-2nd interior floor. Hypothetically all three benches were elevated as well, although this can only be proven for the southern feature. In the two other cases the entire upper benches were missing, as a result of the outward collapse of the interior and exterior facing walls, which had previously retained the bench fill. In the southern bench a section of the terminal plaster surface was isolated at ca. 27 cm below the unit datum. This provides a height for the bench, and indicates that it was raised ca. 34 cm above the previous B6-2nd southern bench. This new bench surface was ca. 52 cm higher than the contemporaneous interior floor surface. A test into the bench remnant (Unit B6-1a, Level 3a) proved that the fill was predominantly aggregate core, containing moderate percentages of pebble (0.4-6.4) and cobble (6.4-25.6 cm) sized sedimentary clasts. It is also likely that the B6-1st facing walls were heightened at this time. Unfortunately, because the upper segments of these walls were the first portions to collapse we were unable to isolate any sections attributable specifically to the terminal B6-1st structure.

In summary, B6-1st was another modification to an earlier structure, the benches and living surface having been raised, as well as the facing walls. The addition of a stair and doorway sill, however, were new features. Given the architecture, it is likely that pole upper walls and a thatched roof continued to be employed at this time. Lithic debitage and sherds were recovered in moderate percentages. The latter were especially prominent in the southern bench fill (Unit B6-1a, Level 3a). Faunal remains were rare. A few slate fragments (5) were recovered from below the stairs. One significant find, the medial section of an obsidian blade (B6-SF/7), was recovered from the interior floor fill (Unit B6-1b, Level 3c). The ceramics from the interior floor and bench test were predominantly from the Late Classic, Spanish Lookout phase (700-875 A.D.). Representatives of the Belize, Cayo, Meditation, and Mount Maloney Ceramic Groups dominated. This assemblage suggests a date of 775-850 A.D. for the B6-1st modifications.

Level 2, excavated in 1992 in the 2x2 m B6-1, and 1x2 m B6-2 units, and in 1993 in the larger 4x4 m B6-1a unit, consists of a fall deposit of variable thickness. The materials which form the majority of the matrix, pebble (0.4-6.4 cm) and cobble (6.4-25.6 cm) sized clasts, derive from the collapse of structural portions of B6-1st and B6-2nd. Lithic debitage and sherds were encountered in moderate percentages. Faunal remains were rare. Within Unit B6-2 a whole obsidian blade (B6-SF/1), a medial section of obsidian blade (B6-SF/3), and an obsidian blade "fragment" (B6-SF/2) were recovered. Other special finds came from

excavations in Unit B6-1a, and included the proximal section of an obsidian blade (B6-SF/6), the medial section of an obsidian blade (B6-SF/4), and a section from a ceramic flute or whistle (B6-SF/5). Ceramics were predominantly from the Late Classic, Spanish Lookout phase (700-875 A.D.). Representatives of the Cayo, Belize, Dolphin Head, and Mount Maloney Ceramic Groups dominated. Unfortunately, given the formation processes involved in the deposition of the fall deposit, the ceramic assemblage is in actuality a mixture of materials related to both B6-2nd and B6-1st. However, it does reaffirm the postulated dates of 750-875 A.D. for the penultimate and terminal structures.

Level 1, a surface/humus deposit of variable thickness, capped the previously discussed fall materials. This deposit consisted primarily of humus materials and fine sediments, with many roots and rootlets. Pebble sized (0.4-6.4 cm) clasts also occurred in moderate percentages. The matrix was moderate to loosely compact. Within this deposit lithic debitage and ceramic sherds were recovered in moderate percentages. Faunal remains were rare. One artifact of note, a medial section of obsidian blade (B6-SF/3), was recovered from Unit B6-2. To the southeast of the B6-1st stair a probable termination cache was recognised, consisting of numerous large sections of broken pottery. This "ritual" deposition, situated at the juncture of B6-1st and the retaining wall separating the *Bac-ha* and *Ac* plazas, was partially excavated in 1992 within the confines of Unit B6-2. The remainder of the deposit was recovered during the excavation of Unit B6-1a, in 1993. The sherds were primarily unslipped types of the Late Classic, Spanish Lookout (700-875 A.D.), Cayo Ceramic Group. Unfortunately, this assemblage alone cannot provide us with a more specific date for the deposition of these materials, and by association the abandonment of the structure. Indications are that such an abandonment would have occurred around 850-875 AD.

In summary, B6 seems to represent a special function structure. Its initial construction coincides with the Late Classic, Spanish Lookout phase (700-875 A.D.) increase in constructional activity already discussed for the *Ac* plaza. This increase in construction appears at all excavated loci in the *Bac-ha* plaza (see below). The subsequent rapid modification program reflects similar activity in other Zubin structures. Thus B6 fits the overall developmental pattern recognised at Zubin. However, the function and symbolic significance of this structure is still in question. Given its extremely small size and elaborate bench area, B6 does not resemble other excavated residential structures in the vicinity. The red painted floor surface also implies that this building was adorned with extra effort. However, the lack of ritual deposits, other than the ubiquitous termination cache, seems to rule out the notion that this was a ceremonial structure. Similarly, the mundane nature of the artifact inventory recovered during excavations does not immediately suggest that elaborate rituals were undertaken within the confines of the structure. Further excavations in other Zubin structures will undoubtedly provide additional comparative data from which a more contextual assessment of this structure can be formulated.

Excavations in Structure B8. B8 was initially considered to have been a residential structure surmounted by a pole-and-thatch superstructure (see Figure 2). Excavations reaffirmed the validity of this postulation. Unit B8-1, a 2x2 m unit, was dug in 1992 (see Figure 3). It was hoped that this unit would expose not only a portion of the B8 terminal architecture, but also some of the terminal plaza floor, and a section of the retaining wall separating the *Ac* and *Bac-Ha* plazas. Unfortunately the latter goal was not achieved. In 1993

Unit B8-2, a 4x4 m excavation, was opened adjacent to Unit B8-1. This excavation exposed almost the entire B8 terminal architecture (see Figure 3). A smaller unit (Unit B8-3) was opened adjacent to the northeastern boundary of Unit B8-2 in order to expose more of the *Bac-Ha* plaza (see Figure 3). The excavation of these units was aimed at providing an understanding of structure function and constructional elaboration. Within the confines of the larger B8-2 unit an axial trench (Unit B8-2a) was excavated down to bedrock in order to facilitate an understanding of the architectural development of the B8 locus, as well as expose any ritual deposits normally situated along this line (see Figure 30). A small exploratory trench (Unit B8-3a) was also excavated within the confines of the larger B8-3 unit in order to clarify the construction sequence. Within the following summary the B8 locus will be discussed from the earliest occupation to the latest. Individual units will be mentioned only when it is deemed necessary to specify the spatial location of significant artifact finds or architectural features.

Level 6, excavated only in the B8-2a axial trench, represents the earliest construction effort at the B8 locus (see Figure 30). Prior to the Level 6 construction this area appears to have been the location of a limestone or *sascab* quarry. Ceramics from the soil immediately overlying the quarried bedrock were all from the Middle Formative, Jenney Creek Ceramic Complex (800-300 B.C.). Representatives of the Savana, Joventud, and Jocote Ceramic Groups dominated the assemblage. This appears to date the initial quarrying to the late facet Middle Formative period (600-350 B.C.). Level 6 itself represents a ca. 60-80 cm thick plaza floor, located in the eastern section of the trench (Figure 31). To the west an unquarried portion of the bedrock outcrop (1.74 m below the unit datum) had been employed, possibly in modified form (flattened and smoothed), as the living surface. The plaza surface, which extended partially over the eastern portion of the aforementioned bedrock outcrop, was completely deteriorated. A ca. 6 cm ballast layer, mainly small aggregate, was all that remained to suggest the level of the original surface (ca. 1.68 m below the unit datum). This overlay a ca. 60 cm deposit of highly compact, dark brown sediments containing moderate percentages of pebble (0.4-6.4 cm) and cobble sized (6.4-25.6 cm) sedimentary clasts. This material had been employed to bring the quarried portion of the bedrock level with the unquarried section. The top of this floor corresponds with the one excavated in Unit A2-1, near the border of the *Bac-Ha* and *Ac* plazas, in 1992 (see Iannone 1993a; see Figure 3). Fewer ceramics were recovered from this earlier excavation, although those that were recovered suggest a transitional Middle Formative/Late Formative date for the construction of the initial *Bac-Ha* plaza floor. Ceramics from the B8-2a excavations were all of the Middle Formative, Jenney Creek Ceramic Complex (800-300 B.C.). Types of the Savana, Joventud, and Jocote Ceramic Groups dominated the assemblage. Thus a late facet Middle Formative (Jenney Creek phase) date for the plaza construction is likely given the evidence from the two excavations (ca. 400-300 B.C.). Associated with the plaza floor in Unit A2-1 was a low, one course, perimeter wall. The plaza floor acted as the sustaining surface. A similar low, one course wall was also encountered in Unit B8-2a (ca. 1.64 m below unit datum). In the latter case the course was intrusive into the small aggregate ballast deposit, suggesting that this may have been the basal course of a low, two course wall. In any event, the correspondences indicate that these two floors are one and the same. Ceramics and lithic debitage were recovered from Level 6 in moderate percentages. Faunal remains were also discovered in small amounts. Significant artifact finds included the proximal section of an obsidian blade (B8-SF/32), and a section of conch shell (*Strombus*). No further construction in the *Bac-Ha* plaza is attributable to the time

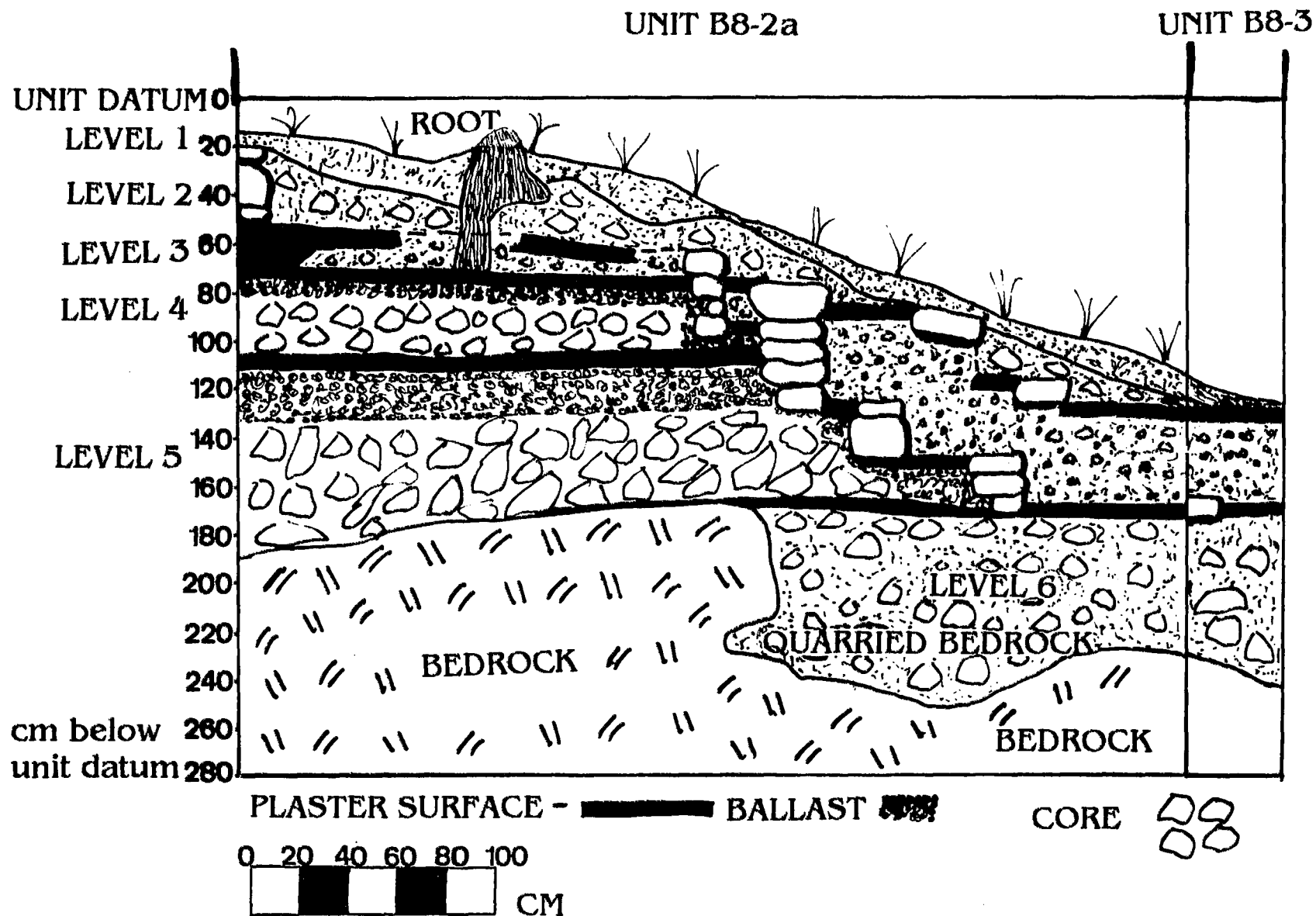
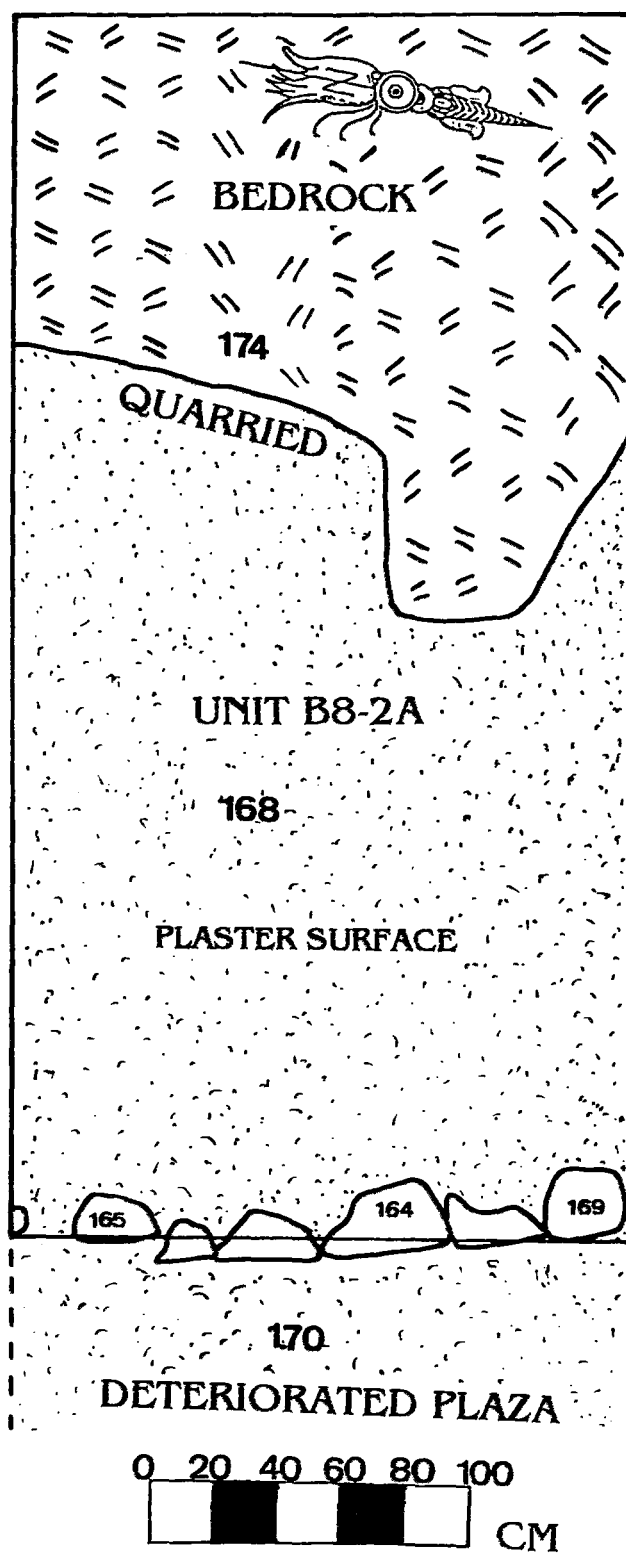


Fig. 30. Profile through Structure B8, Looking North

Fig. 31. Top Plan of Level 6 (Str.B8)

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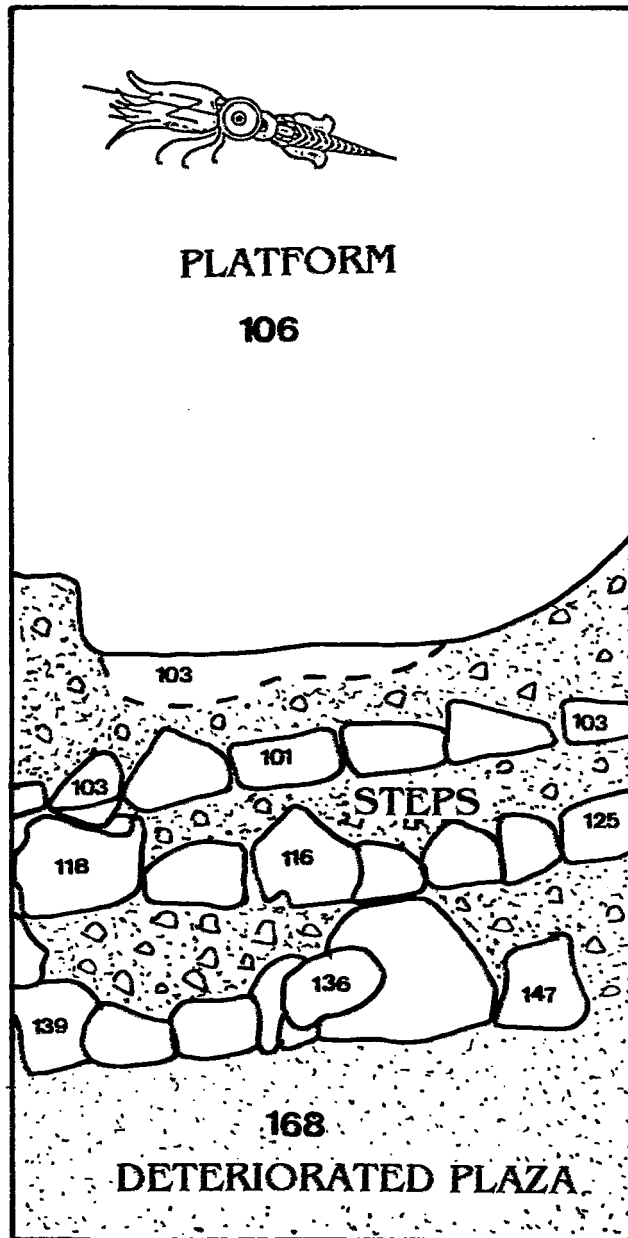


period between the late facet Middle Formative (Jenney Creek phase- 400-300 B.C.) and the Late Classic, Spanish Lookout phase (700-875 A.D.). This is intriguing, and it suggests that this portion of the site continued to be peripheral in terms of activities and construction until quite late in the Zubin occupation. The poor preservation of the floor, and lack of evidence for refurbishing reaffirms this position. Whether in fact special activities, such as craft production, took place at this locus cannot be determined given the present artifactual data base.

Level 5, excavated in Unit B8-2a, represents the first structure constructed at the B8 locus (B8-3rd; see Figure 30). The earlier plaza floor continued to be employed, and does not appear to have been refloored in conjunction with the construction of the B8-3rd architecture. B8-3rd consisted of a moderately well preserved platform, exposed at ca. 1.04-1.08 m below the unit datum (Figure 32). Preservation of the platform surface, encountered at ca. 1.07 m below the trench datum) was good, and indications are that this surface was refurbished at least once. The plaster was ca. 4 cm thick, and was underlain by ca. 21 cm layer of small aggregate ballast (primarily pebble 0.4-6.4 cm sized clasts within a mortar matrix), and a ca. 54 cm dry-stone core deposit (mainly cobble 6.4-25.6 cm sized clasts). The platform itself ran 2.46 m to the east, where it terminated at the nose of a ca. 21 cm high, three course stair riser. The toe of this riser in turn formed the edge of a 34 cm deep tread. This was followed by a further 20 cm high, two course riser, and a 48 cm deep tread. A final 20 cm high, three course riser, led down to the plaza surface (ca. 1.68 m below the unit datum). In sum, B8-3rd was a ca. 62 cm high platform accessed via three steps. No postholes were discovered during excavations, but indications are that B8 was surmounted by a pole-and-thatch superstructure. Lithic debitage and ceramic sherds were moderately abundant within the fill, and a few faunal samples were discovered. No ritual deposits were recovered in the axial trench. The only significant artifact find was the medial section of an obsidian blade (B8-SF/31). Ceramics from the B8-3rd excavations were predominantly from the Late Classic, Spanish Lookout phase (700-875 A.D.), and included types indicative of the Dolphin Head, Belize, Mount Maloney, Chunhuitz, and Cayo Ceramic Groups. Some transitional types, primarily of the Sotero Ceramic Group, were also present. This assemblage, and those of subsequent B8 structures (see below), suggest a 725-750 A.D. date for the construction of Structure B8-3rd.

Level 4 represents a modification to the earlier B8-3rd architecture (see Figure 30). Again, this structure (B8-2nd) was only exposed in the Unit B8-2a axial trench. Modifications included raising the height of the platform by ca. 34-36 cm above the previous B8-3rd level. The surface of the new B8-2nd platform, encountered at 71-73 below the unit datum, was moderately well preserved (Figure 33). It consisted of a ca. 3 cm plaster cap, which overlay a ca. 5 cm ballast layer (mainly pebble sized [0.4-6.4 cm] clast), and a ca. 27 cm thick dry-stone core deposit (primarily cobble [6.4-25.6 cm] sized clasts). The eastern terminus of the platform met with the nose of a new, 19 cm high, three course riser. A ca. 40 cm deep tread then ran to what was the upper stair riser for the earlier B8-3rd structure. This riser had an additional course added to its height, making it a four course, ca. 32 cm high riser. The lower two B8-3rd stairs and Level 6/B8-3rd plaza continued to be employed in unaltered form. The additions combined to form a ca. 96 cm high platform accessed via four steps. Indications are that this platform was surmounted by a simple pole-and-thatch structure. Lithic debitage, and ceramic sherds were recovered in moderate amounts. Faunal remains were encountered in small numbers. Artifacts of note included two medial sections of obsidian blades (B8-SF/29,

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UNIT B8-2a

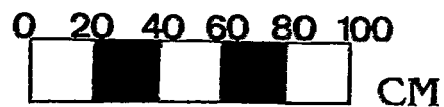
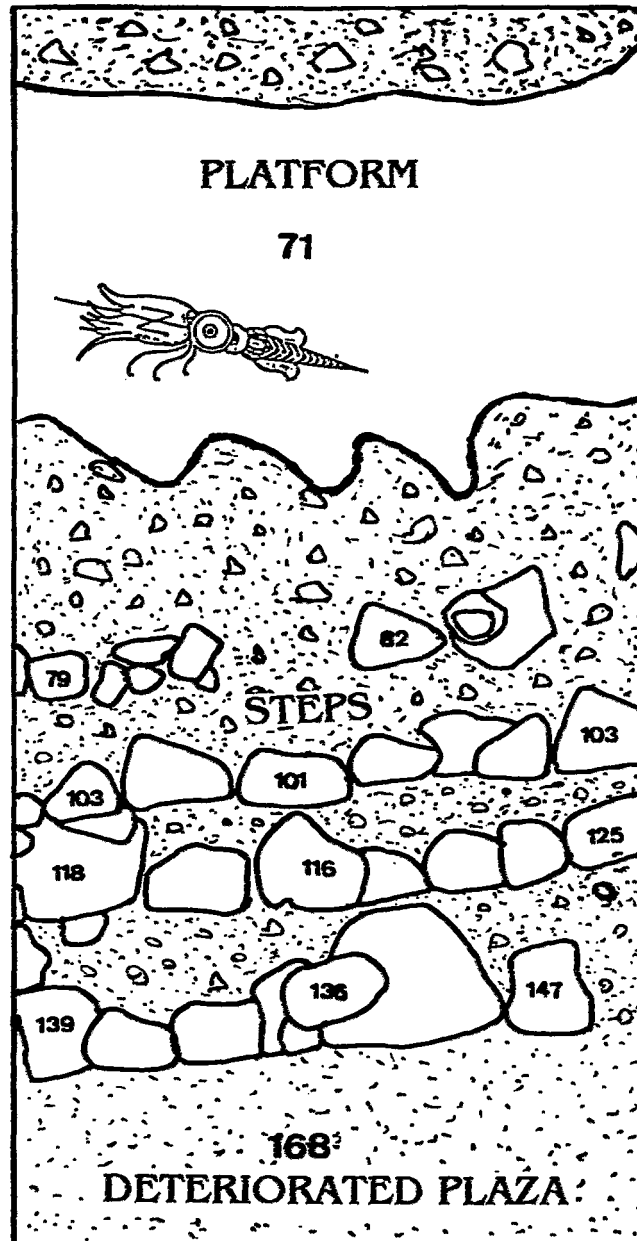


Fig. 32. Top Plan of Level 5 (Str. B6-3rd)

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UNIT B8-2a

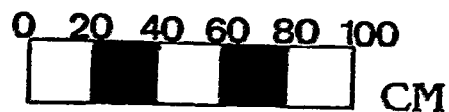


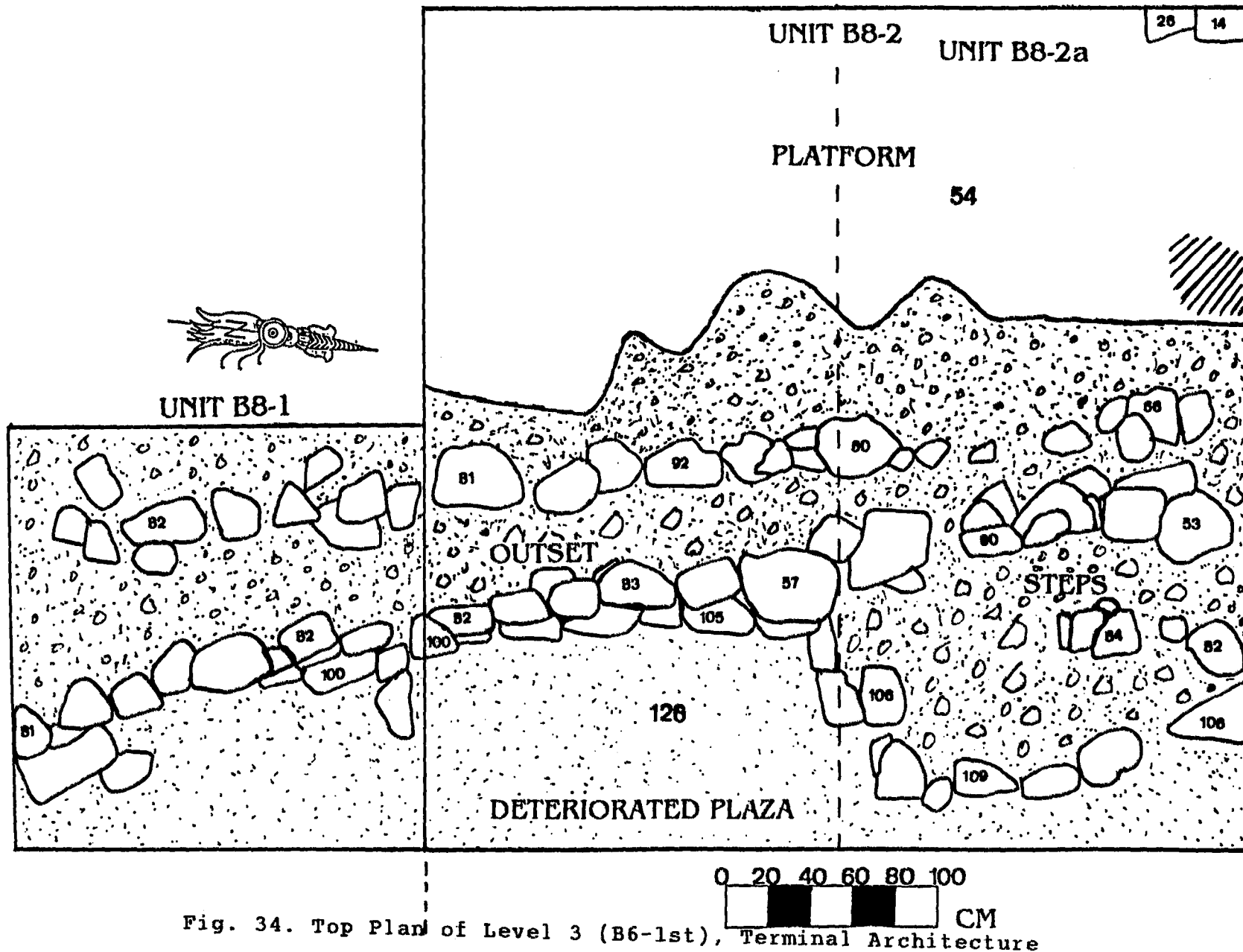
Fig. 33. Top Plan of Level 4 (Str. B6-2nd)

30), and the proximal section of an obsidian blade (B8-SF/28). The ceramic assemblage included numerous Late Classic, Spanish Lookout phase types (700-875 A.D.), including members of the Dolphin Head, Belize, Mount Maloney, Chunhuitz, and Cayo Ceramic Groups. Sherds of the transitional Sotero Group were also present. Given this assemblage, and the architectural sequence, a date for the B8-2nd structural modifications of 725-750 A.D. is likely.

Level 3, the terminal B8 architecture, was exposed in Units B8-1, B8-2, and B8-3 (Figure 34). This new structure, B8-1st, followed the architectural pattern of the two earlier structures. For the most part B8-1st constitutes an entirely new structure, although there are indications that it incorporated some earlier architectural features (but see below). The B8-1st platform was raised ca. 18 cm above the previous B8-2nd living surface (see Figure 30). The preservation of this floor was poor, both root action and ant activity had completely destroyed large sections of it. The surface was encountered at ca. 54 cm below the unit datum, the plaster being ca. 8 cm thick. Indications are that at least two reflooring event had occurred. Beneath the plaster surface a ca. 10 cm ballast layer of small aggregate, primarily pebble (0.4-6.4 cm) sized clasts interspersed within a mortar matrix, was encountered. To the west a section of low, three course wall (ca. 32 cm high), was discovered. The bottom of this wall rested on the platform surface. This wall, the top of which was exposed at ca. 20 cm below the unit datum, probably represents the back wall of a predominantly pole-and-thatch superstructure. To the east the platform terminated at the nose of a ca. 12 cm high, one course riser. This new course had been placed atop the earlier B8-2nd upper riser, although only the upper course was employed in the terminal architecture. This was followed by a ca. 44 cm deep tread. The upper course of the next riser was placed directly upon the earlier B8-2nd penultimate riser. However, only the upper course actually formed part of the new step. Moving from this ca. 8 cm high riser, and a further 66 cm deep tread was exposed, followed by a ca. 24 cm high riser. The nose of the latter riser was formed by a limestone block, the toe by small aggregate. The tread of the next step was ca. 40 cm deep. This tread terminated at a final, one course (ca. 10 cm high) riser, which led down to a new plaza surface (ca. 1.26 m below the unit datum). A poorly preserved, two course (ca. 20 cm high), north-south wall, in line with the upper stair riser, ran the length of the structure. Parallel to this, ca. 40 cm to the east, a lower four course (ca. 40 cm high) facing wall fronted the structure, the plaza acting as its sustaining surface. This wall also ran north-south, and was aligned with the penultimate stair riser. These features combined to form a ca. 40 cm deep outset wall which ran the length of the B8-1st structure, perpendicular to the outset stair. The lower two courses of the eastern facing wall were much better cut, and it appears that they may have been part of the earlier B8-2nd and B8-3rd architecture (only excavated in the B8-2a trench). If this postulation is correct then an outset wall and outset stair may have fronted all three structures.

The plaza floor surface had completely deteriorated, although indications are that it was originally 1.26 m below the unit datum. The plaza surface had been raised ca. 42 cm from its previous level. The intervening ballast layer, primarily pebble sized (0.4-6.4 cm) clasts interspersed with dark brown sediments, was moderately compact. Evidence for burning was present in the upper portion of the plaza floor, likely resulting from modern burning of the area for cattle grazing. This floor surface corresponded with the terminal plaza floor exposed in the 1992, A2-1 excavations. It is of interest that the B8-1st, and probably the earlier B8-2nd and B8-3rd stairs were not situated along the primary axis, but rather to the north of this. In summary, the terminal B8 (B8-1st) architecture consisted of a ca. 72 cm high platform,

54 - CM BELOW UNIT DATUM



originally surmounted by a pole-and-thatch superstructure. This superstructure was accessed via an outset stair with four steps. The B8-1st structure was fronted by an outset wall which ran north-south, perpendicular to the outset stair. During the B8-1st excavations ceramic sherds and lithic debitage were recovered in moderate numbers, and faunal remains were also encountered in small percentages. No significant finds were discovered. Ceramics representing the Late Classic, Spanish Lookout phase (700-875 A.D.) were prominent. Representatives of the Dolphin Head, Mount Maloney, Cayo, and Belize ceramic groups dominated. A few transitional Sotero Ceramic Group sherds were also recovered. The increase in percentages of Mount Maloney sherds, a late facet Spanish Lookout ceramic group (see Gifford 1976) suggest that a date of 750-850 A.D. for the construction of B8-1st is likely.

Level 2, a fall deposit, was excavated in Units B8-1, B8-2, and B8-3 (see Figure 30). This deposit, which consisted primarily of cobble sized (6.4-25.6 cm) sedimentary clasts, derived mainly from the deterioration of the terminal B8 architecture. Pebble sized (0.4-6.4 cm) clasts and lenses of compact soil were also encountered. Within Units B8-1 and B8-2 this deposit was excavated in two spatially distinct levels, 2a and 2b. Level 2b was removed from in front of the outset wall. In contrast, Level 2a was excavated from the area to the west of this wall, primarily from the B8 platform area. The fall deposit varied in thickness from 10-30 cm.

Sherds and lithic debitage were discovered in moderate percentages in Unit B8-1, Levels 2a and 2b (originally 3a and 3b in 1992), and faunal remains were present in small numbers. Large numbers of ceramic sherds were recovered from the Unit B8-2, Level 2a fall deposit, and lithic debitage was retrieved in moderate numbers. In Unit B8-2, Level 2b ceramics and lithic debitage were encountered in fewer numbers. In Unit B8-3 ceramics were abundant, and lithics were recovered in moderate percentages. Faunal remains were rare, but present in all units. The abundance and size of sherds in front of the stairs (Unit B8-3) and adjacent to the southern stair side (Unit B8-2, Level 2a), suggest that they may have been deposited as part of a termination ritual. The majority date to the Late Classic, Spanish Lookout phase (700-875 A.D.), although due to contamination resulting from the formation of the fall deposit a solid date cannot be provided for the termination of B8 occupation. Significant finds included a carved sherd (B8-SF/7), one drilled sherd spindle whorl (B8-SF/6), and an obsidian blade (B8-SF/4), all recovered from excavations in Unit B8-1, Level 2a (originally 3a in 1992). Excavations in Unit B8-1, Level 2b (originally 3b in 1992) produced, the proximal section of an obsidian blade (B8-SF/2), a medial section of obsidian blade (B8-SF/16), a conch shell (*Strombus*) fragment (B8-SF/1), and a drilled sherd spindle whorl (B8-SF/3). A mano and metate fragment, two proximal sections of obsidian blades (B8-SF/9, 10), three medial sections of obsidian blades (B8-SF/12, 13, 14), and one clay bead (B8-SF/11), were all recovered from Unit B8-2, Level 2a. Excavations in Unit B8-2, Level 2b produced two metate fragments, and two medial sections of obsidian blades (B8-SF/15, 16). Sherds from the fall deposit were obviously mixed, due to the formation processes involved in the deposition. However, a time span of 750-850 A.D. is suggested for the construction and occupation of the B8-1st structure, the architectural feature from which the majority of these sherds derive.

Level 1, a surface deposit, consisted primarily of organic humus interspersed with fine silty clays, moderate percentages of pebble sized clasts (0.4-6.4 cm), and many roots and rootlets (see Figure 30). Substantial ant activity was also recognised, leading to areas of high

bioturbation. This deposit was of variable thickness (5-19 cm), and was excavated in Units B8-1, B8-2, and B8-3. Ceramics and lithic debitage were encountered in moderate percentages, faunal remains being rare. Significant finds included one ceramic figurine arm (B8-SF/5) and a crudely made, unslipped, miniature ceramic bowl (B8-SF/8). The latter may have been a termination offering of some sort, although the crudeness and size of the vessel suggests otherwise. Ceramics were mixed, as is expected given the displacement of large portions of the terminal architecture through root action. However, given the assemblage a date of 750-850 A.D. is suggested for the construction and occupation of the B8-1st structure.

In summary, the initial activity at the B8 locus was associated with quarrying of limestone blocks or possibly *sascab*. This activity occurred sometime during the late Middle Formative, Jenney Creek phase (ca. 600-350 A.D.). These materials were probably employed during construction within the adjacent *Ac* plaza. Sometime shortly after this (ca. 400-300 A.D.) a plaza and a low perimeter wall were constructed, akin to features found near the juncture of the *Bac-ha* and *Ac* plazas, in Unit A1-2 (see Iannone 1993a). Indications are that bedrock outcrops were modified and employed at this time to form part of the living surface. It is clear that the plaza construction corresponds with a period of massive building within the *Ac* plaza. It is possible that more residential space was required at this time. However, given that no further residential elaboration occurs within this area until much later, it seems unlikely that this earliest plaza construction coincided with residential occupation of the *Bac-ha* plaza. Rather, it seems probable that more space was required for non-residential activities, such as cooking, or craft production. No tangible evidence exists for either of these activities, but the continual use of the original plaza floor without modification for such a long period of time does imply that this was a "work" rather than living surface. It is not until the Late Classic, Spanish Lookout phase (ca. 725-750 A.D.) that a residential structure was constructed at the B8 locus (B8-3rd). The timing of this construction coincides with increased building activity in the *Ac* plaza, and an apparent increase in population surrounding Zubin. Thus it is likely that more residential space was required by the Zubin inhabitants at this time. However, it is interesting that the old plaza floor continued to be employed. The modifications attributable to B8-2nd act primarily to raise the height of the platform, the original plaza floor continuing to be utilised. It is not until slightly later (ca. 750-875 A.D.), with the construction of B8-1st, that a new plaza floor is built. These efforts correspond with similar periods of rapid structural modifications in the *Ac* plaza, and imply that the period of 700-850 A.D. was a bustling time at Zubin. That the *Ac* plaza, and particularly Structure A1, continued to be the focus of ritual events for the *Bac-ha* inhabitants is clear, given the lack of ritual deposits found in association with this structure.

Peripheral Excavations: Operation 101

A solitary peripheral operation was undertaken during the 1993 season. This entailed the excavation of a *chultun* (Chultun 1, see Figure 2). The goals of this excavation were twofold. First, an understanding of the function of this chamber was required in order to assess how the Zubin inhabitants met such daily requirements as food and water storage. Second, it is clear that during the use-life of *chultunob* they were employed for a variety of different functions (see Aylesworth 1993). It is not uncommon that their last function was as a burial chamber, or at least as a locus for offertory deposits, the latter probably related to the termination of use. Thus, we also hoped to recover any ritual deposits associated with this

chamber.

Chultun 1 is located on a slight break of slope, ca. 85 m to the east of Structure A1 (see Figure 2). To the west the terrain rises to the relatively flat Zubin "acropolis". To the east the steepness of the slope increases substantially. A preliminary exploration of the *chultun* in 1992 indicated that although the upper portion of the chamber was open, a large amount of colluvial sediments had obviously been deposited since the abandonment of the site. It was also readily apparent that the capstone had collapsed at some point. This would have facilitated the aforementioned infilling. Given that the interior of the *chultun* constituted a readily definable space, it served as the primary "unit" of investigation (Unit 101-1). Vertical control over artefact distributions was maintained by excavating within natural levels. Horizontal control over artefacts and features within the chamber was maintained through triangulation. All vertical and horizontal measurements were tied into two datums, one of which was consistently employed as the primary vertical datum. Both were located outside of the *chultun* entrance.

Best considered a "lateral" or "shoe-shaped" *chultun* following Puleston (1971:324), this chamber had a ca. 70 cm wide orifice (Figure 35). This orifice was circular except for in the northwest area, where a small trough existed. This trough was aligned with the direction from which the majority of water would have drained towards the *chultun* opening. The *chultun* orifice exhibited a special feature uncommon to most chambers of this type. During its construction a bevel had been fashioned to facilitate the sealing of the chamber with a capstone (see Figure 36). Examples of this feature have also been found at Uaxactún (Smith 1950; see also Aylesworth 1993:80). The results of excavations within the *chultun* can be summarised as follows.

Level 1, encountered at ca. 1.20 m below the unit datum, consisted of very dark, moderately compact silty clays (see Figure 36). Moderate percentages of pebble (0.4-6.4 cm) and cobble sized (6.4-25.6 cm) sedimentary clasts were interspersed throughout. This deposit was ca. 15-8 cm thick. As it was formed through colluvial processes, the deposit was thickest beneath the entrance, and almost absent in the southern section of the chamber. The bones of a juvenile bovid were discovered on the surface of the deposit. This implies that the orifice was uncovered for a period of time, and that the young cow met his/her demise after falling through the entrance. Lithic debitage and ceramic sherds were encountered in small numbers. Land snails were extremely prevalent. No significant artifacts were discovered. Ceramics were predominantly from the Late classic, Spanish Lookout phase (700-875 A.D.). Sherds of the Cayo Ceramic Group dominated. Unfortunately, because this is an allochthonous deposit, it tells us little concerning the period of *chultun* use.

Level 2, exposed at ca. 1.39 m below the unit datum, consisted of moderately compact, light brown to grey sediments (see Figure 36). This deposit was partially formed through colluvial processes, which carried organic sediments, and pebble (0.4-6.4 cm) and cobble (6.4-25.6 cm) sized clasts into the chamber via the entrance. These sediments mixed with lighter sediments derived from weathering of the *chultun* interior. The later processes carried fine limestone derived particles in solution, which were deposited on the *chultun* surface. In conjunction with this large pebble (0.4-6.4 cm) and cobble (6.4-25.6 cm) sized limestone spalls foliated off of the ceiling and side walls of the chamber. These clasts, the fine limestone derived particles, and the organic colluvial sediments, combined to form a ca. 24-34 cm layer.

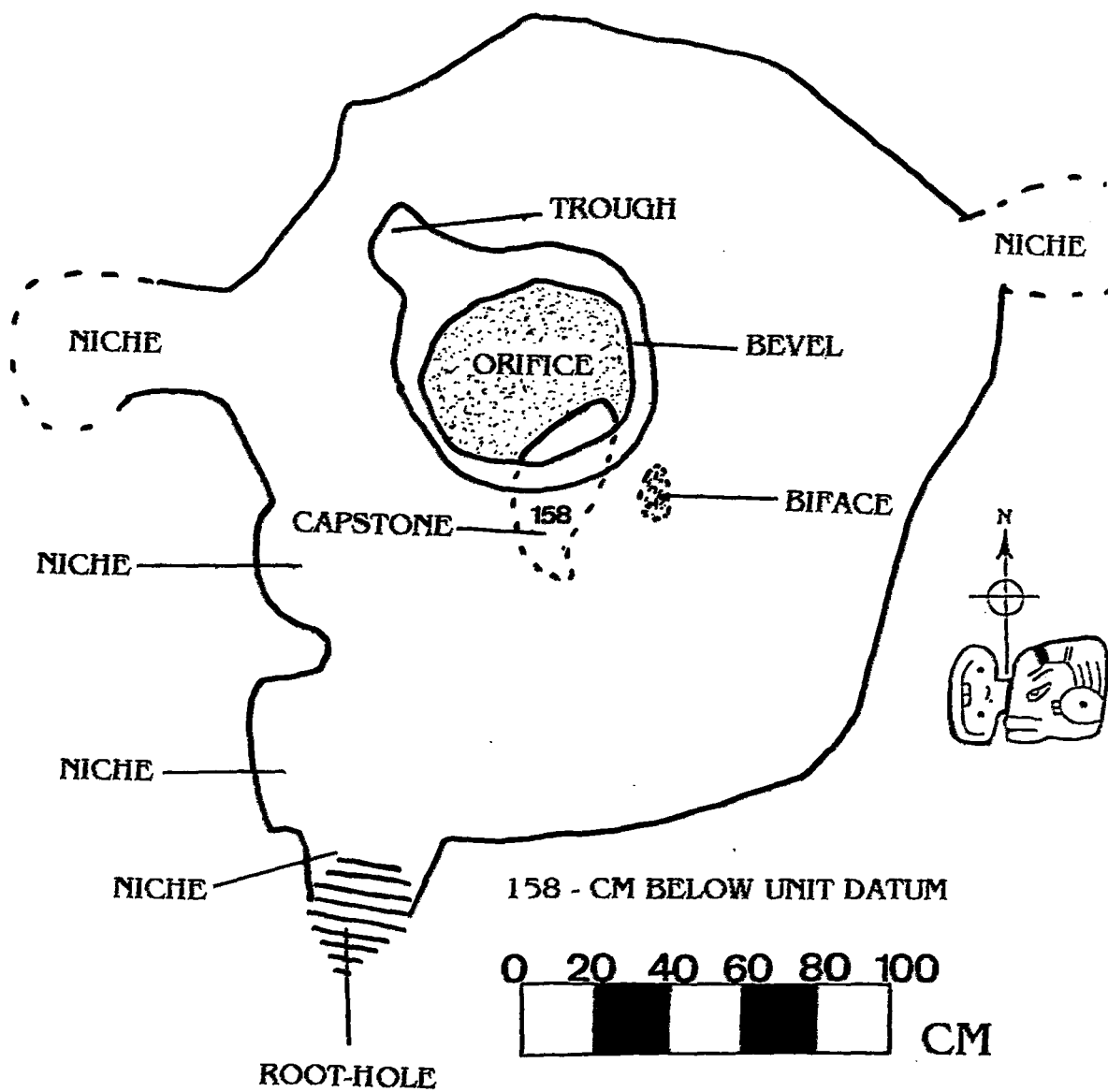


Fig. 35. Top Plan of Chultun 1

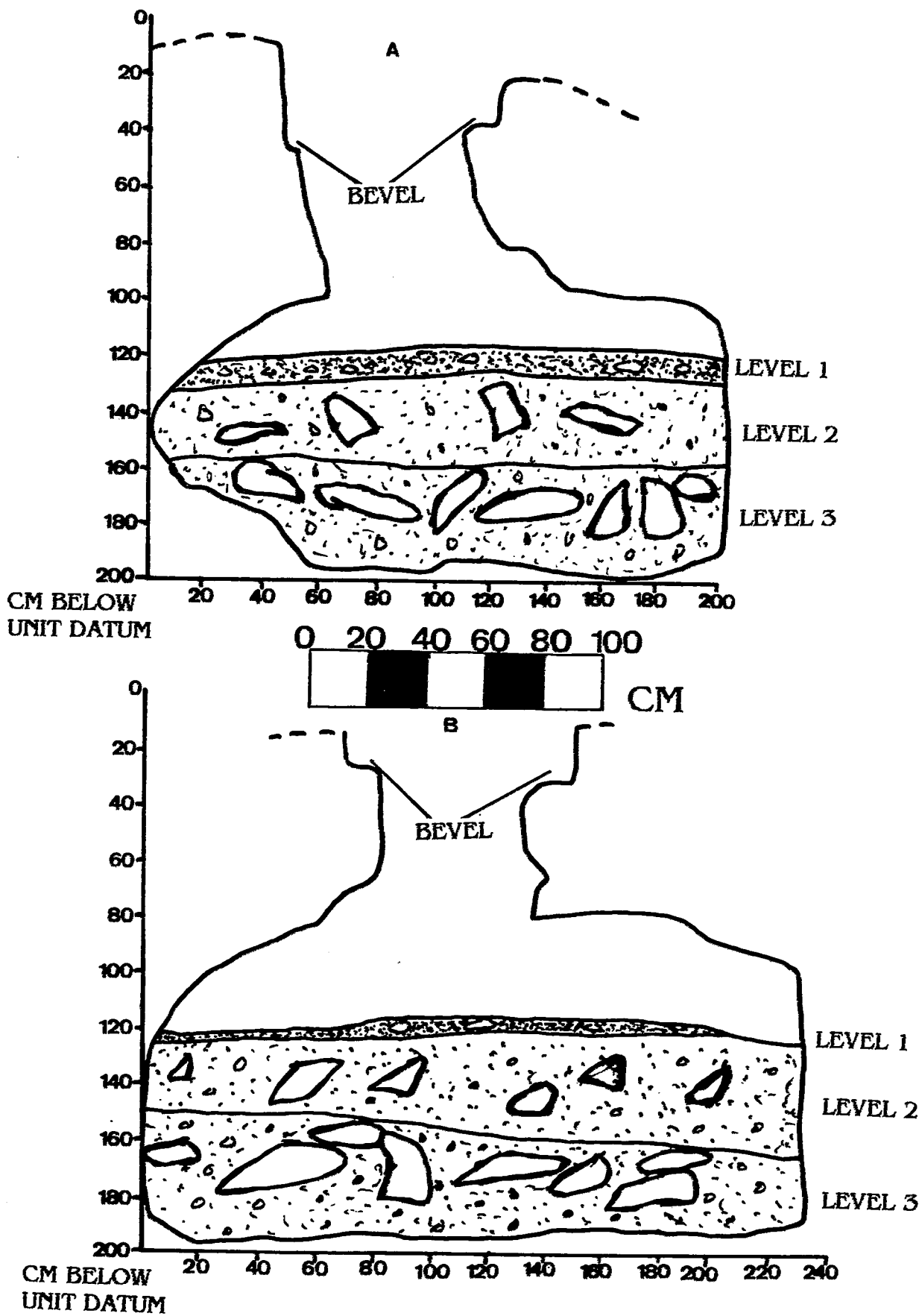


Fig. 36. Profiles through Chultun 1 (A-West/East; B-North/South).

As with the previously discussed Level 1, Level 2 was thicker beneath the entrance of the *chultun*, as more colluvial sediments tended to be concentrated in this area. Upon excavation of this level the widest limits of the *chultun* were exposed (see Figure 35). Being ca. 2.35 m north-south, and 2.18 m east-west, the chamber was roughly circular. Three small niches were exposed in the southwest corner. The most southern niche had been partially destroyed by root action. A further niche was partially excavated on the western side of the chamber. The top of this niche appears to have collapsed inward at some point, and little was left to suggest its original size. A final niche, located on the eastern side of the chamber, directly across from the one previously discussed, had also collapsed in on itself at some point. A 1x1 m test excavation outside of the *chultun* (Unit 101-2) attempted to expose this niche from the outside in order to determine its extent. This indicated that the niche had been quite small. One artifact of significance, a section of limestone spindle whorl (101-SF/2) was recovered in Unit 101-2 during the test excavations. However, this artifact was recovered from the Level 1 humus deposit, and cannot be connected to the niche in any way. In fact, no artifacts were found in association with any of the niches. Whether artifacts had originally been located within these areas cannot be determined with any degree of certainty, as it is always possible that looters had entered the chamber during the period when the entrance was exposed. Ceramic sherds and lithic debitage were recovered in small numbers. Faunal remains, in particular land snails, were abundant. A general utility biface was also discovered near the centre of the chamber. A retouched medial section of obsidian blade (101-SF/1) was the most notable find. All of the above may have been washed in along with the sediments, and it is likely that they are in a secondary context. Thus they tell us little about the actual function of the chamber. The ceramic assemblage was again dominated by Late Classic, Spanish Lookout phase (700-875 A.D.) types, particularly representatives of the Cayo Ceramic Group. Unfortunately, due to the allochthonous nature of the deposit these sherds cannot be used to provide a period of use for this chamber.

Level 3, a final ca. 38-44 cm thick deposit occurred above the bedrock (see Figure 36). These sediments, the top of which were exposed at ca. 1.60 m below the unit datum, were highly compact. Pebble (0.4-6.4 cm) and cobble (6.4-25.6 cm) sized clasts were interspersed throughout the brownish grey matrix. Some boulder sized (>25.6 cm) clasts were also encountered. Many of the smaller clasts may have been carried into the chamber through colluvial processes, but the majority of larger ones likely derive from the weathering of the ceiling and walls of the limestone chamber. Indications are that the upper portion of this deposit formed after the *chultun* had ceased to be utilised, but before large amounts of allochthonous colluvial sediments were able to enter the chamber. A large section of the capstone was found on top of the Level 3 sediments, beneath the orifice (at ca. 1.58 m below the unit datum). The collapse of the capstone, and its stratigraphic position, reaffirm the postulated sequence of formation processes. This is because the deposition of the capstone on top of the apparently autochthonous deposit coincided with the beginning of Level 2 deposition, the latter contained a higher percentage of colluvial sediments. Apparently the *chultun* entrance was covered by the capstone during the deposition of Level 3. Upon collapse of the capstone more colluvial sediments were carried in, and level 2 was formed. A negligibly undulating limestone bedrock surface was encountered at ca. 1.98 m below the unit datum.

Lithic debitage and ceramic sherds were recovered in small quantities, and faunal remains were abundant (primarily freshwater snails). Three clusters of sherds were recovered

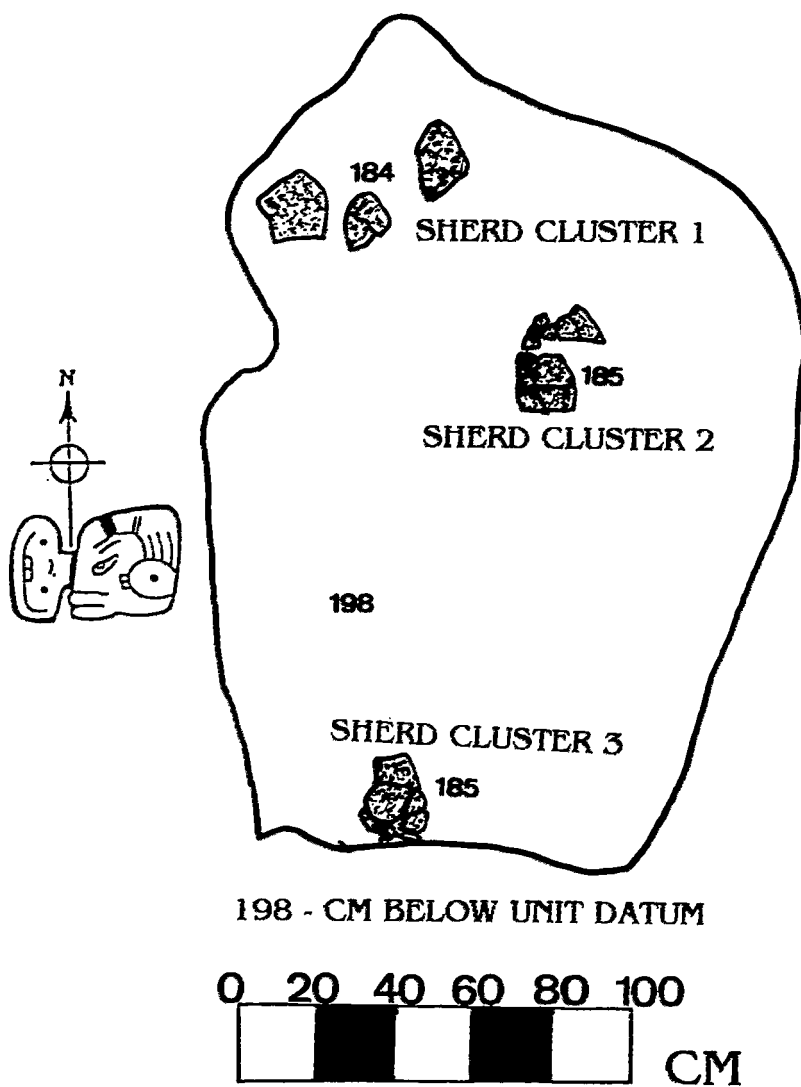


Fig. 36. Top Plan of Chultun 1 Bedrock, Showing Sherd Clusters.

ca. 10-15 cm above the bedrock, within a slightly finer lense of Level 3 sediments (see Figure 37). All sherds were from the Late Classic, Spanish Lookout phase (700-875 A.D.). Sherd Cluster 1, located in the northwestern corner of the chamber (at ca. 1.79-1.89 m below the unit datum) consisted of large sherds representative of the Cayo Ceramic Group. To the east of this, Sherd Cluster 2 was exposed at Ca. 1.85 cm below the unit datum. Large sections of Cayo and Mount Maloney vessels were recovered. Finally, in the southwestern corner of the chamber a final cluster, Sherd cluster 3 was encountered (at ca. 1.85 cm below the unit datum). These sherds were from the Belize and Cayo Ceramic Groups. These clusters appear to represent termination rituals, whereby partial vessels were deposited within the *chultun* upon the termination of its use. Similar termination offerings have been discussed in relation to Structures A1, B6, and B8. Unfortunately, it cannot be determined with certainty whether the deposition of the *chultun* termination offerings coincided exactly with the time when the *chultun* fell into disuse, or whether the offerings were made sometime later. This is because the sediments underlying the sherd clusters may have been deposited during the use-life of the *chultun* (natural weathering of the *chultun* surfaces due to water action), or some time after the termination of use (the floor having been kept relatively clean prior to abandonment). In any event, it is probable that the *chultun* was abandoned sometime near the end of the Spanish Lookout phase (700-875 A.D.).

With regard to function, it is clear that this *chultun* was not employed in the storage of perishables. Its position on the slope, along the path of runoff, rules out this possibility. Rather, it is highly likely that this chamber was for water collection. This postulation is initially suggested given the *chultun*'s location on a slope. It was obviously constructed in a catchment area for water. Such a facility would have been required at Zubin, given its relative distance from a permanent, "natural" water source. The small trough discussed above would have funnelled water into the orifice area. From this point the water could have filtered into the chamber, even if capped. The cap itself would have acted to keep other unwanted substances and creatures outside. The recovered pottery offerings suggest a termination ritual which occurred concurrently with, or shortly after the abandonment of this chamber. The possibility that other offerings or burials had subsequently been deposited within the chamber cannot be ruled out. Unfortunately, do to the fact that it was open for a period of time we can never be certain as to whether this *chultun*, like others, took on ceremonial connotations after it fell into disuse as a water collection and storage facility.

CONCLUSIONS

The 1993 field season added significantly to the data base produced during the 1992 season. As a result of these intensive excavations a multidimensional picture of the minor centre is being formulated. A clearer understanding of the function of individual structures and features is being developed, and the temporally sensitive data base has promoted the recognition of periods of activity and growth. In the future these time periods can be compared with the temporal sequences from other settlement groups in the Cahal Pech vicinity to assess the degree of correspondence. Similarly, the data concerning architecture type and elaboration can be used to assess power relationships with regard to activities undertaken at the site, and the control over labour. The artifact inventories, especially those recovered from

ritual deposits, will undoubtedly increase our understanding of the temporal and spatial control over artifact types within the region, and allow intra- and intersite comparisons to be made. Concomitantly, the location of these ritual deposits, be they caches or burials, facilitates the recognition of symbolic space. Such data leads one towards questions of integrative power, and the control over the deposition of material culture and human remains. All of the above will promote an understanding of autonomy and dependence within the region. Ultimately, by characterising the shifting milieu of power relations along a temporal continuum conclusions concerning the changing social role of Zubin will be made. The final season of investigations (1994) will undoubtedly add further insights. It is hoped that all structures within the site core will be at least vertically trenched, with many seeing detailed horizontal excavation. A primary goal continues to be the mapping of all peripheral groups. Hopefully limited testing will also occur in these areas. In the end, Zubin should provide one of the most complete data bases ever produced for a minor centre in the Maya Lowlands.

Acknowledgements

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A REPORT ON THE FAUNAL REMAINS RECOVERED FROM THE ZUBIN GROUP, 1993 FIELD SEASON

**by Norbert Stanchly
(University of Toronto)**

INTRODUCTION

This report will provide a brief summary of the results of the analysis of 1352 faunal remains undertaken by the author while in Belize during August of 1993. This total represents only a portion of the remains recovered during excavations in 1993. The remainder of the assemblage will be examined during the 1994 season. Interpretations offered in this report are therefore tentative and likely to change to some degree.

Invertebrate and vertebrate remains were identified and include representatives of mollusc, mammal, bird, and reptilian species. The majority of the sample is comprised of invertebrate remains, including both local freshwater and land mollusc (snail and bivalve) species as well as marine shell species. Vertebrate remains were only recovered from Structure A-1 and the majority of these were found in burial contexts. Unfortunately many of these are rat or mouse remains which are recent intrusive inclusions. Some human bone fragments were also observed by the author but are not reported on in great detail in this report.

Since no comparative reference collections were employed as an aid to analysis, a large number of the remains have only been identified to the zoological class or family level. Many of the identifications below this level are tentative until comparison can be made with proper reference skeletal material. It is hoped that this will be carried out following the 1994 season when excavations are expected to be completed at the Zubin group.

METHODOLOGY

This report provides only minimal quantitative data in the form of the number of identified specimens (NISP) counts. No minimum number of individual (MNI) values are provided since excavations at the site are incomplete and taphonomic processes and cultural sequences have yet to be finalized. Minimum numbers will be provided in the final faunal report.

THE FAUNAL SAMPLE

General Characteristics

Of the 1352 faunal remains presented for analysis, 747 (52.3%) are invertebrate remains of both local and marine origin. Species identified include

local land snails (*Euglandina* sp., *Orthalicus* sp.), river snails (*Pachychilus* spp.) freshwater bivalves (*Nephronaias ortmanni*), and marine univalve (*Strombus* sp., *Oliva* sp.) and bivalve (*Spondylus* sp.) remains.

The remaining 605 (44.7%) specimens are vertebrate remains which include mammalian, avian, and reptilian species. Deer, armadillo, opossum, paca or agouti, large cat, lizard, and possible turkey bone have been identified.

Faunal remains were recovered from four structures: A-1, A-3, B-6, and B-8 (see Figure 1 in Iannone 1993). Several burials from within A-1 produced a sizeable amount of faunal material although mainly in fragmentary condition.

Preservation

The preservation of the faunal material recovered from the Zubin group is highly dependant on material type and contexts in which the remains were recovered. Preservation can generally be described as poor for bone materials and good to excellent for shell materials. Shell remains are more readily preserved than bone due to their calcium carbonate composition which possesses a stronger resistance to acidic soils than does bone material. This calcium carbonate make-up helps to neutralize soil acidity. Faunal bone is in general, poorly preserved in the Maya lowland region unless adequately protected from destructive agents such as soil acidity, roots, and water leaching. Bone materials recovered from within well sealed contexts are more resistant to such agents described above and therefore are more likely to exhibit better preservation.

Invertebrate Remains

Fifteen taxa are represented by the 747 invertebrate remains analyzed. Freshwater, marine, terrestrial, and arboreal species are included. Univalve, or gastropod remains, account for the majority of the sample. This includes the remains of conch, olive, and jute snails, and several arboreal and terrestrial species which are most likely intrusive. Only two of these intrusive remains have been identified below the class level and include members of the genus *Euglandina* and *Orthalicus* (cf. *Orthalicus reses*). One worm shell (family Vermetidae?) was also recovered. Bivalve species are represented mainly by the local freshwater mollusc *Nephronaias ortmanni* and the marine thorny oyster (*Spondylus* sp.). All representatives of the thorny oyster were worked finds. Identification to the species level was not possible.

The freshwater snail known locally as jute (*Pachychilus* spp.), conch, and freshwater bivalves would most likely have been utilized as a food source although their importance to ancient Maya diet is still not well understood (Healy et al. 1990). The thorny oyster remains were used as items of personal adornment and may also have been status indicators.

Table 1: List of Invertebrate Remains

<u>Gastropods</u>	<u>No. of Remains</u>
Euglandina sp.	48
Orthalicus sp.	37
Strombus sp.	9
Oliva sp.	4
Pachychilus sp.	17
Worm shell	1
Land Snails	307
Other	38
 <u>Pelecypods</u>	
<i>Nephronaias ortmanni</i>	278
<i>Spondylus sp.</i>	8

Vertebrate Remains

Mammal, bird, and reptilian specimens have been identified among the 605 remains presented for analysis. Mammalian species identified include deer, opossum, armadillo, agouti or paca, and large cat (puma or jaguar). A large number of mice or rat bones were also present within the sample and are considered to be intrusive elements. Turkey or some other representative of a large bird may be present among the avian specimens recovered. Reptilian remains are represented by small lizard mandible remains. A large number of vertebrate remains are unidentifiable fragments. The majority of these appear to be mammalian fragments with some avian representatives.

Deer, agouti or paca, and armadillo were important food items to the ancient Maya as were large birds such as turkeys (*Meleagridae*). It is unclear whether the opossum remains recovered represent a food item or intrusive elements. A large feline is represented by two drilled molars (see below) and no other elements. Both of these molars were recovered from within a burial and their inclusion as a grave good supports a ritualistic interpretation of their importance and may also suggest that they represent status indicators. Jaguars figured prominently in the ritual activities of Maya kingship during the Classic period and may have been connected with specific lineages (Pohl 1983:71).

Table 2: List of Vertebrate Remains

<u>Mammal</u>	<u>No. of Remains</u>
Cricetidae	68
H. sapiens sapiens	10
Rodentia	4
Didelphidae	11
Dasyproctidae	6
Dasypus novemcinctus	17
Felidae	2
Cervidae	6
 <u>Bird</u>	
Passeriformes	2
Aves	16
 <u>Reptiles</u>	
Sauria	18
 <u>Fragments</u>	445

DISTRIBUTION OF FAUNAL REMAINS

The majority of the faunal remains were recovered from structure A-1 (n = 1224). Many of these were from burial contexts. This large number may reflect the amount of excavation carried out on this structure. However, this number may also suggest greater access to resources by the inhabitants of the structure. The number of burials which have been recovered from within the structure, as well as its eastern location within the settlement, does in fact lend support to this interpretation.

Invertebrate remains were recovered from all structures excavated during the 1993 season. The bulk of the discussion below is focused on the remains recovered from str. A-1 with an emphasis on those remains recovered from within burial contexts. Table 3 provides a list of the faunal remains by taxon and their distribution among structures.

Table 3: Distribution of Faunal Remains by Structure

<u>Structure</u>	<u>No. of Remains</u>
Str. A-1	1224
Str. A-3	1
Str. B-6	4
Str. B-8	123

Structure A-1

The 1224 remains recovered from this Str. A-1 included 619 invertebrates and the total vertebrate assemblage of 605 remains. The majority of these were recovered from within the 10 burials excavated. This included worked faunal material which is discussed in greater detail below. It should also be noted that two of the burials discussed below (Burial A1-B/1 and A1-B/2) were excavated during the 1992 season. Although a complete description of these burials and their accompanying grave goods can be found in Iannone (1993), I have nevertheless included descriptions of any faunal material recovered from within these burials in my discussions.

Burial A1-B/1

- Several rodent bones were recovered from this burial. These are considered to be intrusive specimens. Their excellent preservation in comparison to the human remains from the burial lends support to this conclusion. Worked faunal material included two drilled dog teeth (canine and incisor) and one spondylus shell bead (Iannone 1993:23; Stanchly 1993:133).

Burial A1-B/2

- The only faunal material recovered from this burial were two spondylus shell rosettes (Iannone 1993: 23, 27).

Burial A1-B/3

- Two drilled mammalian teeth were recovered from this burial. Both have been identified as lower 3rd molars (left and right) of a large cat species (jaguar or puma). Both are most likely from the same individual but this cannot be said with certainty at this point. A closer examination of the teeth with a comparative reference collection should provide an exact species identification. Both teeth have a laterally drilled hole in one root.

Burial A1-B/5

- A total of 396 remains were recovered from this burial including both local and marine shell, human, lizard, rodent, and armadillo remains. A spondylus bead and two disks were also recovered. Shell remains included members of the jute family, conch shell (columella fragment), freshwater bivalve (*Nephronaias ortmanni*), and several land snail fragments. It is likely that both the lizard and rodent remains are intrusive. Lizard or sauria, remains are represented by mandible fragments and suggest the presence of a small lizard species (species unknown). Armadillo is represented by teeth remains. The skull of this individual or the teeth alone may have been placed with the human individual at the time of interment. Some human tooth fragments were also identified and most likely belong to the individual interred in this burial. It is unknown whether the spondylus remains represent Pacific or Atlantic species.

Burial A1-B/6

- Species represented among the 201 remains recovered include human, rodent, lizard, small bird (Passeriformes), local land and river mollusc remains. As with burial A1-B/5, both the lizard and rodent bones (all mouse or rat) can be considered to be intrusive. The

human remains are those of the individual interred in the burial and are tooth fragments. Two small bird beaks were identified. Their presence within the burial is unclear at the moment, although Pohl has cited the presence of small bird skulls in burial contexts (1983:85). The majority of the remains recovered are small fragments (n = ca. 140) of mainly mammalian origin. It is likely that some of these fragments are human remains.

Burial A1-B/7

- Only 10 remains were retrieved. Both vertebrate and invertebrate remains are present and were recovered from fill below the human skeleton. It is unlikely that any of these remains were interred with the individual at burial.

Burial A1-B/8

- Invertebrate and vertebrate species including land snails, river clams, conch (cf. Florida fighting conch [*Strombus alatus*]), opossum, paca or agouti, and one spondylus shell bead were identified. Opossum remains are represented by teeth specimens as are the agouti or paca remains. The size of the opossum teeth suggest that the common opossum (*Didelphis marsupialis*) is represented. Both the opossum and agouti/paca were consumed by the Maya. It is unclear however, whether or not these remains are intrusive. Taphonomic considerations need to be taken into account. The presence of only the teeth remains does not facilitate any intrusive interpretation since teeth are more durable than bone and would be expected to better survive natural destructive agents.

Burial A1-B/9

- Opossum, land snails, river clams, and avian and mammalian worked remains as well as marine shell artifacts were present. The worked remains are discussed in greater detail below. Briefly, deer (white-tailed or brocket), large bird (turkey?), river clam (*Nephronaias ortmanni*), conch (*Strombus* sp.), and spondylus provided raw materials for artifact manufacture.

Burial A1-B/10

- Land snails, river clams, and worked marine shells (*Oliva* sp.) are present.

Table 4: Faunal Remains Recovered From Burials

<u>Burial</u>	<u>No. of Remains</u>
A1-B/1	1
A1-B/2	2
A1-B/3	2
A1-B/5	396
A1-B/6	201
A1-B/7	10
A1-B/8	18
A1-B/9	38
A1-B/10	24

Structure A-3

Only one specimen was presented for analysis. This has been identified as a right valve belonging to *Nephronaias ortmanni*.

Structure B-6

A total of 4 invertebrate remains representing five species were analyzed. All were of local freshwater or land species (see Table 5). All remains were recovered from within fill contexts.

Structure B-8

A total of 123 invertebrate remains representing both local and marine species were identified. The marine species is represented by only one conch shell fragment.

Table 5: List of Faunal Remains by Structure

<u>Taxon</u>	<u>A-1</u>	<u>A-3</u>	<u>B-6</u>	<u>B-8</u>
Euglandina sp.	20	-	-	28
Orthalicus sp.	18	-	1	19
Strombus sp.	8	-	-	1
Oliva sp.	4	-	-	-
Pachychilus sp.	5	-	-	12
Worm shell	1	-	-	-
Land Snails	290	-	1	16
N. ortmanni	231	1	1	47
Spondylus sp.	8	-	1	-
Other	38	-	1	-

MODIFIED REMAINS

A total of 25 modified bone and shell remains are discussed. All but one of the worked remains were recovered from within burial contexts in Structure A-1. For each artifact, a brief description of the material used for manufacture is given. Specific burial context data is also provided. Special find numbers (SF) are provided when possible.

Specimen 1 - Artifact Type: tube?

Provenience: Burial A1-B/9

Material: bone

Element: metapodial

Taxon: Cervidae (cf. *Mazama americana* - based on size)

Description: this possible red brocket metapodial has been incised exteriorly around the proximal

end

- Specimen 2 - Artifact Type: tube? fragments
Provenience: Burial A1-B/9
Material: bone
Element: long bone
Taxon: avian; large bird; turkey?
Description: fifteen fragments of which one is polished; these fragments may fit with Specimen 3
- Specimen 3 - Artifact Type: tube/whistle?
Provenience: Burial A1-B/9; A1-SF/44
Material: bone
Element: humerus?
Taxon: avian; large bird; turkey?
Description: distal shaft portion only; hole has been drilled into the shaft; distal end exhibits polished surface
- Specimen 4 - Artifact Type: pendant
Provenience: Burial A1-B/3; A1-SF/37
Material: tooth
Element: lower 3rd molar; left?
Taxon: Felidae (puma or jaguar)
Description: anterior root is drilled laterally (i.e. bucal-lingual)
- Specimen 5 - Artifact Type: pendant
Provenience: Burial A1-B/3
Material: Tooth
Element: lower 3rd molar; right?
Taxon: Felidae (puma or jaguar)
Description: anterior root is drilled laterally; most likely from same individual as Specimen 4
- Specimen 6 - Artifact Type: inlay?
Provenience: Burial A1-B/9; A1-SF/47
Material: shell
Element: body whorl portion
Taxon: conch (*Strombus* sp.)
Description: cut/polished square
- Specimen 7 - Artifact Type: inlay?
Provenience: Burial A1-B/9; A1-SF/48
Material: shell
Element: body whorl portion
Taxon: conch (*Strombus* sp.)
Description: cut/polished square

- Specimen 8 - Artifact Type: inlay?
 Provenience: Burial A1-B/9; A1-SF/49
 Material: shell
 Element: body whorl portion
 Taxon: conch (*Strombus* sp.)
 Description: cut/polished square
- Specimen 9 - Artifact Type: inlay?
 Provenience: Burial A1-B/9; A1-SF/46
 Material: shell
 Element: body whorl portion
 Taxon: conch (*Strombus* sp.)
 Description: cut/polished square
- Specimen 10 - Artifact Type: inlay?
 Provenience: Burial A1-B/9; A1-SF/45
 Material: shell
 Element: body whorl/columella portion
 Taxon: conch (*Strombus* sp.)
 Description: much larger than Specimens 6-9; may
 have been core from which others were produced?
- Specimen 11 - Artifact Type: pendant
 Provenience: Burial A1-B/9; A1-SF/51
 Material: shell
 Element: complete bivalve
 Taxon: *Nephronaias ortmanni*
 Description: both valves exhibit two holes drilled
 superiorly
- Specimen 12 - Artifact Type: rosette
 Provenience: Burial A1-B/2; A1-SF/14
 Material: shell
 Element: thorny oyster shell
 Taxon: *Spondylus* sp.
 Description: see Iannone (1993: Fig. 7c)
- Specimen 13 - Artifact Type: rosette
 Provenience: Burial A1-B/2; A1-SF/13
 Material: shell
 Element: thorny oyster shell
 Taxon: *Spondylus* sp.
 Description: see Iannone (1993: Fig. 7d)
- Specimen 14 - Artifact Type: pendant
 Provenience: Structure A-1; A1-SF/39

Material: shell
Element: thorny oyster shell
Taxon: *Spondylus* sp.

- Specimen 15 - Artifact Type: tinkler
Provenience: Burial A1-B/10; A1-SF/43
Material: shell
Element: olive shell
Taxon: *Oliva* sp. (cf. *Oliva reticularis*)
Description: drilled; spire broken and polished
- Specimen 16 - Artifact Type: tinkler
Provenience: Burial A1-B/10
Material: shell
Element: olive shell
Taxon: *Oliva* cf. *reticularis*
Description: drilled posteriorly
- Specimen 17 - Artifact Type: tinkler
Provenience: Burial A1-B/10; A1-SF/42
Material: shell
Element: olive shell
Taxon: *Oliva* cf. *reticularis*
Description: four holes drilled; spire broken and polished
- Specimen 18 - Artifact Type: tinkler
Provenience: Burial A1-B/10; A1-SF/41
Material: shell
Element: olive shell
Taxon: *Oliva* cf. *reticularis*
Description: four holes drilled; spire broken and polished
- Specimen 19 - Artifact Type: bead
Provenience: Burial A1-B/5; A1-SF/55
Material: shell
Element: thorny oyster shell
Taxon: *Spondylus* sp.
- Specimen 20 - Artifact Type: bead/disk
Provenience: Burial A1-B/5; A1-SF/54
Material: shell
Element: thorny oyster shell
Taxon: *Spondylus* sp.
- Specimen 21 - Artifact Type: bead
Provenience: Burial A1-B/5; A1-SF/53
Material: shell

Element: thorny oyster shell

Taxon: *Spondylus* sp.

Specimen 22 - Artifact Type: bead
Provenience: Burial A1-B/8; A1-SF/52
Material: shell
Element: thorny oyster shell
Taxon: *Spondylus* sp.

Specimen 23 - Artifact Type: bead
Provenience: Burial A1-B/1; A1-SF/8
Material: shell
Element: thorny oyster shell
Taxon: *Spondylus* sp.
Description: see Iannone (1993: Fig. 7b)

Specimen 24 - Artifact Type: pendant
Provenience: Burial A1-B/1
Material: tooth
Element: canine
Taxon: *Canis* cf. *familiaris*
Description: laterally drilled in the root portion

Specimen 25 - Artifact Type: pendant
Provenience: Burial A1-B/1
Material: tooth
Element: incisor
Taxon: *Canis* cf. *familiaris*
Description: drilled laterally in root and superiorly at root apex

DISCUSSION

The results of these preliminary observations conform to a general pattern observed within the Cahal Pech faunal sample. That is, the majority of the faunal remains retrieved from both the core and peripheral settlement groups are invertebrate remains. This is most likely the result of differential preservation of shell versus bone remains. Those bones which are retrieved are either mostly recent intrusive elements or remains recovered from within well protected and sealed contexts.

The number of species represented within both the invertebrate and vertebrate categories suggests the utilization of a wide variety of animal resources by the inhabitants of the Zubin group. The majority of the Zubin sample is from burial contexts. Most of the vertebrate remains from these, except worked material, are intrusive. Worked faunal material in the form of bone tubes, whistles, and shell beads, rosettes, discs, tinklers, inlays, and pendants, were recovered exclusively from these contexts.

Unfortunately little can be said concerning the use of fauna as subsistence items by the Zubin inhabitants. Most of the material is found in either construction fill (i.e. secondary context) or ritual contexts, which does however provide significant data concerning the role that fauna played within Maya ideology. This will be discussed further once all of the Zubin material has been presented for analysis. A more complete listing of faunal remains is provided in Stanchly 1994.

FUTURE RESEARCH

Following the completion of the 1994 field season at Zubin, a final faunal report on the materials excavated will be forthcoming. This report will concentrate on the interpretation of the faunal remains with regards to diachronic and synchronic patterns. An exhaustive listing and comparison of all worked material from Zubin and other lowland Maya sites will also be provided. It is hoped that a sufficient number of faunal remains from varying contexts will be available to investigate several issues of social process, especially in lieu of theoretical issues being investigated by Iannone (see 1993 and this volume).

The material from Zubin will also allow the author to investigate not only intra-site patterns but also inter-site patterns of faunal utilization between peripheral groups (ex. Tolok, Tzinic, Zotz, etc.) and the Cahal Pech site core. Broader and more general patterns of faunal utilization within the Belize Valley region will also be investigated.

Zooarchaeological research conducted by the Belize Valley Archaeological Reconnaissance Project should provide important data on ancient Maya faunal utilization through time and concomitantly, should help us to understand the role which fauna played in Maya ideology and Maya society.

ACKNOWLEDGEMENTS

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**SACRED SPACE AND ANCESTOR WORSHIP:
ONGOING PLAZA INVESTIGATIONS OF TWO MIDDLE FORMATIVE
CIRCULAR PLATFORMS AT THE TOLOK GROUP, CAHAL PECH, BELIZE**

BY

TERRY G. POWIS
(Trent University)

ABSTRACT

Recent excavations (1993) at the Tolok Group, located in the southeastern periphery of the Cahal Pech site core, have led to the discovery of two Middle Formative circular platforms. Ongoing investigations of these two building platforms sheds new light on Middle Formative architecture and construction techniques. Also, the location of special deposits and the placement of sequential burials on both platforms raises some interesting questions concerning the ritual importance of round structures in Formative period Maya society, and suggests a focus on group identity, the creation of sacred space, and the religious practice of ancestor worship.

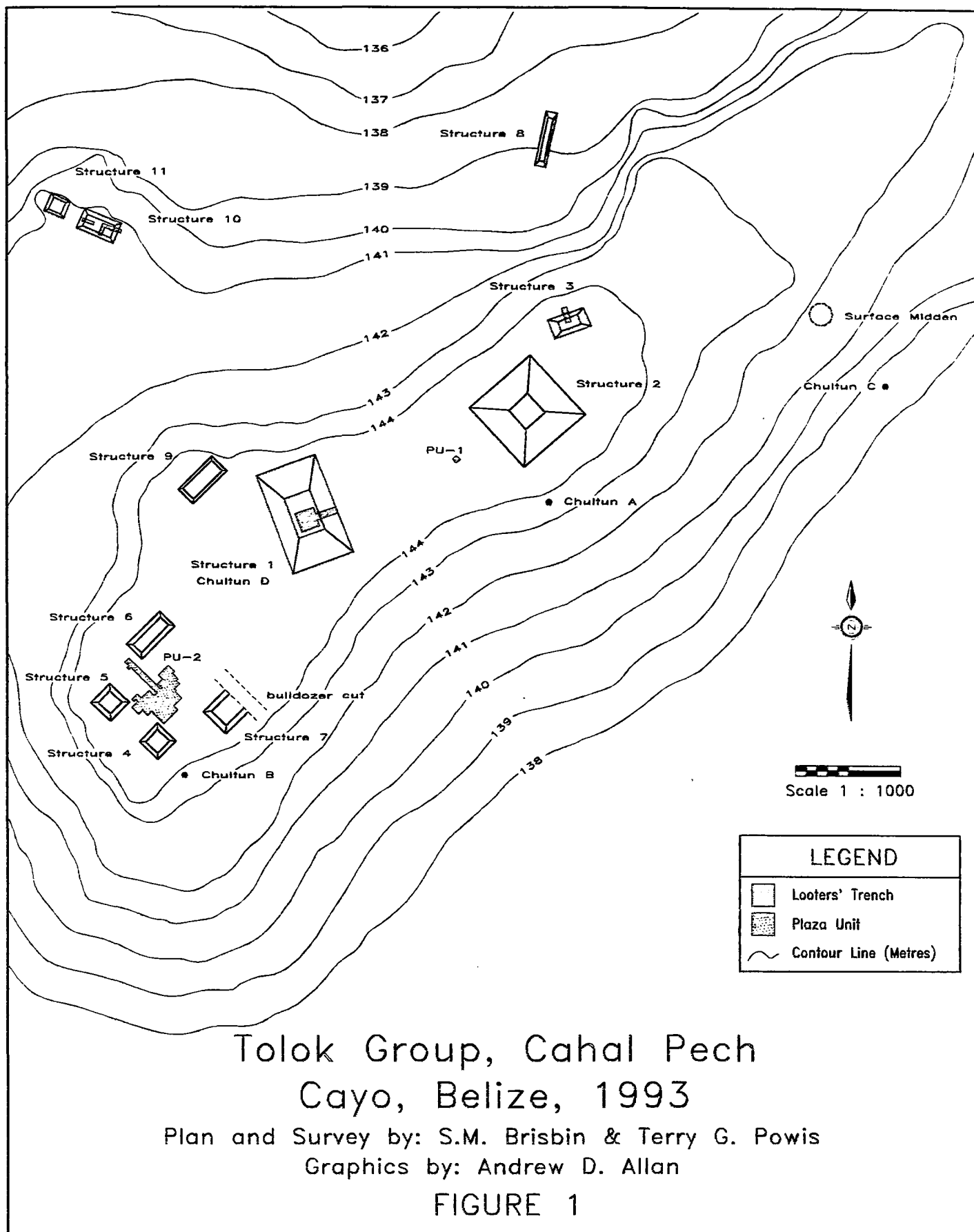
INTRODUCTION

Archaeological investigations continued during the summer of 1993 at several of the peripheral settlement clusters around the site core of Cahal Pech, Belize (see Cheetham; Iannone; and Sunahara this volume). One of these settlements, the Tolok Group, consists of 15 structures, 4 chultuns and a surface midden located on a long, narrow ridge approximately 500 metres southeast of the site core (see Powis 1992; 1993a). The Tolok Group is on land owned by Mr. Carlos Habet of San Ignacio Town and covers an area of 1.8 hectares. During the past three field seasons at Tolok, an extensive mapping and survey project has been overseen by Shawn Brisbin, and has resulted in a detailed site map (Figure 1). The spatial configuration of this Tolok settlement most closely resembles Ashmore's (1981:51) definition of a "Structure-Focused Patio Cluster".

PREVIOUS RESEARCH

Of the 15 structures surveyed at Tolok, 11 have been intensively excavated to date (see Powis 1993a for previous excavation summary). With the exception of Str.8, the rest of the sampled structures in the Group (Str.1 - Str.7, Str.9, Str.14 and Str.15) produced substantial evidence of Middle Formative and Late Formative activity and of continuous occupation into the Terminal Classic period. The extensive Preclassic occupation at the Tolok Group provides new insights into Formative period Maya settlement patterns, architecture (building techniques and materials), artifact assemblages and burial practices.

In previous years, the research design employed at Tolok has been twofold: first, every attempt was made to investigate a 100% sample of the mounds in the settlement cluster; and



second, to focus on the Formative period of development within the Group (Powis 1993a). The data collected from these investigations will provide important information on intra-site chronological development and spatial relationships between the site core of Cahal Pech and its peripheral settlements.

During the 1992 field season, a unit (designated PU-2) was placed in the plaza of the southernmost patio of the Tolok Group to ascertain its construction history and to determine the diachronic development of the southern patio (Powis 1993a:107). The excavation revealed four plaza floors (PF1-PF4) dating from the late Middle Formative period (600-300 B.C.) to the Late Classic period (A.D. 700-900). On the earliest plaza floor, we discovered part of a late Middle Formative circular building platform, designated as Str.14 (formerly PU-2/1st). Only partial excavation of Str.14 was possible in the summer of 1992 due to time constraints and the onslaught of the rainy season. However, our excavations revealed that the circular platform was approximately 40 cm high with a possible diameter of 5 metres, based on the curvature of the structure (Powis 1993a:107-112). Other identifiable architectural features on Str.14 included several postholes and an appended structure (or ramp) located on its southeast side. Above the platform, we also uncovered four Late Classic intrusive burials (see Powis 1993a; and Song 1993).

With only a relatively small number of Formative period round structures excavated in the Maya subarea (cf. Aimers and Awe 1993; Andrews and Andrews 1980; Awe 1992; Awe et al 1992; Ball and Andrews 1978; Gerhardt 1988; Haberland 1958; Hendon 1989; Hammond et al 1991; Pendergast 1982; Pollock 1936; Powis 1993a; Rice and Rice 1979; Ricketson and Ricketson 1937; Sidrys and Andresen 1978; Smith 1972; Thomas 1981; and Willey et al 1965), the author decided to conduct a large-scale horizontal exposure of Str.14 during the summer of 1993. The purpose of this operation was to determine:(1) the construction history of the structure; (2) to obtain a better understanding of Middle Formative architecture (including building techniques and materials employed); (3) to gather as much information regarding the function of Formative period Maya circular platforms; and (4) to increase the burial sample associated with this type of architecture.

CURRENT INVESTIGATIONS

During the 1993 season the backfill from the unit excavated in 1992 was removed and we continued to horizontally expose the circular building platform in each direction (Figure 2). This method was employed because of midden-like deposits scattered around the outside of the structure; the location of the intrusive burials; the size of the appended structure; the location of certain architectural features (retaining walls); and later construction phases. Once the unit was reopened, we exposed Burial 3 which had been left unexcavated in 1992 due to time constraints (for a detailed description and analysis of the burial data refer to Song et al, this volume). After Burial 3 was removed, excavations continued on the circular building platform.

The unit opened during the summer of 1993 measured 10 m x 7 m. Surprisingly, this large-scale horizontal exposure did not completely uncover the building platform, in fact less than 50% of Str.14 was exposed by our excavation (Figures 3 and 4). It also became apparent that the circular building platform was of some magnitude, measuring 9.5 metres in diameter (not including the appended structure) and with an average height of 40 cm. Interestingly

STRUCTURES 14 AND 15
PLAZA UNIT-2, TOLOK GROUP
CAHAL PECH, BELIZE
MAY 31, 1993

PLANVIEW BY: T. POWIS, B. HOHMANN
R. SONG, A. HARTNETT
D. MARDIROS, C. CRINNION

GRAPHICS BY: A. ALLAN

LEGEND	
	POST HOLE
	PLASTER TURN UP
	CUT STONE
	CIST BURIAL 2
PF1	PRESERVED FLOOR 1

SCALE
0 60 120 180 240cm

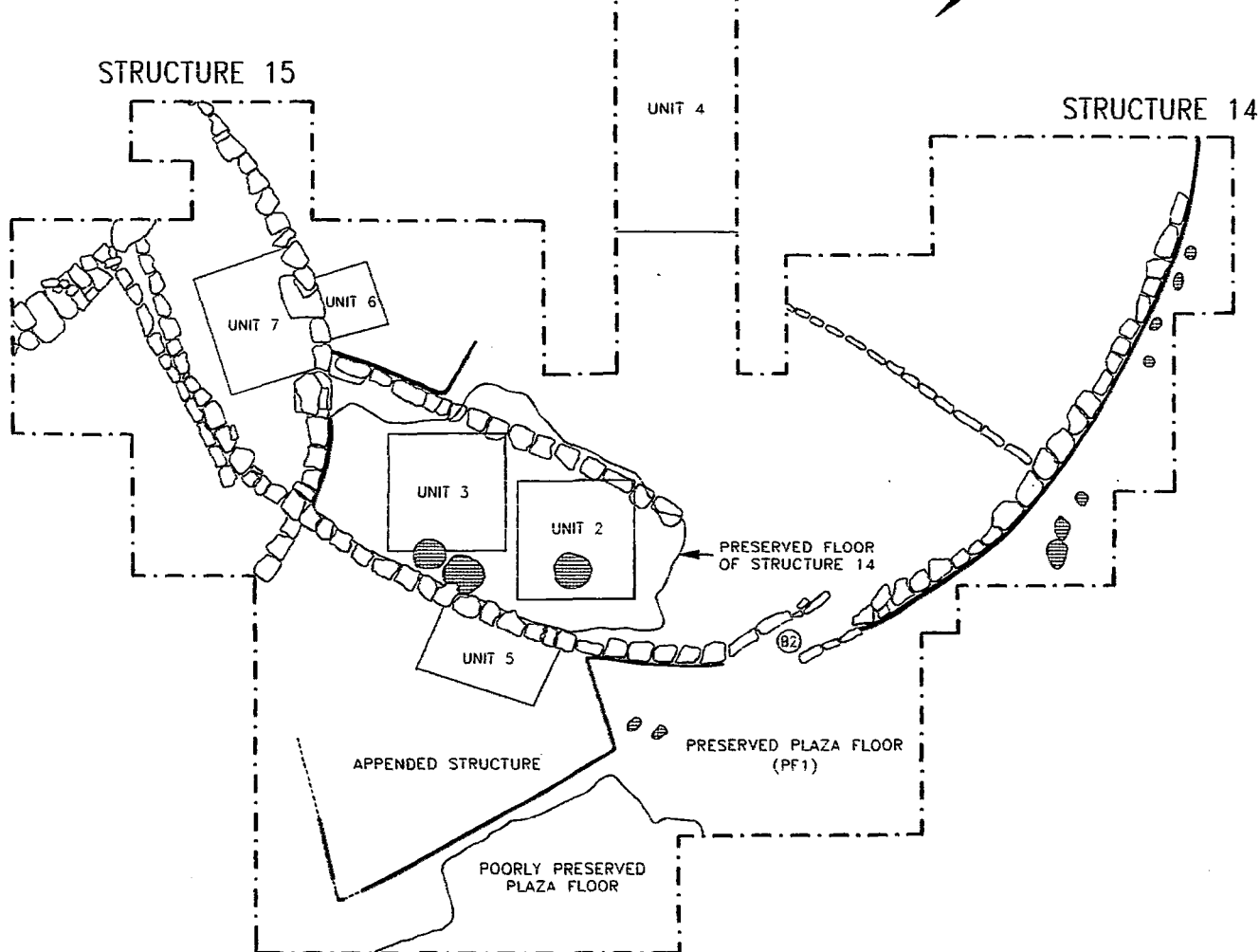
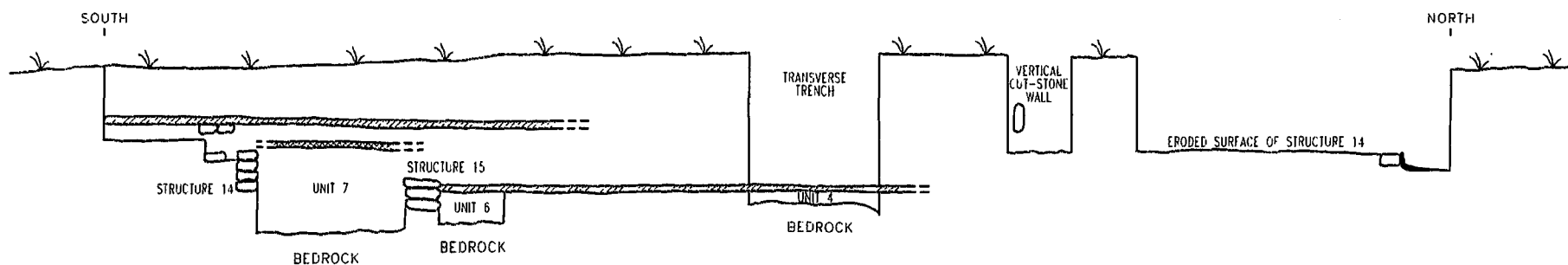


FIGURE 2



LEGEND	
	CUT-STONE
	PLASTER TURNUP
	PLASTERED FLOOR 3
	PLASTERED FLOOR 2
	PLASTERED FLOOR 1

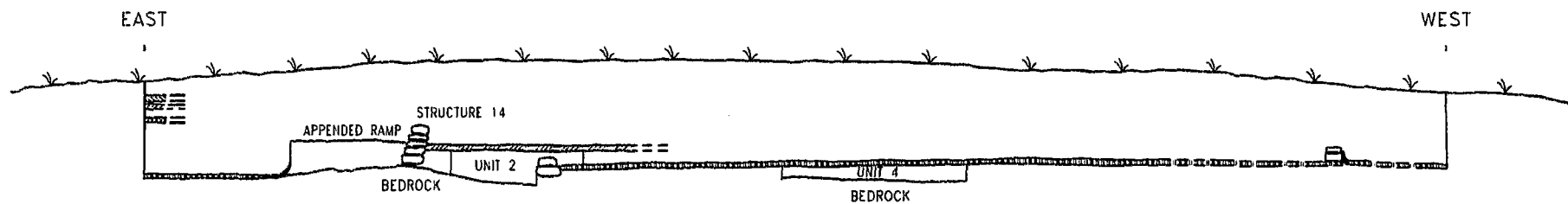
PROFILE OF STRUCTURE 14 & 15, PLAZA UNIT-2
 TOLOK GROUP, CAHAL PECH, BELIZE
 JULY 3, 1993

Profile by: T. Powis & B. Hohmann
 Graphics by: Andrew D. Allan



SCALE = 1 : 50cm

FIGURE 3



PROFILE OF STRUCTURE 14 & 15, PLAZA UNIT-2
 TOLOK GROUP, CAHAL PECH, BELIZE
 JULY 3, 1993

Profile by: T. Powis & B. Hohmann
 Graphics by: Andrew D. Allan

LEGEND	
	CUT-STONE
	PLASTER TURN UP
	PLASTERED FLOOR 4
	PLASTERED FLOOR 3
	PLASTERED FLOOR 2
	PLASTERED FLOOR 1
	FLOOR SURFACE OF STRUCTURE 14



SCALE = 1 : 50cm

FIGURE 4

enough, the diameter of Str.14 was almost twice the size of our original estimation based on the 1992 excavation.

As the unit was expanded, it was noted that most of the floor surface of Str.14, as well as the plaza floors which postdated Str.14, was destroyed (Figures 5A and 5B). While the eroded floor surfaces may be the result of natural disturbance (i.e. tree root activity), it is more likely they were destroyed by the interment of seven intrusive cist burials and two special deposits. Despite these problems, sealed deposits recovered in the excavation enabled us to date the plaza floors and Str.14 with relative accuracy (Powis 1993a:107). In many areas of the unit, arbitrary levels had to be instituted as they were the only means of excavation control. However, the ceramic assemblage used to date Str.14 was exclusively derived from sealed cultural deposits. The results of the 1993 investigations in Plaza Unit-2 are described below in some detail with a particular focus on the architecture, artifactual assemblages, burials and caches.

DESCRIPTION OF EXCAVATION

Str.14 was the second earliest construction phase discerned in the plaza unit (the earliest phase was represented by Str.15 and will be discussed later). As mentioned earlier, Str.14 consisted of a low, circular building platform approximately 9.5 metres in diameter and about 40 cm in height that was erected on top of the earliest plaza floor. The morphology of this building platform closely follows the architectural type defined by Awe (1992:214) as being "low, circular and generally less than 50 cm in height". The building platform of Str.14 consisted of 5 courses of cut-stone, but in some instances only the lower two courses were preserved. This is likely the result of the building platform being robbed in antiquity of cut-stones for later construction events. Similar events occurred at the site of Barton Ramie, where Str.F of BR-1 exhibited the same kind of architectural destruction of its circular building platform (Willey et al 1965:52).

As mentioned above, the circular building platform was built directly on an existing plaza floor (PU-2/PF1). To incorporate the existing plaza floor and the building platform of Str.14 into a single architectural component, the Tolok builders applied a thick coat of lime plaster (hereafter termed a plaster turnup) from plaza level up to the top of the two basal cut-stones of the platform. The plaster turnup was 2-3 cm in thickness and encircled the entire platform (Figure 2). As noted above, the upper three courses of cut-stone (the upper facade) on the eastern side of the building platform were destroyed in antiquity (Figure 5B). Also, one section of the building platform was destroyed on the eastern side as a result of the interment of cist Burial 2. Burial 2 was a Late Classic intrusive burial which cross-cut the building platform along a north-south axis (see Powis 1993a; Song 1993).

While traces of red paint have been recorded on a Late Formative circular platform in the periphery of Rio Azul (Hendon 1989:98), no evidence of paint was preserved on the plaster turnup of the circular building platform at Tolok. Remnants of polychrome painted geometric designs have also been noted on the upper facade of a Late Formative round structure at Becan in the Rio Bec region (Ball and Andrews 1978:12). The occurrence of painted round structures during the Formative period raises some interesting questions about architectural decoration and, more importantly, the ritual significance associated with these types of structures.

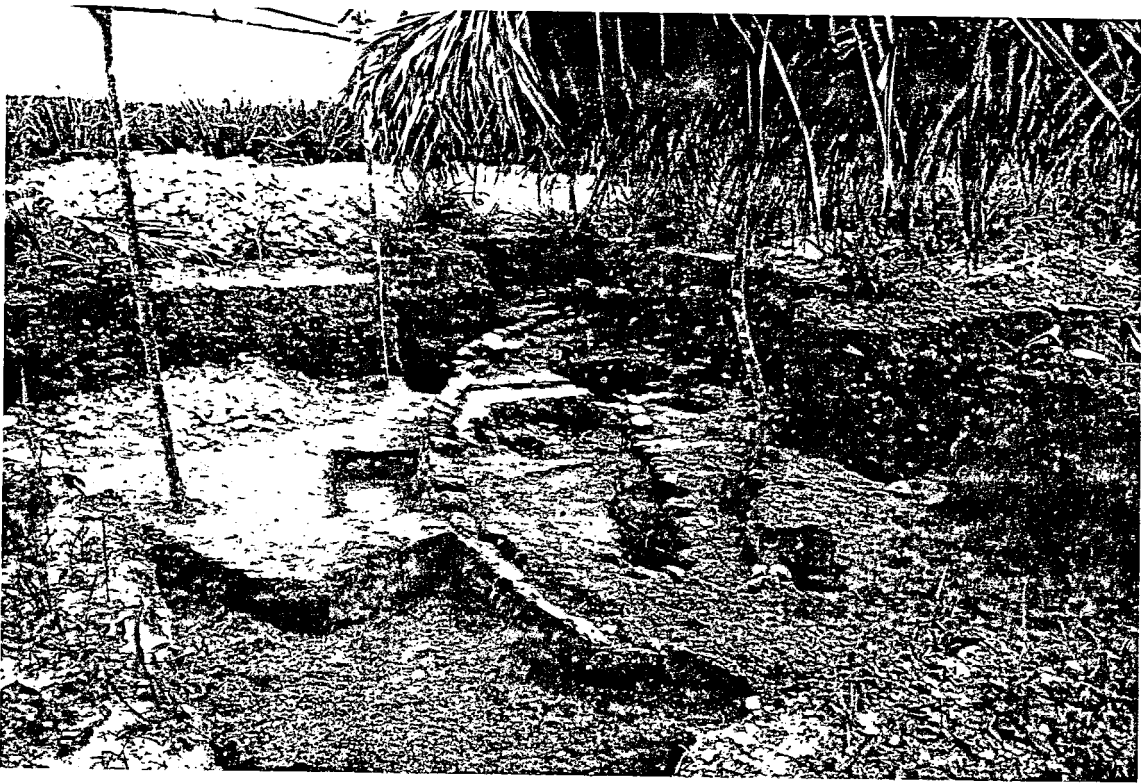


FIGURE 5A: SOUTHEAST VIEW OF STR.14 WITH STR.15 IN THE BACKGROUND.



FIGURE 5B: NORTHEAST OF STR.14 WITH THE APPENDED STRUCTURE IN THE FOREGROUND.

Nine secondary type postholes (after Loten and Pendergast 1984:12) have been located along the entire eastern side of the circular building platform (excluding areas of burials 2 and 4). The postholes ranged in size from 9 to 19 cm in diameter and were located along the plaza floor only a few centimetres away from the building platform (Figure 2). The presence of postholes encircling the building platform suggests that a perishable structure may have been erected over Str.14. The regular patterning of the holes around Str.14 negates the possibility of natural disturbance.

Three larger, support-type postholes were found located on the well-preserved floor surface of Str.14. These postholes were more uniform in size and measured approximately 30 cm in diameter. Again, the presence of postholes on Str.14 possibly indicates that a perishable wooden structure was built on top of the platform. It has been suggested by previous investigators (Awe et al 1991; Pendergast 1982) that the absence of a superstructure (perishable or masonry) on top of a circular platform indicates a strong probability that it did not function as a domestic building. While the presence of postholes on Str.14 at Tolok may indicate some kind of domestic activity, it is possible that Str.14 served more of a ceremonial/ritual function. This is suggested by the association of several intrusive burials and caches overlaying the structure (see Comparison and Interpretation section for more information), and by its similarities with a comparable non-domestic circular platform (Str.F-2) at Chan Chen in Northern Belize (see Sidrys and Andresen 1978).

A solitary vertical partition wall was encountered during our excavation of the northern end of Str.14 (Figure 2). This wall consisted of a single course of cut-stone set vertically into the building platform. Since most of the original floor surface was destroyed in antiquity, it was difficult to determine whether or not this vertically set wall was anchored into the floor. The wall was made of 12+ uniformly-sized cut-stones that were positioned on a diagonal (258°E of N) to the building platform. The western limit of the wall was not found due to time, but we know that it ends somewhere before the central axis of the structure (about 40 cm to the west). The presence of this partition wall and the lack of original floor surface of Str.14 creates two problems: first, if the floor was destroyed in antiquity, why then was the partition wall left intact?; and second, is it possible to tell whether or not both features are contemporaneous? Our excavation revealed that several courses of cut-stone from the building platform of Str.14 were removed and therefore it seems peculiar that this partition wall, which was located at about the same height as the floor, remained completely unaffected by the disturbance. This information suggests that the partition wall may post-date the building platform, however not enough of the wall has been exposed to indicate what it was used for after the destruction of the floor surface of Str.14.

One ritual deposit (Cache 1) was found in association with this partition wall. Cache 1 was located adjacent to the south side of the wall and directly below a Late Formative period (Mount Hope phase) plaza floor (PF2). This dedicatory cache consisted of a partial vessel (lower body and base only - with many sherds placed inside) tentatively identified as an Old River Unslipped: Old River Variety olla. Cache 1 was dated primarily on architectural information (PF2) rather than on the cached ceramic vessel since it lacked a rim. However, the ceramic type was assigned to it based on its form, temper and surface finish (Gifford 1976).

The appended structure found on the eastern side of Str.14 was attached to the circular

building platform by the plaster turnup. The appended structure was constructed of earthen material (primarily ballast and compacted soil) and covered with a thick coat of lime plaster. No cut-stones were employed in the construction of this architectural feature. The top of the appended structure, like the floor of Str.14 was destroyed in antiquity. The only portion of the appended structure with surviving plaster surface was the north and east sides. The appended structure measured approximately 254 cm in length and varied from 80 cm to 100 cm in width. The structure was roughly 35 cm in height and probably much higher if the floor surface remained intact.

The appended structure was of an odd shape, more closely resembling a rectangular form but with only one side attached to Str.14 (Figure 2). Since the southern portion of the structure was destroyed, a true reconstruction of its overall size and shape remains a mystery. Other Formative period round structures which exhibit a similar type of appended structure (or ramp) include: Str.2 of the BA-20 Group at Rio Azul (Hendon 1989); Str.E and Str.F of Group E at Uaxactun (Ricketson and Ricketson 1937); and Str.F in BR-1 (albeit later in date) at Barton Ramie (Willey et al 1965). All of these round structures with appended ramps have been termed "keyhole structures" by J.B. Glass in his excavation of Str.F in BR-1 at Barton Ramie. This definition is harder to apply to Str.14 at the Tolok Group because of the orientation of the "ramp". Also, the authors mentioned above stated that the appended structures were possibly used as ramps to ascend the building platform. Again, this is difficult to determine for Str.14 due to its unknown height and the physical positioning of the appended structure to Str.14. Therefore, the term "appended structure" is used rather than "appended ramp" to avoid confusion until such time that the function of this architectural feature has been determined.

A small 1 m x .50 m unit was placed in the appended structure adjacent to the circular building platform of Str.14 (Figure 2) to determine its construction date; the height of the retaining wall of Str.14; and to locate any special deposits and/or burials which may have been placed inside of it. Ceramics recovered from the unit were few in number, but included varieties of Savana Orange and Pital Cream types (see Gifford 1976). This information indicates that the appended structure was constructed during the late facet of the Jenny Creek phase (600-300 B.C.) at approximately the same time Str.14 was built. At present, it is not possible to determine if the appended structure may slightly predate or postdate Str.14 based on available architectural information. However, it is known that the appended structure was adjoined to Str.14 when the plaster turnup was laid down on the eastern side of the circular platform. Thus, the plaster turnup is the only feature which connects the appended structure to Str.14. No plaza floor, nor any plaster turnup were observed within Unit 5. Also, no cache deposits or burials were found inside the appended structure. However, Burial 6 was found outside the structure along its long-axis (oriented north-south) and will be described later in the Burial Data section.

During our 1992 excavations of Str.14, a unit (Unit 2) was placed on top of a preserved section of the plastered floor surface in order to determine the construction date of the building platform. Based on the ceramics recovered from the unit, a late Middle Formative construction date (600-300 B.C.) was assigned to Str.14. As our excavations continued during the summer of 1993, we were able to place another unit (Unit 3) on the remaining portion of the floor surface of Str.14 (Figure 2). Unit 3 measured 1 m x 1 m in size and was placed beside Unit

2. The ceramics recovered from Unit 3 confirmed the construction date determined by the excavation of Unit 2 (see Powis 1993a for ceramic types). One architectural feature was present in Unit 3. A low wall consisting of two courses of cut-stone was found in the northwest corner of the unit. The wall was also present in Unit 2, but only partially exposed (see Powis 1993a for details). The wall is associated with an earlier circular building platform (Str.15) which is located just to the south of Str.14 (Figure 2). Str.15 will be discussed in more detail later in the report, but it is important to note that the northern extent of the wall identified in Units 2 and 3 was destroyed with the interment of cist Burials 2 and 3.

The construction fill of Str.14 consisted primarily of ballast and compacted soil, and was capped by a 6 cm thick plastered floor. The floor exhibited a large burnt surface which was identified prior to the excavation of Unit 3. The unit was positioned almost directly over the centre of the burnt floor surface. The burnt plaster floor covered an area of approximately 170 cm x 100 cm, encompassing two secondary postholes. It is possible that the burnt floor was produced by either a perishable structure burning down or by the burning of copal. Evidence for the burning of incense has been observed on Str.2/2nd in the Zotz Group, Cahal Pech (Awe et al 1991:132) and possibly on Str.2 in the Bedran Group, Baking Pot (Powis 1993b:214) suggesting that some kind of ritual activity was conducted on the floor surface. Whether or not the burnt floor surface on Str.14 indicates a similar type of activity has yet to be determined, but the analysis of a sample of burnt plaster will hopefully identify what substance was burnt on the floor.

The southeastern section of the circular building platform of Str.14 was the only area where all five courses of cut-stone were preserved. Fortunately, this is also the only place where the floor surface exists allowing for some speculation about the gross morphology of Str.14. The height of the building platform was five courses of cut stone with the floor surface located at a lower level, roughly abutting the third course. This information suggests that a low masonry wall (the upper two courses) located above the floor encircled the building platform. An example of a Late Formative period round structure with a similar architectural feature is Str.F-2 at Chan Chen in Northern Belize where the principal investigators stated that "given this evidence of a circular masonry wall with interspersed postholes, it is quite probable that a large wood-and-thatch superstructure, with a low circular masonry wall as a base, was built on top of the Str.F-2 platform" (Sidrys and Andresen 1978:648).

One of the most interesting features exposed during our excavation of Str.14 was its relationship with Str.15. It was briefly mentioned above that the building platform of Str.15 was also circular in plan and that it predated Str.14. As excavations continued on Str.14, it became apparent that it was superimposed over the building platform of Str.15. In fact, the northern retaining wall of Str.15 was incorporated into the existing floor surface of Str.14. Evidence to support this information is derived from the plaster turnout which connects the two building platforms (Figure 2). Why was the building platform of Str.15 incorporated into Str.14 instead of being destroyed and used as building material for the construction of Str.14? It is a difficult question to answer with only a limited portion of Str.15 exposed but hopefully further excavation of both platforms will shed more light on their architectural relationship.

As excavation of Str.15 continued towards the southwest, more of the circular building platform was exposed including cist Burials 7 and 8, and Cache 2. As more of Str.15 was

uncovered, it became evident that this building platform was associated with the earliest plaza floor (PF1) and with the low retaining wall identified in Units 2 and 3. Burials 7 and 8 were interred on or just below the earliest plaza floor and cross-cutting the northern wall of the building platform of Str.15 (Figures 6 and 8). More detailed information on location and associated grave goods of both burials and Cache 2 will be discussed in the Burial Data section. One interesting feature associated with the low retaining wall is a plaster turnup connecting it to the earliest plaza floor surface. As seen in Figure 2, the plaster turnup is located on the west side of the wall forming a right angle and extending westward about 54 cm before disappearing. A preliminary interpretation of this low retaining wall (including the plaster turnup) suggests some kind of an appended structure to Str.15, but clearly more excavation is needed and therefore any functional interpretation remains speculative.

Two units (Units 6 and 7) were placed on either side of the circular building platform of Str.15 (Figure 2). Unit 6 was placed on the northern side to determine the height of the building platform and to further define its association with the plaza floor. The unit was excavated to bedrock at a depth of approximately 24 cm and consisted of fill primarily made of ballast, marl and compacted soil. The building platform exposed in Unit 6 indicated a height of five courses of cut-stone, although the upper two courses were removed for the interment of Burials 7 and 8. The cut-stones used in the construction of the building platform were very similar in size and shape to the those employed in the construction of Str.14. As suspected, the plaza floor did abut the building platform of Str.15 at the third course of cut-stone (Figure 6). The plaza floor was 4 cm thick and was constructed on top of a base made of marl (approximately 6 cm in thickness). Artifacts recovered from Unit 6 were few in number and consisted primarily of lithics and ceramics. The majority of the pottery were unslipped body sherds, but some diagnostics (n=6) were identified as Savana Orange variety (Middle Formative period).

Unit 7 was placed in between both building platforms to obtain as much architectural information as possible and to determine the nature of the construction fill. The unit measured approximately 1 m x 1 m in size and was excavated to bedrock. Construction fill strewn between both platforms was very different from other areas excavated in the Plaza Unit. The fill consisted mostly of medium-sized rubble and ballast with lesser amounts of compacted soil. It should be noted that no marl was encountered in the unit and perhaps indicates the absence of a plastered floor surface. Interestingly, no evidence of a floor has been found on the south side of the building platform of Str.15. The artifacts recovered from the unit were few in number and included ceramics (primarily of Savana Orange and Jocote Orange-Brown types) and freshwater snails (*Pachychilus* spp.).

To confirm that Str. 14 was indeed a circular building platform an 8 m x 1 m transverse trench was placed across the structure from the east side. As the transverse trench was extended, only two of the plaza floors were present and there was no indication that the floor of Str.14 remained intact. Again, it seems likely that the destroyed floors were the result of either natural disturbance or past cultural activity. At the western end of the transverse trench, the other side of the building platform was located. The curvature of the wall at this end confirmed that Str. 14 was circular in plan with a diameter of 9.5 metres. However, only one course of cut-stone with remnants of a plaster turnup were found. There were two other architectural features recorded in the transverse trench and they included the earliest plaza floor

STRUCTURES 14 AND 15
BURIALS 2 - 8
PLAZA UNIT-2, TOLOK GROUP
CAHAL PECH, BELIZE
MAY 31, 1993

PLANVIEW BY: T. POWIS, B. HOHMANN
R. SONG, A. HARTNETT
D. MARDIROS, C. CRINNION

GRAPHICS BY: A. ALLAN

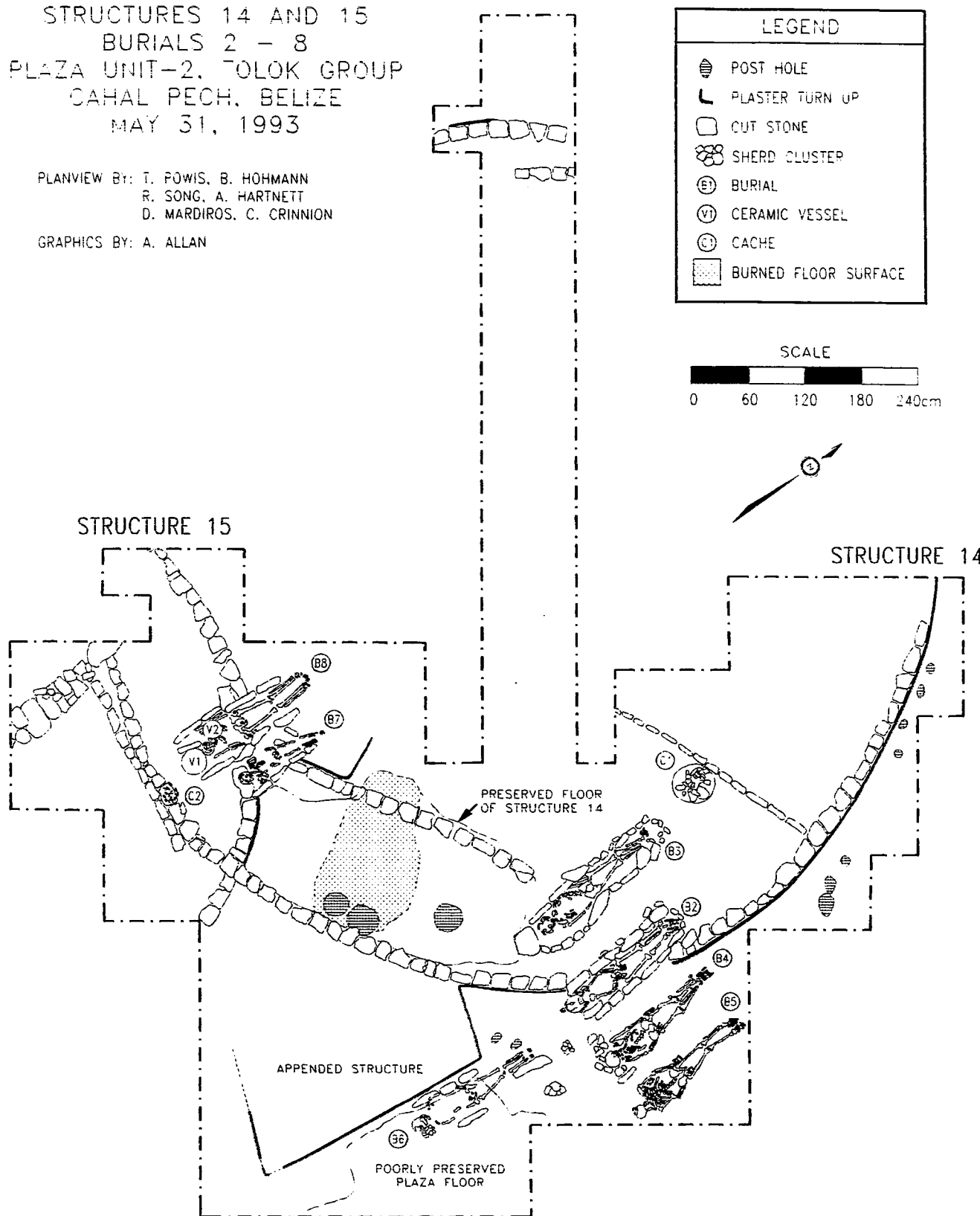














FIGURE 6

DETAILED PLAN OF INTRUSIVE BURIALS 2 - 6
 STRUCTURE 14
 PLAZA UNIT-2, TOLOK GROUP
 CAHAL PECH, BELIZE
 MAY 31, 1993

PLANVIEW BY: T. POWIS, B. HOHMANN
 R. SONG, A. HARTNETT
 D. MARDIROS, C. CRINNION

GRAPHICS BY: A. ALLAN

LEGEND	
	POST HOLE
	PLASTER TURN UP
	CUT STONE
	BURIAL
	CERAMIC VESSEL
	BURNED FLOOR SURFACE
	SHERD CLUSTER
	BIVALVE
	JADE
	NACREOUS SHELL
	'MINI' VESSEL
	SLATE DISK

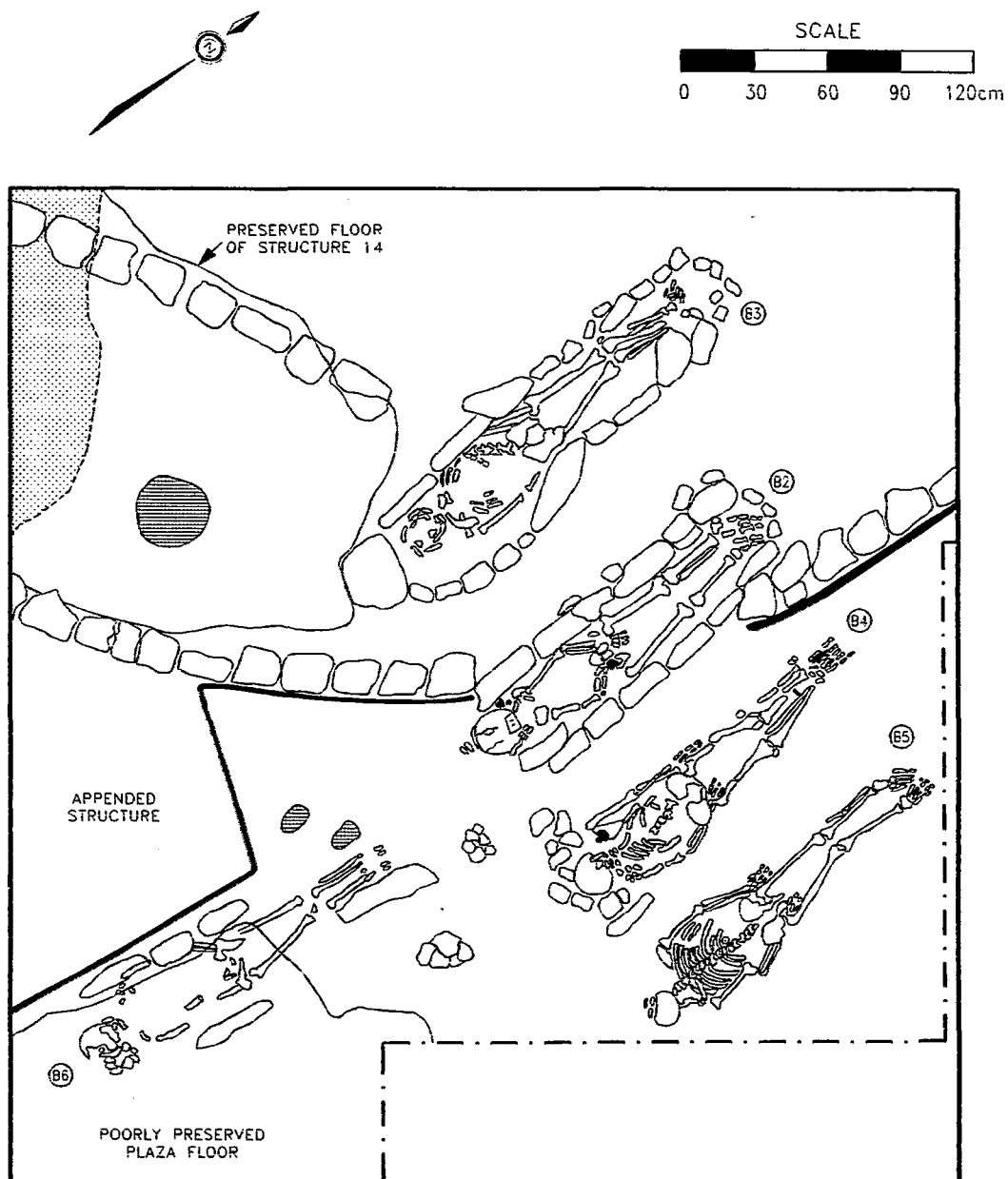












FIGURE 7

DETAILED PLAN OF INTRUSIVE BURIALS 7 AND 8
STRUCTURES 14 AND 15
PLAZA UNIT-2, TOLOK GROUP
CAHAL PECH, BELIZE
JUNE 9, 1993

PLANVIEW BY: T. POWIS, B. HOHMANN
R. SONG, A. HARTNETT
D. MARDIROS, C. CRINNION

GRAPHICS BY: A. ALLAN

LEGEND	
	POST HOLE
	PLASTER TURN UP
	CUT STONE
	BURIAL
	CERAMIC VESSEL
	CACHE
	SHERD CLUSTER
	BIVALVE AND JADE
	JADE
	BURNED FLOOR SURFACE

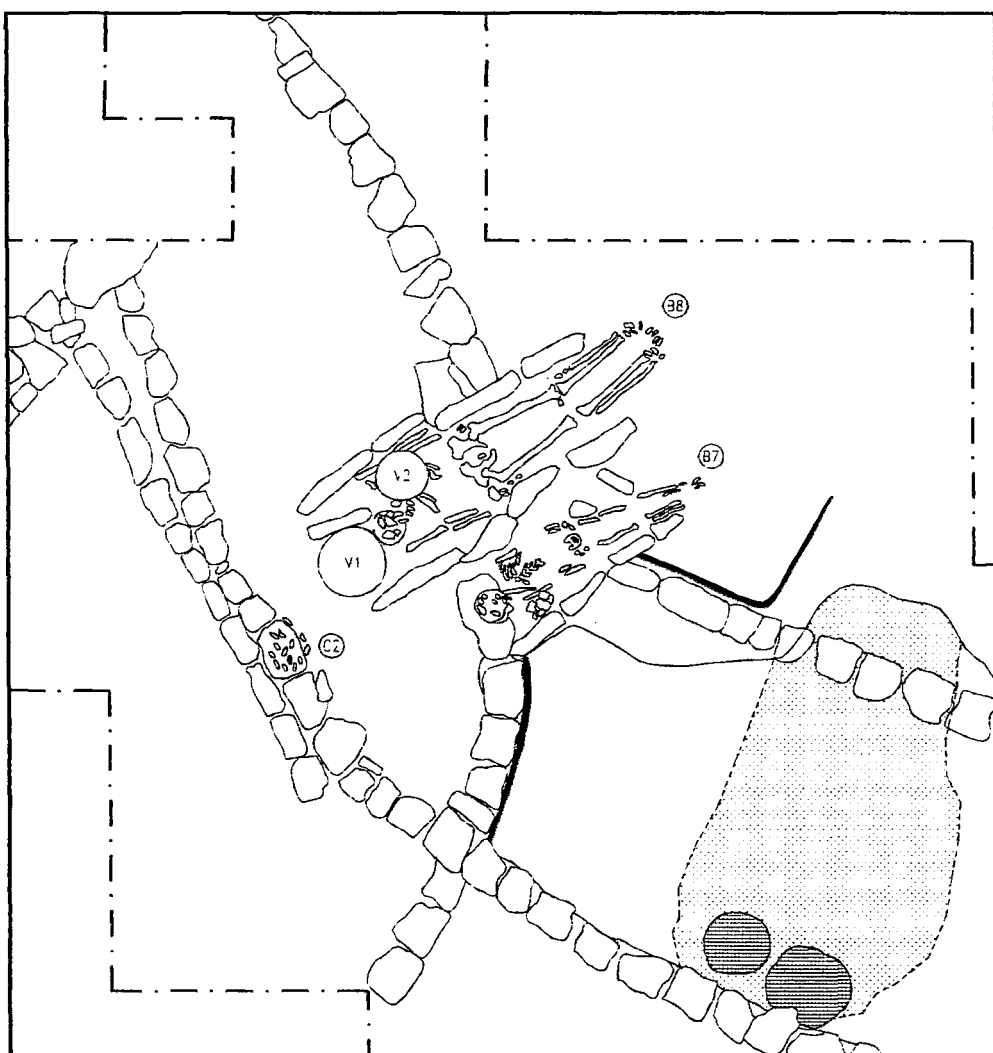
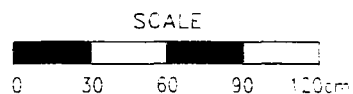
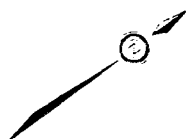


FIGURE 8

(PF1) and a Late Formative building platform located on a preserved section of a plaza floor (PF2) near the western limit of the trench (Figure 2). The earliest plaza floor was poorly preserved in the western end of the transverse trench but well-preserved closer to the start of the trench.

Unit 4 was placed in the well-preserved section of the plaza floor. The unit was 2 m x 1 m in size and was excavated to bedrock approximately 18 cm deep. Artifacts were varied and included several chert flakes, shell material (*Pachychilus indiorum* and *Pachychilus glaphyrus*), an obsidian blade fragment and a number of ceramic sherds. The ceramic material was represented by varieties of Savana Orange, Reforma Incised, Jocote Orange-Brown, Pital Cream and Sayab Daub-Striated. The ceramics recovered from this unit combined with those from Unit 6 suggest that the earliest plaza floor was constructed sometime during the late Middle Formative period.

The artifact assemblage recovered from Plaza Unit-2 (from surface to sterile level) spanned from the Middle Formative period through to the Late Classic period. Of particular interest were several midden-like deposits (or trash deposits) that were found scattered on the outside of Str.14. The largest concentrations of these midden-like deposits were found on the northeastern side of the structure (near the partition wall) and on the southeastern side (adjacent to a low retaining wall). The soil matrix consisted of a dark brown to black finely-grained material (primarily compacted soil/clayey loam) in both midden areas and was represented by a high density of Middle Formative period artifacts which included: ceramic sherds and figurine fragments; chert flakes and debitage; celt fragments and small pieces of slate; obsidian blade fragments; calcine faunal and human bone fragments; and shell material (both freshwater and marine species). A detailed analysis of many of these artifacts has not been completed and therefore only a preliminary listing is given.

TOLOK BURIAL DATA

A total of 7 intrusive burials have been uncovered during our 1992 and 1993 excavations in Plaza Unit-2. The seven interments (Burials 2, 3, 4, 5, 6, 7, and 8) are classified as cist burials according to Welsh's (1988:17) grave typology. Five of the intrusive burials (Burials 2, 3, 4, 5 and 6) are dated to the Late Classic period (Spanish Lookout phase), while the remaining two burials (Burials 7 and 8) are dated to the terminal Late Formative period (Floral Park phase). All of the burials were placed either on the surface of or slightly below the surface of the building platforms of Strs.14 and 15 (Figure 6). Our excavations revealed that the bodies were interred with great care and effort with the majority of them (except Burial 6) being placed sequentially across the circular building platforms. Haviland (1985:152) has also observed this practice in Str.4F-1 at Tikal, in which four burials were placed at various times, without disturbing the previous burials. Another burial practice was noted by our excavation of these seven burials. We observed that from Late Formative times onward, each individual was interred in a similar fashion with its body placed in a prone (face and stomach down), fully extended position with head oriented to the south and hands placed under the pelvis.

Burials 2, 4 and 5 were excavated during the 1992 field season and have been reported elsewhere (Powis 1993a; Song 1993). Structural context and associated burial goods of Burials

3, 6, 7 and 8 are discussed below and a more detailed report on the analysis of the skeletal remains (including age, sex and pathological information) is provided by R. Song et al, in this volume.

Burial 3 was discovered to the west of Burial 2 during the summer of 1992, but we did not have time to expose it until the following season. Burial 3 was placed on the earliest plaza floor cutting through the building platform of Str.14 (Figure 3). Burials 2 and 3 were similar in grave morphology as both were contained in a cist that was completely lined and capped with cut-stones. Although, Burials 4 and 5 were placed sequentially to the east of Burials 2 and 3, they were interred directly on the plaza floor just beyond the building platform and consequently did not have a stone lining. No grave goods were found with Burial 3 and therefore the date of interment is based on its association with Late Classic Burials 2, 4 and 5. It is important to note, however, that Burial 3 was found in close proximity to Cache 1.

Burial 6 was located along the long-axis (running north-south) of the appended structure (Figure 7). In regards to grave construction, this was one of the most interesting burials to be excavated in the Plaza Unit. As the construction fill was being removed over the cist, it became evident in the eastern profile that the Tolok Maya had made a rectangular cut through the plaza floors to inter the body. Burial 6 was placed on top of the earliest plaza floor and lacked the type of stone lining evident in Burials 4 and 5. No grave goods were associated with this individual, however, two sherd clusters (types yet to be identified) were found just to the north and east of the cist (Figure 6). Although the clusters were located outside of the burial, they may still be special deposits offered to the individual interred in Burial 6. Further analysis of the sherd clusters will determine contemporaneity between the two features.

Burials 7 and 8 were located on the northern wall of the building platform of Str.15 (Figure 8). Both burials were intrusive to a depth just below the level of the earliest plaza floor. In fact, Burial 7 was found placed on top of both of the building platform and the low retaining wall associated with Str.15. Both cist burials were stone-lined and capped with large well-dressed cut-stones. It was also noted that both burials shared the same spine wall whose construction destroyed the upper two courses of cut-stone and plaster turnup on the building platform. During our excavation on the south end of cist Burial 7, we uncovered a broken miniature vessel placed on top of the cut-stones (the head was also located at this end). Once the cut-stones were removed, and our excavation of the burial continued, we found a small, biconically drilled spondylus shell located just above the pelvis area of the individual. The shell artifact was 7 mm in diameter and highly polished on the non-pitted side. When the bones were exposed, a broken, miniature, ceramic vessel was found on the left shoulder (east side) which reflected a similar burial practice of a miniature vessel being placed on each of the shoulders of Individual 2 of Burial 4 (Powis 1993:111). Possibly the most interesting grave goods associated with Burial 7 were the two shell artifacts placed directly on the pelvis of this prone individual. One non-modified freshwater snail (*Pachychilus indiorum*) was placed inside of a worked marine bivalve (*Pectinidae* ?). The marine bivalve was deep orange in colour, highly polished, approximately 7 cm in diameter and had four drill holes made for suspension (2 intact, 1 broken and 1 not finished).

Two intact ceramic vessels accompanied Burial 8 and were located in the southern area of the grave. Vessel #2 was placed on the right shoulder (west side) of this individual and has

been identified as an Aguacate Orange:Aguacate Variety bowl with a ring base dating to the terminal Late Formative period (Floral Park phase A.D. 200-300). The vessel measured 19.5 cm in diameter and was placed upright on the body. No offerings were found inside the vessel. The other intact vessel (Vessel #1) was found slightly above and just south of the head of the individual. This vessel was also identified as an Aguacate Orange:Aguacate Variety bowl with tetrapodal supports. The hollow mammiform feet had two opposing holes with clay rattles inside and flattened teat nubbins (Gifford 1976). The vessel has a diameter of 24 cm and a surface decoration consisting of five vertical-to-diagonal lines or chevrons painted with a black slip descending from the top of the bowl down to each of the mammiform feet. This vessel was placed upright in the grave and contained the remains of a human mandible, maxilla and some cranial bones. Although the bones were highly fragmented, a near full compliment of teeth were found in the vessel (see Song et al, this volume for teeth descriptions). It appears that the maxillary region and the mandible of this individual interred in Burial 8 was removed and placed into the bowl after death. Presently, there is no evidence to suggest otherwise and therefore it is probable that post-mortem mutilation was performed on this individual sometime near the end of the Late Formative period (W.B.M. Welsh, personal communication 1993).

Is it possible that Burials 7 and 8 are associated with one another? Admittedly, there is a lack of diagnostic ceramic material from Burial 7 to suggest they were both interred at the same time. However, it must be stressed that contemporaneity between features does not always have to be based on associated artifacts. Instead, it is presented here that both burials were likely interred at the same time based on their structural context and shared grave construction.

During the excavation of Burials 7 and 8, we uncovered Cache 2 which was found approximately 50 to 70 cm south of the burials and on the top course of the building platform of Str.14 (Figures 6 and 8). Cache 2 was an unusual deposit because it consisted of 14 human teeth (of mixed dentition) and a single biconically drilled tubular jadeite bead, measuring 8 mm in length. Only two other known tooth caches have been reported in the eastern Maya lowlands prior to the excavation of Cache 2 in the Plaza Unit at the Tolok Group. Pendergast et al (1968) reported the findings of a Late Postclassic tooth cache containing 379 teeth and an irregular subglobular jadeite bead from Str.A-I at Yakalche in Northern Belize. The other tooth cache was reported by Saul (1975) and contained the dentition of two adult individuals recovered from a Late Classic period housemound at the site of Lubaantun in Southern Belize.

Cache 2 was found just to the south of Burial 7 and may represent post-mortem mutilation of the teeth (similar to Burial 8) from the individual in Burial 7. Only five teeth (both deciduous and permanent) were found with Burial 7 and it was presumed that the remaining ones were missing. However, the 14 teeth recovered from Cache 2 provides some evidence that they may likely have been removed from the individual interred in Burial 7 (see Song et al, this volume). Based on this dental evidence, it is possible to infer that this tooth cache is dated to the terminal Late Formative period and therefore represents one of the earliest examples of a Maya tooth offering in the central Maya Lowlands.

COMPARISON AND DISCUSSION OF TOLOK CIRCULAR PLATFORMS

The two circular platforms at the Tolok Group have already been compared in some detail with other Formative period round structures in the Maya lowlands. At present, the number of round structures that have been excavated are relatively few in number compared to other architectural types (i.e. rectangular shaped building platforms). However, more of them are known today than six decades ago when Pollock (1936) published his seminal work on the distribution and architectural significance of round structures in Mesoamerica. Since the beginning of our project in 1988, at least four additional Middle Formative period round structures have been found in the Upper Belize River Valley, including the two (Strs.14 and 15) from the Tolok Group. This suggests that round structures are more widespread than previously believed and it has been aptly stated by Sidrys and Andresen (1978:649) that "it is only through excavation that most of these structures are discovered". For the scope of this paper, the classification of round architecture will be simplified by establishing only two types; this listing is considered preliminary in nature until more detailed information on those excavated round structures is obtained by the author.

Generally stated, it appears from the published literature on round structures that two basic types persist with some variations on each form. The first type may be generalized as "keyhole shaped" exhibiting a low stone and plaster circular building platform (less than 50 cm in height) with an appended ramp and supporting either a masonry or perishable superstructure. Based on the above description, there are several structures which conform to this type and they include: Str.F in BR-1 and the circular foundation found in Cut 4 of BR-44 at Barton Ramie (Willey et al 1965); Str.2 of the BA-20 Group at Rio Azul (Hendon 1989); Str.E and Str.F of Group E at Uaxactun (Ricketson and Ricketson 1937); Str.304 in Platform 34 at Cuello (Gerhardt; and Hammond et al 1991); Mound 20 at Altar de Sacrificios (Smith 1972); Str.7E-746 at Becan (Thomas 1981); Str.605 in the Mirador Group at Dzibilchaltun; a round structure found in a plazuela group at Becan (Ball and Andrews 1978); and possibly some of the circular constructions found at Chakantun in the Central Peten of Guatemala (Rice and Rice 1979). Morphologically, Strs.14 and 15 at Tolok are most similar to this type 1 architectural form.

The second type of round structures identified in this report may be considered as somewhat more complex forms of round architecture exhibiting a higher building platform (over 50 cm in height) with either an inset or outset stairway and generally lacking a superstructure (cf. Awe 1992:210-212). There are fewer examples compared to type 1 and they include: Str.C-13/4th and 3rd at Altun Ha (Pendergast 1982); Str.2/2nd in the Zotz Group at Cahal Pech (Awe et al 1992); Str.B-4/7th in the site core of Cahal Pech (Awe 1992); a small pyramidal structure excavated at Luisville in Northern Belize (Haberland 1958); and a second round structure found in a plazuela group at Becan (Ball and Andrews 1978). Based on available data of the excavated Formative period round structures mentioned above, only Str.F-2 of Group F at Chan Chen in Northern Belize exhibited architectural features of both types (see Sidrys and Andresen 1978; and Sidrys 1983).

What does the architectural information, intrusive burials and ritual deposits tell us about the function of these two platforms at the Tolok Group? Architecturally, the presence of postholes on and off Str.14 suggests that a perishable structure was erected on top of the

building platform. However, this information does not indicate whether or not the structure served a domestic or ritual function. Does the presence of a perishable structure reflect the type of social activities being conducted on the inside of the structure? Although a perishable structure may have been present, the question arises as to what were the activities being performed on the inside? Were the activities ritual in nature? Archaeologically, the only evidence we have to date of any ritual activity on top of Str.14 is the burned floor surface which requires further study and analysis.

The appended structure is another architectural feature which may shed some light on the kind of activities associated with Str.14. This feature could be identified as an ancillary platform of Str.14 used in a domestic context, however, there is a lack of artifactual evidence to support this interpretation. Also, there is little information to suggest whether or not the appended structure served as an access ramp to the top of the building platform, but based on analogous forms of round structures and with Str.14 raised off the ground (40+ cm), it seems plausible that the circular platform was accessed by some kind of "ramp".

Although post-dating the circular platforms, the burial and ritual deposits above on the surface of Strs. 14 and 15 provide the most intriguing insights regarding the cultural activities conducted on these platforms by the Tolok Maya. During the past two field seasons, our excavations have uncovered seven burials and two caches placed either on or around the two circular platforms. To date, these burials constitute the only excavated graves at the Tolok Group. Despite a 100% sampling of the mounds at Tolok (including the small patio group) no other burials or caches have been found. It has been discussed elsewhere (Powis 1993a:112-113) that the Tolok Maya could have buried their dead on any one of the plaza floors in the patio group. Despite this, the only burials recovered to date were interred on or around the two circular platforms. Admittedly, the burial sample is small, but it nonetheless reflects a practice of deliberate interment of bodies on both of the circular platforms. It is suggested here that the tradition of ancestor worship may have been a determining factor in the placement of the dead in this specific location, and that this area continued to have religious importance to the community throughout the history of the Tolok Group (Powis 1993a:113). Comparative evidence indeed suggests that Strs.14 and 15 may have served as the family shrine for the initial inhabitants of the small southern patio group at Tolok, and perhaps for the entire Tolok Group in general. The large number of burials (N=18) found in association with the circular Str.2\2nd in the Zotz Group, Cahal Pech has led Awe et al (1992) to state:

this...provides convincing evidence that the structure may have served as a family shrine from its initial construction in the late Middle Formative to its abandonment during the Late Classic period (Awe et al 1992:131-132).

The Tolok Group has a long history of occupation from the late Middle Formative to the Late Classic period, and it is possible that Strs.14 and 15 at Tolok reflect a similar pattern to that identified in the contemporaneous Str.2\2nd at the Zotz Group, Cahal Pech.

The suggestion that the Tolok Maya knew the specific location of both platforms into the Late Classic period (a duration of over a millennia) is clear from the interment of at least seven individuals above the circular platforms. Also, the sequential interment of each of these bodies attests to the knowledge of the Tolok Maya as to the former whereabouts of the two

structures and suggests that the platforms and/or their location represented sacred space. The discovery of Caches 1 and 2 on the circular platforms reinforces this argument, and further indicates that ritual activity may have been conducted at this locale throughout the Formative period and into the Classic period. Indeed, Cache 2 provides a good example of ritual activity on both of the circular platforms. The tooth offering in this cache may represent the post-mortem mutilation of the individual in Burial 7, and according to Welsh (1988:167-170) skeletal mutilation demonstrates evidence for sacrifice. Driver et al. (1992:5) also note that caches and human sacrifice are ritual activities that are particularly associated with public architecture and sacred space. It appears then that the primary act of skeletal mutilation of the individual in Burial 7 (and perhaps Burial 8?) at Tolok served as a reaffirmation of this ideology.

More round structures are being found in plaza areas of sites (i.e. Cuello, Uaxactun, Chan Chen and Tolok) and they may demonstrate the importance of the creation of sacred space among the ancient Maya. With the formalization of plazuela groups from the late Middle Formative period onwards, it is perhaps likely that the Maya constructed their houses knowing the whereabouts of these special ritual structures. This premise suggests that the practice of ancestor worship may well have influenced the subsequent spatial configuration of the patio group at Tolok. It further implies that with the passage of time, the Tolok Maya revered this location as sacred space and purposely erected their buildings around the outside perimeter of the two (sub-surface) circular platforms. Certainly this is indicative of Str.14, however more excavation is needed on Str.15 to prove this tentative hypothesis. If we view the practice of ancestor worship through the interment of bodies on Strs.14 and 15, then it is not unreasonable to believe that the deification of sacred space was maintained through time. Therefore, if socio-religious activity is reflected in the ritual practices of the community, the interments of several burial and caches on the two circular platforms, and their sub-plaza location in the center of the patio, represents "an extension of the physical space of the residential compound and a further development of social space" (Hendon 1993:5).

One final argument should be made regarding the religious importance of the two circular platforms at the Tolok Group. During our excavations of the four structures of the patio group, it was noted that all of the building platforms had a late Middle Formative component, and were informally organized around the outside of the two circular platforms. The earliest construction phases of Strs.4,5,6, and 7 were erected directly on bedrock (in some cases, the bedrock was altered) whereas Strs.14 and 15 were raised much higher off the ground surface by a height of 40+ cm. The difference in elevation may be important, because as Hendon (1993) explains:

elevation separates the residential and ritual structures...and that the difference in location may reflect a desire to give greater physical prominence to the building where ritual practices related to the creation of a group identity for the residents of the compound took place (Hendon 1993:7).

CONCLUDING REMARKS AND FUTURE CONSIDERATIONS

Our excavations in the Plaza Unit at Tolok have demonstrated the complexity of Middle Formative architecture, particularly the superposition of two circular platforms designated as Strs.14 and 15. It is possible, based on our investigations in 1992 and 1993, that the two platforms served a ritual function to the early inhabitants of this peripheral settlement. Unfortunately, not enough information is known about the social and religious dynamics of the Formative period Maya to know whether these ceremonies constituted private household, or public, rituals. In other words, we do not know whether the Middle Formative Tolok Maya were elites practising ritual activities on these special structures, or whether they were simply commoners focusing in on their own household rituals rather than that of the wealthier elite living in the site core.

Hopefully, excavations in the summer of 1994 will shed more light on these Middle Formative circular platforms, and provide additional clues to the extent of ritual practices performed at the Tolok and other household groups in the Belize Valley.

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All in the Family Circle: A Second Interim Report of the Human Skeletal Remains from Tolok, Cahal Pech, Belize 1993

By

Rhan-Ju Song, Bobbi Hohmann, Denise Mardiros and David Glassman

The following report is a preliminary analysis of the human skeletal remains excavated during the third field season at Tolok, Cahal Pech. Basic age and sex determinations, observations of pathology, and interpretations of relative health and nutrition are discussed. In addition, the data has been assessed within the scope of the entire Tolok sample, as well as other skeletal remains from Cahal Pech and its peripheral groups. To date, the Tolok assemblage consists of nine individuals from Late Formative and Late Classic contexts. Lastly, implications for overall prehistoric Maya health and biocultural processes will be examined.

Introduction

During the 1992 and 1993 field seasons, excavations in the plaza of the small southern patio at Tolok revealed seven primary burials associated with a Formative period circular platform (Str.14) (See Powis 1993; Powis, this volume). Notably, two burials (Burials 7,8) associated with Structure 14, were also found overlying a second Formative circular platform (Str.15), which was newly discovered in 1993 (see Powis:Fig.6, this volume). In total, eight individuals were retrieved from the plaza. (The only other burial found at Tolok was from Chultun B in 1991). Three Late Classic interments (Burials 2,4,5), containing a total of four individuals, were excavated and analyzed in 1992 (see Song 1993). Since Burial 5 was not fully examined at that time, its analysis will be discussed below.

This past season saw the discovery of four burials associated with Structures 14 and 15. While Burials 3 and 6 were Late Classic in date, Burials 7 and 8 were associated with Late Formative contexts (See Powis, this volume). A Terminal Late Formative tooth cache (Cache 2) consisting of fourteen human teeth was also uncovered above the circular Str. 14 building platform. Burials 3,6,7 and 8 each contained a single individual, and like all three previous platform interments, were enclosed in cist graves (cf. Welsh 1988). Significantly, all platform burials contained individuals with the entire body fully extended, placed face and stomach down, and with heads oriented to the south. Additionally, in all cases, except Burial 7, one or both lower arms were slightly flexed under the pelvis. The presence and nature of associated artifacts varied between the individuals and cross-cut age and sex groups (see Powis, this volume).

The preservation of the skeletal remains of the eight individuals ranged as follows: Individual 1 of Burial 4, and Burials 6 and 7 were poor to fair; Burial 8 was mediocre to good; and Burials 2,3,4 (Individual 2), and 5 were very good. Regardless of overall preservation, most individuals lacked well preserved rib and vertebral bones, and this could be attributed to the low preservation potential of such cancellous bones, the nature of the cist graves, soil acidity, as well as possible insect and rodent activity.

Regarding the notching of both medial maxillary incisors, according to Romero (1970), this individual exhibits a B4 type of modification. This type can be described as basically an "alteration of the contour of the dental crown...where one of the angles of the crown is mutilated" (Romero 1970:50,52). Dental modification, both in the form of filing and inlays, has been found to be a common Mesoamerican cultural practice evident in both sexes (Romero 1970). In the Maya area, dental filing is thought to have been practiced as early as the Middle Formative period, for example, at Uaxactun (Ricketson & Ricketson 1937).

At Tolok, this is the only case, thus far, of dental modification, in the form of filing. Elsewhere at Cahal Pech, the presence of filed teeth have been found in a Late Classic burial (Burial 1) in Str. B-4. In addition, jadeite and pyrite dental inlays have been observed at the site core of Cahal Pech (Burial B2-1 and B4-1), and the Zotz group (2-B/3).

According to Romero (1970), the depictions of modified teeth in (non-Maya) ritual objects, such as god effigies, masks and (Zapotec) funerary urns, suggests a possible religious basis for the practice. For the Maya, its popularity probably only reflected Maya ideals of personal adornment and attractiveness.

Lastly, examination of dental modifications in Mesoamerica have led to the conclusion that such cultural practices were not necessarily indicative of social status (Fastlicht and Romero 1951; Romero 1970).

Post-Cranial Skeleton:

Clavicles: no sternal ends

Scapulae: mainly consist of blades, though fragmented

Humeri: no epiphyses present

Left and Right Ulnas and Radii: all bones missing epiphyses

Metacarpals and Hand Phalanges: some fragments

Vertebrae: half or less of entire vertebral column present and mainly consisting of transverse processes (no bodies)

Ribs: only about half present, and very fragmented

Sacrum: missing lower half of body, left superior articular process present, missing auricular surfaces and most of pelvic surface

Innominate: both acetabulums present and are smooth, no eburnation or pitting; narrow sciatic notch (between 60 and 90 degrees); right and left ischium both present and are fused to body; most of main ilia is present but only extending to beginning of pubes, with only a fragment of the right pubic symphysis present; about 1/2 to 3/4 of both auricular surfaces present-right auricular surface appears slightly billowy on more inferior end and pitted, while left surface is also billowy on inferior end; no remains of iliac crest.

Femora: robust, with pronounced linea aspera of both, and all epiphyses present and fused; no pitting or eburnation on acetabulum or femoral heads

Patellae: left one found, right one not yet accounted for

Tibiae: both lack distal epiphyses and right tibia is fragmented

Fibulae: left-missing both epiphyses; right-missing proximal epiphysis (head)

Tarsals and Metatarsals: half or less accounted for

Foot Phalanges: three accounted for at time of excavation

Bones absent, or not accounted for at this time: Sternum, Carpals, and Sacrum.

AGE:

Evidence used to determine approximate age included dental remains, the fusion of femoral and ischial epiphyses, and the overall state of the skeleton with respect to activity related stress.

Specifically, the presence of the epiphyseal fusion of the femoral head indicated a minimum age range of 15-20 years, while the fusion of the distal medial epicondyle and lateral condyles suggested a minimum range of 16-23 years (cf. Brothwell 1981). Likewise, fusion of the ischial tuberosity indicated an age of at least 17 years, to 25 years for complete fusion. Next, examination of a portion of the right pubic symphysis, and ectocranial suture closure of the right midlambdoidal region gave an age range of 22-32 years.

With respect to dental remains, molar wear (cf. Brothwell 1981) was typical of an age range of 25-35 years, but following Lovejoy (1985), wear pattern of all teeth suggested 35-40 or 40-45 years. However, a lower age range will be accepted, since one must consider the gritty diet of the Maya, and the fact that other skeletal remains show no evidence indicative of older age. For instance, activity-related evidence of old age, such as osteophytic lipping (i.e. on vertebrae, pelvis or femoral head), bone pitting or eburnation, were not evident in the remains of this individual.

This evidence suggests a preliminary age range of 25-35 years for Individual 3.

SEX:

Based on the overall robustness of the skeleton, specifically the femorae and traits of the skull (pronounced brow ridges, large mastoids, robust mandible with large teeth), and the pelvis (narrow sciatic notch), a male sex can be assigned to Individual 3.

HEALTH:

Enamel Hypoplasia: This dental pathology was apparent on all canines and appeared as depressed bands, one on each tooth. The most prominent bands, in terms of depth and size, were noted on the lower right canine and both upper canines. The presence of hypoplastic lesions on the canines is consistent with the preponderance for more severe and numerous bands or pits to be found on these very long and slow developing teeth, as well as on maxillary central incisors (Skinner & Goodman 1992).

In general, the presence of hypoplastic bands may indicate some sort of childhood nutritional or pathological stress in the individual's past. Age of such stresses can be determined based on the relative position of the band on the crown (see Massler et al. 1941), but such assessments have not yet been done for these teeth, nor for the hypoplastic teeth from Burials 2,4 (Individual 1) and 8 from Tolok.

It should be noted, however, that examination of other Maya dental remains seems to indicate a consistent age of occurrence at around two to four years (Saul 1972; Saul & Saul 1991; White 1986). Similarly, at Cahal Pech, Maar and Varney (1993) have determined an age of occurrence between 2 and 3 years for dental remains from the Zubin group (Burial 2-B/7). This age of occurrence is associated with periods of nutritional and health stress during the weaning time, which corresponds to Landa's observations of Maya weaning age at the time of the Conquest (Landa 1566, in Tozzer 1941:125).

Caries:

Maxillary teeth: There was extensive carious destruction apparent on the left M1, which was absent of lingual cusps, and had a large pit that extended into the lateral root. Carious destruction was also present on this tooth's medial surface (adjacent to Premolar 2). On the right M1, an intercusp cavity was apparent between the lingual cusps on the occlusal surface of the tooth.

Mandibular teeth: An intercusp cavity was evident between the labial cusps of the left M1, while the right pM2, which lacked its crown, had a deep pit inside its root. In the right M1, there was extensive destruction, in the form of a large carious pit throughout more than 3/4 of the crown, and only the posterior cusps were present.

Calculus: No calculus deposits were observed at time of examination.

Other than the dental irregularities noted above, no other evidence suggestive of pathology, trauma or infection were observed in this individual.

BURIAL 5

While Burial 5 was excavated during the 1992 field season, a complete skeletal analysis was not undertaken until summer 1993. This burial consisted of a simple cist grave containing one fully extended individual lying face down, with the head to the south. The lower arms of this individual were slightly flexed with the left hand placed under the pelvis. Skeletal length of this individual was measured to be approximately 149 cm.

Skeletal preservation of this individual was generally quite good. All of the major long bones were present and included epiphyses in most cases. The cranial bones were highly fragmented, as were the sacral and vertebral bones. The body of the ilium and a portion of the ischium were present, but the pubes and pubic symphyses were missing. The vertebral column was also poorly preserved, with few thoracic and lumbar vertebrae present. The mandible, however, was completely intact and well preserved, allowing it to be used in age determination of this individual.

SKELETAL INVENTORY

Cranial Remains: overall, the cranium was very fragmented. Recovered remains include small portion of left frontal, including part of orbit and temporal line; left parietal; left mastoid process and most of right temporal; and fragmented occipital bone, with small nuchal crest

noticeable.

The only accounted viscerocranial remains was a fragmented right zygomatic.

Mandible and Teeth: no teeth were recovered from this individual, but the mandible was complete, with extensive alveolar resorption. The loss of teeth and reduced chewing activity would have led to the reduced height and thickness of the mandibular body and ramus evident in this individual. Gonial angle is concurrently very obtuse, and the delicate jaw appears "bird-like".

Post-cranial Skeleton:

Clavicles: both only missing sternal epiphyses

Scapula: only remains of left one found-with glenoid cavity, fragment of acromion and portion of lateral border present

Humeri: R-fragmented head and one third of shaft present; most of distal end not preserved, although trochlea is intact; L-epiphyses not present, but septal aperture is evident

Radii: all epiphyses missing

Ulnae: all epiphyses missing

Carpals: right lunate, scaphoid and capitate present only

Metacarpals: right and left remains highly fragmented

Hand and Foot Phalanges: most present

Vertebrae: some fragmented cervicals with bodies; fragmented thoracics lacking bodies; some lumbar vertebrae with transverse processes, no bodies

Innominates: R-body of ilium with acetabulum and small portions of auricular surface and ischium present

L-body of ilium (minus iliac crest), and portions of the ischium and auricular surface present; large sciatic notch is evident; No pubes were found with either innominate

Sacrum: very fragmented

Femorae: both proximal heads are present and fused to shafts; diaphyses preserved; and distal epiphyses are fragmented

Tibiae: both diaphyses present, as are epiphyses (though fragmented); left distal epiphysis is in good condition

Fibulae: both mostly preserved, except for left distal end

Tarsals: most preserved and in good condition

Metatarsals: all five right ones present and in good condition

Bones absent, or not accounted for at this time: right scapula, sternum, left carpals, patellae, and left metatarsals.

AGE:

Age estimation of this individual was somewhat problematic as many of the more reliable indicators of age were not present, for example, pubic symphyses, sternal end of the clavicle, cranial sutures, and dentition. Nevertheless, a preliminary age range was established based on the complete fusion of the left ischial bone. According to Brothwell (1981), this would suggest a minimum age of 25 years.

It is possible that an older age could be assigned to this individual based on substantial

alveolar resorption of the mandible. All mandibular teeth seem to have been lost antemortem, although one or more incisors may have possibly been lost postmortem. The extent of bone resorption is indicative of tooth loss over a considerable period of time prior to death. The state of this mandible, with respect to tooth loss, is very similar to the mandible of Individual 1 from Burial 4 (Song 1993:117). For both cases, the extent of alveolar resorption suggested an older age range (i.e. 40+ years), but for Burial 5, one would put the age range at between 25 and 40 years. This is due to the fact that there appeared to be no evidence of any age-related bone degeneration such as osteoporosis, or osteophytic lipping, present on the postcranial skeleton. But, the lack of such degenerative evidence may simply be a result of the poor preservation of the remains, rather than a true absence.

Importantly, with regards to age determination, the dietary and cultural practices of the Maya, like many other prehistoric populations, were conducive to poor dental health and early tooth loss. A high carbohydrate maize diet would have encouraged increased cariogenic activity and tooth destruction, while grit incurred from maize processing could easily damage tooth surfaces and affect structural integrity. Loss of molar teeth and consequent mandibular resorption has been found in individuals as young as 20 years from prehistoric Texas populations (Hartnady & Rose 1991). These authors found that by age 30 years, the dentition of most Lower Pecos individuals was virtually edentulous.

Thus, the lack of teeth, and resulting edentulous mandible of Individual 5 can still comfortably be attributed to a "middle-aged" adult of 25-40 years.

SEX:

Based on the overall gracility of the skeleton (small mastoids and mandible, less pronounced nuchal crest), as well as the wide sciatic notch and pronounced pre-auricular sulcus, a female sex can be assigned to this individual.

HEALTH:

Examination of Individual 5 revealed evidence of possible periostitis on the right tibia, as well as possible infection on the left side of the inner occipital surface, adjacent to the internal occipital crest. Such evidence cannot conclusively be correlated to cause of death. Dental health could not be determined due to lack of dental remains, and no other evidence of pathology or trauma was observed.

BURIAL 6

Burial 6 consisted of a simple cist grave containing one fully extended individual. This individual was lying face down with the head to the south, and both lower arms and hands were placed beneath the pelvis. Skeletal length was approximately 150 cm.

Overall skeletal preservation of this individual was fair to poor. As a result of the placement of the large cut stones, many of the long bones were highly fragmented. A large portion of the skull remained intact, including the frontal bone and portions of the parietal and temporal bones. Notably, there were practically no ribs or vertebrae found in this burial, and

much of the
remaining skeleton was fragmented and incomplete.

SKELETAL INVENTORY

Cranial Remains: while most of the larger skull bones were present, the maxilla was poorly preserved, with very few fragments present. Only one tooth was recovered from this individual. Regarding the mandible, some bone resorption was evident but could not be assessed, as most of the body and ramus was missing. Only a portion of the right ramus, without condyles, was well preserved. A significant pathological lesion was present on portions of both parietals and will be discussed shortly.

Post-Cranial Skeleton:

Humeri: both missing proximal and distal epiphyses; right one highly fragmented

Ulnas and Radii: all missing proximal and distal epiphyses

Ribs: few present but highly fragmented

Innominates: highly fragmented with only portions of the ischium and ilium present (no iliac crest or pubes); wide sciatic notch evident; small acetabulum

Femorae: left femur head present and missing only distal epiphyses; right-missing proximal and distal epiphyses

Tibiae: both missing proximal and distal epiphyses and highly fragmented

Fibulae: both missing proximal and distal epiphyses and highly fragmented

Bones absent, or not accounted for at this time: clavicle, scapula, sternum, vertebrae, carpals, metacarpals, hand phalanges, sacrum, patellae, tarsals, metatarsals and foot phalanges.

AGE:

Aging this individual was somewhat difficult due to the highly fragmented nature of the skeletal remains, as well as the lack of dentition. Only one permanent incisor with a carious pit on one side (lateral?) of the tooth was found associated with this individual, and there was attrition present, although it was not assessed.

Evidence used to determine approximate age of this individual came primarily from the fusion of femoral and ischial epiphyses, and cranial suture closure. Complete epiphyseal fusion of the left femoral head indicated a minimum age range of 15-20 years, while the fusion of the left ischial bone suggested an older minimum range of 17-25 years (Brothwell 1981). Finally, the closing of the sagittal and coronal sutures suggested an age range of 22-38 years (cf. Montagu 1960). Specifically, complete union and obliteration of the cranial sutures was indicative of an older age in this range.

Lastly, mandibular remains also pointed to an age older than 35 years. The fragment appeared highly obtuse, with some bone resorption also evident. This sort of remodelling and bone resorption suggests extensive antemortem loss of teeth, and is usually associated with older individuals.

SEX:

Sex of this individual was determined primarily from observations on the innominate and skull. The overall gracility of the skeleton, particularly the small brow ridges and virtually non-existent nuchal crest, as well as the wide sciatic notch, suggest that this individual was female.

HEALTH:

Significantly, for Individual 6, a pathological lesion suggestive of infection and trauma was evident on the skull. It appeared as a region of thickened, raised bone, which terminated in a missing fragment (hole) in both parietals (Fig. 1). The hole was located in the most superior region of the parietals at the sagittal suture. It was observed from the bregma region extending posteriorly. Both compact and cancellous bone were affected.....

BURIAL 7

This cist grave contained one fully extended individual lying face down, with skull to the south. Preservation of this sub-adult was poor to mediocre, and consisted of fragmented skull bones, right clavicle, rib fragments, some vertebral remains (minus bodies), highly fragmented long bones (minus epiphyses), few cancellous bone fragments of the pelvis and small portions of right iliac blade, and two metatarsal fragments. No mandible, scapulae, sternum, patellae, hand or foot bones were identified at the time of excavation. Measurement of this individual in the field, minus the tarsals, metatarsals and foot phalanges, revealed an approximate length of 95 cm.

Teeth:

Dental remains thought to be associated with this individual included five teeth, both deciduous and permanent. They included one permanent 4-cusp molar crown, which was only half the normal adult crown height; another large (permanent?) molar crown found near the skull; one permanent incisor crown with medium shovelling evident; one deciduous molar with one root and about 3/4 of crown, with a fracture extending down middle of crown; and a possible deciduous upper first incisor crown. Preliminary examination of both permanent molar crowns revealed a lack of visible macroscopic wear and no root formation, and were interpreted to be unerupted molars.

AGE:

With respect to age, a general juvenile age range was designated for Individual 7 based on epiphyseal fusion times. No epiphyses were accounted for, and this was interpreted to be due to differential preservation of non-fused cancellous epiphyseal bone. In this case, non-fusion of the sternal epiphysis to the right clavicle suggested an age of less than 18 years, while lack of the femoral head and trochanters suggested an age younger than 15 years (cf. Brothwell 1981). A more specific age range was indicated by dental remains. The presence of permanent molar crowns, both with undeveloped roots, and a deciduous upper incisor, were thought to indicate an individual between the ages of 6 and 8 years (cf. Brothwell 1981). A clavicular diaphyseal length of approximately 74 cm was also consistent with such an age range.

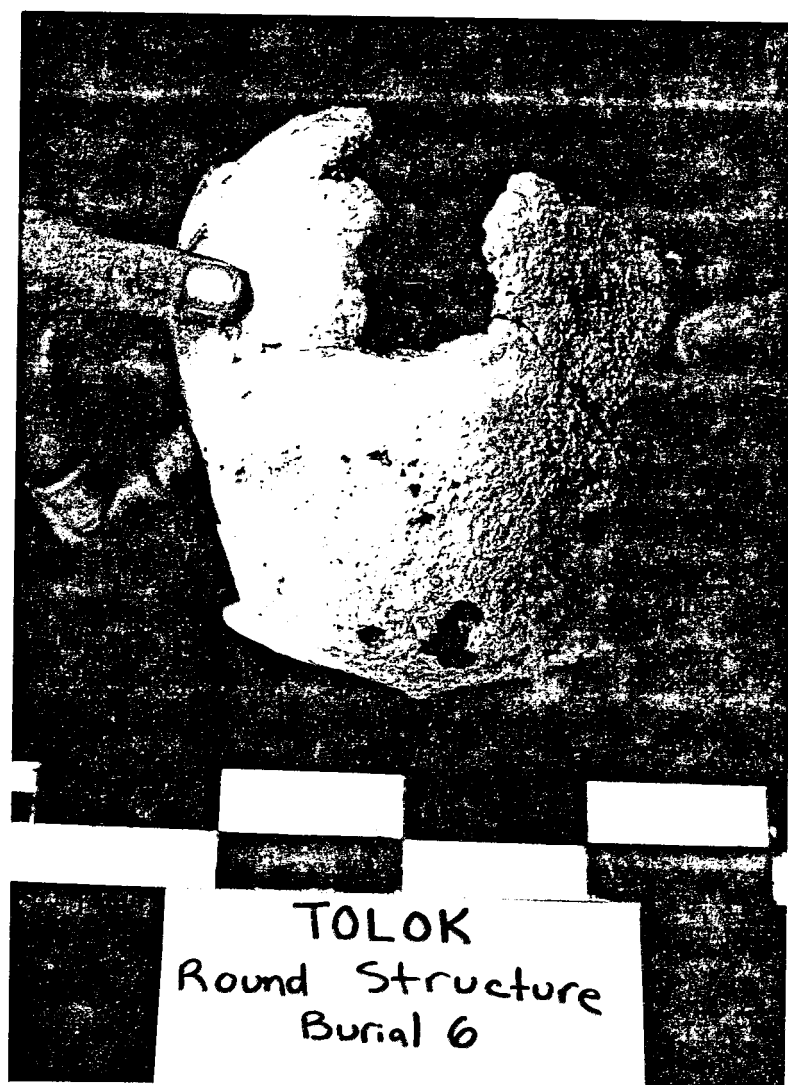


Fig. 1: Burial 6 cranial pathology, with hole evident.

SEX: Due to the fragmentary nature of the remains, and the difficulty involved with sexing juvenile skeletons, a sex could not be assigned to this individual.

HEALTH: No skeletal evidence of pathology, or trauma, was noted for this individual, but slight porosity on the exterior surface of several long bones could possibly indicate anemia, or periostitis.

BURIAL 8

Due to time constraints, a complete skeletal analysis of Individual 8 could not be undertaken during the summer of 1993. What follows is a description of grave morphology and skeletal positioning, as well as a skeletal inventory. A preliminary discussion of age, sex and health will be commented on briefly.

Like Burials 2-7, Burial 8 consisted of a simple cist grave containing one extended individual lying face down. Skeletal length was approximately 134 cm from superior cranial remains to the left tarsal region. Head orientation of this individual was to the south and the left hand was placed slightly beneath the pelvis, similar to the second individual from Burial 4, as well as Burial 5. Overall skeletal preservation of this individual was mediocre to good, due primarily to the onset of the rainy season during excavation of this individual. All long bones were present, missing only their proximal and distal epiphyses. Other bones preserved included fragmented portions of the skull, ribs, vertebrae and pelvis.

Unlike most burials excavated at the Tolok group during both field seasons, two intact vessels were found associated with this individual. One vessel (V1) was located adjacent to the skull, on its right (west) side, and contained highly fragmented cranial bones, as well as an almost complete complement of teeth. All teeth were found inside this vessel, but a few cranial fragments were also found outside the vessel. It appears as if this individual's viscerocranium (face and mandible) had been intentionally placed inside the vessel at the time the individual was buried. Due to poor preservation of the cranium and cervical vertebrae, it cannot be determined whether this individual had been decapitated..... (For more information regarding associated artifacts, see Powis this volume.)

SKELETAL INVENTORY

Cranial Remains: few fragmented cranial bones present

Teeth:

Maxillary R: 2122
 L: 2122

Mandibular R: 1123
 L: 2123

*All teeth found loose inside associated vessel. No dental caries identified during initial observation.

Post-Cranial Skeleton:

Scapulae: highly fragmented with no side determination

Humeri: both missing proximal and distal epiphyses

L/R Ulnas and Radii: missing all epiphyses

Carpals: some fragments present

Metacarpals and Hand Phalanges: some fragments of both present

Ribs: few extremely fragmented ribs

Vertebrae: less than half of vertebral column present; atlas also preserved

Pelvis: portions of ischium and body of ilium present; no sciatic notch or iliac crest present.

Femora: both femoral heads present; condyles missing

Tibiae: both missing proximal and distal epiphyses

Tarsals: some fragments present

Metatarsals and Foot Phalanges: some fragments present

Bones absent, or not accounted for at this time: clavicle, sternum, sacrum, patellae.

AGE, SEX AND HEALTH:

Examination of the skeletal remains from Burial 8 indicated a young adult female of approximately 17 to 26 years. This was based on complete eruption of the permanent dentition; the open state of endocranial sutures; and the lack of age-related dental attrition, or skeletal degeneration.

No evidence of skeletal pathology, trauma, or infection was observed, but dental remains were found to have enamel hypoplasia. In this individual, most teeth exhibited minor lesions, but there was extensive hypoplasia on the right mandibular third molar. At this time, the age of stress has not yet been determined.

CACHE #2

In addition to the four cist burials excavated during the 1993 field season, a tooth cache similar to that excavated at Yakalche in northern Belize (Pendergast et al. 1968) was found associated with Burial 7. The cache consisted of one small jadeite bead and fourteen teeth of mixed dentition, which were all concentrated in a small scatter. The following teeth were present:

- 1 deciduous first molar
- 2 deciduous second molar
- 4 deciduous incisors
- 4 unerupted permanent incisors
- 1 unerupted permanent canine
- 2 unerupted permanent first premolars

In comparing these teeth with the five teeth found throughout the fill of Burial 7, twelve teeth do not overlap, and could therefore belong to the individual. If it is associated with Burial 7,

which has been dated to the terminal Formative (Powis, this volume), this cache could represent the earliest tooth cache recorded thus far for the Maya lowlands.

The tooth cache at Yakalche was dated to the late Post-Classic period (thirteenth to fifteenth centuries A.D.) and consisted of 379 teeth and a "small, irregular subglobular jadeite bead" (Pendergast et al. 1968:638). The only other tooth cache known to the authors was found at Lubaantun and dated to the Classic period (Hammond 1975). A total of 56 teeth were found in a house mound at this site, and were "within an area so small as to suggest that they were buried in a container of some perishable material" (Hammond, pers comm. to Saul 1970, in Saul 1975:389). This may possibly be the case for the Tolok tooth cache as well.

The significance of the tooth cache at Tolok may be inferred from Pendergast's interpretations of the tooth cache at Yakalche (Pendergast et al. 1968). According to Pendergast et al. (1968:642) J.E.S. Thompson associated the tooth offering at Yakalche with evidence of child sacrifice to Itzamna, or God D. This god, like the other two Old Gods (Gods L and N), is generally represented as an aged individual who, except for a single molar at each corner of the mouth, is otherwise toothless. The Old Gods are thought to have presided over Xibalba in Maya cosmology (Schele and Miller 1986:54), and were important deities to the ancient Maya (Awe, pers comm.). Pendergast et al. (1968:642) have suggested that children's teeth were removed in order to give them a greater resemblance to Itzamna, prior to their sacrifice in his name. The teeth may have served as a secondary offering to the deity, or as an offering to any one of the Old Gods, considering their similar toothless depictions.

The circumstances of Burial 7 are significant, in light of Pendergast et al.'s interpretation, because the interred individual was a child, and was associated with unique grave goods. These goods included a smashed miniature vessel on top of the cut stones at the head region, another broken ceramic vessel (miniature?) above the left shoulder (east side), a biconically drilled spondylus shell in the fill above the pelvis, and a shell offering consisting of one non-modified freshwater snail (Pachychilus indiorum) placed within a worked marine shell (Pectinidae ?) (See Powis, this volume). This shell offering was found directly on the pelvis, and considering the prone position of the skeleton, it would have been placed on the individual's back.

This particular shell offering, in addition to the tooth cache, distinguishes Burial 7 from the other burials at Tolok. Firstly, shells are ritually significant in Maya ideology, and have been shown to be associated with death and the underworld (Andrews IV 1969). In turn, two of the Old Gods, Gods D (Itzamna) and N, are often depicted wearing shell pectorals or ornaments, of either conch or turtle (Andrews IV 1969; Schele and Miller 1986). Specifically, God N, or Pauhahtun, is often depicted as carrying a large shell on his back, or emerging from the shell (Andrews IV 1969:48). The fact that the shell offering in Burial 7 was placed on the back of a child, and associated with a tooth cache, may therefore be evidence of ritual activity associated with the Old Gods as early as the Late Formative period.

Conclusions

As far as burial customs go, excavations at Tolok have revealed enlightening information on the ritual practices of ancient Maya commoners in the Belize Valley. Thus far, seven burials containing eight individuals have been retrieved from the plaza area associated with two low circular platforms. The nature of the interments at Tolok is highly suggestive of burial customs among non-elite populations. For instance, all burials were of a cist nature (cf. Welsh 1988), and arranged on a north-south axis. All graves contained individuals fully-extended in a prone position, with one or both hands placed under the pelvis, and head orientation was consistently to the south. Similar patterns of head orientation and extended, prone skeletal positioning have been found to be common at the nearby sites of Baking Pot, Xunantunich, and Barton Ramie (Welsh 1988). In addition, the preference for head orientation to the south was evident at Pacbitun (Campbell-Trithart 1990:259), and throughout the Cahal Pech sustaining area.

With respect to the skeletal material, the eight individuals from Tolok represent relatively healthy males and females, and one child. Most pathologies were of an acute nature, and can be considered to reflect the every day stresses of living in an agricultural, tropical environment. Evidence of such stresses include porotic hyperostosis, probably due to anemia (Burial 6); possible (minor) periostitis (Burials 5, 7); possible cranial infection (Burial 5); caries (Burials 3, 4-Individuals 1 and 2); calculus (Burials 2,3,4-Individual 2); and enamel hypoplasia (Burials 3,8, and possibly 7).

A common condition of several individuals was early tooth loss, and a subsequent thinned, resorbed mandible (Burials 3-partial, 4-Individual 1, 5, 6-partial). Outside of Tolok, similar mandibles have been observed at Zubin, in individuals from Burials 2-B/3 and 2-B/7. Early tooth loss and subsequent alveolar bone resorption can be attributed to factors such as caries, abscesses, periodontitis, calculus, and general infection. In the Maya case, one can also attribute it to cultural practices that entailed a gritty diet. Consequently, in considering these factors, it can be suggested that the nature of such mandibles is a poor indicator of old age.

Lastly, with respect to health, the only other notable case of skeletal pathology was the trauma inflicted on the individual of Burial 6. Some sort of traumatic event resulted in the removal of bone in this individual's cranium, and it resulted in significant deformation of the superior region. The association of hyperostotic lesions in this area suggests that either anemia was the cause of the bone's susceptibility to traumatic injury, or that the infection resulted from the trauma. At this time, no definite conclusions can be made on the exact cause of the hole, nor of its relationship to the cut mark.

As a small, and possibly extended family, community on the periphery of Cahal Pech, (the investigations at) the Tolok Group has provided valuable information on the health status and ritual activity of Formative and Classic period Maya. Hopefully, future excavations at Tolok will expand the skeletal population, and reveal additional information regarding the significance of circular platforms and the early settlers who utilized them.

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As supervisor of excavations at Tolok, Terry G. Powis must be commended for his high regard and concern toward burial excavations and human remains. His genuine interest in all matters skeletal has greatly enhanced the scope of research at Tolok. We only hope that we have aided in his interpretation of the past. Furthermore, Terry should be thanked for sharing his insight into Maya archaeology, for it has helped us to better understand the context of the skeletal remains.

We would also like to recognize the contributions of Cathy Crinion and Alexandra Hartnett. Not only did they help excavate and clean the skeletal remains, but they also provided great friendship, and daily humour during times when the work seemed endless.

Finally, the senior authors extend their gratitude to Dr. David Glassman of Southwest Texas State University for providing important unpublished data on some of the skeletal pathologies. His results will eventually be published in a formal report for the entire site area of Cahal Pech. His generous provision of this unpublished information is greatly appreciated.

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Return to the Suburbs: The Second Season of Investigations at the Zopilote Group, Cahal Pech, Belize

by

**David T. Cheetham, Jim Aimers, Josalyn Ferguson, David Lee,
Leonce Delhonde and Al Jenkins**

Introduction

The purpose of this report is to outline the investigations of the Zopilote Group which were undertaken from May to July, 1993. Due to several constraints, our efforts were confined to two operations. The first consisted of two large excavation units at the base of the primary structure (Str.A-1), as well as a small excavation unit within the platform directly in front of structure 1 along the central axis. The second operation consisted of the partial horizontal excavation of Structure B-3, a small, severely looted mound located 45 meters east of the northeast corner of the platform (see Ferguson et al., this volume).

Since this report focuses upon the first of these operations, the reader is referred to the previous site report for a detailed description of the Zopilote Group (see Cheetham et al. 1993). It should be noted, however, that a revised site plan is included within this report (Fig.1).

STRUCTURE A-1 OPERATIONS

As previously stated, two major excavations were undertaken at the base of structure A-1 (Units 5 and 7), with a third (Unit 6, Fig.2) centrally located on the upper platform (plaza) along the central axis of the structure. The purpose of these excavations were to a) determine the chronological sequence of construction by correlating exposed phases of architecture with their respective platform (plaza) levels, and b) to place a vertical excavation unit (7) into the central stairway to test for any cache material which might be present. These efforts resulted in the partial exposure of the final four construction phases, spanning the Late Formative through Late Classic periods (300 B.C. - A.D. 900). During the construction of the final architectural phase (Str.A-1/10th, Late Classic), a roughly vaulted chamber was placed within the base of the stairway, the contents of which included a carved stela. To the best of our knowledge, the placement of a stela within a vaulted tomb or "stela chamber" is unprecedented within the central Maya area. The presence of this monument, as well as the elite burial discovered in 1992 (Cheetham et al 1993; Cheetham 1994), demonstrate elite ritual activity beyond the Cahal Pech site core, and provide interesting information regarding the sociopolitical relationship between the site *center* and its peripheral settlements. Functional issues concerning the construction and role of ancient *sacbeob* are also being examined.

Unit 5

This excavation was conducted alongside the left (west) stair side, into the Late Classic stair-side outset or lowermost terrace (Fig.3.1 and 3.2, also see Loten and Pendergast 1984:22, fig.5

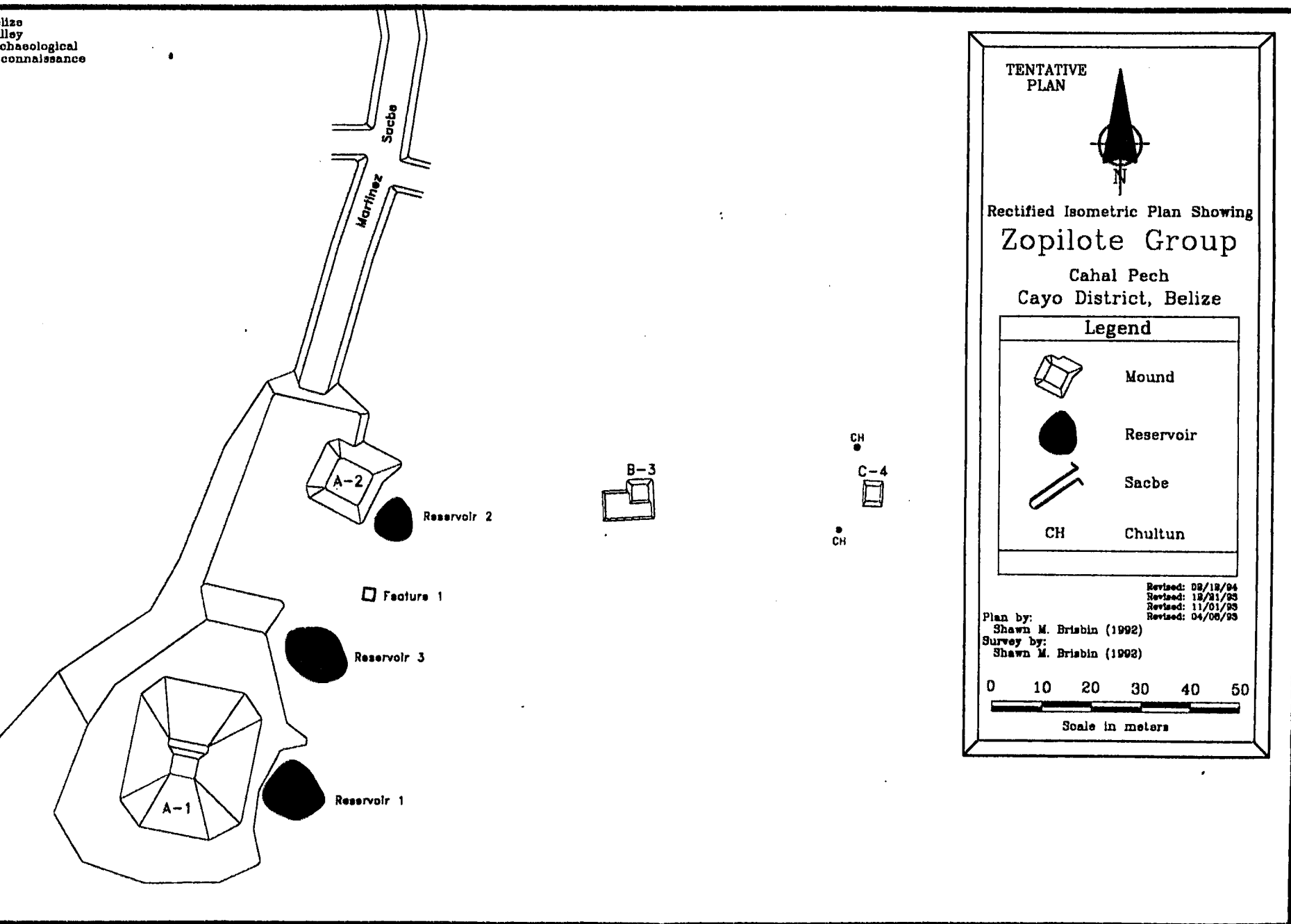


Fig. 1: Plan of the Zopilote Group

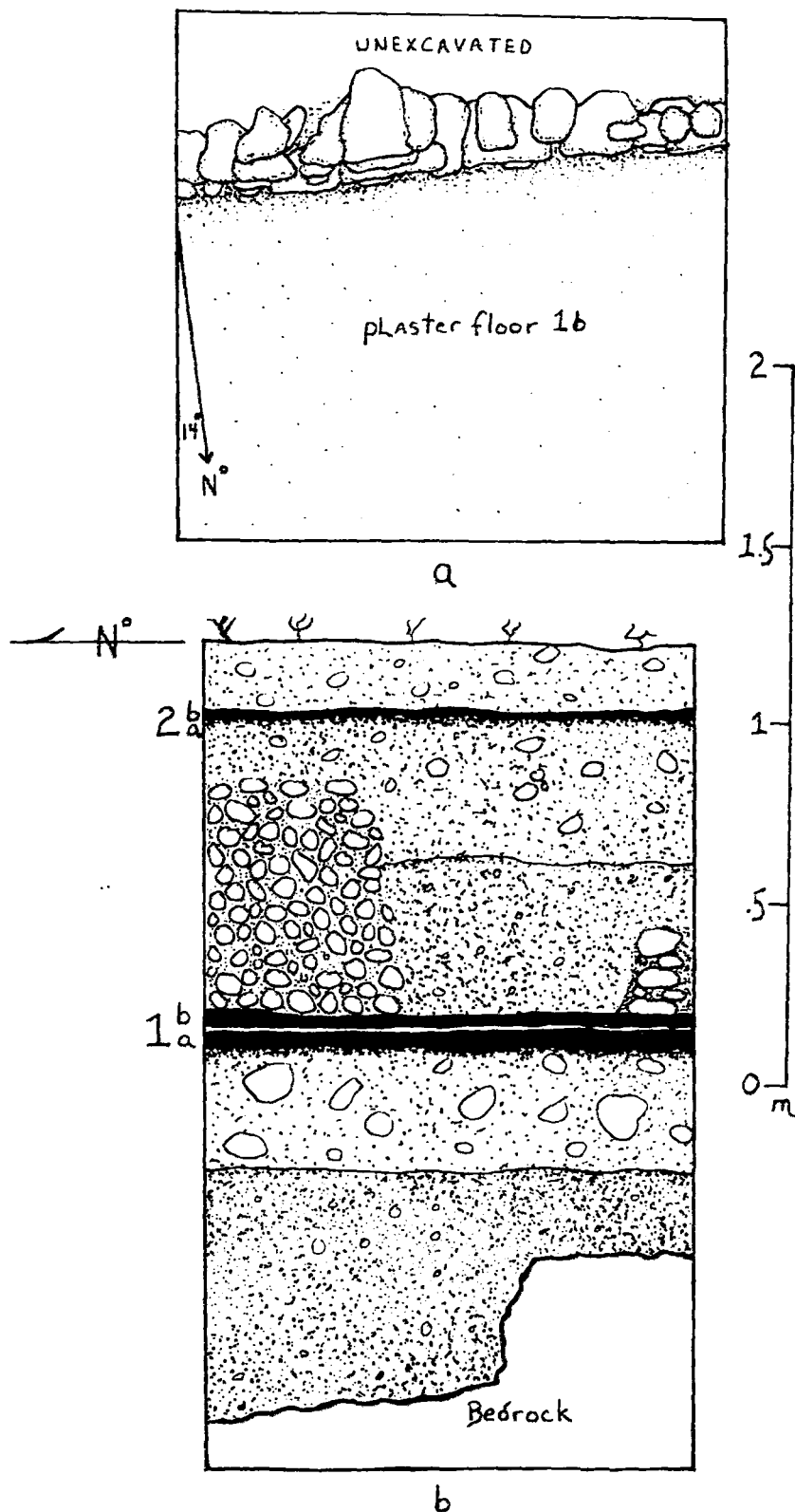


Fig. 2: Unit 6 (platform). a; floor plan of platform surface 1b, b; east-face profile indicating floors 1, 2 and carved bedrock

for architectural terminology and definitions). A total of five architectural phases were recorded, including the final modification (Str.A-1/10th, Late Classic), the penultimate pyramidal structure (Str.A-1/9th, a late Early Classic (Ahcabnal) phase [Tzakol 3]), and Late Formative phases Str.A-1/8th (early Late Xakal A.D 100-350 [protoclassic]), 7th and 6th (Early Xakal 350 B.C.- A.D. 100). Unfortunately, overburden prevented penetration into the remaining five phases of late Middle and Late Formative architecture which had been previously noted along the walls of Looter's trench #1.

Despite these constraints, we were able to correlate the exposed phases with their associated platform floors. Pottery recovered in our excavations indicate that the final platform floors (Floor 2a and b; See Figures 2 and 3.2) were constructed during the Late Classic. During this construction phase a multi-levelled platform, which had previously formed part of the Late Formative and early Classic construction phases, was replaced with a two-level platform divided approximately at the mid point between structures 1 and 2 (Fig.1). As previously indicated, this platform had been replastered on two occasions. Clearly, an effort was made by the builders to diminish the effect that the earlier architectural configuration had maintained for such a long period of time - that is, their construction atop a natural outcrop of limestone (carved in areas) above the surrounding terrain during the late Middle Formative Kanluk Phase (*late facet* 650-350 B.C.) and subsequent multi tiered platform that covered, but still emphasized the prominence of Structure A-1 until the middle of the Late Classic period.

Structure A-1/10th

This phase of architecture was represented by a pyramidal structure with a series of architectural terraces flanking a north facing central stairway. Excavations within unit 5 indicate that the lowermost terrace was 1.3 meters high (with a batter depth of 32 cm), and was constructed of well shaped limestone facing stones with a thin backing masonry of mortar and soil abutting the penultimate (A-1/9th) lowermost terrace (Fig.3.2). The lowermost portion of the terrace is defined by a two-course basal moulding while occasional blocks of limestone protrude from the fourth course of facing stones forming a intermittent medial moulding. The adjacent stair-wall forms an acute angle of 85 degrees with the terrace, indicating considerable distortion of this feature by natural forces. The whole was coated with a thick plaster as attested by remnants upon the stair-wall as well as the lowermost portion of the terrace.

A fragmented portion of a monument (identified within figure 3.1 as Stela fragment 9) was discovered alongside the stairway in front of the lowermost terrace atop the final platform floor 2b. Little can be said concerning this monument, aside from the fact that it clearly exhibits evidence of deliberate destruction. Generally speaking, its morphology indicates that it originally constituted half the base (butt) of a plain (uncarved) stela. Its placement hints that it was, for reasons unknown to us, dragged to the side of the stairway at, or near the end of the Late Classic Period.

Structure A-1/9th

This architectural phase was constructed to house the remains of the high status Tzakol 3 burial previously reported in Cheetham et al. 1993. Unlike the final Late Classic phase of architecture, this pyramidal structure functioned in conjunction with the initial, formally

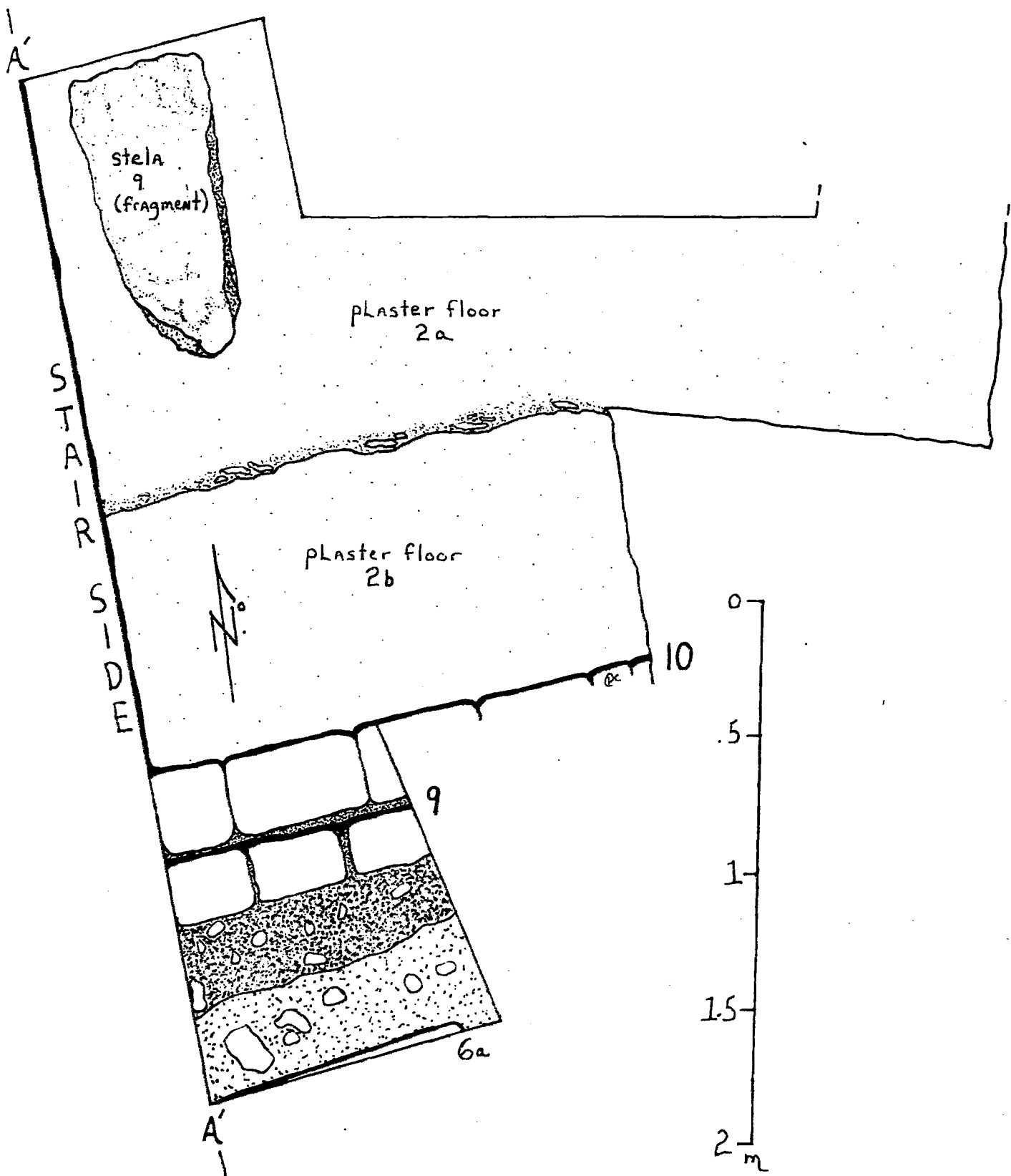


Fig. 3.1: Unit 5 (floor plan). A' A' marks the western limit of excavation at top floor 2b (see Fig. 3.2), 10; basal stones (A-1/10th); 9, basal stones (A-1/9th); 6a, terrace/platform face (A-1/6th)

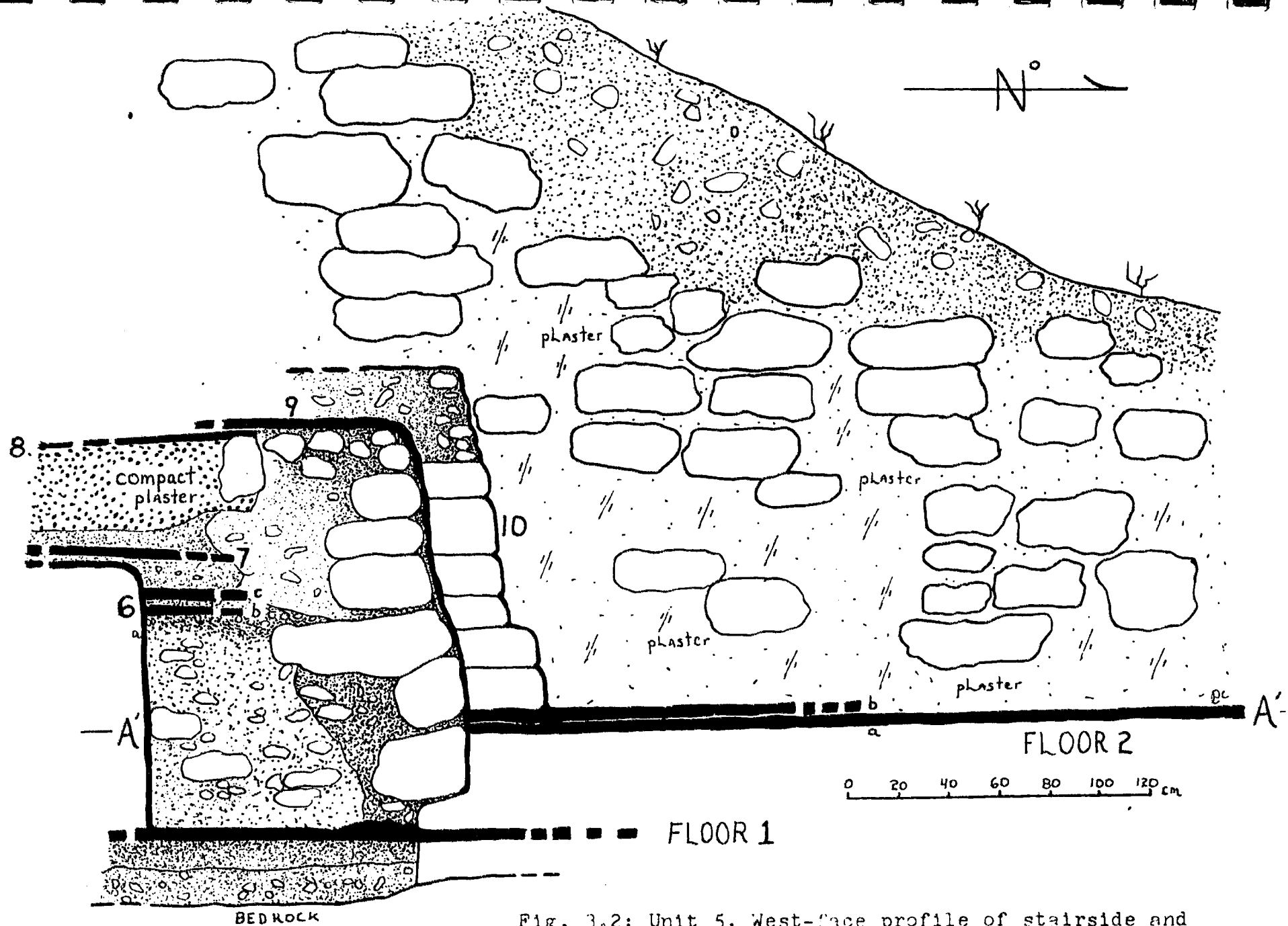


FIG. 3.2: Unit 5. West-face profile of stairside and terrace architecture, 10, (Late Classic); 9, (late Early Classic); 8, (terminal Late Formative); 7 & 6, (early Late Formative)

plastered, multi-level platform erected during the early Late Formative Period (Platform [plaza] floor 1). Although we were unable to isolate the stair-wall of this phase within Unit 5, excavations into the lowermost section of the Late Classic stairway (Unit 8) tentatively indicates that, like its architectural successor, the late Early Classic stairway consisted of an uninterrupted flight of stairs from the platform base to the structure summit. The Late Classic stairway may, in fact, be constructed directly on top of its Early Classic predecessor.

Unlike the latter phase of construction, during the building of Str.A-1/9th considerable damage was done to the previous Late Formative phases of architecture. As illustrated within figure 3.2, all but the inner most portions of A-1/8th, 7th and 6th were destroyed to allow for adequate packing of backing masonry behind this terrace. We believe that this was undertaken because these earlier floors (sealed within Str.A-1/8th prior to the Early Classic modification) functioned as lower (secondary) platforms (Str.A-1/8th & 7th) and an adjoining lower stairway (Str.A-1/6b,c) which would have extended beyond the eventual location of the late Early Classic terrace. A similar, wide early Late Formative platform and stairway has been noted at the base of Str. B-4 within the site core (Awe 1992).

The terrace of Str.A-1/9th is 1.55 meters in height, and comprised of 7 courses of facing stones covered, once again, with a thick coat of plaster. The depth of the batter is 25 cm. Facing stones of this terrace are very large and irregular in shape hinting that they may have been reused from the earlier Late Formative stairway mentioned above. Excavations within the site core have demonstrated that tread and riser portions of Late Formative stairways were constructed from similar large limestone blocks at the expense of (or, with very little) backing masonry fill.

Structure A-1/8th

Tentatively dated (by ceramic comparisons) to the terminal Late Formative Period (Protoclassic Late Xakal 100 - 300 A.D.), the remains of this phase of architecture were noted directly below the upper (horizontal) surface of Str.A-1/9th (Fig.3.2). As is so typical with Late Formative architecture at Cahal Pech, copious quantities of poured limestone mortar and blocks were used as ballast below this floor. As noted above, the northern portion of this platform was demolished to make way for the subsequent terrace. Nevertheless, the horizontal depth of the remaining floor indicates that, as described above, a wide lower platform and stairway may have been present at this time. Although we are unable to conclusively prove this, logic would dictate that if this architectural feature consisted of a terrace, the builders of Str.A-1/9th would have likely incorporated it as a stable, secure backing for their subsequent modification.

Structure A-1/7th & 6th

These two phases are tentatively dated by ceramic analysis to the early portion of the Late Formative Period (early Xakal Phase 300 -100 B.C.). Although figure 3.2 indicates two separate and distinct floor levels (7 and 6), mapping within a large tunnel - a tunnel looters had dug deep into the center of structure 1 - indicates that floor 7 is likely a lower (or secondary) platform extension of a very well preserved early Xakal structure identified previously as floor 4 (Cheetham et al. 1993, figure 4), and here as A-1/6th. As the uppermost interior area of the

main looters tunnel corresponds with the central summit/platform of the Late Formative structure, we were in the unique position of being able to examine portions of the platform summits without having to conduct major excavations. In the process we noticed several additions to this particular phase of architecture, including successive replasterings and a possible bench at the rear of the platform. Similar modifications also took place at its base, as the initial lower building platform (Str.A-1/6a) was refurbished with the addition of a wider stairway (Str.A-1/6b,c) and the whole later sealed within an extended platform (Str.A-1/7th).

Unit 7

As stated at the outset, unit 7 (3m X 2m) was placed within the lower section of the terminal stairway adjoining excavation unit 1. When excavated and mapped (Fig.4) this unit indicated that what we previously assumed was a small platform was, in fact, fall or scree which had accumulated at the base of structure 1. Three phases of architecture were noted within this stratigraphy, including Str.A-1/10th, 9th and the lowermost riser of Str.A-1/7th or 6th.

Unit 7 - Architecture

Remains of the terminal stairway were located 60-40 cm below humus level. Consisting of 2-3 cut stone risers covered with a thick coat of plaster, this portion of the stairway exhibits extensive blackening of its surface, possibly the result of the ritual burning of incense above the "stela chamber" located directly below (see below). In constructing this chamber, the builders of Str.A-1/10th removed a large section of the Str.A-1/9th stairway, the remainder of which was noted along the lower (north) section of this unit. The only other identifiable architectural element within the unit was a plastered riser (22 cm in height) located at the southern base of the chamber itself. As stated above, this likely represents a portion of an early Late Formative stairway.

"The Stela Chamber"

The most striking discovery of the 1993 field season, the "stela Chamber", has provided considerable data concerning Late Classic ritual at the Zopilote platform Group. This ritual included the sacrifice, disarticulation and "stoning" of at least two infants (possibly four) aged 1-2 years (Fig.4, UB = "upper burial"), the phalanges or finger tips of at least 25 adult individuals within small hemispherical unslipped bowls, and the incisors of at least 9 adults (Fig.4, LB = "lower burial"). We should note, however, that, with the exception of the "upper burial," these numbers represent the *minimum number of individuals* - the number of individuals involved could be much higher. The small bowls, for example, number 139, with many additional highly fragmented specimens possibly raising the total to 200. As a great many of these "finger-bowls" were fragmentary, their contents (phalanges) most likely succumbed to poor preservation. In fact, minute fragments of unidentifiable bone were discovered within, or near these bowls. A more complete description of the osteological remains is provided by Cheetham, Awe, and Glassman (this volume).

The artifacts accompanying the upper, multiple burial include 19 halved and smashed Late Classic vessels (Dolphin Head Red, Belize Red, Platon Punctated-Incised [Platon Variety], Benque Viejo Polychrome [weathered]; as defined in Gifford

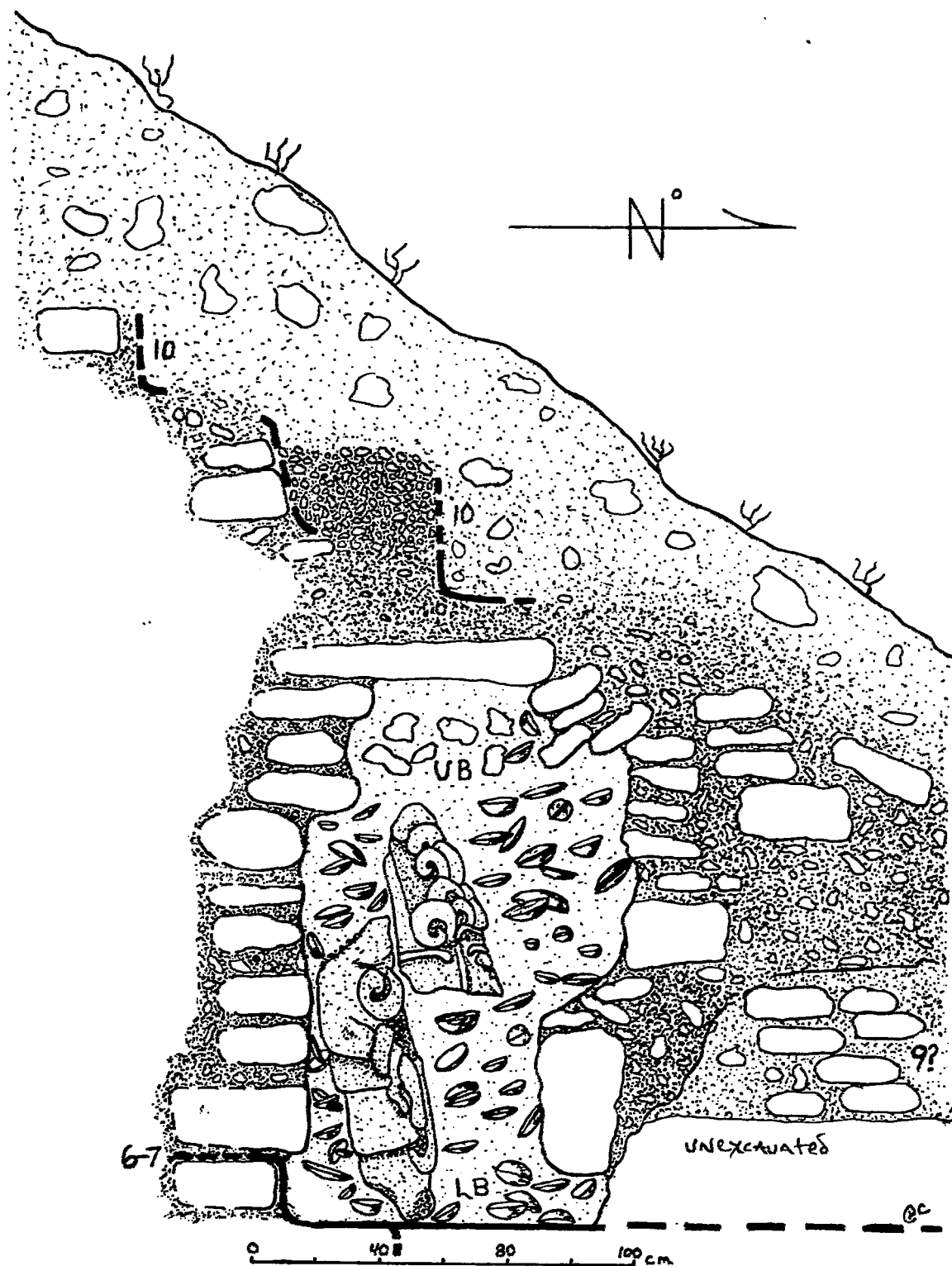


Fig. 4: Structure A-1 (Unit 7). West-face profile of "stela chamber" (Tomb #2) showing contents and exposed architecture, 10 (A-1/10th); 9? (A-1/9th) and 6-7 (A-1/6th or 7th). UB - upper burial; LB - lower burial (incisors)

1976:225-288), three lid-shaped pendants (ceramic), 5 obsidian blade fragments, 1 intact obsidian blade, 1 small fragment of honey-coloured chert and 1 large *Pomacea flagellata* shell. Four obsidian blade fragments and one whole blade (broken in three pieces) were located with the incisors ("lower burial") along with three shells (*Codakia orbicularis*, *Pachychilus largillierti* and *Pachychilus galaphyrus*).

The dimensions of the chamber are 75 cm (width, as taken along the chamber floor [e-w]), 1.72 m (height, as measured from chamber floor to capstone) and 1 m (depth, also along the chamber floor [n-s]). Although not spectacular in terms of construction technique, the chamber was vaulted and topped with a large, well shaped capstone. The interior wall-facing, as well as the vault stones were left unplastered. In viewing the chamber one is apt to describe its construction as rough. Although this is hard to discount, its placement directly below the stairway necessitated a sturdy construction - which was achieved. To ensure the stability of the chamber to an even greater extent, the entire contents were tightly packed in soil. In addition to increased strength, this allowed the huge number of "finger bowls" to be effectively deposited and covered without greatly disturbing their contents. Of course this also facilitated the final ritual involving the infant sacrifice atop the large quantity of ritual deposits below.

The stela itself was a surprise to those of us involved. Until this season, a total of eight uncarved monuments had been documented at Cahal Pech: 6 stelae and 1 altar in the site core (Awe and Campbell 1988), and 1 stela in front of Str.2 of the Zinic Group (Conlon and Awe 1991). All presumably date from the Late Classic Period, including the stela from the Zinic Group which James Conlon (per. comm) has dated via plaza level association to 700-750 A.D.

Stela 9 (Fig.5) from the Zopilote Group was defaced, and broken into two large pieces. Despite this, it was placed as vertically as possible within the chamber in order to facilitate the placement of the ritual deposits surrounding its entire length. Measurements of the monument indicate a height of 1.59 m, width of 72 cm (as measured across the nose of the upper fragment) and depth or thickness of 34 cm (as measured from the nose of the upper fragment). Unfortunately, Stela 9 terminates at the waist of the depicted personage - the lowermost portion of the monument was not discovered. It should also be noted that no inscriptions were present on the remains of Stela 9. Nevertheless, its battered state and missing lower section does not preclude this possibility. A hemispherical "bowl-like" depression was carved into the top of the stela, perhaps functioning as a receptacle for offerings or the burning of incense. Generally speaking, Stela 9 depicts a standing figure with flexed arms holding oblong, circular objects (copal, corn, or cacao beans?).

On the basis of stylistic features, it is possible that Stela 9 predates the context and date (Spanish Lookout 680-880 A.D.) of the "stela chamber". It appears that the monument was moved into the chamber during its construction, most likely having been removed from the previous platform floor during the Late Classic refurbishing of Str. A-1 and its supporting platform (or plaza). This would indicate that Stela 9 was likely erected prior to the construction of terminal phase A-1, possibly during the period that platform Floor 1 was utilized (350 B.C. - A.D. 700 [approx]).

Stylistically, the *compositional field* of Stela 9 is of the "wrap-around" type, intended to display narrative imagery and evoke the dimensional powers of sculpture in the round (Clancy



Fig. 5: Stela 9. a, front view; b, right side.
Height of monument - 1.59 m

1990:22,31, figure 2.2). In this sense, Stela 9 has few counterparts within the central Maya lowlands. It does, however, bear superficial resemblance to stelae from Tonina (Blom and La Farge 1926-27; Mathews 1983) and Copan (Maudslay 1889-1902 [vol.1]; Spinden 1913, plates 18 and 19). Beyond this general resemblance, however, the iconographic elements of Stela 9 indicate an early date. Specifically, the scrolls (apparently depicting smoke) emanating from the head area bear striking resemblance to scroll elements on the stucco masks of Structure E-VII-sub at Uaxactun where they are made up of separate elements of simple outline and equal width, with blunt ends (Proskouriakoff 1950:29, and fig's 11,a and 36,b). Recently, additional Late Formative stuccoed masks bearing similar shaped scrolls have been unearthed from several sites in the lowlands including Cerros (Freidel 1985; Freidel and Schele 1988), Nakbe (Hansen 1989) and, once again, at Uaxactun. The Uaxactun stucco sculptures (Valdez 1989, 1990, also see Schele and Freidel 1990, fig's 4.7,4.8 and 4.9), include scrolls on giant masks, as well as stucco portraiture of kings on building walls standing amidst vertical panels of smoke scrolls. Schele and Freidel (1990:134,138) identify these as blood (smoke) scrolls of the "Vision Rite" associated with recalled ancestors. Very similar portraiture has been recovered at Tikal - in this instance, however, the composition is painted (Coe 1967:41; Coggins 1976). The depictions at both sites date to the first century B.C.

The smoke scrolls depicted on early stelae convey a sense of iconographic continuity with Late Formative stuccoed and painted counterparts. Uaxactun stela 19 (8.16.0.0.0) has smoke scrolls rising above the individual (see Morley 1937-38, vol.5, pl.55; Schele and Freidel 1990, figure 4:13b), and the undated Stela 10 (Morley 1937-38, vol.5, fig.36e,f) also from Uaxactun, displays thick, round smoke scrolls that echo those found upon the building walls at Tikal and Uaxactun as well as Stela 9 from Zopilote. Proskouriakoff (1950:103) indicates that in relation to the scrolls on Stela 10;

...the nearest in form are the scrolls on the stucco masks of Structure E-VII-sub...they also vaguely resemble scrolls on stelae from Izapa, in Chiapas. Whether or not this monument is early, the fact that the scrolls of Uaxactun Stela 10 are not distinctively Maya but are of a type not clearly differentiated, is itself an argument for its extreme antiquity.

Proskouriakoff was correct. Recent investigations at the El Mirador satellite site of Nakbe (Hansen 1989) have uncovered Formative period carved stelae on which thick smoke scrolls are depicted. Schele and Freidel (1990:438-39) associate these scrolls with those found on the first century B.C. stuccoed and painted portraits from Uaxactun and Tikal. They greatly resemble those on Stela 9 of the Zopilote Group which seems to represent an intermediate style, incorporating both the narrative three-dimensional form of the Late Formative stucco mask and the depiction of individual portraiture in a similar narrative style.

Recently, David Freidel and Linda Schele (1993:206) have discussed the importance of smoke-scrolls in the ritual of the ancient Maya, pointing to their epigraphic use for the word *muyal*, or "cloud," in Classic Period inscriptions (Houston and Stuart 1990; Stone and MacLeod 1991). These clouds, they indicate, convey *ch'ul*, "soul," just as blood does. Moreover, smoke-scrolls are found in association with the glyph *waybil* -possibly referring to important classic structures (Houston and Stuart 1989) and lineage shrines (Grube and Schele 1990). The modern day K'iche' use a derivative of this word (*warabal ja*) in referring to the shrine home

of a dead soul, or "sleeping house" (Freidel and Schele 1993:188).

It is particularly noteworthy that Stela 9 has a carved receptacle at its top. Below this, smoke-scrolls billow upward, seemingly *from* the figure itself. When the iconography and its possible interpretation are considered, we can infer that when Stela 9 was erect, precious substances were periodically burnt within this receptacle, thereby evoking gods of the otherworld and quite possibly the *ch'ul* of the depicted personage.

Other iconographic elements indicating an early date include the presence of a bifurcated loin cloth apron suspended from the figure's belt. Proskouriakoff (1950:103, fig's. 26c,d, 38b) identified a similar style on Stela 10 (Uaxactun) as well as a carved figure at the entrance to a cave at Loltun, Yucatan - both of which, she indicates, are very early monuments.

SUMMARY

Since this paper is intended to be a tentative summary of excavations undertaken during the 1993 season, it is in no way the final product of analysis. In a preliminary sense, however, the iconographic analysis of Stela 9 indicates an early monument with iconographic elements similar to those found elsewhere within early lowland contexts. From a ritual standpoint, the termination and relocation of Stela 9 indicates a cognizant Late Classic endeavour at placating and honouring the elite heritage of Cahal Pech (manifest within Stela 9) through the placement of this monument as a dedicatory item within a refurbished temple structure. This ritual necessitated the "participation" of a large number of individuals. Although we believe the presence of severed body parts represents the unwilling contribution of captives (Cheetham 1994), this remains speculative. Nevertheless, the amount of bone material would appear to indicate so, hinting that an important ceremony involving human sacrifice, not unlike the captive scene depicted on the famous murals from Bonampak (Ruppert *et al.* 1955; Miller 1986), occurred at the Zopilote Group during the culmination of a special event.

In relation to the settlement patterns, the Zopilote platform/sacbe complex demonstrates a sense of functional continuity with the site core. Given the architectural connection between the two - as manifest through the presence of the Martinez *sacbe* - cohesiveness was achieved in an readily observable manner. Once established, this architectural configuration was deeply imbued with, and perhaps a vital part of, the ritual activity of the site. In this sense, we now view the *sacbe* as an integral part of the corpus of architecture aimed at enfranchising and embellishing the power manifest within the elite of Cahal Pech and other sites within the lowland area where similar *sacbeob* are present. The location of these activities approximately 1 kilometre south of the site core indicates an explicit statement and extension of the "ceremonial precinct" of Cahal Pech into an area comprising settlement of a lower order, indicating an inclusive, public forum in which to periodically conduct rituals of homage.

Acknowledgements

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**Sacrifice at the End of the Road:
Preliminary Report of the Osteological Analysis
of Human Remains from the Zopilote Group, Cahal Pech, Belize**

by

David T. Cheetham, Jaime J. Awe and David M. Glassman

Introduction

Excavations on Structure A-1 of the Zopilote Group, the primary pyramidal structure at the terminus of the Martinez *sache*, have recently uncovered two vaulted burial chambers. The first consisted of a vaulted high status tomb placed below the summit/platform of a terminal Early Classic (Tzakol 3) structure. The second, a roughly vaulted "stela chamber," was constructed within the stairway at the base of the subsequent, and final, Late Classic phase of architecture.

Given the relative absence of excavated data relating to the function of ancient Maya *sacheob*, investigations were initiated at the Zopilote Group in 1992 in an effort to elucidate the role of these architectural features, and that of *sache* termini complexes. Along with architectural and artifactual data, we hope that this study of the human remains recovered at Zopilote will also provide clues regarding Classic Period ritual, and its association with the glorification of elite achievement, warfare, sacrifice and the meshing of these human activities with ancient Maya settlement systems. In sum, it is hoped that this and other investigations at the Zopilote Group will not only shed light on the role of these architectural complexes, but also help us to understand the function of *sacheob* which has, heretofore, remained largely enigmatic.

OSTEOLOGICAL REMAINS

As previously stated, the primary purpose of this paper is to provide a preliminary report on the osteological analysis of human remains from the late Early Classic high status burial (Tomb #1) and the Late Classic "stela chamber" (Tomb #2). Comments regarding the politico-religious significance of these features will, therefore, be limited. Those interested in additional data (i.e., ceramics, artifacts etc.) can refer to Cheetham et al. 1993 (for information on Tomb #1) and Cheetham et al. in this volume (for information on the "stela chamber").

Tomb #1

Human remains within Tomb #1 consisted of an extended individual (burial #1) with a secondary cranium (burial #2) located at the feet of the primary interment. The latter had been placed between two broken ceramic vessels (Cheetham et al. 1993). Prior to our excavation, looters had penetrated deep into the center of Structure 1 and their tunnels practically dislodged cut-stones on the southeast corner of the tomb. Although the looters failed to discover the chamber, the destabilization caused by their tunnels, and subsequent gravitational pressure, caused the southeast section of the tomb to partly collapse into one of the tunnels. This

allowed free access to both bats and mice and, consequently, much of the osteological data that otherwise might have been preserved was destroyed.

The location of the skeletal remains of the primary individual (burial #1) indicates that the burial was extended with head to the south. Large concentrations of wood (tentatively identified as cedar) at the north and south extremities of the tomb indicate that this individual may have been lowered into the tomb on a wooden litter, or placed upon a specially built wooden platform. We are inclined to believe it was the latter since concentrations of wood extended beyond the general area of the skeletal remains, and the area on which the ceramic vessels were located. It is even possible that the entire contents of the tomb may have rested upon this wooden platform.

In situ measurements of the skeletal remains of burial #1 indicate that the individual had an approximate height of 165 cm. Although precise sexing could not be achieved (due to poor preservation of the bones), the iconographic representation of a formal militaristic procession of adult males on vessel #2 suggests that the individual was masculine. A stingray-spine located in the pelvic region may, as Michael Coe (1988:27) has recently suggested, also be indicative of an elite male who would be drawing blood from his penis in Xibalba (the Maya Underworld). Several dental inserts (jade), located in the head area, further suggest that this individual was an affluent member of the Cahal Pech community. All remaining postcranial bones suggest that the interment consisted of a young male adult.

As noted above, Burial #2 consisted of a severed cranium between two partial, unslipped ceramic vessels. The placement of the cranium between the vessels resulted with good preservation of the human remains. While location at the foot of the primary burial indicates subordination; we cannot determine whether the decapitated cranium pertains to a captive of war or to a victim from within the Cahal Pech community. The iconographic data described above does, however, suggest the former. As no cervical vertebra were noted with the cranial bones, the head was most likely "prepared" (defleshed) prior to its interment within the tomb. The wear pattern of the dentition, as well as the lack of suture closure, indicate that the skull came from a young adult. In addition, the molar size and mesial-distal breadth of the maxillary central incisor suggests a male skull.

Tomb #2 (the "stela chamber")

Tomb #2, consisted of a roughly vaulted, Late Classic (A.D. 680-880) chamber that was constructed at the base of the terminal phase stairway of Str. 1 (cf. Cheetham et al., this volume). Although we have designated this chamber as tomb #2, precise descriptive terminology is difficult because of the unusual nature of its contents - namely, a carved stela. Since the latter monument represents the primary deposit within the tomb, we shall henceforth refer to this feature as the "stela chamber".

In addition to the broken stela, an interesting collection of osteological material was obtained and analyzed from the tomb. These human remains were concentrated in two particular areas of the chamber: at the top of the stela accompanied by 19 smashed Late Classic vessels, and in front (north) of the base of the monument. Approximately 200 small, hemispherical unslipped bowls (many of which were inverted "rim to rim") were also placed around the stela

along its entire height. This was achieved by the gradual filling (with dirt) of the chamber at the same time that the vessels were being deposited. Of particular interest were the remains of medial and distal phalanges (finger-tips) that were recovered within intact (15% of total) "finger bowls." The majority of bowls, however, were discovered in a broken state, thus it is possible that they too may have originally contained phalanges. Indeed, the discovery of 188 phalanges in the packed earth within the tomb certainly supports this interpretation.

The "Finger Bowls"

If all the phalanges recovered in the tomb are combined (i.e., within finger bowls and in the matrix) they total 206 medial and distal phalanges. Assuming that all phalanges from each contributing individual was cut off for inclusion in the chamber, the total number of phalanges recovered suggests that at least 20-21 individuals (MNI) were used for this ritual. We must take into account, however, that many (if not the majority) of phalanges may have deteriorated due to soil acidity and time. This possibility is suggested by the fact that in many instances recovered bone proved too deteriorated to identify.

As indicated above, the minimum number of individuals also assumes that every phalange from each contributor was used. If, for example, the ritual involved a single digit from each participant, and if each digit was placed within inverted bowls, the number of individuals involved would increase substantially (N=100). Since there is not a great deal of size variance between the recovered phalanges, we are inclined to believe that the fourth, and perhaps third, finger(s) (medial and distal elements) comprise the majority of the phalanges. Once again this possibility would increase the amount of participants involved (N=25). The osteological analysis also noted that the secondary centers of the phalanges (epiphysis) were fused, indicating that the bones derived from adult individuals.

Upper Burial (bone concentration)

After the stela had been completely encased within packed earth interspersed with the "finger bowls", it appears that two or more children were sacrificed and their disarticulated remains deposited at the top of the chamber. Along with these human remains were 19 Late Classic vessels, one intact obsidian blade, 5 obsidian blade fragments, 3 lid-shaped pendants, 1 small piece of chert and 1 shell.

The analysis and identification of bone material from the upper chamber (Table 1) indicates an age of 1-2 years based upon dental development data. This determination is corroborated with the identification of sub-adult cranial and postcranial remains.

CRANIAL REMAINS

- several cranial fragments (sub-adult)
- 4 petrous portions of temporal bone
- 2 rt. maxillary fragments (sub-adult)
- 1 lf. maxillary fragments (sub adult)
- 2 lf. mandibular fragments (sub adult)
- 2 rt. mandibular fragments (sub-adult)

DENTITION

- 10 deciduous incisors
- 4 deciduous canines
- 7 deciduous 1st molars
- 6 deciduous 2nd molars
- 4 unerupted 1st permanent molars
- 1 incisor or canine (deciduous)
- 1 crown of deciduous maxillary central incisor
- 1 unerupted 1st permanent molar w/ marked linear hypoplasia

POSTCRANIAL REMAINS

- fragments of sub-adult vertebra, ribs & misc. long bones
- rib, vertebra and long bone fragments (sub-adult)
- 3 phalanges, no which of epiphyses
- fragment of sub-adult left femur (diaphyses only)
- fragmentary vertebra, ribs & long bones (sub adult)

Table 1: Identified osteological remains from Upper Burial

Unfortunately, we were unable to determine the precise number of infants within the burial, but the minimum number of individuals is at least two. Sub-adult cranial fragments, located underneath and adjacent to four large ceramic sherds along the west wall of the chamber, nevertheless, suggest that up to four infants may have been involved. Given the disarticulated, commingled nature of the burial, it remains possible that many body parts would have not been interred, or that due to poor preservation (as a result of proximity to the surface) most of the delicate bone material may have been destroyed.

Lower Burial (bone concentration)

The concentration of bone in what is herein referred to as the "lower burial" consists of 36 permanent mandibular incisors placed at the north base (in front) of the stela. These remains were discovered along with four obsidian blade fragments, one whole obsidian blade (broken in three pieces) and 3 shells. Four fragmentary roots (most likely also from mandibular incisors) were also recovered from this area.

Once again we cannot determine the exact number of individuals represented by the incisors, but do note that the MNI (minimum number of individuals) would equal at least nine.

SUMMARY

Although the analyses of human remains from the Zopilote Group have not been fully completed, they provide intriguing information regarding Classic Period elite rituals involving high status burials and human sacrifice. In particular, the deposition of the "finger bowls," "incisors" and child sacrifice along with the stela either indicate that the "termination" of this monument marked an important politico-religious event, or that the stela may have been associated with a powerful individual in the Cahal Pech community.

While it is not the purpose of this paper to comment on the ritual nature of the internments thus discovered, (see Cheetham et al. 1993; Cheetham 1994; Cheetham et al., this volume for description), the Early Classic tomb, the late Classic "stela chamber" with its accompanying sacrificial burials, and the sacbe link between the Zopilote Group and the Cahal Pech site core certainly suggest that elite ritual activity was conducted at this sacbe termini complex.

Acknowledgements

We would like to thank Ran Ju Song (B.V.A.R. staff) who assisted in the initial examination of the human remains from the "stela chamber." The support and consent of Alan Moore and John Morris (Belize Dept. of Archaeology) is also gratefully noted.

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AN EXAMINATION OF STRUCTURE 4, ZOPILOTE GROUP, CAHAL PECH

BY

JOSALYN FERGUSON, DAVID CHEETHAM & DAVID LEE

INTRODUCTION

Excavations during the 1993 field season at Cahal Pech included the investigation of several structures at the peripheral Zopilote Group. One of these mounds, Structure 4, was excavated in order to determine its function, and to enhance our present knowledge of household and settlement archaeology at Cahal Pech. This paper provides a preliminary report on the results of our investigations on Structure 4.

SETTING

The Zopilote Group is located approximately 1 kilometres south of the core area of Cahal Pech, in the Cayo District of Belize. Zopilote (vulture in Spanish) was located in the 1992 summer field season after some local land owners alerted members of the Belize Valley Archaeological Reconnaissance Project of its existence (Cheetham et al. 1992:2). The group consists of a total of five mound-structures, a sacbe that extends northward to the site core, two chultuns east of the group, and what were initially thought to be a series of reservoirs adjacent to the platform on which Str. 1 is located (Cheetham et al. 1992:3)(See figure 1). All of the structures at Zopilote exhibit evidence of having been badly looted.

Chultuns are noted by William Bullard (1960:362) to occur at Maya sites in the Peten around house ruins, as well as ceremonial centres. Often chultuns occur within close proximity to one another, as is the case with the chultuns at Zopilote, which are nearest to Structure's 4 and 5. Because the principle use of chultuns was likely for storage, it has been suggested that their function is household related. There continues to be, however, some debate over the true function of these ancient features.

Structure 1 is the largest structure in the group, reaching a height of 11.5 meters (Cheetham et al. 1992:9). The structure faces northwards and is located on the southern end of a fairly large artificial platform, which has two levels, the southern level being 50 centimetres higher than the northern level (Cheetham et al. 1992:3). Adjacent to, and to the east of, Str. 1 and the platform are the three depressions originally thought to have been reservoirs. Excavations of these features, however, uncovered virtually no ceramic materials, and it has since been suggested that these depressions are the result of extensive quarrying (Cheetham et al. 1992:8-9), perhaps for limestone or fill.

In the Peten, two types of quarries have been noted, the first are vertical limestone "faces", used for extracting cut stones, and the second for extracting *sascab*, a material used for making mortar (Bullard 1960:363). Quarries sometimes occur in close proximity to residential areas, but more frequently occur near ceremonial centres (Bullard 1960:363).

Zopilote Group, Cahal Pech Cayo District, Belize

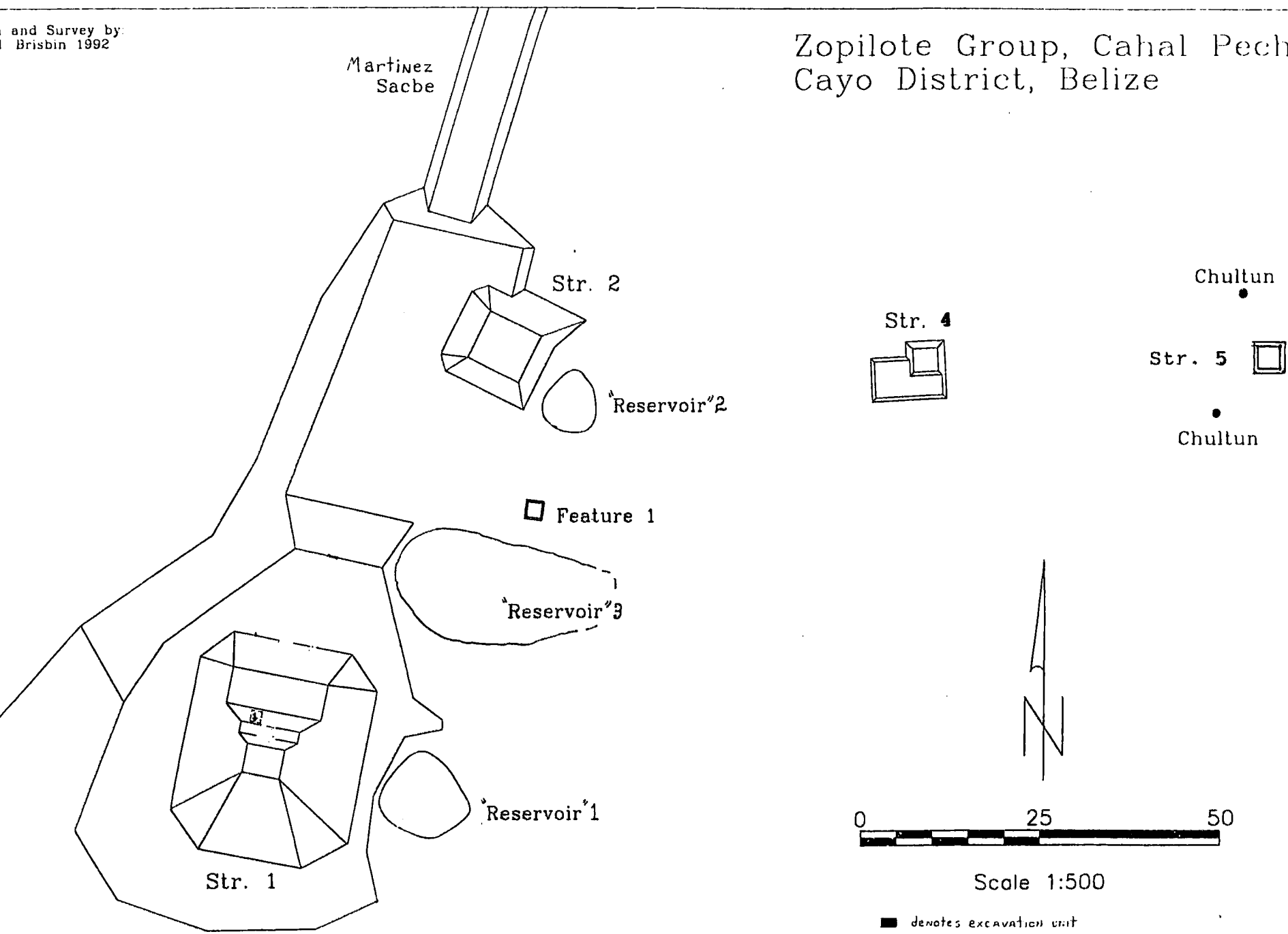


Fig. 1: Map of Zopilote Group, Cahal Pech, Belize

Structure 2 shows the most extreme looting damage, and the mound has virtually been gutted. The mound is four meters high, and apparently was accessed via a western entrance (Cheetham et al. 1992:18). This is of particular interest as the Martinez sacbe runs from the edge of the platform, directly adjacent to Structure 2 on its western side.

Structure 3 is 3.5 meters high and is located at the end of the Martinez Sacbe, north of the main group (Cheetham 1992:18). Besides being looted, this structure was also partly destroyed by the construction of a modern road. Presently this structure has not been tested.

Structure 5 is located approximately 100 meters east of the main platform. The mound is relatively small, measuring only 25 centimetres in height. An assortment of ceramic sherds were found in association with this mound by David Cheetham, who notes that they mostly date to the Late Classic period (1992:19). Although test pits or more extensive excavations have yet to be initiated at this structure, one can suggest that Structure 5 was likely a household structure as suggested by its size, ceramic associations, proximity to chultuns, and its offset nature from the main Plaza group.

STRUCTURE 4

Structure 4 is located 40 meters east of the platform group on a small limestone ridge. The mound is 1.75 meters high, and is the second smallest structure at Zopilote. Unfortunately, a rather extensive looters trench has disturbed much of the structure's interior, and the placement of the backdirt from the trench has served to distort the true shape and size of the mound. Because horizontal excavations were not conducted in 1993, size measurements were taken from the interpreted edges of the mound. From north to south, the mound measured 9.47 meters, and from east to west, 11.79 meters.

The somewhat offset nature of structure 4 from the main plaza and its small size were the primary reasons for assuming a household function of this structure. This, along with the fact that it is one of only two such structures at Zopilote and in its surrounding area prompted us to excavate it this past field season (1993).

Looters Trench

Our initial investigation of the mound involved the cleaning and examination of the looter's trench. The looters had entered the mound along its southern edge, and then excavated into the interior of the mound. Once they reached the back retaining wall they then began digging towards the east. While the looters did extensive damage, the trench was helpful in that it gave us an idea of the layout of the structure and what to expect in our excavations. The trench cut into the centre of the structure, revealing a series of extremely well preserved, superimposed plaster floors, most of which had no fill between them. There were also the remains of what we interpreted to be the back wall of the structure. The north-west corner of the trench revealed two superimposed cut stones which seemed to run on an east-west axis. We could see that behind these stones the wall extended westerly into the mound. Of particular interest was the discovery that these stones had been plastered on their interior side. Unfortunately the wall was broken by the looters as a gap appears along where the wall should continue. However, adjacent to these cut stones at the eastern cut of the looter's trench are

some more cut stones which run on a north-south axis, but which likely meet up with the back retaining wall. This apparent second "wall" however, does not extend far as it is merely two cut stones (approximately 80 centimetres) long. Both of these sections of cut stone were set on the same floor, and had a later floor abutting them until. While cleaning up and examining the looter's trench we came across minimal amounts of pottery, and few lithic artifacts. Those ceramic fragments we did find seemed to be predominately Late Classic in date.

Excavation

Because of time constraints, we were unable to initiate a horizontal excavation of Structure 4. However, in retrospect it would seem that this method may have been particularly useful for determining the function of this peculiar mound.

Unit 1

On the basis of the exposed interior architecture, we decided to set up an excavation unit on the eastern side of the structure, next to the break in the north-south wall. By putting a large unit (4m X 1.5m) on a virtually 90 degree angle from this wall, we expected to be able to locate the structures entrance way, in addition to being able to sample a section of the patio area.

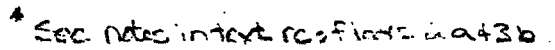
After beginning our excavations we came across a lot of well cut, but dislodged stones. Amongst the cut stones was a fragment of a metate (special find #SF-S4-unit 1-2). Underneath the cut stones we eventually discovered what appeared to be an in situ wall running diagonally across the middle section of unit 1. This wall was sitting on a poorly preserved floor, in the first level below the humus level. Since the location of the wall indicated that the doorway into the structure was positioned elsewhere, a decision was made to place another unit that would transect the first one, and hopefully expose this feature (unit 3). A second unit (Unit 2) was placed to the south of unit 1 in order to expose a section of the patio area.

Unit 2

The excavation of unit 2 revealed a series of six floors. Floors 1 through 4 had dirt and stone fill between them, while the last two floors (5 and 6) were successively plastered. All but the last two floors were in rather poor shape, which suggested to us that perhaps they were open to the elements while in use, as portions of a patio might be.

One aspect of unit 2 that was interesting was the discovery of an obviously intentionally placed line of uncut stones across a portion of the unit. The stones were not very big, and did not abut each other, but rather seemed to be sectioning off an area. Another series of uncut stones placed along the same line as the previous ones were recorded on floor 3. This "wall", also formed some sort of boundary for the next three levels as well. While floors 4 and 5 abutted the "wall", the "wall" had originally been placed on floor 6, with the addition of a second wall abutting the first one. What were the Maya demarcating with these "walls"? Why did they choose such small stones to do it with? As Tourtellot (1983:45) notes, "patio floors are often defined by low walls extending rectilinearly between circumambient structures. Patios are clearly an integral and vital part of households, and not just empty spaces". So it

West Profile of Unit 3



would appear that what we have here is a boundary of the patio.

Unit 3

As previously indicated, unit 3 transects unit 1 at its northern region, and transcends the mound from the looters trench down 3 meters, and across 1.5 meters. The datums for this unit were placed outside the unit at a distance of 60 centimetres. The excavation of this unit revealed the structure's retaining wall, a stairway, and a series of at least six floors in the interior of the structure.

After clearing away a great deal of the looter's backfill and the humus from unit 3, we discovered nearly entirely in situ, the stairway into the structure. This suggested that the structure faced southwards towards Structure 1. A step however appears to be missing from below the large central step. Lodged beneath this large step we found half of a grooved stone (special find #SF-S4-unit3-1) made of granite and about the size of a fist. Such stones are suspected to have been used as weights for fishing nets. Seven grooved stones from nearby Barton Ramie and Baking Pot were found by Willey et al. (1965:466), all of which came from house-mound refuse, and which were from contexts predominantly Late Classic in date. At the foot of the stairs, two floors were found. In the fill between these floors was a damaged bifacial chopper (special find #SF-S4-unit3-2) was discovered. Similar choppers are reported from house-mounds in the Belize Valley, commonly in the fill between floors, or on the surface of floors (Willey et al. 1965:426). Below the second floor at the base of the stairs was bedrock.

The interior of Structure 4 was on the northern side of the retaining wall, and took up approximately one meter of the unit. In the wall profile of unit 3 (figure 2), only floors 3, 5 and 6 actually abut the exterior architecture. This, however, is likely due to poor preservation. At the nearby site of Barton Ramie, "plastered walls or plaster superstructural features are relatively rare" (Willey et al. 1965:521) in household structures.

One of the most startling aspects of structure 4 was the discovery of fragments of painted floor from floors 3 and 4. Linda Schele (1985:32) has noted that the interiors of some buildings were often plastered and painted and that red pigment may have been particularly used because red was symbolic of the east and rebirth (Schele 1985:37-42)

Artifacts

The most common artifacts found in Structure 4 were potsherds and a variety of coloured chert flakes and cores.

The following is a list of special finds from Structure 4.

<u>Special Find #</u>	<u>Artifact</u>	<u>Excavation Level</u>
SF-S4-unit1-1	Obsidian fragment	humus
SF-S4-unit1-2	Metate fragment	humus
SF-S4-unit2-1	Conch shell fragment	level 1

SF-S4-unit2-2	Conch shell fragment	level 1
SF-S4-unit2-3	Bone(likely intrusive)	level 2
SF-S4-unit3-1	Grooved stone fragment	humus
SF-S4-unit3-2	Bifacial chopper	level 1
SF-S4-unit3-3	Painted floor fragments	level 3
SF-S4-unit3-4	Painted floor fragments	level 4
SF-S4-unit3-5	ceramic whistle chamber	level 5

There were no complete ceramic artifacts recovered in excavation, only fragments, the majority of which were no larger than a 2 cm. sq. Identification of many of these fragments was therefore difficult. In total, 1,795 sherds were recovered, 1,456 of which were undiagnostic. While there are a few sherds dating to the Jenny Creek Phase (Middle Preclassic 600-300 B.C.), there are no Late Preclassic, Proto-Classic or Early Classic ceramics in the sample. The majority of sherds from Structure 4 come from the Late Classic Period, predominantly from the Spanish Lookout ceramic complex. Thus, it would seem that Structure 4 is essentially a Late Classic construction. This correlates with the data retrieved from the other excavated structures at Zopilote, as all but Structure 1 appear to have been erected during the Late Classic, as evidenced by the ceramic data (Cheetham et al. 1992).

Table 1 details the results of our analysis of the ceramic content of Structure 4. James Gifford's "Prehistoric Pottery Analysis and the Ceramics of Barton Ramie in the Belize Valley" (1976) was used as a reference in establishing ceramic types for Structure 4's ceramic assemblage. The three most common ceramic types found in Structure 4 are Belize Red (an ash tempered ware that at Barton Ramie, and elsewhere in the lowlands, seems to have been made in mass production (Gifford 1976:226)), Cayo unslipped and Alexanders unslipped. Belize Red ceramics are known from the entire Spanish Lookout phase (Gifford 1976:226), and Cayo and Alexanders unslipped are diagnostic markers of the Late Classic Period.

CONCLUSION

Due to the limited nature of the excavations on Str. 4 we were unable to accurately determine the function of the structure. A number of architectural features, however, leads us to question whether Str. 4 had a domestic function. Some of these features include the well cut and dressed limestone walls, the painted floors and walls of the building, the labour investment manifested by these materials, and the relationship of the mound to the large sacbe termini complex. These features are generally associated with more public and/or ceremonial architecture, but until further excavations are conducted on the mound, the functional nature of the structure will remain somewhat enigmatic.

Finally, it is also important to note that one of the problems with the identification of mounds such as Structure 4, is the fact that because they look like house-mounds, they get classified as such until they are excavated. As Gordon Willey et al. (1965:15) remarked, "what else could they be"? Such a stance has likely caused many such structures to be overlooked, and it does not aid in determining the true function of these structures. This problem leads to another, in that the identification of such structures as houses, in turn serves to skew population estimates of sites and their sustaining areas. Hopefully, future work in the Belize Valley will continue to address these problems.

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A SLICE THROUGH TIME: 1993 INVESTIGATIONS AT THE CAS PEK GROUP, CAHAL PECH, BELIZE.

By

Kay S. Sunahara & Jaime J. Awe

INTRODUCTION

The settlement cluster known as the Cas Pek Group is located just west of the Cahal Pech site core. Excavations were first conducted at Cas Pek in 1991 (Awe et al. 1992) and they revealed an impressive chronological sequence spanning from the Middle Preclassic to the terminal-Late Classic. A second season of excavations, in 1992, verified this long history of occupation (Cheetam et al 1993). Given the B.V.A.R. Project's research interest in examining Formative period developments at Cahal Pech, and the integrity of the stratified deposits at this peripheral settlement, a third season of investigation was conducted at Cas Pek in 1993.

Investigations this past year focused on Structure 1 (See Figure 1). The latter is a large platform located at the center of the Cas Pek settlement cluster (Awe et al. 1992). During land development and road construction (for urban expansion) in 1991, a bulldozer cut a large portion off the northern side of the platform, exposing a clear stratigraphic section (approximately 3 m) of the mound. The 1993 investigations consisted of one operation that worked its way from the top of the platform, down the face of the bulldozer cut, to the surface of the newly created road. A second unit was set into the surface of the bulldozed road, 1.5 m north of the first unit. This approach enabled us to excavate both units simultaneously, and allowed us to sample the full sequence of occupation, from bedrock to platform summit, within a four week period.

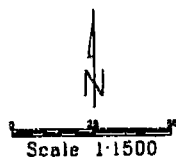
The primary goals of the excavations were to salvage as much information from this threatened platform, and to increase the sample of Formative period data before the site is lost to modern development. What follows is a brief summary of the excavations and a preliminary discussion of the information retrieved.

UNIT 1, LEVEL 1.

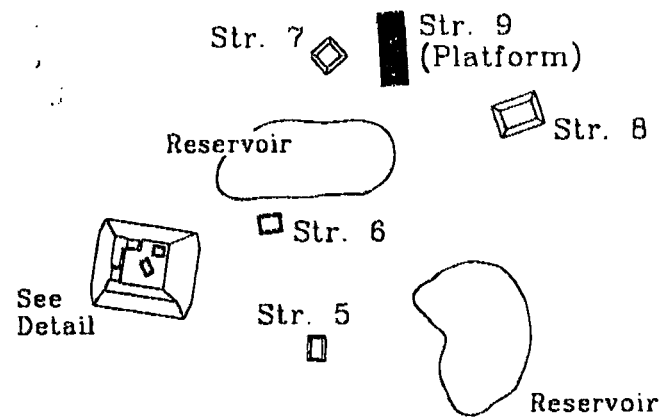
Unit 1 presented an unique excavation opportunity because the stratigraphy of the unit was already evident in the bulldozer cut. The operation exposed a total of eight construction (architectural) phases. Within the topmost level there was a cut stone wall (running north-south along the western edge of the 2 m by 1.5 m unit) pertaining to a Late Classic building platform (See Figure 2). It is suspected that the wall of the late Classic platform may have been three, or more, courses high, but only two courses were recorded in situ (See Figure 3).

Dating of the above feature was determined by ceramic comparisons with the

Cas Pek Group, Cahal Pech
Cayo District, Belize

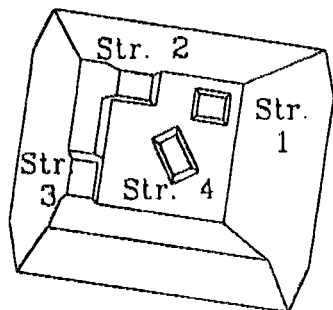


Chultun • Str. 10



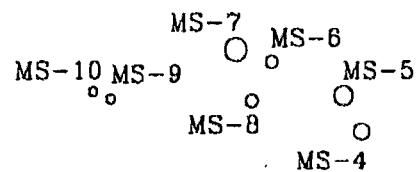
Plan and Survey by:
S. M. Brislin 1992

Detail



Scale 1:500

Str. 12



Str. 11

MS-2 MS-1
MS-3

Reservoir

Belize Valley Archaeological Reconnaissance 1992

Fig. 1: Map of Cas Pek Group, Cahal Pech, Belize

Figure 2

Cut Stone Wall, Level 1, Unit 1, Structure 1.
Cas Pek Group, Cahal Pech, Cayo, Belize.
B.V.A.R. Project 1993.

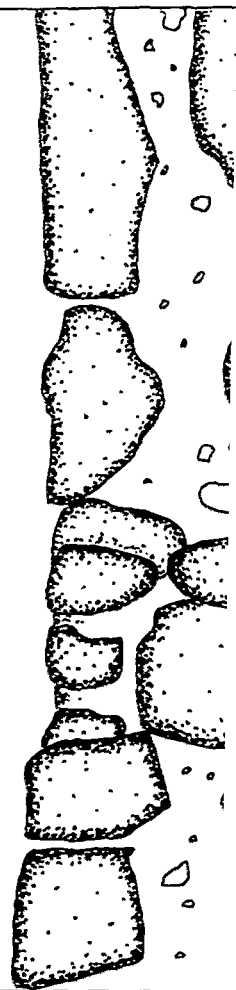
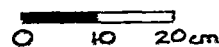
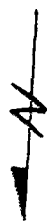
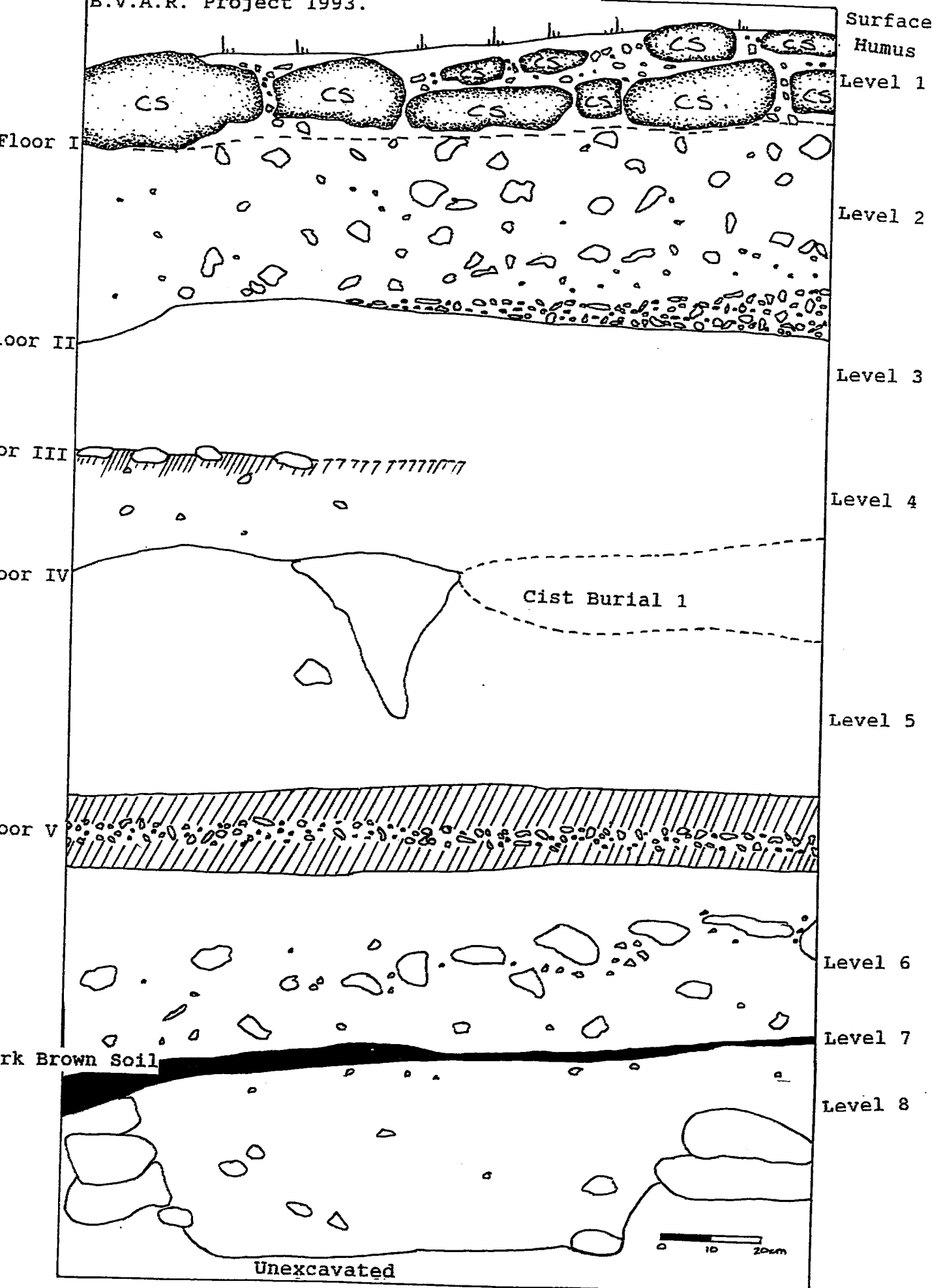


Figure 3 West wall profile, Unit, Structure 1.
 Cas Pek Group, Cahal Pech, Cayo, Belize.
 B.V.A.R. Project 1993.



typological sequence established by Gifford (1976) at Barton Ramie. Typical Mount Maloney Black, Garbutt Creek Red, and Belize Red sherds characterized this upper level. Some Preclassic pottery were also retrieved in this upper strata, but these consisted primarily of small fragments of Savanna Orange.

Other associated artifacts of note were two obsidian blade fragments and a broken slate pendant. The first obsidian artifact was a medial section of a blade, 1.4 cm long. The second fragment was a proximal section 1.8 cm in length. Although only one half of the slate pendant was found it was possible to discern that it originally had a bi-conically drilled hole (Figure 4).

UNIT 1, LEVEL 2.

Level 2 averaged 37 cm in thickness and was composed of densely packed, ballast-size, limestone within a marl matrix. This material represented construction fill that had been deposited directly above Floor II.

UNIT 1, BURIAL 1 LEVEL 3.

During the clearing of Floor III it was discovered that the floor did not continue in the northeast quadrant. A roughly rectangular area filled with core rubble appears to have been excavated by the Maya through floors III and IV in order to construct a cist burial (Burial 1). Since the burial had been partially destroyed by the bulldozer, erosion, and subsequent looting activity, only the upper half of the interred individual was recovered. The cranium was also badly crushed but the size of an intact mastoid process allowed a tentative identification of the individual as male. The head was oriented to the south, as is typical for the Belize Valley, and the skeleton was generally poorly preserved.

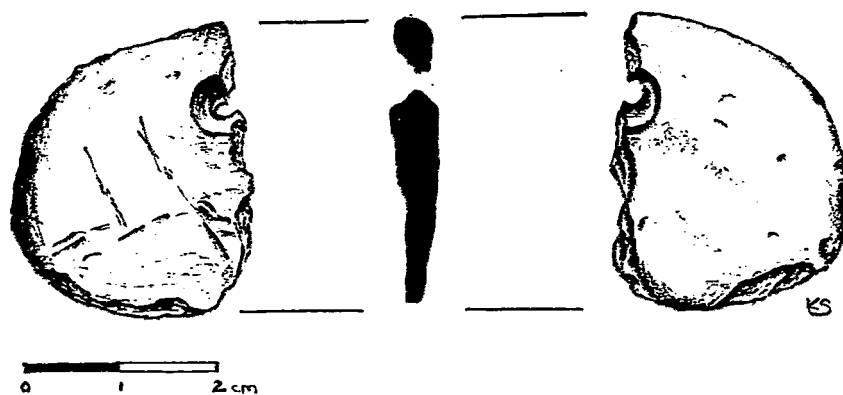
One spondylus shell ornament was included as a grave offering. The ornament was in the form of a face that can be described as being Olmec-like in appearance (Figure 5). The ornament was drilled both vertically and horizontally, indicating that it could have been attached to a garment.

UNIT 1, BURIAL 2, LEVEL 3.

A second cyst burial, containing a single individual with similar orientation to Burial 1, was uncovered in the eastern portion of the unit. The skeletal remains in Burial 2 were even more poorly preserved than Burial 1. The head orientation was, in fact, only determined by the relative location of cranial bone fragments to the remnants of the post-cranial skeleton. Like Burial 1, the lower portion of Burial 2 had also been destroyed by bulldozing activity. Cultural material within the cist included one jade bead and a pot stand. The bead was cylindrical in shape, 3 cm long and 0.7 cm in diameter (Figure 5). It was discovered in the upper left chest region of the body. The pot stand was located to the left of the individual's head. Typologically, the pot stand appears to be related to Mollejon Plain: Mollejon Variety material which dates to the Proto-Classic period, or Floral Park Ceramic Sphere at Barton Ramie (Gifford 1976: 152-153).

Cas Pek Group, Cahal Pech, Cayo, Belize.
B.V.A.R. Project 1993.

Figure 4



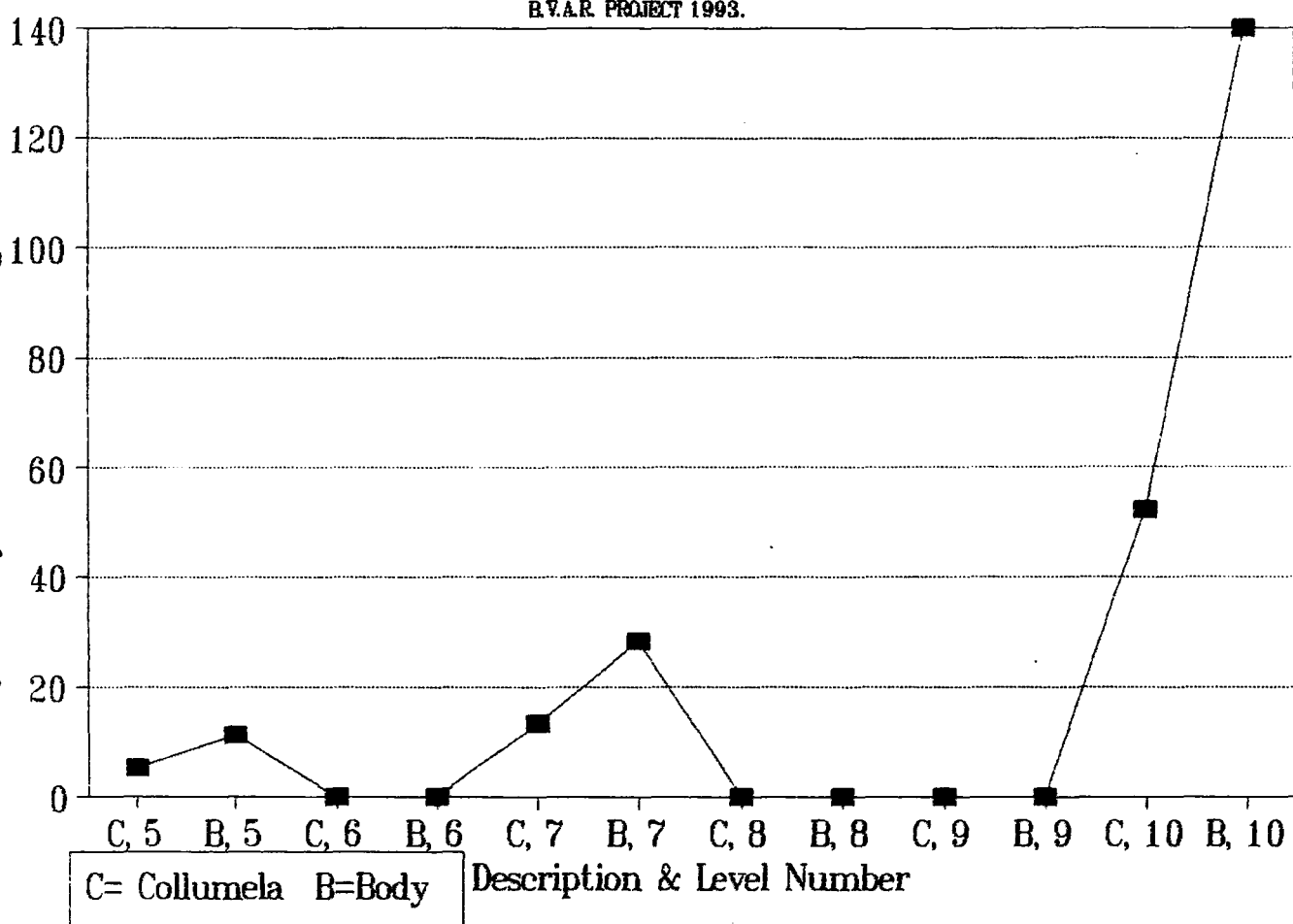
Slate Pendant, Level 1, Unit 1, Structure 1.

Figure 6

CONCH SHELL INVENTORY

CAS PEK GROUP, CAHAL PECH, CAYO, BELIZE

B.V.A.R. PROJECT 1993.



Mixed in the soil matrix of the burial were numerous charcoal flecks. The charcoal particle size ranged from fragments as large as 1 cm across to dust-like particles. Several samples were collected and are currently undergoing analysis.

UNIT 1, LEVEL 4.

Due to the intrusion of Burials 1 and 2, there was very little of Level 4 to excavate. What was left was composed of highly compacted ballast and marl. The only artifacts recovered in this undisturbed matrix were a handful of small pot sherds dating to the Early Classic and Proto-Classic period.

UNIT 1, LEVEL 5.

Below the burials, Level 5 consisted of a moist grey marl. Artifacts recovered within this level included a few pot sherds and a number of lithics. Faunal material consisted of small jute shells (*Pachychilus*), fresh water bivalves (*Nephronais ortmanni*), and the collumela tips of marine conch shell *Strombus*. (For a conch shell inventory see Figure 6).

Along with several chert flakes and debitage, we recovered one obsidian blade fragment (2.3 cm by 1.2 cm), and a total of 11 chert drills. The latter range from 3.0 cm to 1.6 cm in length (See Figure 7 for a chert drill inventory). Following their appearance in Level 5, these chert drill bits henceforth (to the earliest occupation level) remain a consistent part of the Cas Pek lithic assemblage.

Floor 5 was located at an average depth of 150 cm below surface. The floor was remarkable for both its level surface (its greatest variance was a difference of 6 cm from the northwest to southeast corners of the unit), and thickness, (15 cm to 17 cm). The uncommonly thick floor appears to have been the result of two replastering episodes directly over the surface of the original platform floor. Comparative dating of ceramics indicates that the sequential surfaces of Floor V were all constructed during the Late Preclassic period. This reconfirms the results of both previous excavations (Awe et al 1991, Cheetam et al 1992) on Str. 1. A horizontal measurement of Floor 5 along the profile exposed by the bulldozer indicates that this surface would have covered almost the entire breadth of the platform, approximately 28 m. The quality of preservation of the floor is also consistent throughout this 28 m span and suggests a substantial undertaking in terms of organizational, labour and material resources.

UNIT 1, LEVEL 6.

Beneath Floor V (Level 6) several classes of artifactual material were recovered. The ceramics of this stratigraphically sealed level firmly date to the Late Preclassic period. Prominent among the cultural material were a large quantity of lithic and faunal remains. Fresh water bivalves and jute were all present; however, conch shell fragments were most conspicuous. Four drilled conch shell beads were also recovered. Three of the beads were disk-like in shape and slightly convex. The fourth bead was rounder and more cylindrical. In Level 6, these drilled beads were all found in stratigraphic association with 14 chert drill bits.

Figure 7

CHERT "DRILL" INVENTORY
CAS PEK GROUP, CAHAL PECH, CAYO, BELIZE
B.V.A.R. PROJECT 1993.

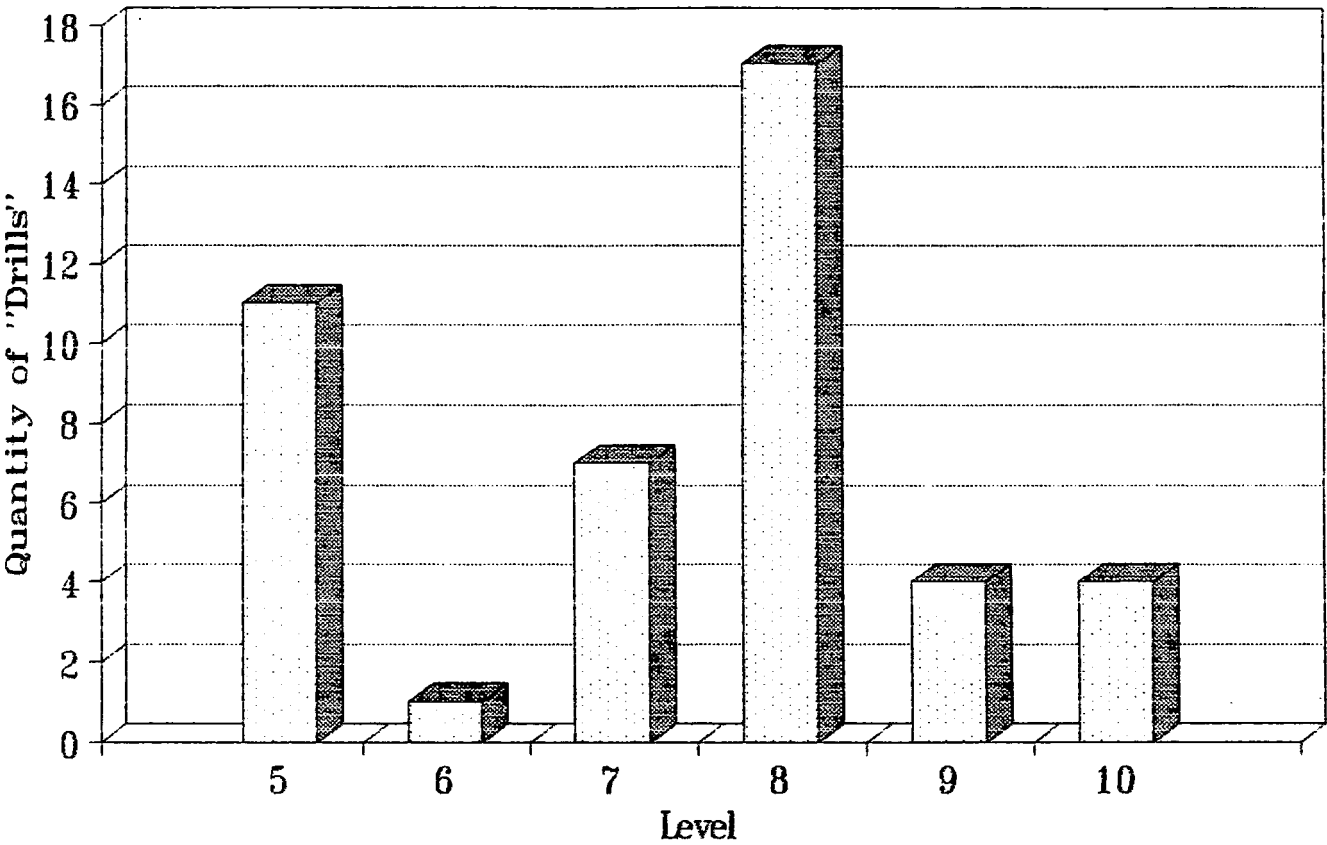


Figure 8
Floor VI, Level 8, Unit 1, Structure 1, Cas Pek Group, Cahal
Pech, Cayo, Belize. B.V.A.R. Project 1993.

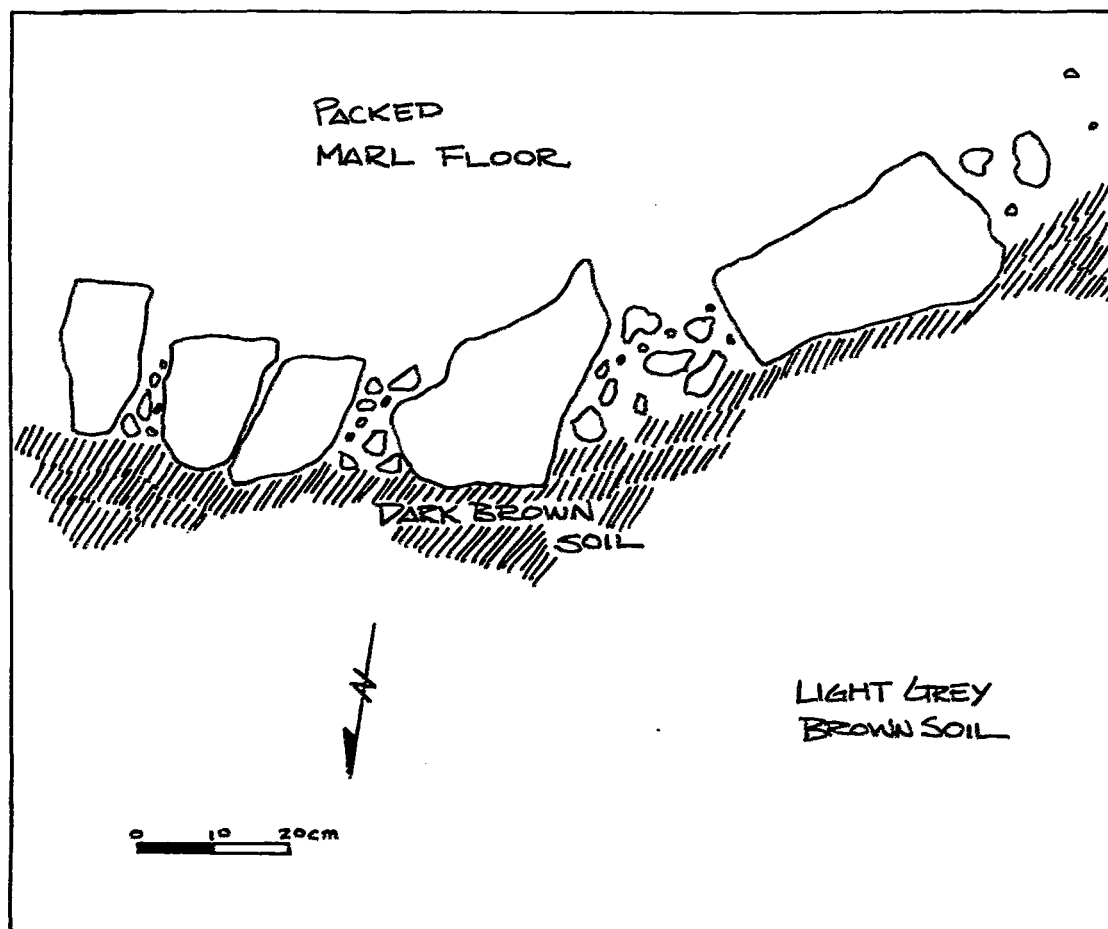
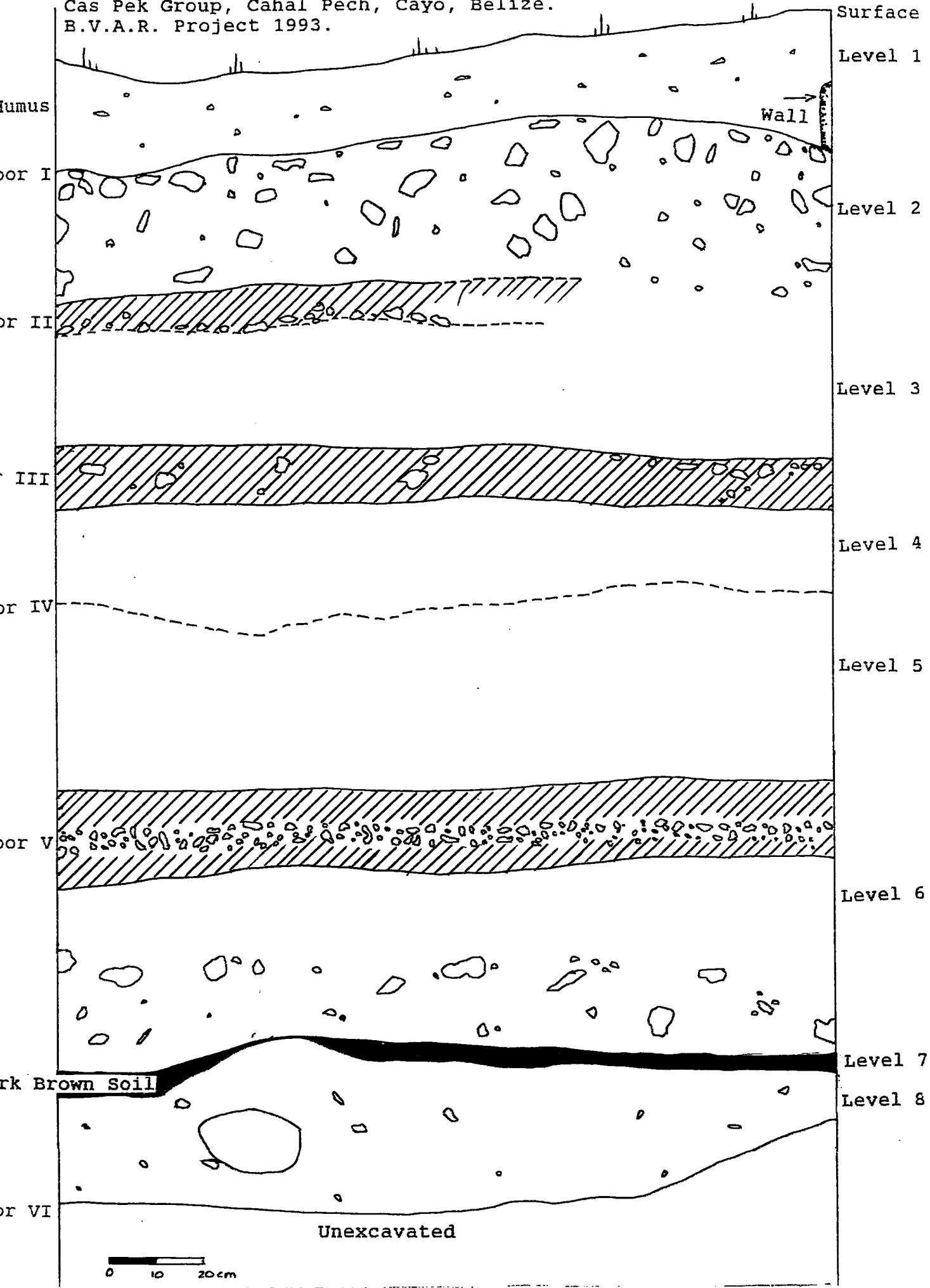


Figure 9 South Wall Profile, Unit 1, Structure 1,
 Cas Pek Group, Cahal Pech, Cayo, Belize.
 B.V.A.R. Project 1993.



A more enigmatic find was that of two femurs. There were no signs of a formal burial, nor were there even the faintest traces of additional skeletal material. The femurs were both partially (20 cm in length) preserved and appear to be matching left and right leg elements of an individual.

UNIT 1, LEVEL 7.

This level was characterized by a very dark brown-black soil rich in faunal remains. As in the previous level, drilled conch shell beads (4) were again found along with several chert drill bits (18), demonstrating an interesting association between these two types of artifacts.

UNIT 1, LEVEL 8.

Level 8 yielded fewer artifacts than the previous strata and pot sherds were sparse and smaller in size. Several more chert drills were also recovered along with worked and unworked conch shell. Across the middle of the unit, and with an east-west orientation, was an arrangement of roughly shaped limestone blocks that apparently served as a boundary between grey brown soil to the north and white packed marl to the south (See Figure 8). The position of the limestone blocks is reminiscent of the retaining walls of apsidal and circular platforms identified by Awe (1992) for the Middle Formative period at Cahal Pech. Floor VI was a couple of centimetres above the surface of the road cut. (For a south wall profile of Unit 1 see Figure 9).

UNIT 2, LEVEL 9.

This second unit was started at the road level where excavations of Unit 1 ended. All ceramics recovered in Level 9 were of Formative period wares. Jocote orange-brown, Pital cream, Chunhinta black, and Reforma incised were well represented in the assemblage. Lithic artifacts included two obsidian blades (the longest measuring 3.2 cm, the shortest 0.8 cm.) and 11 chert drills. Conch shell artifacts also occur, including one disk shaped drilled bead with a circumference of 1.5 cm.

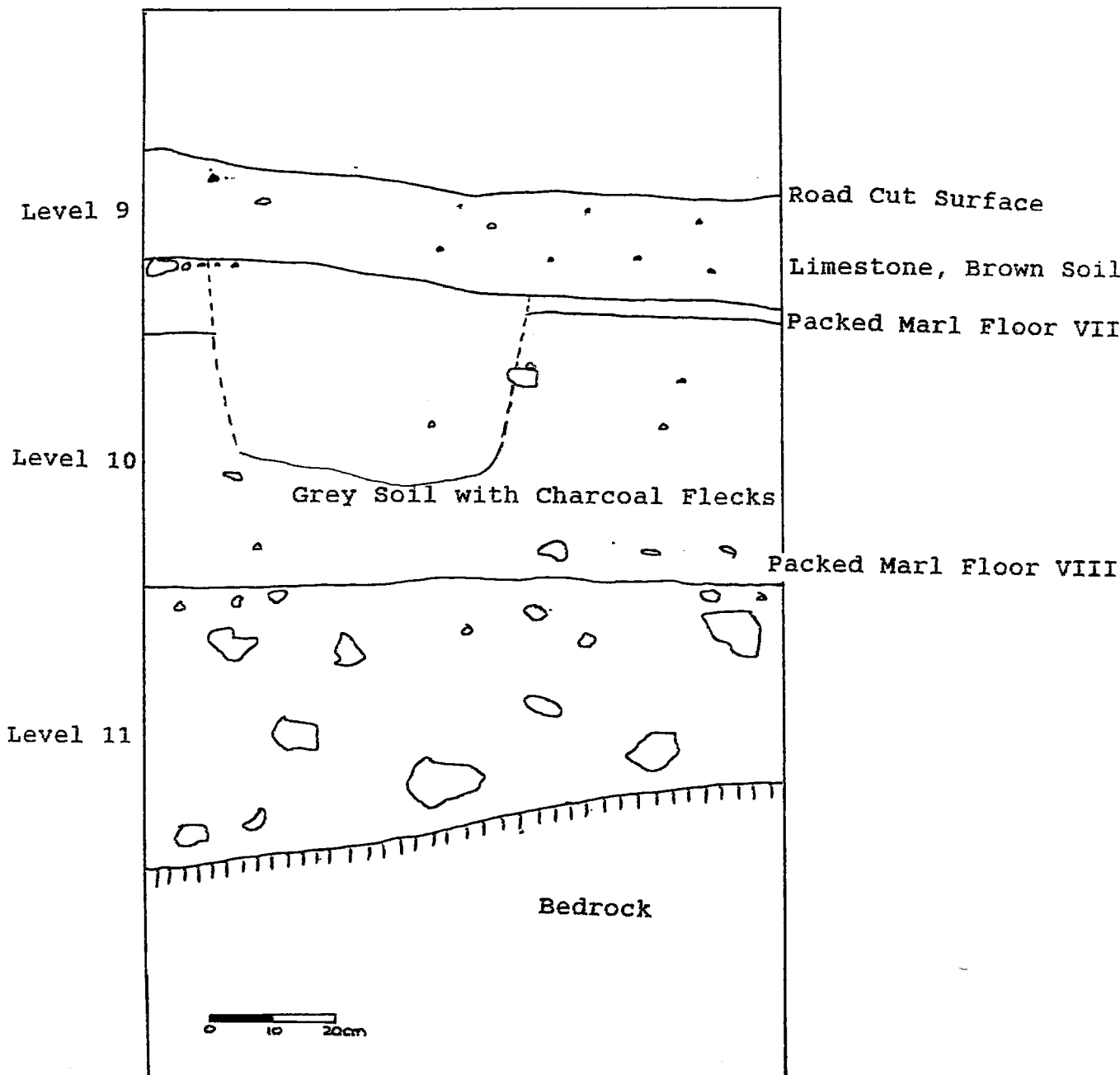
Associated with Level 9 was a hard packed marl floor. On the eastern side of the unit, and encircled by Floor VII, was a possible hearth measuring 49 cm across at its fullest excavated diameter (See Figure 10 & 11). Unfortunately, the extent of the 1 x 1 m unit did not permit the complete excavation of the feature. The hearth consisted of grey-green coloured ash, speckled with flecks of black charcoal. Samples of the latter were collected for analyses but were not yet completed at the writing of this report.

UNIT 2, LEVEL 10

In Level 10, several limestone blocks were found positioned in a north-south alignment and in association with a packed marl floor (Floor VIII, [See Figure 12 & 13]). To the extreme western edge of the unit, immediately adjacent to the limestone blocks, a midden containing a dense concentration of pot sherds and charcoal flecks was identified. A post hole, 16 cm in diameter, was also uncovered to the outside of the possible apsidal or circular wall.

Figure 10

East Wall Profile, Unit 2, Structure 1, Road Cut.
Cas Pek Group, Cahal Pech, Cayo, Belize.
B.V.A.R. Project 1993.



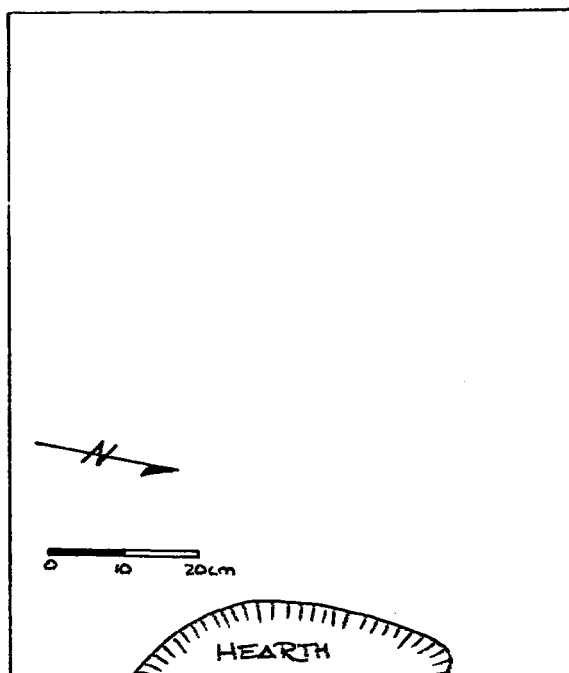


Figure 11

Top Plan, Level 9, Floor VII,
Unit 2, Structure 1.

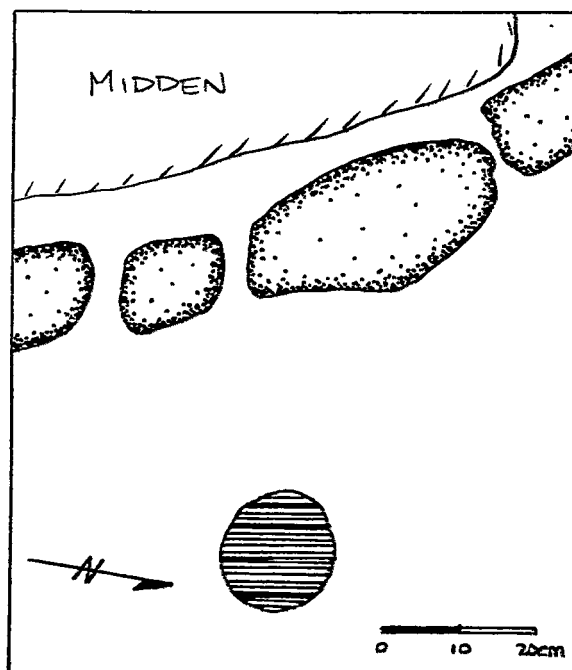
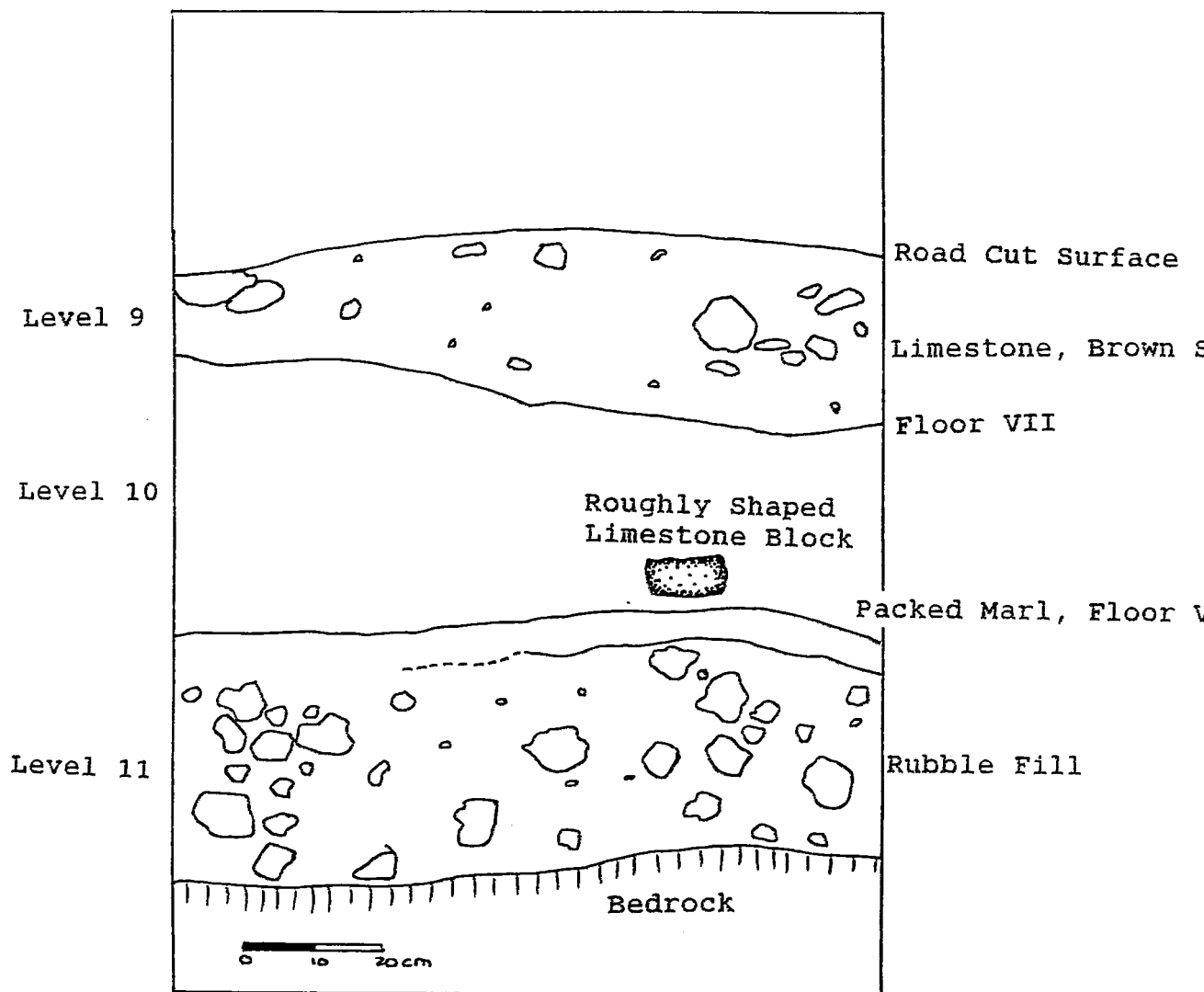


Figure 12

Top Plan, Level 10, Floor VIII
Unit 2, Structure 1.

Figure 13

South Wall Profile, Unit 2, Structure 1, Road cut.
Cas Pek Group, Cahal Pech, Cayo, Belize.
B.V.A.R. Project 1993.



Pot sherds from this level were consistently Middle Formative in date.

UNIT 2, LEVEL 11

Below Floor 8, Level 11 consisted of small limestone fill in a grey clay-like matrix. Ceramic, lithic, and faunal remains were sparse and bedrock was encountered at 110 cm from the road surface.

CONCLUSION

Results of the excavations conducted during the 1993 field season at Cas Pek confirm that this settlement cluster was first occupied during the Middle Formative period, and that the early occupants of the group were involved with the production of shell ornaments. The latter is indicated by the discovery of numerous chert micro drills in association with drilled shell beads and shell detritus. Indeed, it appears that fragments of conch shell that were too thin, or of unusable shape (the collumela), were discarded, and that this detritus eventually became deposited in middens and construction fill. In their discussion of similar finds in the Valley of Oaxaca, Feiman and Nicholas (1993:108) argue that this assemblage of faunal material and artifacts is indicative of specialized craft production of shell ornaments. Since few complete shell objects have been recovered at Cas Pek, it is possible that once the ornaments had been produced they were exported to the elite in the site core, and perhaps traded to other peripheral settlements.

Prior to the 1993 season, Awe (1992:58) had noted that the possible function of the Cas Pek Group had not yet been elucidated. For lack of previous evidence, it was also assumed that the function of the group may have been connected to agricultural production. The 1993 excavations have allowed us to reassess this preliminary interpretation, and have provided evidence for craft specialization back into the Middle Formative period. These early developments at Cas Pek may also help to explain the precocious construction of the large, 28 m. long, Late Preclassic platform at this peripheral settlement cluster.

Finally, the three seasons of excavation at Cas Pek clearly illustrate the presence and accessibility of Middle and Late Formative deposits at Cas Pek, and serve to emphasize the need for further large scale (horizontal) investigations before this data is completely lost as a result of urban expansion.

Acknowledgements

The 1993 Cas Pek excavations were conducted under the direction of the junior author and in association with the Belize Valley Archaeological Reconnaissance project. We extend a special thanks to the landowner, Mr. Javier Hernandez, for his cooperation and for allowing us to conduct the excavations on his house lot. The field investigations were conducted by Pat Kilpack, Chas Scidmore, Joe Martinez, Tanya Wiegand, and the two authors. Rhan-Ju Song and Norbert Stanchly provided valuable information on the human and animal remains respectively. Lastly, members of the Belize Department of Archaeology and B.V.A.R. staff and volunteers are thanked for their support.

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OF MARL AND MOUNDS: A *CHULTUN* SALVAGE OPERATION NEAR THE ZINIC GROUP, CAHAL PECH

by

Gyles Iannone, Barry Ford, & Tim Stevens

INTRODUCTION

As outlined by Awe and Brisbin (1993) in last years report, our investigations in and around Cahal Pech have never been entirely of a planned nature. Like most projects in the Maya area we have had to contend with a great deal of looting. However, unlike most other archaeological enterprises, we have also had to deal with the continual growth of a large residential population. San Ignacio town now thrives not only on the northern doorstep of Cahal Pech, but through the parceling out of larger land packages settlement it has now completely surrounded the site core. This settlement has been facilitated by the construction of large roads where only footpaths once existed. Through our efforts, as well as those of a variety of funding agencies, the Department of Archaeology in Belmopan, and the townsfolk of San Ignacio, the Cahal Pech Archaeological Reserve boundaries have now been drawn up and legalized (see Awe and Campbell 1988; Awe, Bill and Campbell 1990; see Figure 1). These boundaries mean that further development will not occur in or adjacent to the Cahal Pech site core. Unfortunately, as San Ignacio continues to grow, houses must be built somewhere. As a result the area immediately outside of the reserve boundaries is now being developed at a staggering rate.

The aforementioned development has seriously impacted many of the peripheral settlement groups in the vicinity of Cahal Pech. During 1993, along with continued growth in the northern periphery, much activity was witnessed to the south of Cahal Pech proper. Significantly, the previously narrow road running east-west between Cahal Pech and the Zinic and Zopilote groups was notably widened by bulldozers, allowing gravel trucks into the area for the purposes of marl mining. Upon recognition of this activity the Department of Archaeology in Belmopan was immediately informed, and project members, government archaeologists, and the Cahal Pech caretaker continued to monitor these activities. The bulldozers soon opened up a wide area immediately to the east of the Zinic group (see Conlon 1992; Conlon and Awe 1991), and in time all the Zinic group mounds were also bulldozed except for the two large pyramidal structures (see Figure 2). At this time Terry Powis and the senior author made a cursory reconnaissance of the bulldozed area in order to salvage any significant artifacts which had been exposed during the destruction. Of note was one obsidian eccentric which was recovered from in front of Tzinic Structure 2. This item undoubtedly belongs to the assemblage recovered from the north face of this structure during the 1991 operations (see Iannone 1992).

Sometime later, upon request of the Department of Archaeology, further salvage operations (op. 1993:1) were initiated ca. 35 meters to the southeast of the main Tzinic group.

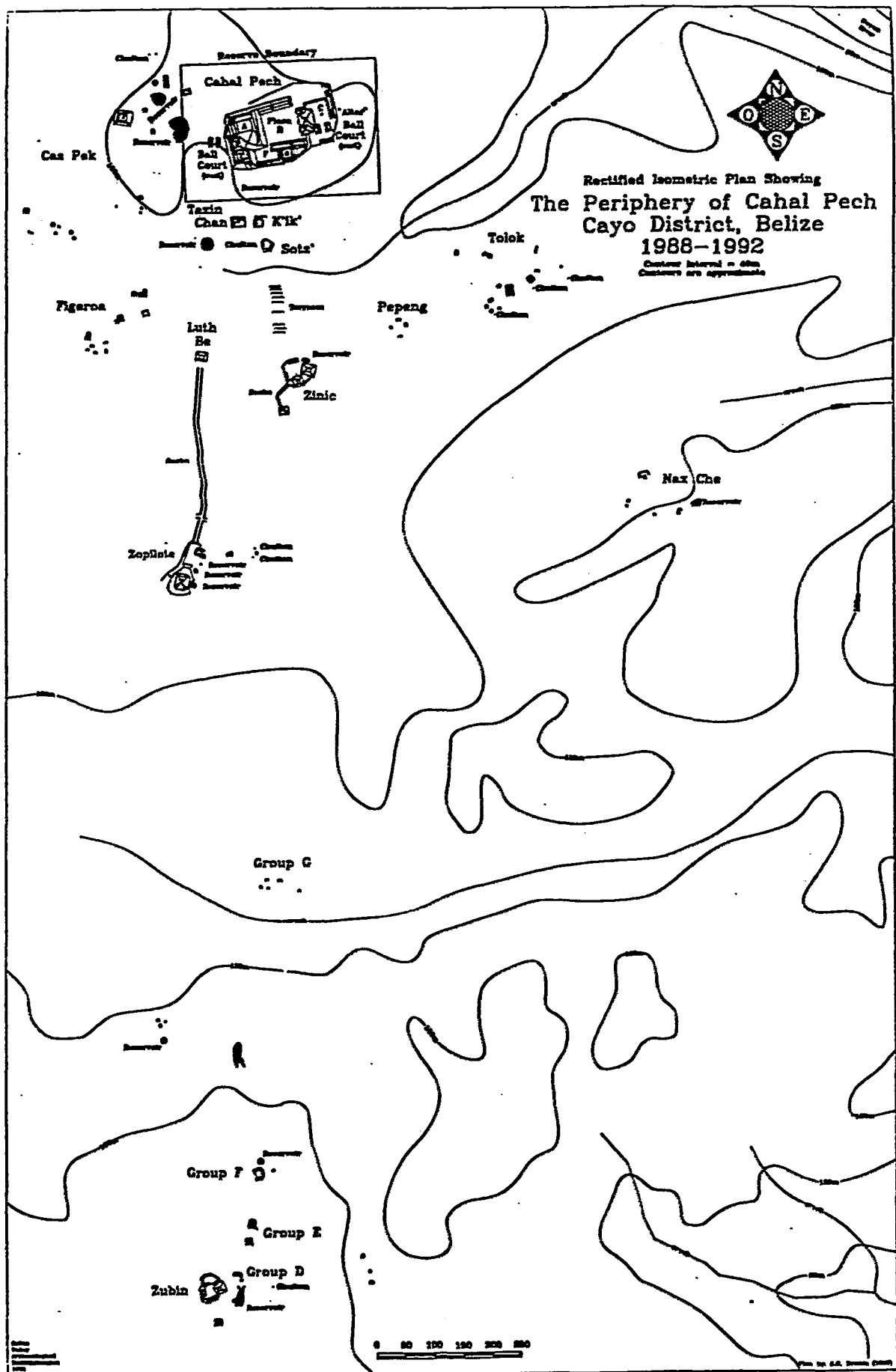


Figure 1. Map showing the boundaries of the Cahal Pech Archaeological Reserve and some of the peripheral groups surrounding the site.

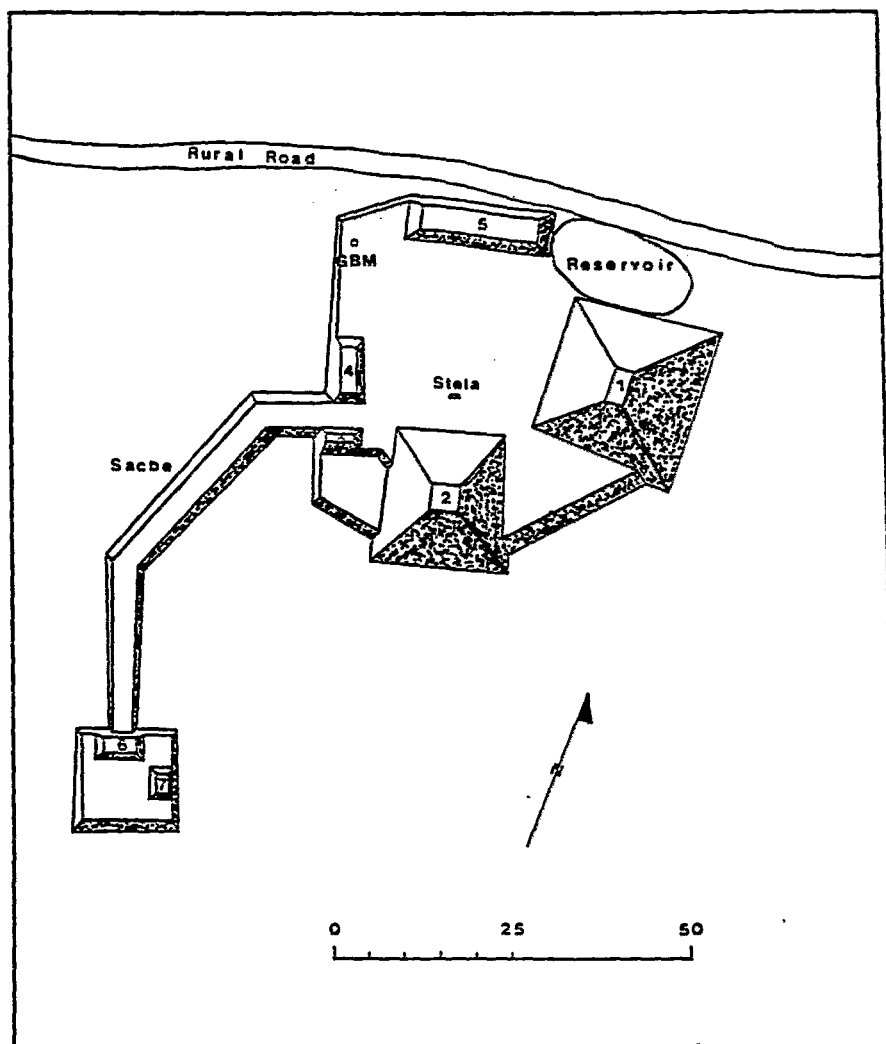


Figure 2. Rectified plan of the Tzinic group.

These operations focused on a *chultun* which was being impacted by the Ministry of Works marl mining. Two mounds (Structures 8 and 9) and two *chultunob* (*Chultunob* #1 and #2) had previously been located in this area. Upon arrival of the B.V.A.R. crew, and John Morris of the Department of Archaeology, both Structures 8 and 9 had been bulldozed, and *Chultun* #1 had been looted. It was only through quick action by the Cahal Pech caretaker and the Department of Archaeology that *Chultun* #2 was saved from a similar fate. A ceramic collection was made from the area near where Structures 8 and 9 had been located. *Chultun* #1 was also briefly explored, a scattering of poorly preserved human bone fragments were all that remained of its original contents. All efforts therefore concentrated on achieving as much information from *Chultun* #2 as we could. However, it was decided that we would only set aside the day for these operations, knowing full well that whatever we left for the next day would likely be removed by the original culprits during the night.

EXCAVATIONS IN *CHULTUN* #2

It should be stated at the outset that upon completion of our investigations the caretaker from Cahal Pech informed us that some minor looting of *Chultun* #2 had in fact occurred. This information was relayed to him by a nearby landowner. In fact, the caretaker had apprehended one individual in the process of removing vessels from the *chultun*. These vessels (vessels #1 [1993:1/4] and #2 [1993:1/5]) were recovered and returned to the *chultun* by the caretaker, and thus their original spatial location within the *chultun* remains a mystery. Whether other artifacts had been removed could not be ascertained. As time was of the essence immediate excavation and mapping of the *chultun* was implemented.

Level 1, Terminal Floor (see Figure 3)

Chultun #2, a lateral -chambered *chultun* (Puleston 1971:323), consisted of a main chamber with three large niches. The orifice was approximately 60 cm in diameter. Beneath this orifice a sill or small ramp had been constructed in order to facilitate entry and departure from the *chultun* (a similar feature is described by Powis 1993:104). Level 1, the terminal floor, was ca. 139 cm below surface in the main chamber (Chamber I). The western chamber (Chamber II) had a plastered floor surface ca. 143 cm below surface. Chamber III, to the north, had no apparent plaster floor and was a true niche. The final chamber, Chamber IV, was much lower, being ca. 198 cm below surface. This chamber contained no apparent cultural remains and was left unexcavated.

Chamber I contained the remnants of at least one individual. Two vessels (see Figures 4 and 5) were found upon the surface of Chamber I, but had been placed there by the Cahal Pech caretaker after retrieval from the looters. Whether in fact these had originally been located in the northern niche (Chamber III) will never be known. Neither of these vessels can be classified using the Barton Ramie (Gifford 1976), Tikal (Culbert 1993), or Uaxactun (Smith 1955) typologies with any degree of certainty. Excavations within the sill beneath the entrance produced a dedicatory cache consisting of a Mangrove Black-Brown: Mangrove Variety bowl (Figure 6; see Gifford 1976:204). This vessel dates the construction of the terminal floor to the Tiger Run phase (ca. 600-700 A.D.). Scatters of human bone were found throughout the western and northern sectors of the chamber. The depth of the floor in Chamber I was ca. 11 cm thick.

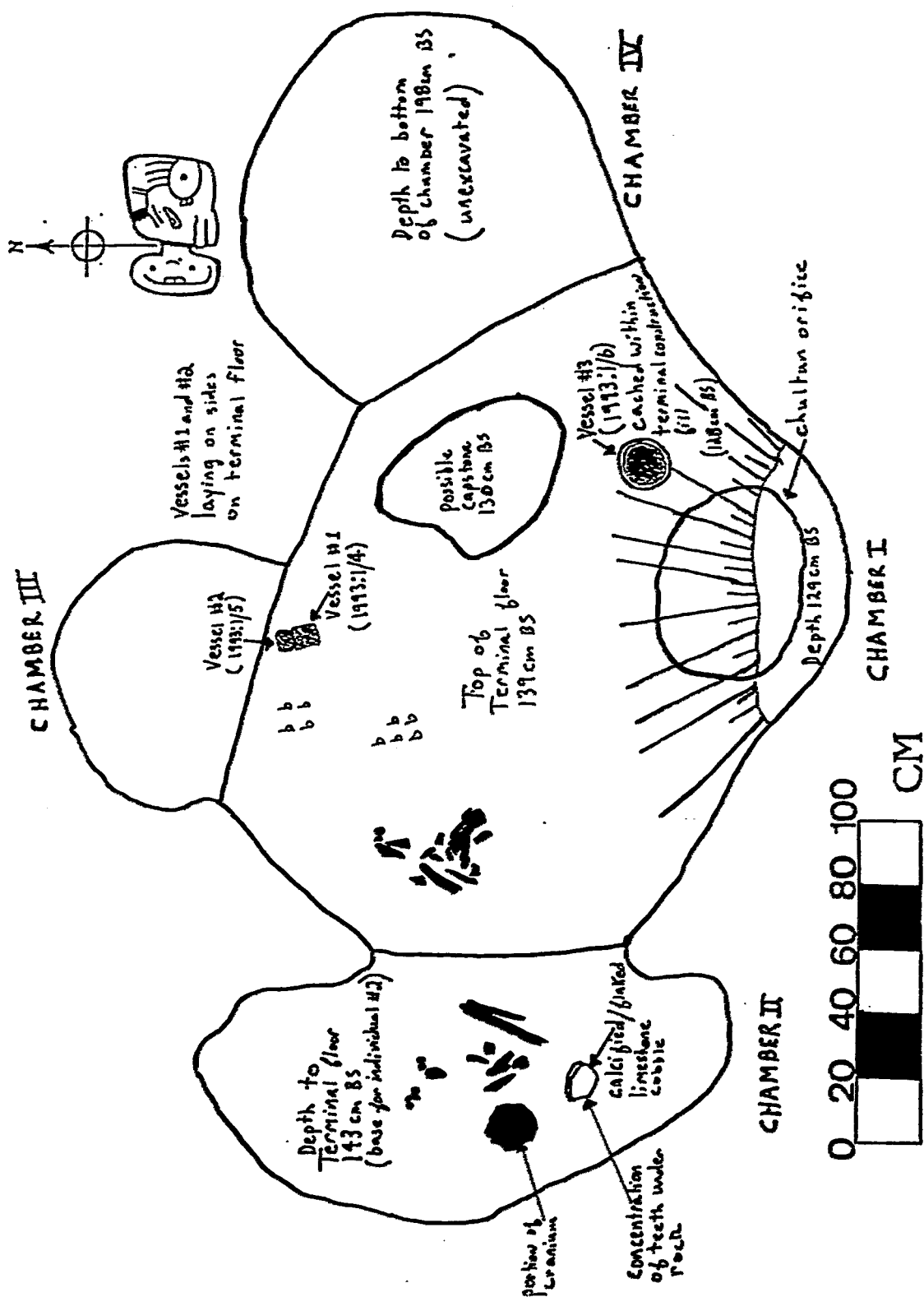
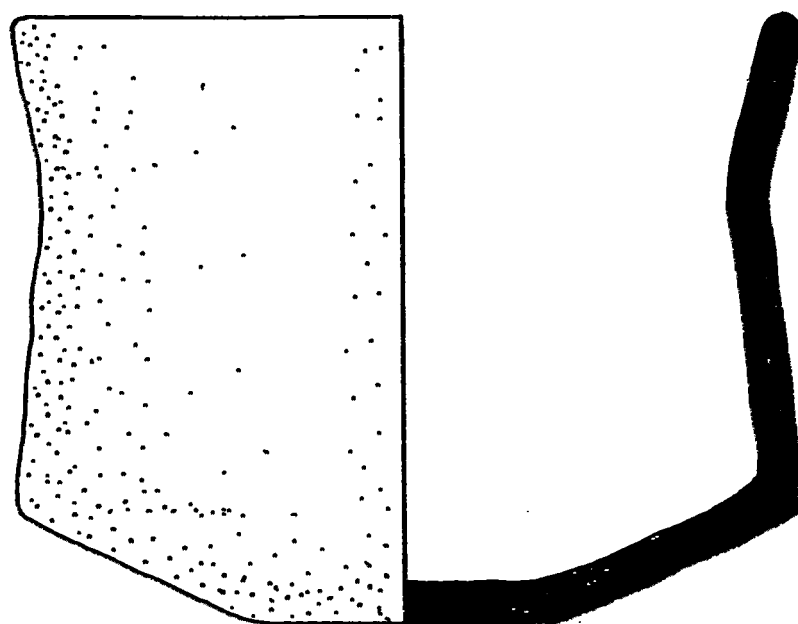


Figure 3. Top plan of *Chultun* #2 terminal morphology and associated cultural remains.



SCALE 1:1

Figure 4. Vessel #1, SF# 1993:1/5 (drawing by Tim Stevens).

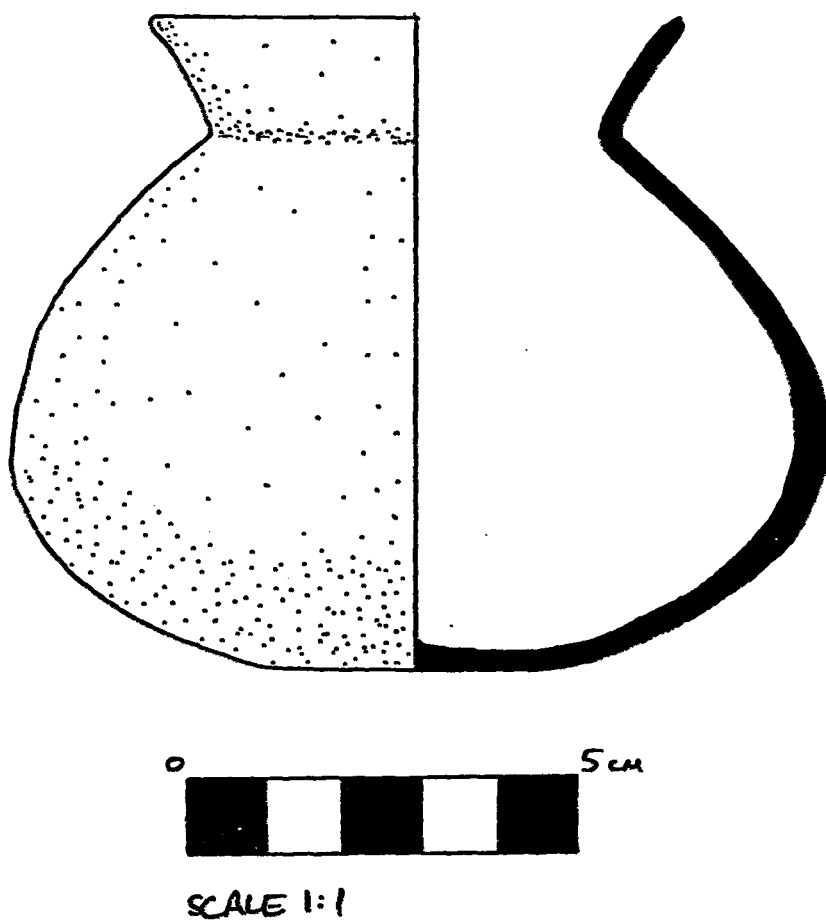


Figure 5. Vessel #2, SF# 1993:1/5 (drawing by Tim Stevens).

Chamber II contained more human remains, although due to poor preservation we were unable to determine whether in fact these were representative of another individual, or whether they were further remnants of the individual found in Chamber I. No cultural artifacts were found in Chamber II with the exception of a large, flaked, calcified limestone cobble. The floor in Chamber II was ca. 13 cm thick. Chamber III had no plaster surface, and as has been mentioned previously it can be considered a true niche.

Level 2, Penultimate Floor (Figure 7)

Upon removal of level 1, a second plaster surface was exposed indicating the initial flooring of Chamber I. This very poor plaster surface was approximately 10 cm thick and was only encountered in Chamber I. As with level 1, a small sill had been constructed beneath the *chultun* orifice in order to facilitate entrance and departure. No human remains were recovered during excavation of this level. A dedicatory cache was, however, exposed near the base of the sill. This cache contained a single upright vessel (Figure 8) found in association with two carved conch shell artifacts which had been deposited level with the vessel rim, although slightly to the east of it. The vessel, which was placed just above bedrock, appears to be a "special", as a review of the ceramic reports failed to produce anything quite like it. Not only does its form make it difficult to classify, but it also appears to have been reslipped a different color at some point in time. One of the conch shell artifacts was perforated, suggesting that it was a pendant of some sort. The other was similar in shape, although it lacked a perforation. This may have been a blank, although we cannot be too sure about this conclusion. Further excavations of the level 2 floor produced no other cultural remains.

CHULTUN FUNCTION

As was made quite clear by Aylesworth (1993) in last years report, it is often quite difficult to ascertain *chultun* function. This is due to the fact that these chambers appear to take on different functions over time (see also Powis 1992:46). Therefore, like other *chultunob*, the original function of *Chultun* #2 cannot be determined. However, as with many other chambers of this type, it is apparent that the final function of *Chultun* #2 was as a burial chamber. Why such a function would be taken on by these chambers remains a mystery, although such features are reminiscent of tombs in size and shape, and it may be that they were employed as graves in order to economize in labor, as well as provide a proper resting place. Much more work would have been required to construct such as feature within the smaller housemounds, and the effect in the end is rarely so pleasing and easily achieved. Why the *chultunob* lost there previous functions, however, may have to be assessed anew in each individual case.

CONCLUSIONS

Through the continued cooperation between the BVAR project, the Department of Archaeology, and the caretaker at Cahal Pech, we were able to salvage some information from the Tzinic east mound cluster. Unfortunately, we can never be sure how much data was lost. In the future such cooperation will have to continue, as San Ignacio town continues to grow and inevitably impact the archaeological resources outside of the Reserve boundaries. Quick action will be needed to cover our losses, but hopefully this salvage operation can be viewed as an example whereby our cooperation allowed some partial success.

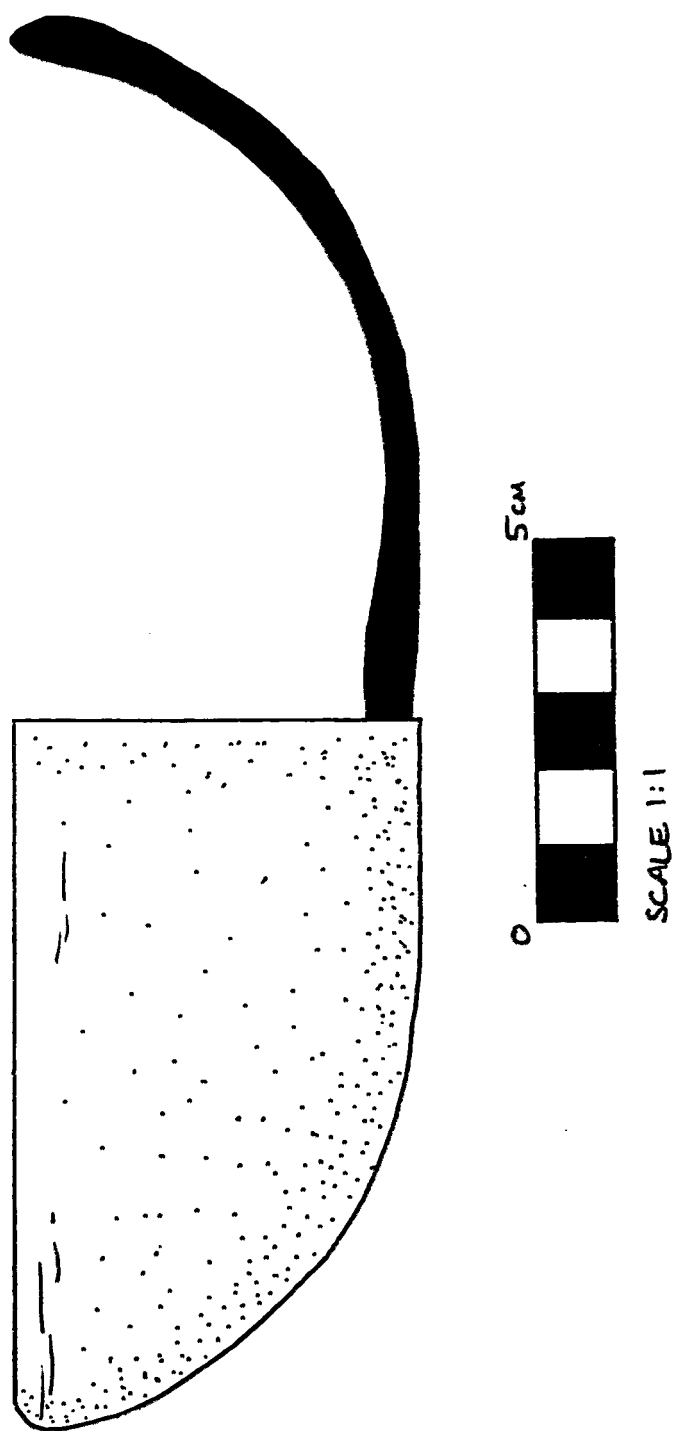


Figure 6. Vessel #3, SF# 1993:1/6 (drawing by Tim Stevens).

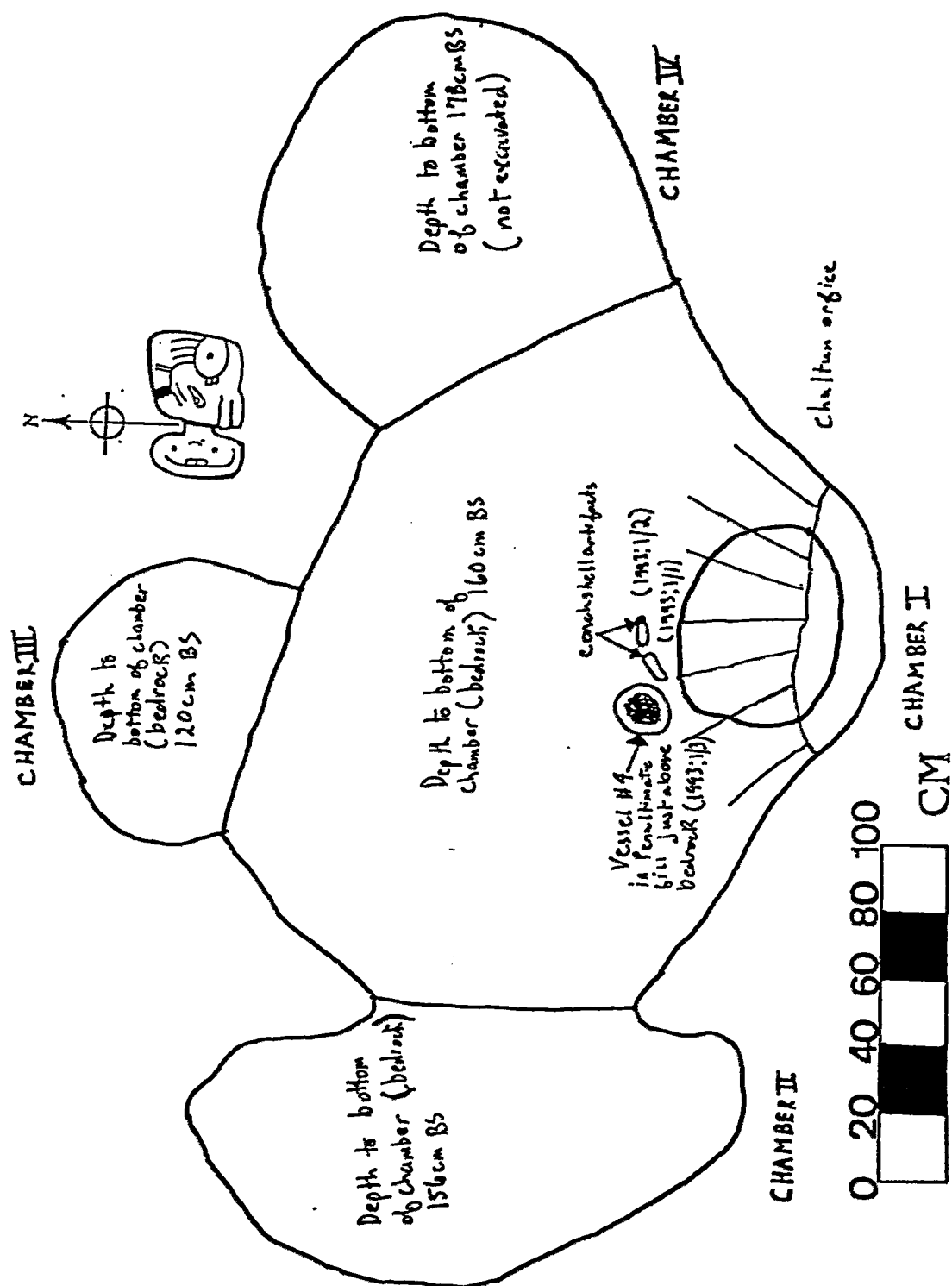


Figure 7. Top plan of penultimate *chultun* morphology and associated cultural remains.

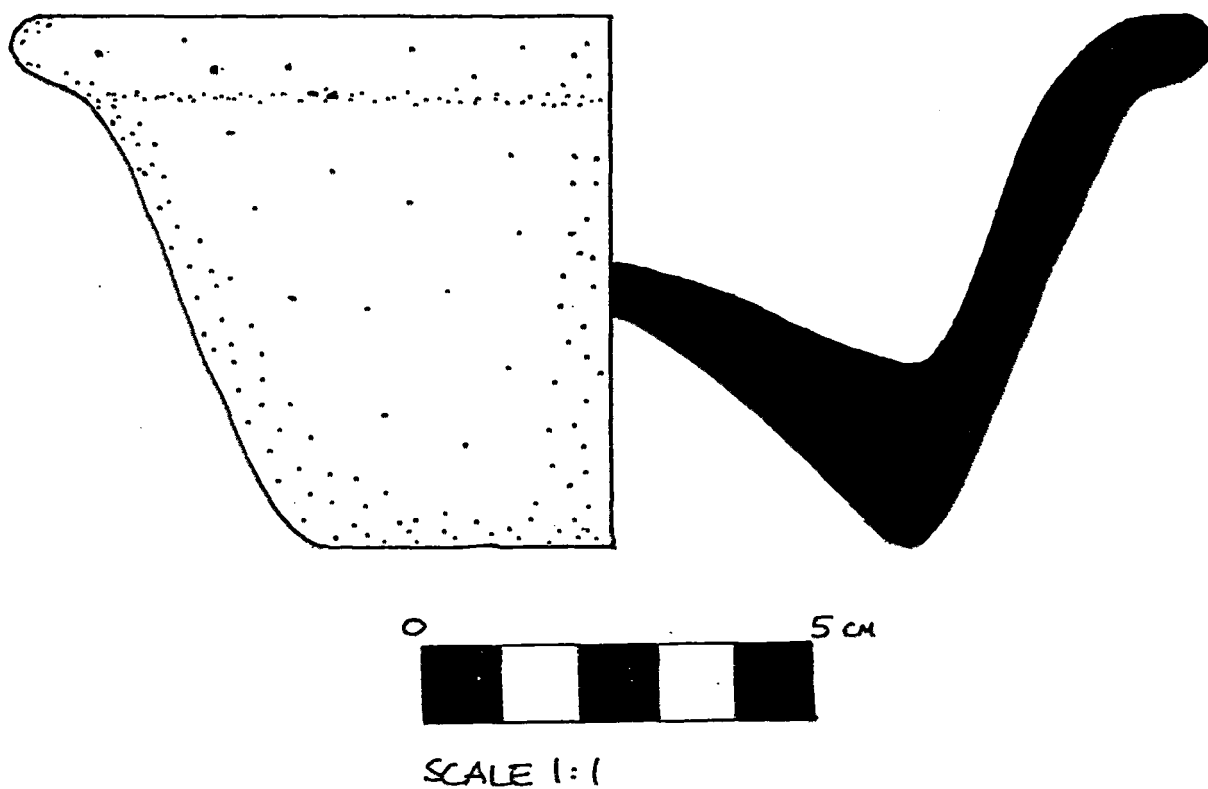


Figure 8. Vessel #4, SF# 1993:1/3 (drawing by Tim Stevens).

ACKNOWLEDGMENTS

We would like to thank the Department of Archaeology for working closely with us on this matter. John Morris must be especially thanked not only for shuttling us around on the day of the operation, but also for supplying much needed refreshments in the afternoon heat. Hilberto, the caretaker at Cahal Pech must also be commended for his quick actions in saving the vessels, and contacting the Department about the looting. The local residents must also be gratefully acknowledged for contacting Hilberto when it was first learned that the looting was occurring.

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Ruler or Ruled?: Status, Land Tenure, and Nucleated Settlement in the Western Periphery of Baking Pot, Belize

By

**James M. Conlon
University of London**

**Terry G. Powis
Trent University**

**Bobbi M. Hohmann
University of New Mexico**

INTRODUCTION

This paper presents results of the 1993 season of investigations in the Western periphery of the ancient Maya site of Baking Pot (Figure 1). Survey and excavation data are employed in an analysis of social organization. Comparative data from the site core of Baking Pot, and various other pertinent sources, facilitates an examination of Classic Period societal development. We shall focus our examination on economic and political intra-relationships and their significance to the intra-relationships of the prehistoric community of Baking Pot. The subject of our interest is taken from the restricted perspective of the Bedran Settlement Cluster (Figure 2). Ultimately, we hope to demonstrate the increased utility of intensively exploring readily distinguishable settlement units, such as plazuela groups and clusters, by emphasizing their archaeological potential for more fully reconstructing segments of ancient Maya community structure.

BVAR AT BAKING POT

First, let us outline some of the basic reasons for the impetus to conduct archaeological investigations at Baking Pot. As operations at Cahal Pech move into their seventh year, and begin to wind down, many of the senior staff of the Belize Valley Archaeological Reconnaissance Project (BVAR) have begun to contemplate future research projects. A research focus at Baking Pot, similar to that employed at Cahal Pech, could provide substantial intercommunity comparative data. Intracommunity developments at Baking Pot, as shall be revealed through proposed future investigations, will eventually provide a larger database to better facilitate intercommunity comparative analyses. Subsequently, these site level investigations, coupled with other concurrent programs in the Belize Valley, shall form the basis for a more acute regional synthesis on a broad temporal and areal scale.

The most intriguing aspect of intercommunity relationships observable between the acropole Cahal Pech (Figure 3) and valley bottom Baking Pot (Figure 4) is the possibility to analyze apparent similarities between two proximally close sites in geographically differing settings.

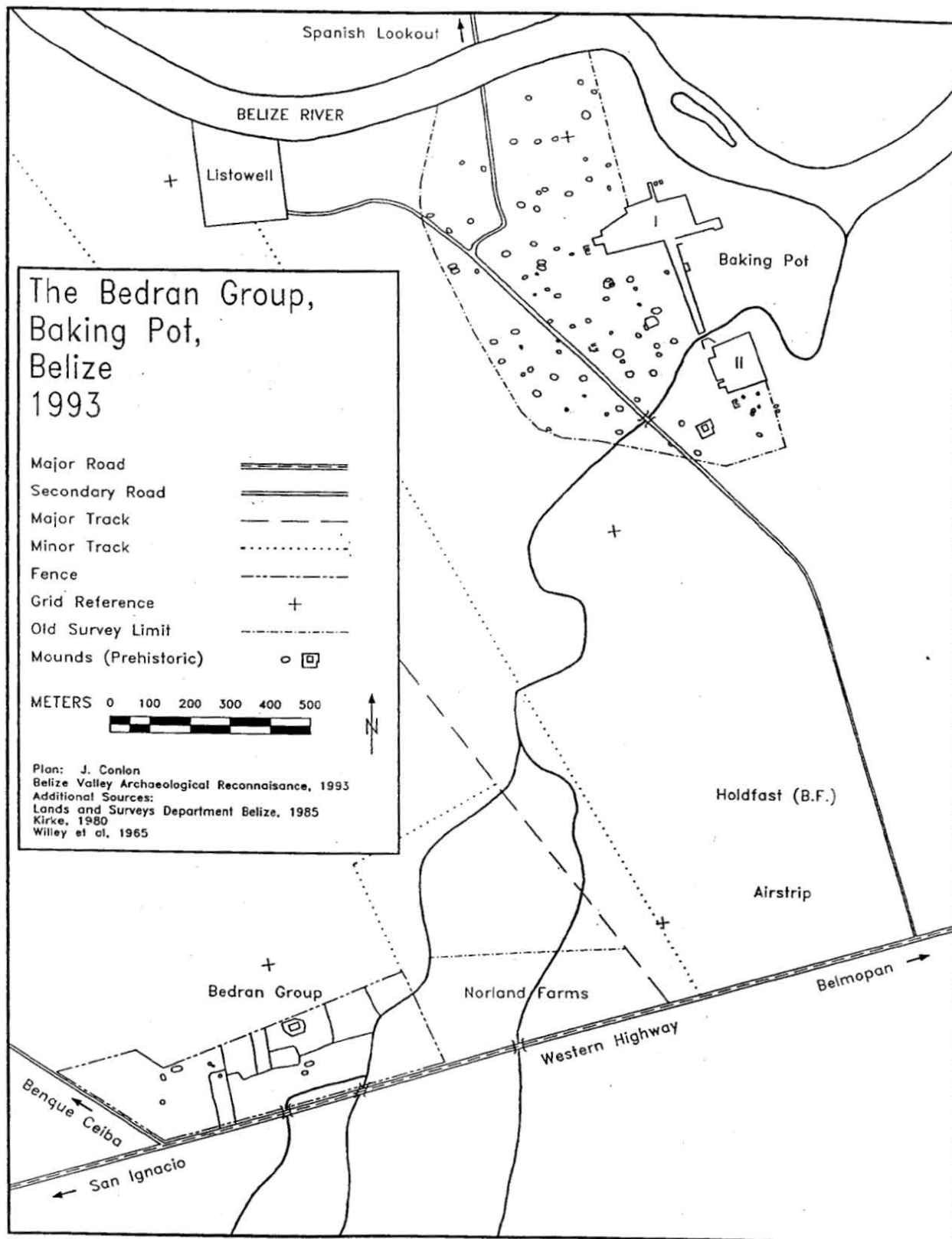


Figure 1: Location of the Bedran Settlement Cluster in relation to Baking Pot, Belize.

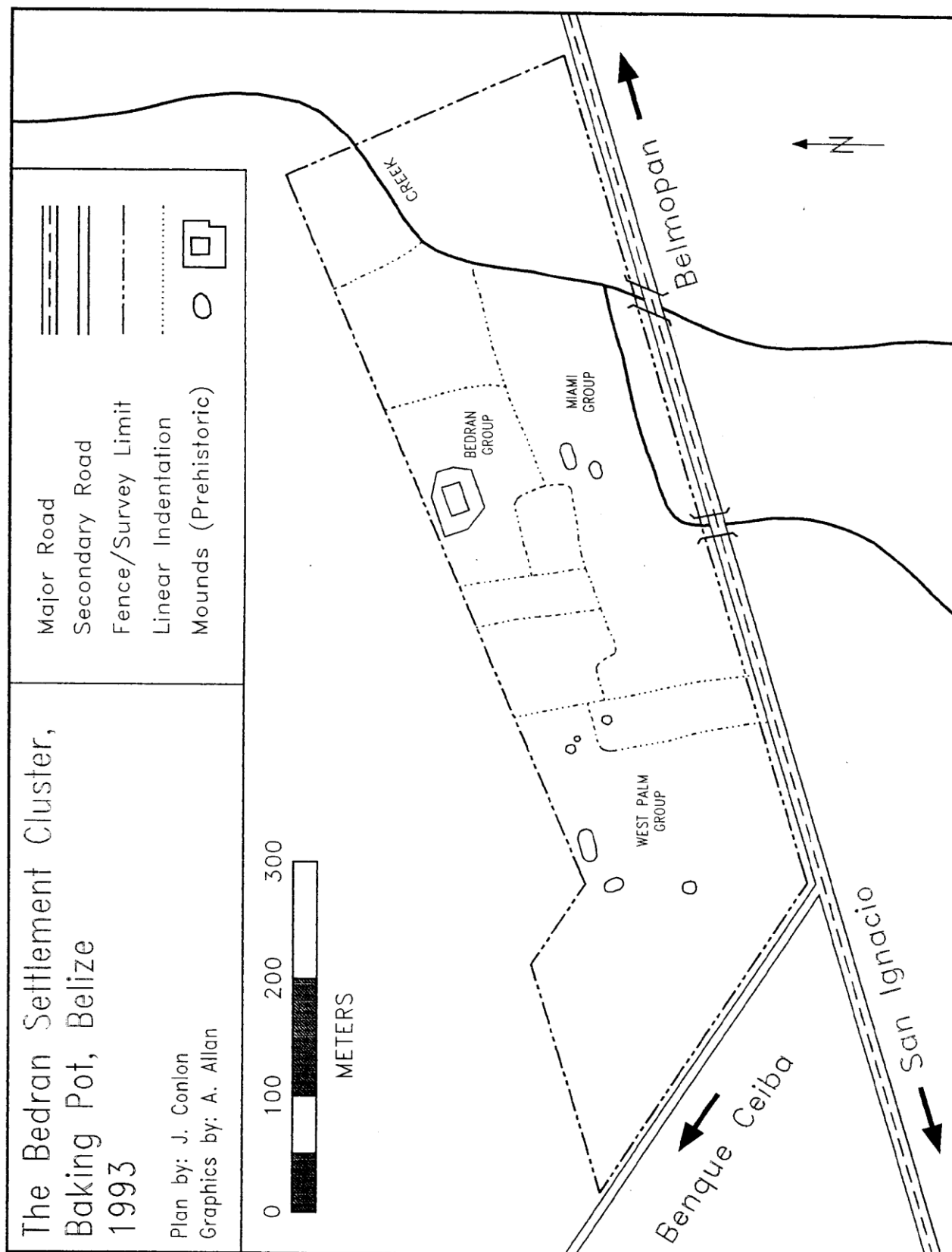


Figure 2: 1992 Survey limit of the Bedran Settlement Cluster (Field N1).

Similarities in central precinct plaza configurations between the two sites are apparent. If one could imagine a sacbe separating Plazas A, D, and E from Plazas B, C, F, and G at Cahal Pech it would roughly correlate respectively to the closed and open types of plazas at Groups II and I at Baking Pot. The implications to prehistoric Maya social organization of the control of access to various parts of Cahal Pech has been discussed elsewhere (Awe et al 1991). Excavation at Baking Pot would help define other possible access points, such as through range-type structures, which would help to develop these implications further.

The closed plaza configurations at both sites are also in close proximity to major aguadas and may denote a significant relationship of such groups with their role in water management. This has also been a focus of attention at Cahal Pech (Conlon 1992:85-87) and should continue to be a fruitful avenue of investigation in the future at Baking Pot.

Ballcourts at the two sites also have correlated site-specific spatial relationships. The eastern ballcourt at Cahal Pech is located in the open Plaza C, almost external to the site core, since the eastern end of this plaza is bordered by only very low mounds. Group I's ballcourt at Baking Pot is also located on the periphery of the open group of the site. Both of these ballcourt locales suggest they functioned for viewing the ballgame spectacle by large numbers of people.

More striking is the apparent funnel effect the other ballcourts at these two sites demonstrate. The two mounds that make up the western ballcourt at Cahal Pech flank a sacbe which leads from the main northeast entrance of Plaza B to the southwest periphery where the upper Middle Level Settlement Units (MLSU) (see Iannone 1993:12), Zinic and Zopilote, are located. The ballcourt of Group I at Baking Pot also has a passageway type function, in this case, acting as the main access point to and from the plaza.

Here, then, are two distinguishable functions for ballcourts. One acting as an access point or passageway, possibly denoting a more symbolic role than the open, practical, playing and viewing, ballcourts. If passageway ballcourts acted solely in the symbolic realm then just what the exact metaphor of these symbolic passageways may have been to the Maya is open to debate.

These are only some of the readily observable comparisons one can begin to make. Other important research includes further establishing the diachronic development of the site and its associated settlement for comparison with the Cahal Pech database. Willey (1953:xviii) recognized that the diachronic development of any group was important for understanding community interrelationships. The acquisition of this data has been a major research goal of the BVAR project (e.g. Awe 1992:68; Awe and Campbell 1992:3-4; Awe and Brisbin 1993:7; Cheetham et al 1993:153; Conlon 1992:88, 1993a:182; Iannone 1993:12; and Powis 1993a:97).

Our field seasons have averaged about three months each in duration. Taking into consideration that we have really only completed two field seasons, relative to other projects that generally run from five to six months, we estimate a full scale investigation at Baking Pot to run from two to three full seasons. Such a research focus as that employed at Cahal Pech would require substantial funding. Until all potential interested research parties were free from other obligations, and sufficient funding was obtained, it was decided to continue a less expensive and more narrowly focused research objective (Conlon 1993b:173). The preliminary research objectives would focus attention upon settlement peripheral to the site core of Baking Pot.

Research at Cahal Pech indicated that the settlement system was as complex as those systems of Xunantunich, Baking Pot, Buena Vista, and Blackman Eddy (Awe and Campbell 1992:3). Also demonstrated was the ambiguity of the "continuous strip" description of settlement nearer the river (Bullard 1960:370). The high mound density close to the Baking Pot site core, coupled with similar densities at other sites investigated by Willey et al (1965), was likely a contributing factor to the formulation of the "continuous strip" settlement hypothesis.

On the other hand, Willey (1956:110) proposed that such settlement was actually "near-contiguous villages, or even towns, focusing upon a major ceremonial center". We suggest this is a more accurate description of settlement in the upper Belize Valley, for it clarifies the overly simplistic characterization of settlement as "continuous", which might lead others to presume that there was a similar site-focused high mound density replete throughout the valley.

The "near-contiguous" description of settlement more accurately reflects subsequent investigations of settlement which includes a variety of hypothetical organizational groupings including "village, hamlet, or residential unit" (Willey and Bullard 1956:43), "clusters, zones, and districts" (see Bullard 1960:367-370), and even "housemounds, minor centers, and major centers" (Willey et al 1965:581). Some have applied a core type of investigative approach to specific groups such as Nohoch Ek (Coe and Coe 1956) and Actuncan (Gann 1925). These investigations generally referred to these groups in a hierarchically subordinate role although Nohoch Ek was recognized as a potentially larger site.

Although also referred to in a subordinate role, the cognizance of a larger interrelationship between settlement groups and associated mound clusters was partially employed in the investigation of the Melhado group (Willey and Bullard 1956), located almost 2 kilometers north of the site core of Cahal Pech. A similar research focus could have been employed at Barton Ramie except for "a serious lack in our survey and excavation program that we were able to do no more than make a single small test dig into BR 180-182 complex" (Willey et al 1965:572-573). The inclusion of excavations at the BR 180-182 group would have substantially augmented the settlement survey conducted in the 1950's and perhaps provided greater potential analyses for the proposed hierarchical relationship (Willey et al 1965:579).

The ability to discern definable groups of mounds was an important archaeological investigative tool at Cahal Pech, particularly where customary survey practices were circumvented by the need to quickly coordinate salvage operations at various groups including Zinic (Conlon 1992:69; Iannone and Conlon 1993); Tolok (Powis 1993a:101); Cas Pek (Awe and Campbell 1992:3; Awe et al 1992:53; Awe and Brisbin 1993:3; Cheetham 1993:139); Pepeng (Awe and Brisbin 1993:6); and at three separate locations in the northern periphery of Cahal Pech (Awe 1992a). This reflects the necessity for BVAR researchers to focus their investigations upon not only groups of mounds that were high risk candidates for destruction by land developers, but also, fortuitously, viable archaeological units (see Haviland 1968:106; Hayden and Cannon 1982:140-141; Becker 1982:112; Chase and Chase 1987:54).

By beginning our operations at a recognizable, and archaeologically viable, settlement unit in the periphery of Baking Pot we hope to garner a better understanding of this sites' community intra-relationships before we start to make sweeping generalizations regarding regional interrelationships (Graham 1987:754). By doing so, we hope to avoid the pitfall of locking ourselves into a site core

dominated hypothesis regarding regional interrelatedness, and thus, a top down perspective of community organization, which we would have to prescribe to perpetually as work progressed beyond the central precinct. The pursuit of community focused study should allow for regional reconstructions beyond the political spectrum.

The folly of site-core generated reconstructed regional organization is demonstrated vividly by the inappropriately applied "rural elite residence" function for Cahal Pech (Ball and Taschek 1991). This function for Cahal Pech was predetermined by an organizational model applied to the framework of a "full coverage survey" of the upper Belize Valley (Ball and Taschek 1991:149). Its function predetermined, investigations were restricted to the central precinct at Cahal Pech (Mark Campbell, personal communication 1993), since, it was assumed, there could be no surrounding settlement of any significance (see Ball 1993:248). Totally omitted was the extensive and diverse settlement within the immediate environs of this sites' core (Awe and Brisbin 1993:7).

To be fair, this may have only been an error in theoretical perspective. As noted by Awe and Brisbin (1993:7), Ball and Taschek (1991) have a contradictory hypothesis regarding the correlation of site configuration to site function. Their contention that Buena Vista functioned administratively while Cahal Pech was specifically residential could be contended by others (Marcus 1983:211-223). The unconventional wisdom in Ball and Taschek's organizational model of the Belize Valley is further highlighted by their dubious contention that Xunantunich was hierarchically subordinate to Buenavista (Ball and Taschek 1991; see also Leventhal et al 1992).

Ultimately, the inclusion of the peripheral settlement at Cahal Pech demonstrates it to be a fully functioning site center (Awe and Brisbin 1993:7), perhaps as early as the late Middle Formative period (Awe 1992a). The spatial configuration is reminiscent of that displayed at Caracol with its intricate and complex mixture of terminal phase settlement, albeit, more extensive than Cahal Pech. One can only suspect this empirical omission from Ball and Taschek's total coverage survey was an oversight representative of methodological confusion. This confusion likely arose out of a misconstrued ideology concerning the importance of the entirety of community settlement in the Belize Valley. The result of which is a bizarre hypothetical construct diametrically opposed to the established, and more popularly held, settlement hierarchy (Willey et al 1965:579; and Ford 1981:158).

PREVIOUS INVESTIGATIONS AT BAKING POT

With our methodological viewpoint explained we must indicate this perspective would be limited to intragroup analysis, and intergroup comparison of similar group types, such as the Melhado Group at Cahal Pech (Willey and Bullard 1956) and Group 1 at Blackman Eddy (Garber et al 1992:9; Driver et al 1992), if it were not for previous researchers efforts at Baking Pot. The data available from Baking Pot (Ricketson 1931; Willey et al 1965; Bullard and Bullard 1965) permits us to make some preliminary observations regarding intracommunity organization at the site level. If we can make an attempt to understand the richness of peripheral social dynamics, before commencing full scale core investigations, perhaps our societal reconstructions at the community level can guide us in developing more dynamic regional perspectives of site interrelatedness.

None of this could be done without at least some inkling of Baking Pot core development, even though previous investigations at the site core of Baking Pot seemed to have been mainly exploratory (Bullard and Bullard 1965:7; and Conlon 1993a:173). These operations, however, provide a

chronological reference as well as comparative stylistic information. These are summarized very briefly in this section for those not familiar with the past research at Baking Pot.

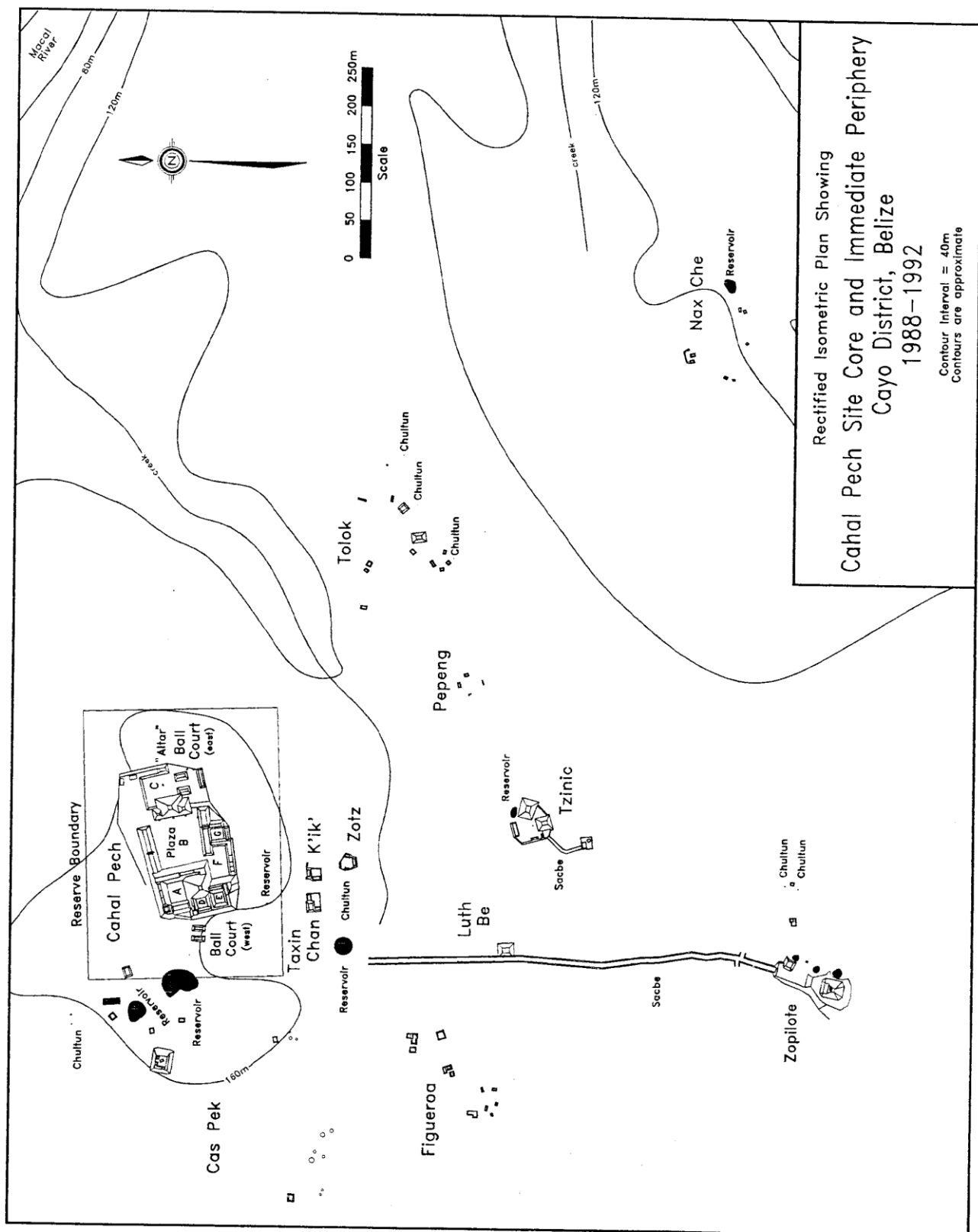
Ricketson (1931) tested several mounds in 1924 in the northern core of Group I, nearest to the Belize River, where operations concentrated upon Mound G. In 1949, the late A.H. Anderson, while archaeological Commissioner of Belize, made notes about Group II. As part of a large scale settlement survey, that focused primarily on Barton Ramie, Willey et al (1965) performed test excavations on several small mounds (BP-3, BP-17 and BP-31) immediately west of Group I. They also placed a small unit in Plaza I of Group I. Bullard and Bullard (1965) concentrated upon exposing terminal architecture in Group II, as well as some perfunctory pitting and trenching of several areas here.

The ceramic evidence for occupation at Baking Pot indicates a period spanning almost 2,000 years, from Jenny Creek (c. 600B.C.) to New Town (c. A.D.1250) (Willey et al 1965:309). Bullard and Bullard (1965:38) did not record any New Town ceramic evidence from Group II and indicated that Spanish Lookout phase ceramics predominated (Bullard and Bullard 1965:10). The Spanish Lookout phase was also an intense period of activity at Cahal Pech (Awe and Campbell 1988:42). This phase was found to, in some instances, directly overlie Late Formative (c. 200B.C. - A.D.200) constructions (Awe and Campbell 1988:40). Given the similar emphasis of Spanish Lookout ceramics between the two sites it would be interesting to see if Baking Pot also demonstrated this sequence of development, or, whether Hermitage phase ceramics are more abundant here.

Further evidence from Baking Pot of the diminished role of Early Classic wares would lend strong support to the notion that the Early Classic period of development in the Belize Valley was characterized by the persistent use of Formative period pottery (Lincoln 1985; Conlon 1992:80-81; and Cheetham 1992:4). The Hermitage phase ceramic wares may be a reflection of a highly localized use at Barton Ramie and we shall now consider the possibility that this site is, ceramically, diachronically unique in the Belize Valley.

The ceramic ambiguity pertaining to the Early Classic in the Belize Valley (e.g. Lincoln 1985; Brady 1987; and Chase 1990) remains for future research to clarify (e.g. LeCount 1993:132). To date, our excavations have only revealed Classic period occupation at the Bedran Settlement Cluster (Conlon 1993a and 1993c) and provides us little information with which to make conclusions regarding the Early Classic ceramic enigma. However, some preliminary observations are warranted here. Our Early Classic construction phases at Bedran do not include any Floral Park sherds. This may be an indication that the inaugural settlers arrived late in the Early Classic. This may be so, given these earliest phases of construction were built directly over by Late Classic, Tiger Run phase, constructions.

The lack of Floral park material at Bedran is confusing considering the presence of Aguacate Orange: Privacion Variety in our Early and Late Classic levels. This may be accounted for by the possibility that the Privacion Variety of Aguacate Orange may have been an early facet of the Early Classic Hermitage ceramic phase (Gifford 1976:145). This, however, does not explain its occurrence very late in the Early Classic. Brady (1987:474) suggests that Aguacate Orange is a separate type closely related to Society Hall Red, indicating also a continuity with the Late Preclassic red wares, and thus, likely to have an early occurrence within the Early Classic. On the other hand, Adams (1971:26) suggests that Aguila Orange is a more appropriate type designation



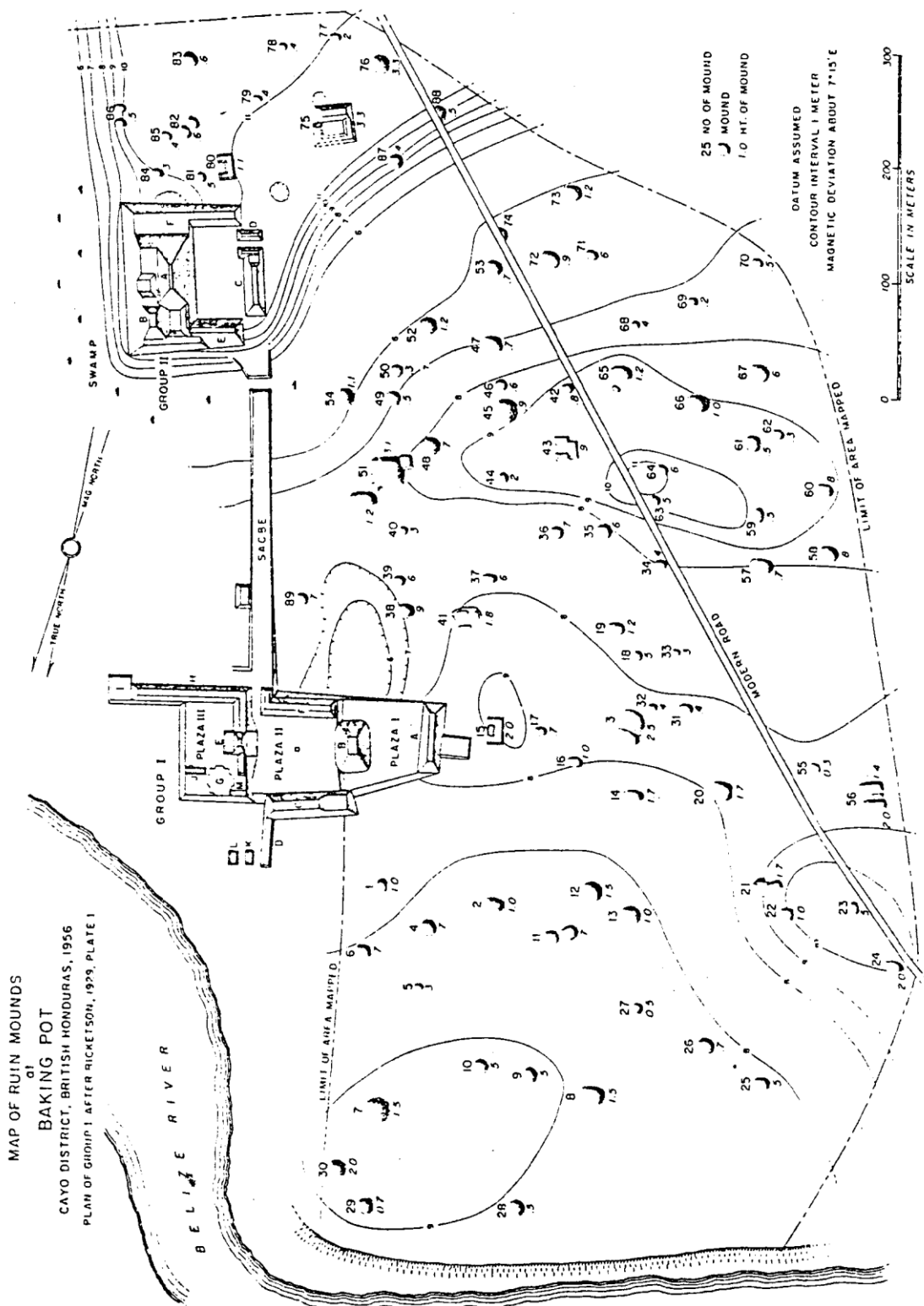


Figure 4: Baking Pot site plan (after Willey et al 1965:302).

for both Protoclassic and Early Classic orange monochromes (cf. Brady 1987:474). If Aguila Orange persists into the Early Classic then it is possible that the Privaccion Variety of Aguacate Orange at Bedran could manifest relatively late in the Early Classic period. This would have to be so since there is no indication of any earlier population in the area that may have provided midden material for construction efforts.

Ceramic debates aside, there is also valuable architectural information at Baking Pot. The Bullards' (1965:37) work on Structure II-A indicates there were two smaller structures, described as oratory rooms, at the base of the terminal architecture. A similar room has been uncovered at Cahal Pech on Structure A-1 (Awe 1992b:74). The Cahal Pech structure was vaulted, ran with the width of the north facade, and had a bench with portions of hieroglyphs, including a seating glyph (Awe 1992b:77). Baking Pot structures were equally impressive with one containing a niche and a masonry altar (Room 1) and another with a niche area with a plain stone shaft (Room 2) (Bullard and Bullard 1965:37). An eccentric cache as well as a lip-to-lip cache, possibly coeval, were recovered in association with Room 2. There was also found a carved bone pin (Bullard and Bullard 1965:38) similar to that found at Mound 1 at Bedran in 1992.

With some of the more pertinent observations made we can now turn our attention to the Bedran Settlement Cluster.

BEDRAN SETTLEMENT CLUSTER

Choosing an investigative strategy came down to past experience. At Cahal Pech, where the proximity of the ever-expanding modern town of San Ignacio dictated our research sampling strategy (Awe and Brisbin 1993:3), we found easily recognized groupings of mounds were the most salient unit for investigation. We found this strategy to have increased analytical utility by concentrating efforts upon smaller scale studies (Haviland 1981; Hayden and Cannon 1982:140-141; Graham 1987:753; de Montmollin 1988:165; Fedick and Ford 1990:20; Conlon 1993a:180; and Iannone 1993a:12).

Upon first inspection, the relatively high density of mounds near the Baking Pot site core, as indicated by the Bullards' survey (see Figure 4), meant the employment of this group focused strategy was inapplicable unless we considered all of these mounds to constitute one group on its own. We were not prepared to undertake such a large excavation program. Jaime Awe was aware of a suitable group of mounds which would not only fit our criteria for unit of analysis, but also be manageable in a single field season.

The initial impetus for investigating at the Bedran Group was the ambiguity posed by the ditches in the fields surrounding the mound group (see Figure 2). As one-time Archaeological Commissioner of Belize, Awe was partly responsible for promoting a survey which documented these ditches (Kirke 1980). Evident was a close spatial association of these ditches to the Bedran Group, however, although their prehistoric provenience was noted by Kirke's (1980) report, their functional relationship was still very much speculative since no excavation had been undertaken in either the ditches or the mounds. In the summer of 1992, as part of a proposed larger settlement investigation plan, the Bedran Group mounds were examined (Figure 5) and preliminary relational observations detailed (Conlon 1993a and 1993c). The inclusion of an eastern shrine (Powis 1993b) and the presence of numerous ritual deposits, including an eccentric cache (Iannone 1993b), gave some indications of the significance of this groups' former occupants.

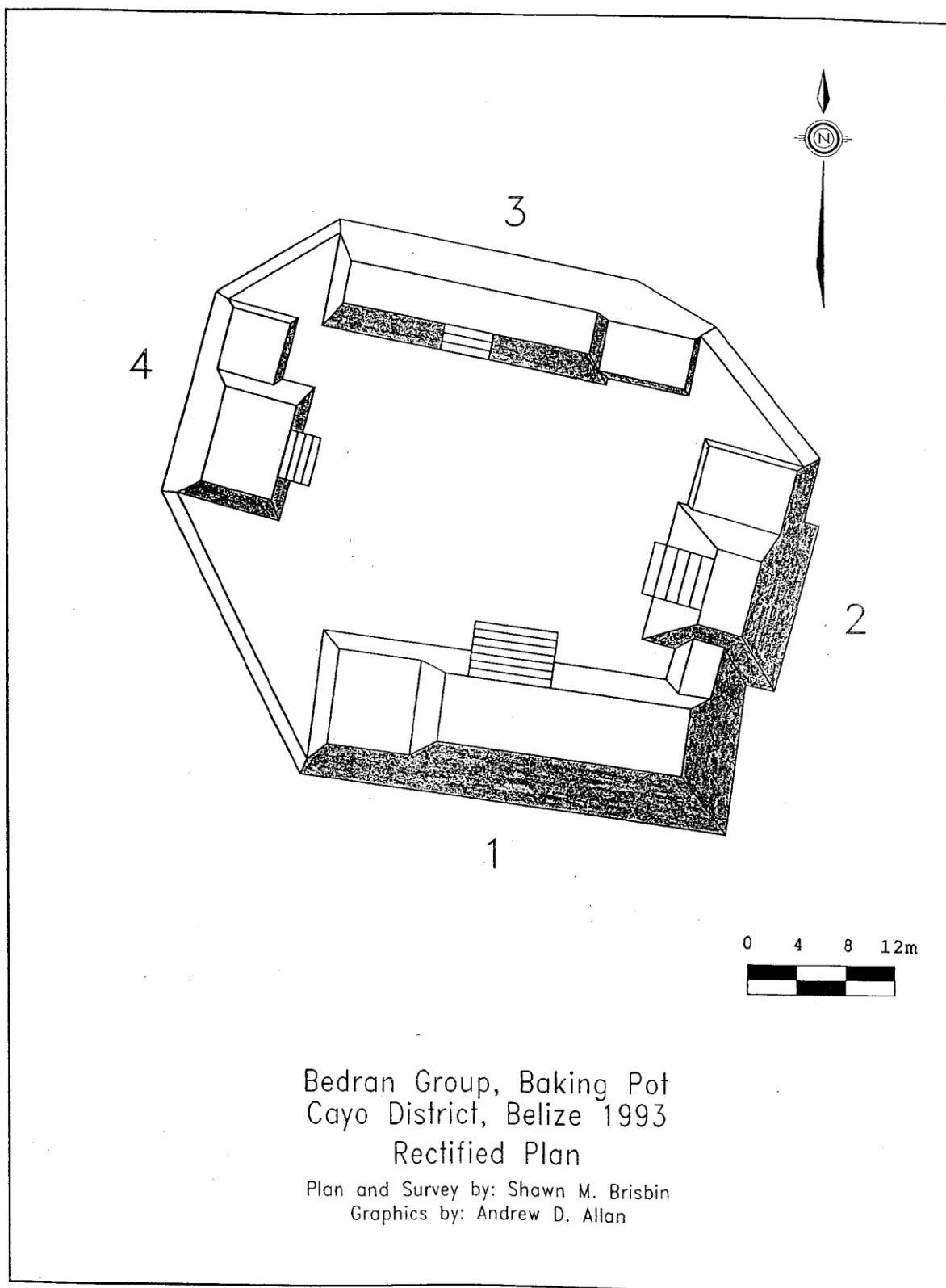


Figure 5: Rectified plan of the Bedran Group, Baking Pot, Belize.

After the 1992 season, it was evident that more questions concerning group dynamics at Bedran remained to be answered (Conlon 1993a:206). Therefore, a second season of investigations were conducted in the summer of 1993. Aspects which needed further clarification included testing mounds in the settlement cluster outside of the Bedran Group to amplify our chronological database, a more complete survey of the linear indentations and other mounding in the vicinity, and excavations at similar groupings to obtain comparative data for assessing status differences between similarly configured groups. These investigations also provide data for the preliminary examination of intracommunity relationships at Baking Pot.

SURVEY

As part of our goal to increase our survey database, reconnaissance in 1993 included field walking a portion of land owned by Senor Abdala Bedran. This land was located north of the Bedran Settlement Cluster (field N1) towards the Belize River (fields N2 to N5). Five crew members participated in the field walking exercise, noting only obvious mounding and, thus the study cannot be considered comprehensive. The intent was to obtain a better understanding of obvious mounding in order to expand the terminal phase settlement database in the immediate vicinity of the Bedran Group with which future investigations could be developed.

The field immediately north of the Bedran Group was designated N2. It contained Mounds 1 and 2 of the newly designated Boca Raton Group (not shown) located 75 meters north of the Bedran Group. There is a patio group (also, not shown) about 200 meters to the west of Boca Raton which is associated with the West Palm Group. This patio group has two low mounds, one on the north and one on the south, on top of a one meter high platform about 75 meters square in area. Both the West Palm and Boca Raton Groups can be considered affiliates of the larger Bedran Settlement Cluster because of their proximity to the larger Bedran Group.

It was in field N2 that we were able to follow the continuation of the linear indentations from field N1. The 1993 tape and compass survey included only the mounds of the Boca Raton Group so it is necessary to provide a brief description here regarding the linear indentation system. The indentations in the western extremity of the 1992 Bedran survey turn eastward almost immediately north of the survey limit. They pass through the western aguada which abuts the appended platform at the southern base of Mound 2 of Boca Raton. The indentation continues out of the eastern end of this aguada to connect with a second aguada, the South Aguada, located immediately southeast of Boca Raton Mound 1. Again the indentation exits at the eastern end of this aguada and continues parallel to the north survey limit until it turns south, into the last indentation in the eastern end of the 1992 survey, which connects directly to the creek running through to Baking Pot Group II and the Belize River (see Figure 1).

The aguada northeast of Boca Raton Mound 1, or North Aguada, is not recognizably part of the linear indentation - aguada system. Its close proximity to the South Aguada makes it potentially inclusive, but, silting, such as occurred at the round bottom canals of the El Pedernal bajo near Rio Azul (Culbert et al 1990:120), may have made its connection imperceptible on the modern ground surface.

We were not able to meet our goal of excavating portions of this system this past season. Extensive excavations of this system are still required before we can begin to fully comprehend its functional nature. It is expected that results similar to those found at Rio Azul (Culbert et al 1990) and at

Pulltrowser Swamp in Northern Belize (Harrison 1990) will help to further heighten our understanding of the temporal and spatial extent of ancient water management and agricultural systems.

Field N3, north of the Boca Raton field N2, was a long, narrow field, seemingly devoid of recognizable mounding. There are, however, irregular patches of low scrub set amidst the longer, 1.5 meter high, tiger grass that abounds in this pasture land. These scrub patches are generally no more than 10 centimetres higher than the almost level, present day ground surface.

The scrub patches are generally amorphous in shape, although approximately round and 3 - 6 meters in diameter, with no distinguishing artifact scatters or cut stones visible on the surface. Although not substantially higher than the modern ground surface their vegetation cover approximates that of the Miami Group immediately south of the Bedran Group, and thus, should be considered for possible inclusion in the prehistoric mound count. However, their inclusion in the prehistoric settlement figures at Baking Pot will remain problematical until such time that test excavations can confirm their ancient cultural significance.

The main locale for these innocuous mounds is between the Bedran Settlement Cluster and a similar settlement cluster, discovered in 1993, over 500 meters to the northwest. Subsequently designated the Naxima Settlement Cluster, the focus of this settlement is the Naxima Group, an approximately 2 meter high platform, about 100 square meters at the base, with 2, and maybe 3, low mounds surmounting it. Several mounds were in close proximity 25 meters to the east of the platform, and some 75 meters to the west, mounds over a meter in height were observed.

The occurrence of several mounds on top of a high platform is similar to the instance of the main mound at the Cas Pek Group of Cahal Pech (Awe et al 1992; and Cheetham et al 1993). The Cas Pek Group has been identified as an area that was likely an important farming community and shell workshop which possibly provided support services to the elite in the site core of Cahal Pech (Awe et al 1992:58; Awe personal communication).

Another feature associated with the Naxima Settlement Cluster is a series of linear indentations similar to those found at the Bedran Settlement Cluster (Conlon 1993a and 1993c). Primarily aligned north-south, these rectilinear ditches appear to connect to an east-west oriented ditch just south of the Naxima Group and emptying into an aguada about 50 meters southeast of the Naxima Group's platform. The apparent lack of any creek in close proximity to the group suggests it operated somewhat differently than the Bedran system. At the least it relied only upon precipitation and subsequent drainage to feed its aguada. Preliminary observations would suggest that similar agricultural pursuits to those of the Bedran Settlement Cluster were likely undertaken though the platform configuration of the cluster focus group of Naxima may indicate a different social, religious and/or political community organizational relationship. These are only preliminary observations and a future season of investigation would be worthwhile for providing data pertinent to intragroup comparison at Baking Pot.

To summarize, settlement density is certainly not consistent throughout the valley. What is readily apparent is that the high mound density near Baking Pot is by no means replicated two kilometers west of the site core (see also Willey et al 1965). The diminishing density of mounds beyond the site center of Baking Pot, coupled with the smaller nucleated settlement cluster data, indicates a more diverse settlement system than can be represented by any hypothetically constructed regional model. We are presently suitably armed with a three tiered construct (Iannone 1993c) which provides all

the refinement necessary (see Hendon 1992:36) for guiding analysis of settlement distribution (see de Montmollin 1988:156) when excavation is effectively employed. Bedran and Naxima are already made ideal components of analysis (Conlon 1993a:181).

BOCA RATON GROUP

Boca Raton is both the closest group to the plazuela of the Bedran Group and it also has the two volumetrically largest mounds in the designated Bedran Settlement Cluster. We needed to include testing of Bedran Cluster mounds in order to meet another of our goals concerning future development of intragroup comparison for purposes of examining site intra-relatedness. Ascertaining chronological interrelationships and defining structure morphology were objectives of excavations at this group.

Mound 1 at Boca Raton is approximately 75 meters north of the Bedran Group. It is almost 22 meters N/S by 14 meters E/W at its base and over 4.25 meters high. The several cut stones around the base of this mound, similar in size and quality to the steps of Mound 1 at the Bedran Group, coupled with its overall size and proximity to the Bedran plazuela, made it an intriguing target for excavation. This type of configuration, a large mound and a nearby plazuela group, bore a resemblance to the Melhado site (Willey and Bullard 1956) approximately two kilometers north of Cahal Pech.

One 2 x 2 meter unit was placed directly on top of the primary axis to recover as much of the mound's potential chronology as possible (Figure 6(top)). A second 2 x 2 meter unit was placed midway up the south face of the mound in order to search for a possible access point which might be oriented towards the Bedran Group. Both excavations were disappointing for their almost complete lack of architectural and artifactual data. These units were abandoned before reaching a sterile level to pursue operations within the Bedran Group itself.

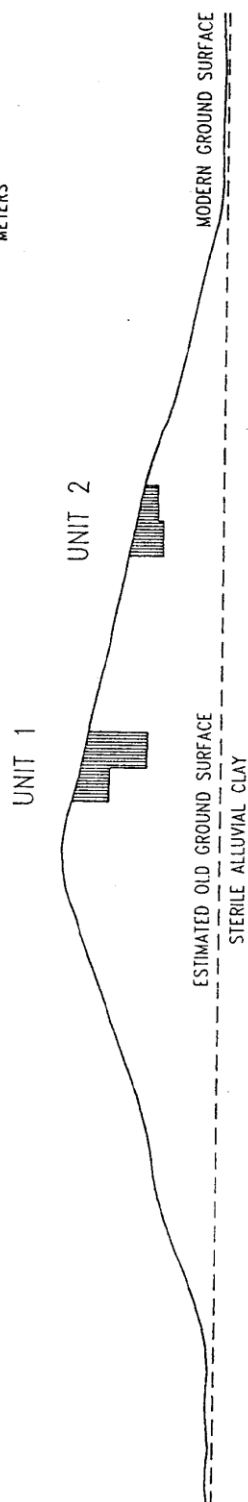
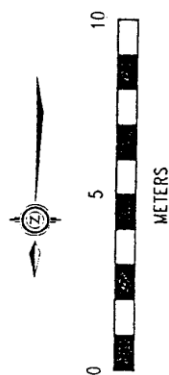
Mound 2 is 28 meters E/W by 8 meters N/S rising 1.90 meters above the present ground surface (Figure 6(bottom)). A single unit was placed along the mound's primary axis. Artifactual evidence recovered from this mound was not any greater than that of Mound 1, however, we did encounter a platform as evidenced by the positioning of a number of poorly cut limestone blocks. This platform was found relatively deep below the surface, almost 40 centimetres. Most terminal architecture within the Bedran Group was within 5-10 centimetres of the present day surface. This suggests there was an unpreserved terminal platform in Mound 2. This is not peculiar for it was also difficult to distinguish platform surfaces in Mound 4 of the Bedran Group. Unless cut stones defining a platform edge were present there was little in the way of definable plaster surfaces. Some small flakes of plaster did remain in places and suggest that a hard-packed clay floor was only lightly washed with plaster to form the living surface (Conlon 1993a:201).

The ceramic remains from Boca Raton were entirely from the latter portion of the Late Classic period (A.D. 750-850). The fill in the mounds is also similar to the Late Classic preference for clay fill used in the Bedran Group (as opposed to the previous period Early Classic rubble and brown dirt fill). The apparent dearth of architectural data from Mound 1 would lead one not to ascribe it a structural function. However, as noted, platform construction can be extremely ephemeral. The apparent lack of stairs on the south face may be the result of unit placement on top

BOCA RATON GROUP, BAKING POT, BELIZE, 1993

MOUND 1, UNITS 1 AND 2 NORTH - SOUTH PROFILE

Plan by: T. Powis & J. Conlon
Graphics by: A. Allan



MOUND 2, UNIT 1 NORTH - SOUTH PROFILE

Plan by: B. Hohmann & J. Conlon
Graphics by: A. Allan

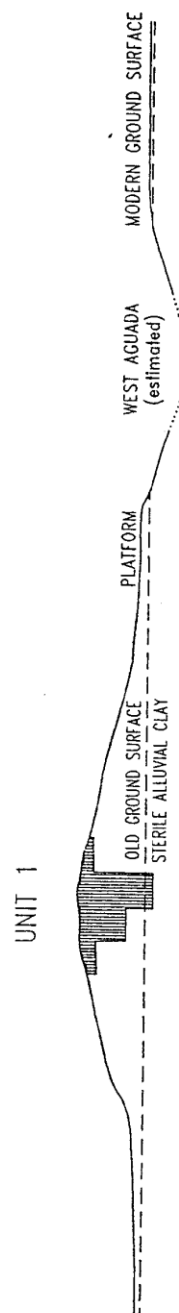


Figure 6: Profile of Boca Raton Mounds 1(top) and 2(bottom) of the Bedran Settlement Cluster.

of a clay surfaced terrace, or, behind a platform wall. Mound 1 may yet be a Late Classic structure of indefinable architecture owing to unfortuitous unit placement.

Two other possibilities exist which may explain our excavation results. One includes the possibility that this mound was an incomplete construction effort, abandoned near the time of the Terminal Classic "collapse". A second possibility could suggest that this mound was waste material dredged from the adjacent North and South aguadas and even the linear indentations themselves. This "waste mound" may have been a store for construction material to be used at a later date, stockpiled in order to maximize the areal extent of the agricultural fields. This hypothetical stockpile may explain in part the loose cut stones spaced sporadically around its base. Perhaps continued excavations in the future could clarify this mystery.

BEDRAN GROUP

Two specific questions remained unanswered about the Bedran Group after the 1992 operations had terminated (Figure 5). One question pertained to the potential data unexcavated from the plazuela area at the base of Mound 2. The second concerned the relationship of Mound 1 to Mound 2, and thus, the Group as a whole. Was Mound 1 a focus of Group ritual activity? To answer these questions operations were resumed on both of these structures.

In 1992, Mound 1 underwent operations at its summit and at its base. Late Classic deposits of ritual significance were recovered from on top of the mound. These included the circumscribed burning of plaster platform surfaces, the deposition of a red-powdered substance identified as crushed red ochre, and the caching of a partial vessel identified as an Early Classic Dos Arroyos - Orange Polychrome (Conlon 1993a:201). There was no evidence for this cache being intrusive and the inclusion of an Early Classic vessel in a Late Classic context may indicate a construction in the early facet of the Tiger Run phase, or, a vessel which remained an integral part of a number of generations (heirloom) before it was carefully cached in this area.

Although the number of caches was significantly lower than that of Mound 2's, and no burials of any kind were encountered in the area excavated, these deposits signified a possible focus of some importance for Mound 1. The apparent importance of Mound 1 led to the subsequent identification of the Bedran Group as a South and East Structure-Focus Group (cf. Chase and Chase 1985:55). In order to confirm this proposed designation we opened a new 2 x 2 meter unit directly south of the basal step of Mound 1. This placement would hopefully garner further evidence for a structure focus designation based upon the possibility of substair caches such as those found in Mound 2.

Excavations in 1993 revealed a portion of a late Early Classic platform that may have been connected with the bottom most terminal stairs and with successive platform modifications as revealed in 1992. Three large river cobbles were uncovered in the southeast quadrant of the unit, "hanging" in the middle of the homogeneous construction fill, underneath this Early Classic platform. This may be an indication of a hearth area, as in Mound 4 at its surface (Conlon 1993a:202). However, there was no indication of burning on these stones. Similar cobbles were found in Mound 2 behind the west face of the north terminal basal platform and likely acted as a retaining wall during construction, eventually faced with suitable cut stones. This was not the case at Mound 1 for there was no associated wall abutting these cobbles. Their function remains a mystery.

In the southwest quadrant there was revealed what we thought was initially a portion of a plaster platform. Further excavation revealed this to be a large cut stone overlying typical brown dirt and rubble indicative of the Early Classic period at the Bedran Group. The Early Classic context was confirmed by ceramic analysis of the sherds recovered from this strata. The rubble construction fill was irregular and sloped down to the north. This fill was found to abut a plaster surface identified as the early Late Classic penultimate plaza floor (c. A.D. 600-650). In this area, we found evidence for a replastering of the initial plaza surface which was not evident in excavations through the plazuela north of the basal step of the terminal phase of architecture.

Eventually we uncovered a large hole, almost one meter square, cut through both the penultimate plaza floor and its replastered area in the southwest quadrant of the unit. Further excavations in this area revealed stratigraphy similar to that encountered in the 1992 plazuela unit of this mound. This makes the hole in the plaster floors enigmatic for there would seem to be little if any depth for which to deposit anything here, except maybe a vessel, such as the previously mentioned Dos Arroyos - Orange Polychrome recovered in the Late Classic construction phase. It is still possible that this vessel was retrieved from the plazuela area and placed on top of the mound since Late Classic construction is what directly overlies this Early Classic platform. A similar instance of 'empty hole phenomena' was reported from Blackman Eddy where it was suggested that termination ritual activity was represented (Garber et al 1992:7).

After these excavations it would be inappropriate to continue designating this group as a South and East Structure-Focus Group (see Chase and Chase 1985:55) or a Plaza Plan 2 type group (Becker 1983:169).

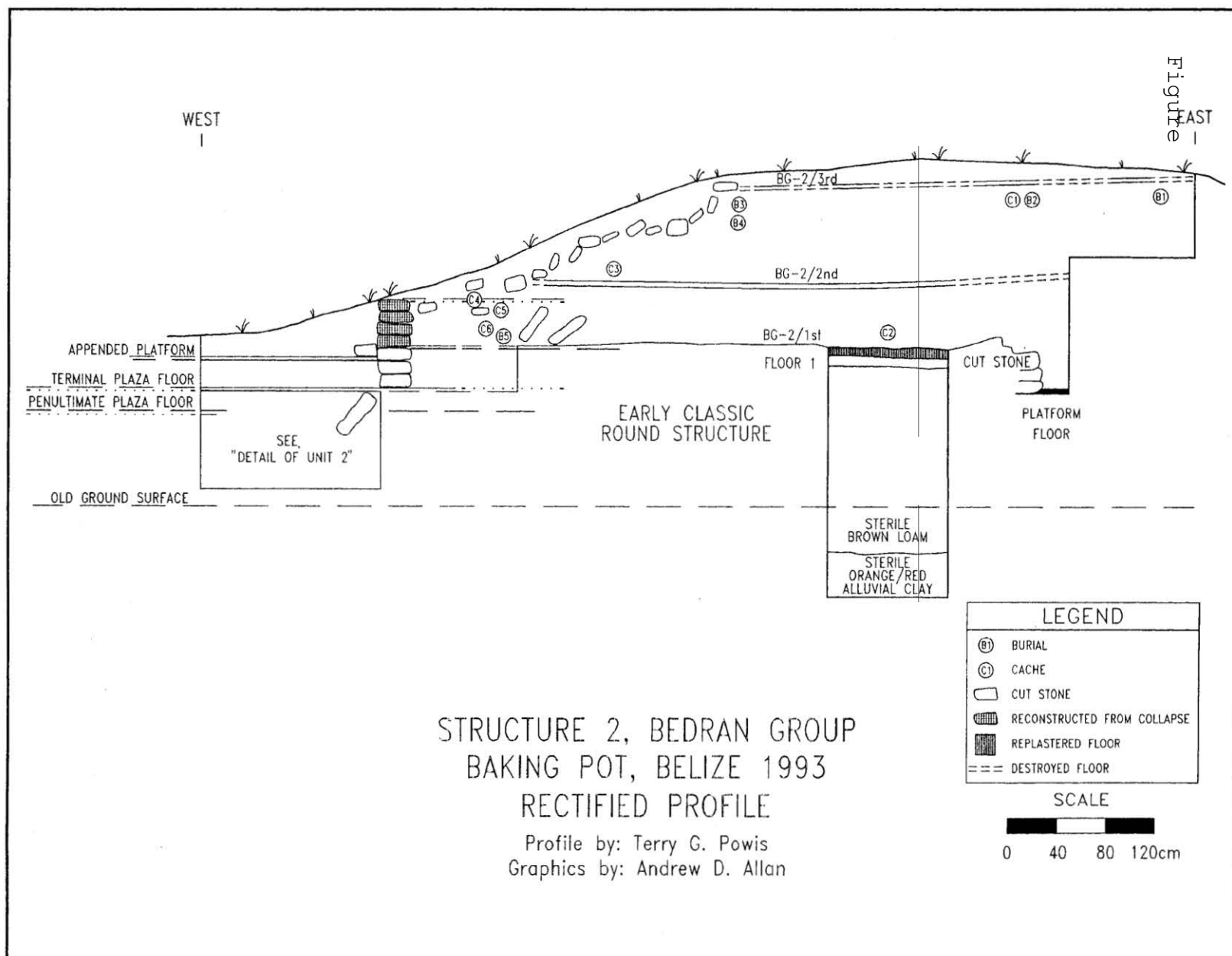
However, the few ritualistic deposits that are present, its volumetric dominance within the Group, its physical attachment to Mound 2, as well as their similar heights, suggests that Mound 1 must be considered to have had an increased importance relative to the small Late Classic domiciles of Mounds 3 and 4 (Conlon 1993a:192; Powis 1993b:222).

The five burials and six caches recovered in 1992 from Mound 2 kept us busy within the main platforms of the structures. Mound 2 was the only mound where adjacent plaza excavations were not undertaken in 1992. To remedy this we reopened the last meter on the west of our old excavation and extended it another meter westward to lengthen the total unit to 8 meters long east-west (Figure 7). Objectives included better delineation of architectural features as well as confirming the plaza morphology discerned from the 1992 excavations at the other three mounds within the Group.

Upon opening the newer northern section of the unit we encountered what we were later able to identify as indications of terminal architectural collapse, within which included Sherd Cluster 1 that was initially designated Cache 7 upon discovery (Figure 8). Its similarity to the sealed Cache 15 directly below it leads us to suspect this deposit was purposeful and did have a ritualistic significance, and therefore, remains designated Cache 7.

The extended excavations confirmed the continuance of a central stair subsequently found to be flanked by a basal platform seven courses high. The terminal phase stairs lead down to an appended platform extending the length of our unit and overlying the terminal plaza floor.

Figure 7: Profile of Mound 2 of the Bedran Group



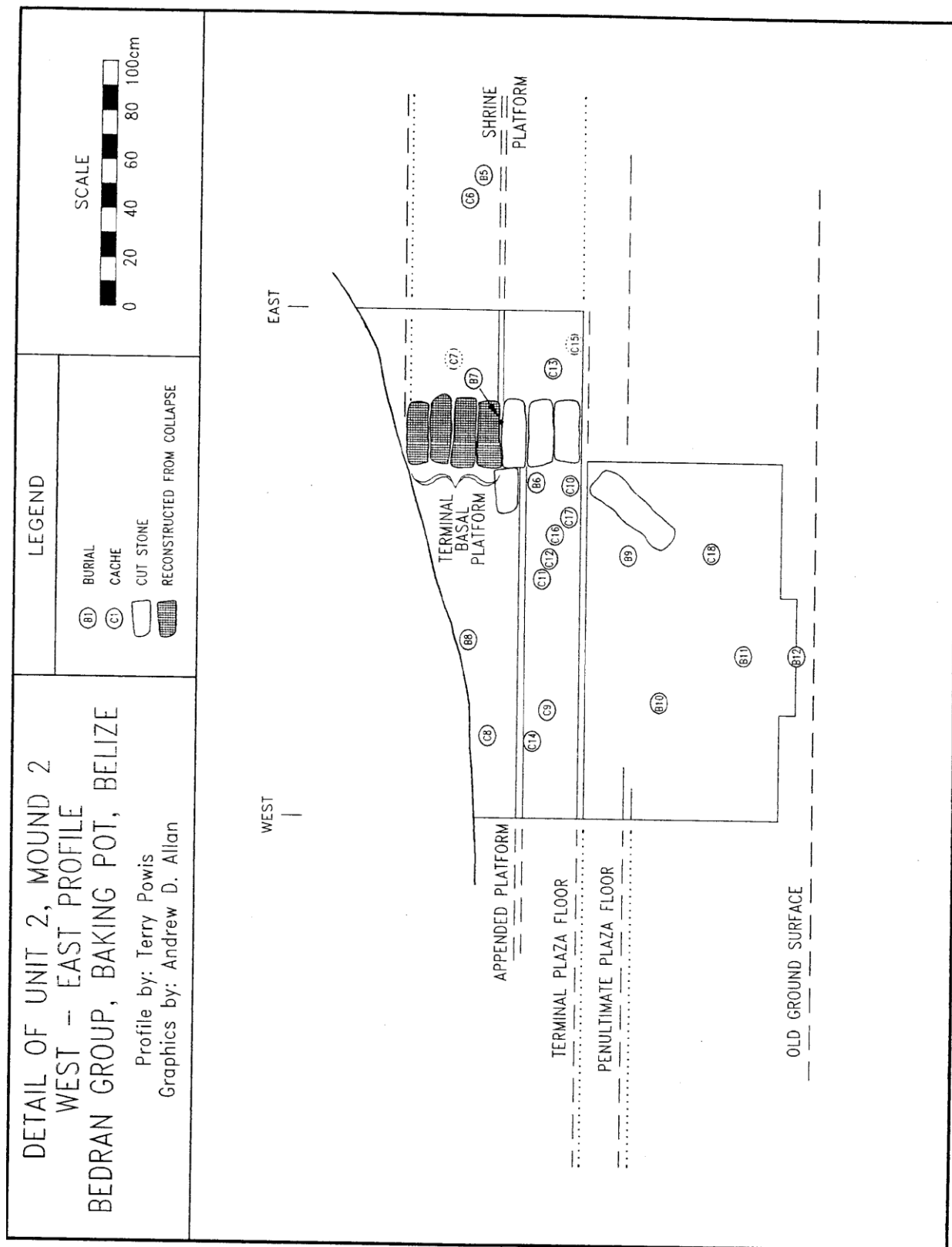


Figure 8: Profile of the Bedran Group Mound 2 1993 operations (detail of plaza excavations).

Above this appended platform was found Burial 8. Burial 8 consisted of a few fragments of a human long bone, but its occurrence within the surface stratum makes its burial status designation questionable. It may have come from a disturbed context such as a midden or collapsed terminal phase construction.

Cache 8, on the other hand, offers no such puzzle. It is a large concentration of sherds, a number of which can be refitted to form partial vessels. There was also a single eccentric (Figure 9(i)) which is similar to the one found in Burial 2 in 1992 (Figure 9(ii)). Cache 8 was found directly upon the appended platform, and suggests a termination ritual occurred here c. A.D. 850. Similar sherd clusters have been found at nearby Xunantunich (Chase 1993:42) and at Blackman Eddy (Garber et al 1992:9).

Sealed within this appended platform were numerous Late Classic period caches and burials. These deposits, along with those discovered in 1992, are listed in Tables 1 and 2 and will not be discussed individually here. However, a quick note about the sherd clusters is warranted. To date, we know of "sherd scatters" found associated with site abandonment at Xunantunich (Chase 1993:46). At Group 1 near Blackman Eddy there was uncovered a termination deposit within the Early Classic construction fill of Structure 1C (Driver et al 1992:6).

The capping of these deposits at the time of construction of the appended platform at Bedran suggests they were part of a single occurrence. The likely sequence of events probably included first, carefully laying the elements of Cache 16 (Figure 10) and 17, followed by the placement of the partial vessels of Caches 9, 10, and 14, after which numerous sherds were deposited with Cache 14 to form a large sherd cluster. Finally, two sherd clusters, Caches 11 and 12, were laid central to, and west of, the shrine inset before being capped by the plaster of the appended platform. In this regard, what we have designated as separate caches in the course of our excavations are really numerous different elements of a single event c. A.D.800 - 825.

The recovery of sherd clusters within the appended platform at Bedran suggest that this type of activity was not limited to termination rituals at the time of abandonment. Garber (1983) has suggested that broken artifacts not only are associated with abandonment but also termination (cf. Driver et al 1992:4). The stratigraphically sealed Bedran sherd clusters suggest they were originally an integral part of the dedicatory rituals revolving around death and rebirth and are likely to be found in various contexts other than abandonment throughout the valley in Classic period times.

The plazuela sequence for Mound 2 is not easily correlated with the other three plazuela units because of the intrusive Late Classic deposits that destroyed the barely perceptible Early Classic plazuela floor. For the first time though, we see a fair number of Hermitage phase sherds, albeit, mixed with the intrusive Late Classic deposits. The concentration of Hermitage phase sherds here confirms Mound 2's primacy within the Bedran Group (Conlon 1993a:200; Powis 1993b:217).

The level underneath the terminal plazuela floor falls within the early Spanish Lookout phase (c. A.D. 700-750) (Conlon 1993a:198). Beginning at the bottom of this level is Burial 12, which likely overlies the sterile old ground surface of the Group. This needs to be further clarified for this interment was left unexcavated after discovery late on the last day of operations in 1993. It was very well preserved and similar to Burial 11, but had no grave goods. Burial 12 shall be recovered in 1994.

No.	Location	Type	Contents	Notes	Period (A.D.)
1	Str. 2/3rd; sub-platform; south of Burial 2	Dedicatory	Teotihuacan hollow oven foot tripod vase with glyph band (PSS)	Deposited with Burial 2. Same glyphs as V4 of B2	700-725
2	Str. 2/2nd; primary axis	Dedicatory (partial vessel)	Aguacate Orange; Privaccion Variety	Similar to Cache 1 of Mound 1	600-650
3	Str. 2/3rd; primary axis; sub-stairs	Dedicatory	8 Spanish Lookout phase vessels and 48 eccentrics	Placed with terminal central stair construction	775-825
4	Str. 2/3rd; primary axis; sub-stairs	Non-Dedicatory	3 chert bifaces	Deposited same time as Cache 5	775-825
5	Str. 2/3rd; primary axis; sub-stairs	Non-Dedicatory	1 chert biface within partial vessel	Same event as Cache 4	775-825
6	Str. 2/3rd; primary axis; sub-stairs	Dedicatory	1 McRae Impressed vessel	Associated with Burial 5?	775-800
7	Str. 2/3rd; terminal basal platform	Dedicatory (Sherd Cluster #1)	Sherds from McRae Impressed; Platon Punctate-Incised; Dolphin Head Red; biface; mano	Commemorating completion; directly above Cache 15	775-825
8	Plaza; above appended platform	Termination (Sherd Cluster #2)	1 partial vessel; 1 eccentric; numerous Spanish Lookout sherds	Termination ritual at time of abandonment	850-900
9	In appended platform	Dedicatory (partial vessel)	McRae Impressed (inverted)	Last event before completing construction	800-825
10	In appended platform	Dedicatory (partial vessel)	Highly eroded (red slip?); (inverted)	Same as Cache 9	800-825
11	In appended platform	Dedicatory (Sherd Cluster #3)	Mainly Spanish Lookout; some Tiger Run	Over 1,000 sherds	800-825
12	In appended platform	Dedicatory (Sherd Cluster #4)	Same as Cache 11	-	800-825
13	In Shrine Inset; under Shrine Platform	Dedicatory	6 vessels; chert biface; mano	Vessel 1 & 2 inverted bowls; Vessels 3-6 lip-to-lip	750-775
14	In appended platform	Dedicatory (partial vessel)	Partial Red-on-Cream vase	Partial similar to V1 in B11	800-825
15	Str. 2/3rd; terminal basal platform	Dedicatory (Sherd Cluster #5)	Numerous Polychrome sherds; partial glyphs; Jaguar motif	Commemorating commencement of construction; directly below Cache 7	775-825
16	In appended platform; primary axis	Dedicatory	Effigy censor	First to be laid with Cache 17	800-825
17	In appended platform; North of Cache 16	Dedicatory	Miniature Dolphin Head Red	-	800-825
18	Plaza; below TPF; between B9 and B11	Dedicatory (partial vessel)	Platon Punctate-Incised; obsidian blade; 1 marine shells (Family Muricidae); 2 marine shells (Family Cardidae)	Contemporaneous with B9, B11 and B12	725-750

Table 2: Cache Description from Mound 2, Bedran Group, Baking Pot, Belize.

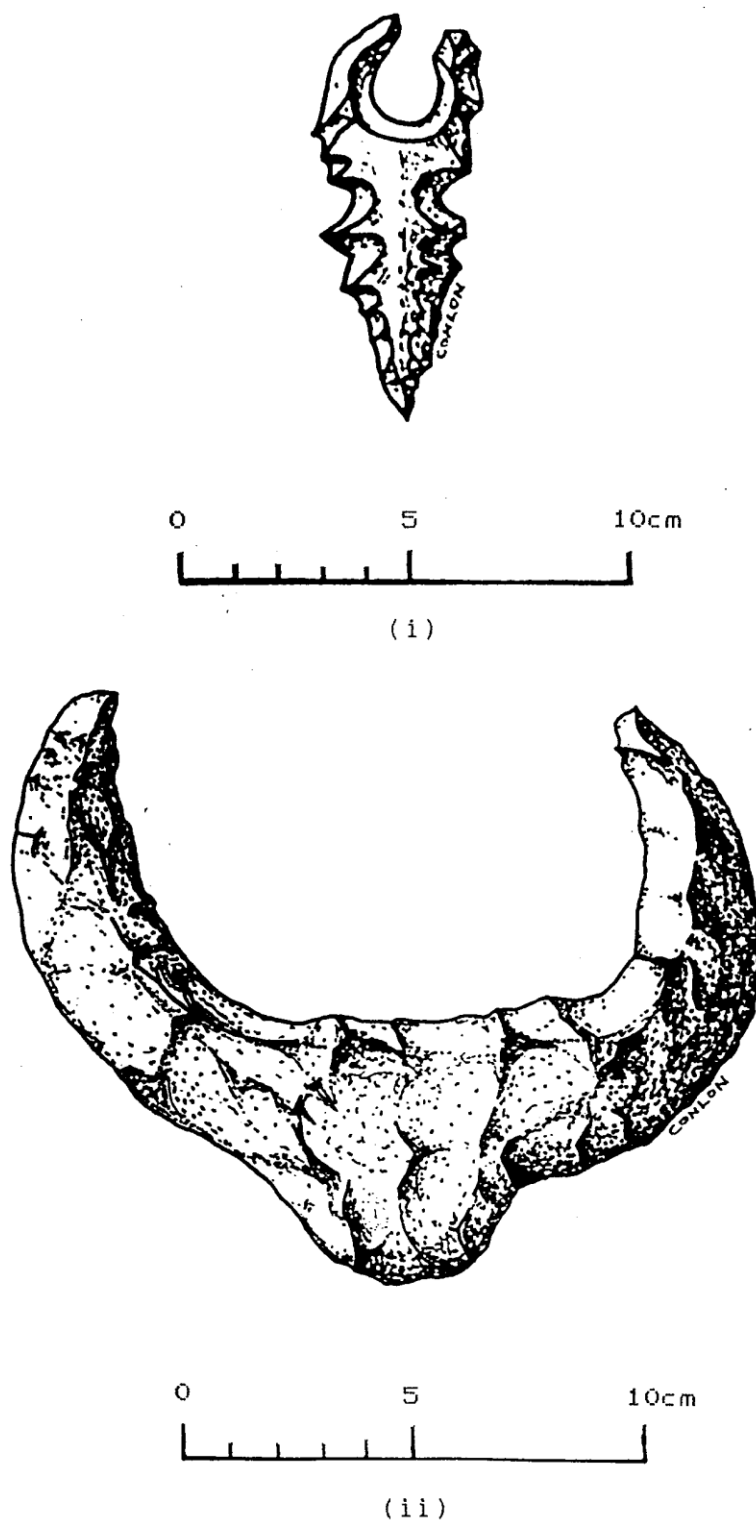


Figure 9: Chert eccentrics from Cache 8 (i) and Burial 2(ii) of Mound 2, the Bedran Group.

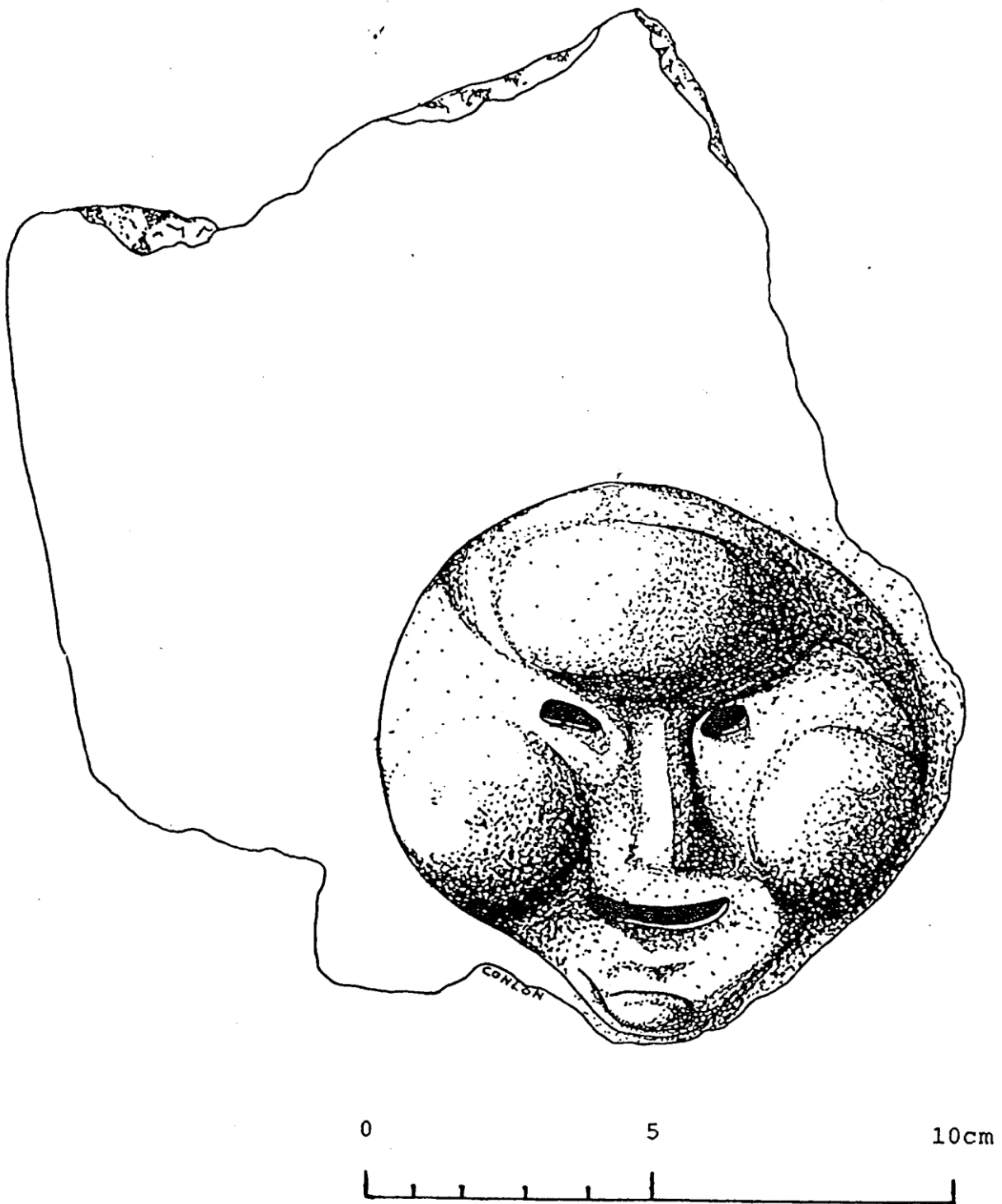


Figure 10: Censor fragment with human effigy from Cache 16 of Mound 2, the Beaman Group.

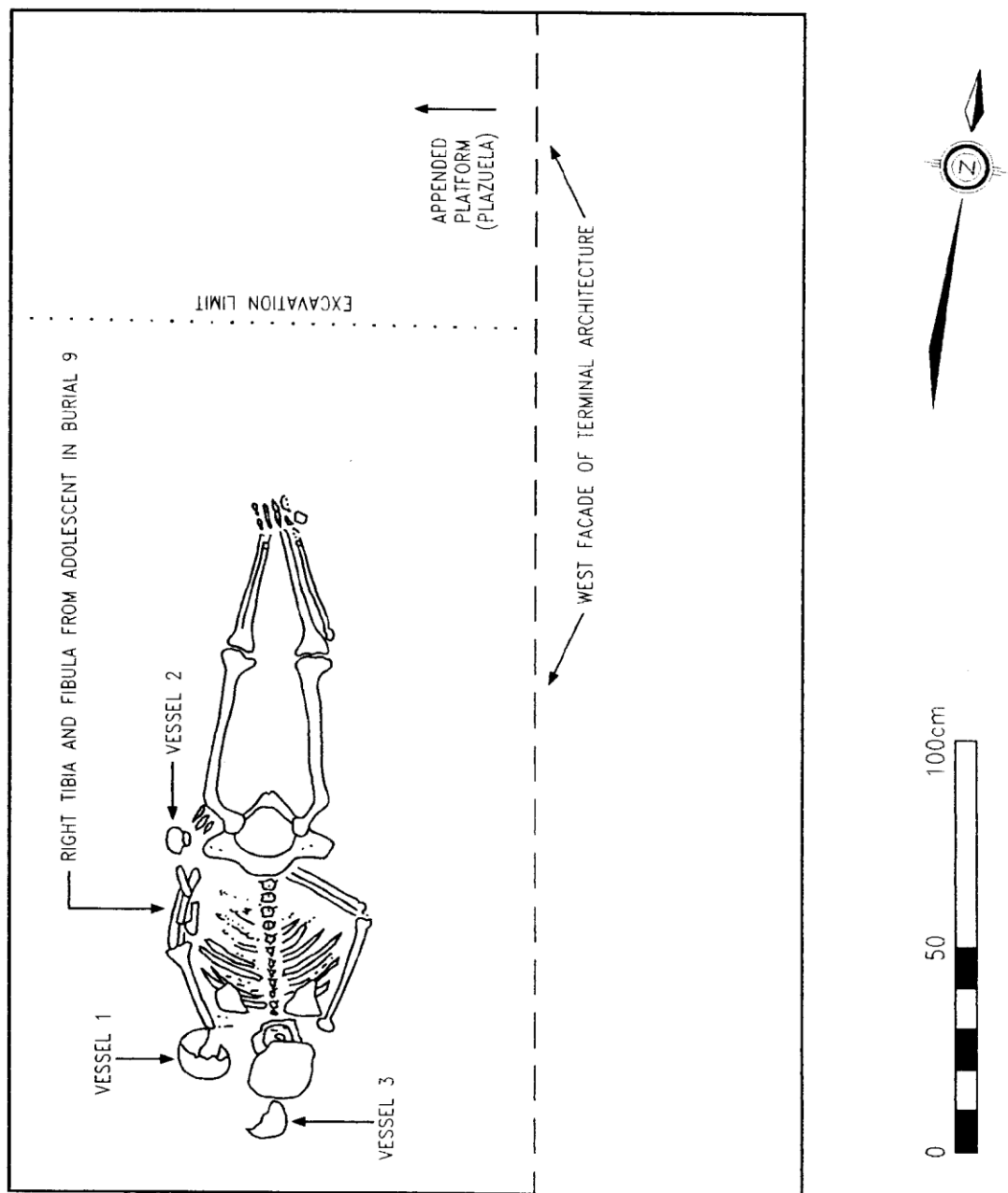


FIGURE 11: PLAN VIEW OF BURIAL 11, MOUND 2, THE BEDRAN GROUP



Figure 12: Red-on-Cream vase vessel from Burial 11, Mound 2, the Bedran Group.

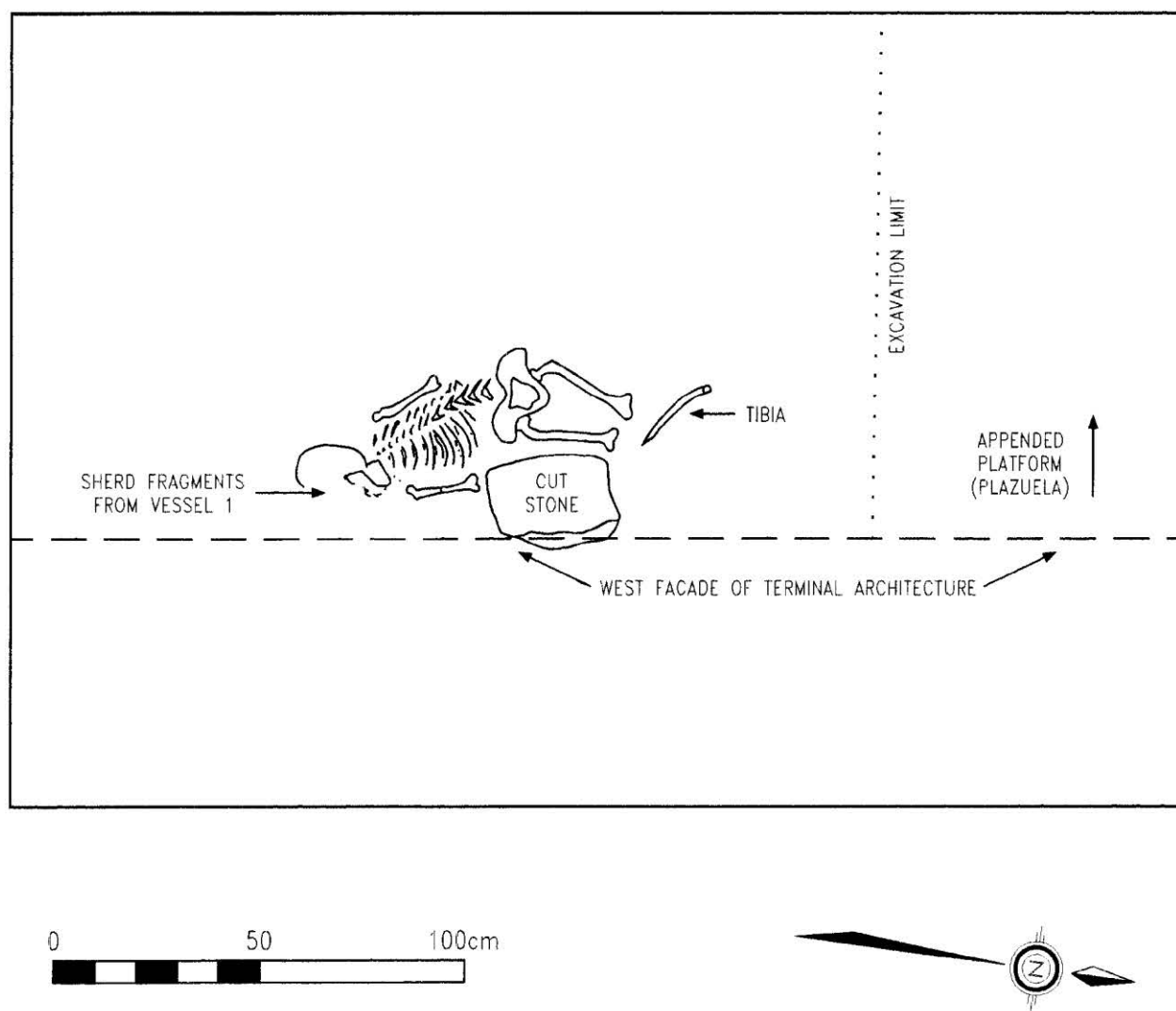


FIGURE 13: PLAN VIEW OF BURIAL 9, MOUND 2, THE BEDRAN GROUP

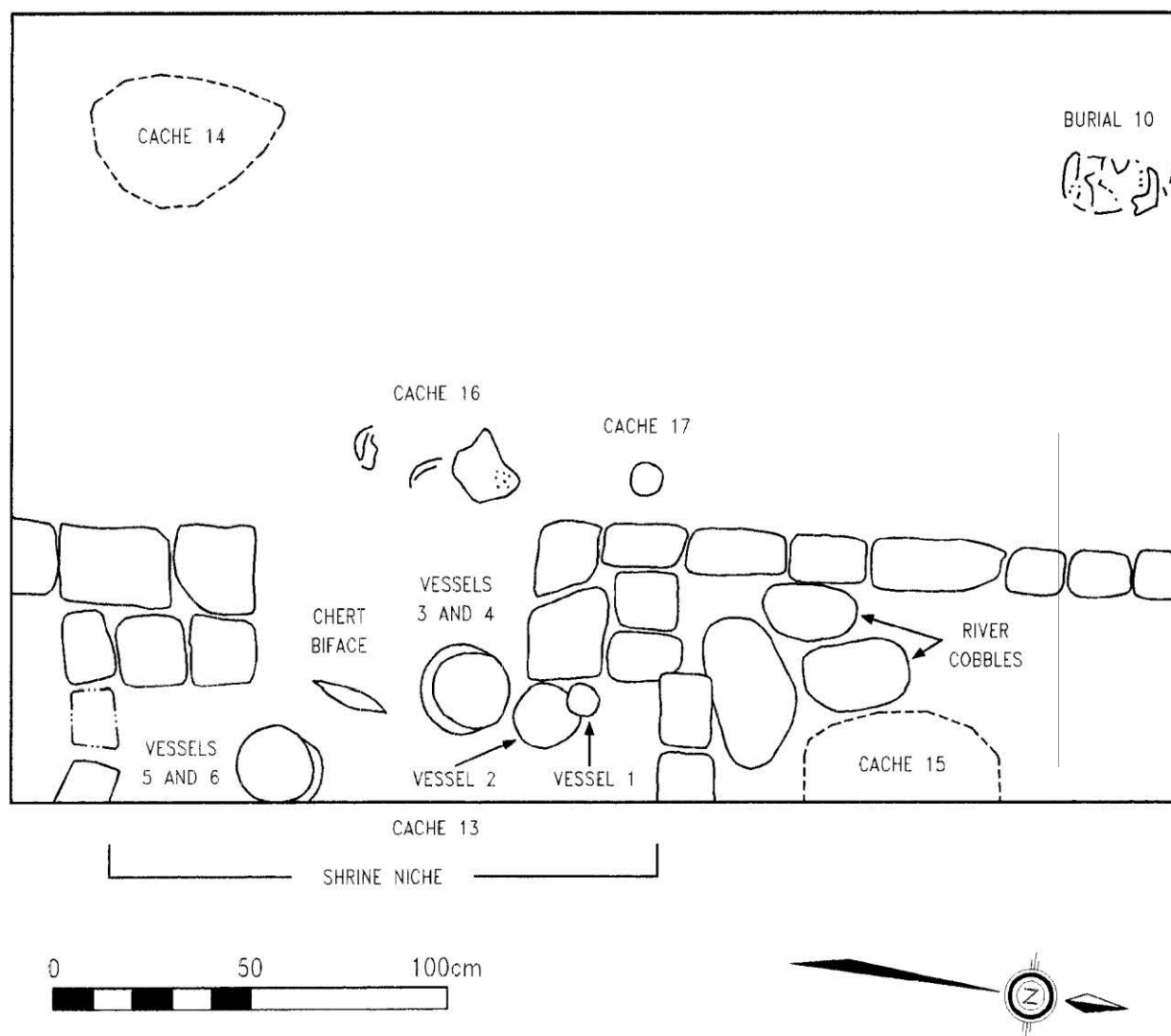


FIGURE 14: PLAN VIEW OF SHRINE INSET/NICHE AND CACHES OF MOUND 2, THE BEDRAN GROUP

Burial 11 is a fully extended, prone adult male with two partial vessels and one miniature vessel comprising its funerary finery (Figures 11 and 12). Located on its right elbow were fragments of two long bones not belonging to the individual of Burial 11. It was later discovered that these two bones could be refitted to the adolescent in Burial 9 (Figure 13). It thus seems as though Burial 9 individual's ulna and radius were purposely meant to accompany the individual of Burial 11. The possible association is one of a sacrificial victim subservient to the individual interred in Burial 11 partly supported by the bloodletting paraphernalia from Cache 18. The items in Cache 18 may have been used in the sacrificial ritual of the adolescent of Burial 9. However, the relationship is somewhat muddled by Burial 12.

Since the individual of Burial 11 was interred before Burial 9 was interred it may be that the individual in Burial 9 was purposely butchered and a portion of his body laid with Burial 11. Because Cache 18 intercedes between these two burials it is considered to be coeval with these interments. Cache 18 consisted of a partial vessel identified as an early form of a Platon Punctated-Incised and thus provides a basis for assigning a date of interment (c. A.D. 725-750). This coincides with the proposed construction of the terminal plaza floor, around A.D. 700-750, based upon ceramic evidence from the other plaza excavations in 1992. Burial 12, though, also seems coeval with this event since it too must have been laid at the time of the construction of the terminal plaza floor. Burial 12's lack of grave goods would suggest a lesser status than Burial 11 and thus a possible attendant of Burial 11.

Burial 10 was discovered north of the central axis within the same level as Burials 9, 11, and 12, but off the primary axis to the north, in front (west) of the terminal basal platform. This represents a separate, intrusive, interment during the Spanish Lookout phase of the Late Classic period after the appended platform was added (c. A.D. 800-825). No grave goods were recovered and, although buried next to the eastern shrine, was not necessarily an individual of paramount importance in the Bedran elite lineage.

The shrine is described as inset earlier because at this point in time, c. A.D. 700-750, there were two opposing columns, three courses high, resting on the terminal plaza floor with a small, 65 centimeter opening, into a larger, niche area (Figure 14). This configuration is strikingly similar to that of Room 1 on Structure II-A at Baking Pot. The shrine platform of Mound 2 at Bedran came about early in the Spanish Lookout phase (c. A.D. 750-775). This date is based upon the early facet Dolphin Head Red vessels 1 and 2 as well as the form and surface decoration of the Platon Punctated-Incised vessels 3 through 6 of Cache 13 which show distinct similarities to Rosario Incised of the earlier Tiger Run phase (see Gifford 1976:196 and 256). The shrine platform bears a resemblance to the niche above the masonry altar in Room 1 of Structure II-A at Baking Pot.

Later, around A.D. 775 - 800, the intrusive Burial 7, was placed upon the south column/pillar set into the plaster surface. This interment consisted of an adult skull only. This may have been another sacrificial victim whose body was not recovered in our excavations. On the other hand, Cache 6 may be associated with Burial 5, whose cranial remains were absent. In either case, there seems to be some evidence for the practice of ancestor worship whereby the head is retained for continued reverence in post mortem rituals (cf. Welsh 1988:196). Laporte (1993:310) reports of niche areas on Structure 5D-87-8 and 5D-82-5 at Mundo Perdido, and 5E-38 in the East Plaza at Tikal, the first having stone carved human skulls on the sides and back of the niche. Perhaps there is a link between ancestral head worship at the shrine inset of Bedran and the placement of effigy censors in this niche type of architectural setting.

At Cahal Pech we find a room specifically designed for one of the ruling elite. This also occurs at Baking Pot in Group II. The rooms were likely part of the living display of pomp while niche areas likely contained some form of ritual paraphernalia. The inclusion of a shrine inset for the specific purpose of "housing" ritual paraphernalia such as effigy censers representative of ancestors, or even the human heads of the ancestors themselves, was apparently an important feature within major site centers. Housed representations of individuals and events is important as exemplified by the large rooms built for stelae at the Twin Pyramid Complexes at Tikal.

Twin Pyramid Complexes at Tikal have alluded functional interpretation (Coe 1988:78). But what is readily apparent is their replication of the Great Plaza configuration. The main plaza at Tikal has two opposing temples on the east and west, a multi-roomed palace construction on the south and numerous temples on the North Acropolis with a higher number of stelae. The Twin Pyramid Complexes conform to this type of configuration with their two opposing pyramids, a multi-roomed palace structure on the south, and a stela erection in the north. It is our contention that the niche area in Mound 2 at the Bedran Group is similarly an attempt to mirror not only the architectural configurations of the core at Baking Pot, but also, like the Twin Pyramid Complexes at Tikal embody the heart of their related site-core, to mirror all of the mightiest manifestations central to elite power and control.

The significance of these "rooms" is further signified by the temple of inscriptions at Palenque. Both mythological and historical events are recorded in texts of temple structures, including births, accession, and bloodletting (Schele 1990:143). The seating glyph at Cahal Pech is a similar manifestation (Awe 1992b:77). Of significance to Bedran is the inclusion of the Primary Standard Sequence in these room texts which indicates temple dedication (Schele 1990:143). The PSS is displayed upon the Orange Walk Incised vessel from Burial 2 in Mound 2 (previously described as a Sotero Red Brown bowl, see Powis 1993b), as well as the Teotihuacan hollow oven foot tripod vase of Cache 1. Schele (1990:156) states "similar dedication and termination caches are documented at almost all Maya sites including the lip-to-lip caches found at Tikal, Uaxactun, and the northeastern Peten and Belize." These similarities coincide with the Bedran Group's Peten artifactual and architectural influences and poses the question of this Group's participation in the larger peer-polity network (see Freidel 1986).

A vessel similar to that of Cache 1 at Bedran was confiscated from looters in 1978 digging in Structure A-1 in the core of Cahal Pech (Awe 1992b:80), and is possibly from a high status burial. Vessel 4 of Burial 2 at Bedran (Figure 15), with its PSS glyph band, also indicates a very high status individual. These types of "cacao" vessels have been found in tombs of high status individuals within site cores, such as at Rio Azul (Hall et al 1990). A similar vessel belonging to Lord Smoke-Squirrel of Naranjo found in a high status burial at Buenavista attests to the affirmation of ties between elites (Taschek and Ball 1992; and Ball 1993:260). As at Zinic (Iannone and Conlon 1993:84), elite affiliation is further solidified by the inclusion of the eccentrics of Cache 3 (see Iannone 1993b). At Bedran, this conformity confirms the entrenchment of the Bedran elite within the peer-polity interaction sphere.

The full implications of Caracol's defeat of Tikal in A.D. 492 is still not well understood. Neither is Caracol's relationship regarding the Belize Valley. The Late Classic period is supposedly one marked by waning relationships with the Peten (Gifford 1976:288). However,



Figure 15: Glyph band rollout from an Orange Walk Incised bowl (Vessel 4) of Burial 2, Mound 2, the Bedran Group, Baking Pot. Scale 1/3 actual size.

Naranjo appears to be the favourite in consideration for supreme domination over all of the Belize Valley (cf. Ball and Taschek 1991; and Leventhal et al 1992), itself aligned with Tikal. It is not surprising then that similarities of lip-to-lip caches at Tikal, Bedran, and Group 1 at Blackman Eddy all testify to a strong relationship with the Peten.

This hypothesis has further support in the inclusion of Manik Complex (A.D. 250-550) ceramics direct from the Peten in the Bedran Sherd Clusters 11 and 12 (see Culbert 1993, Figures 15b, 16a, and 17a). The Tikal-Naranjo connection is further demonstrated by the inclusion of ceramic vessel types originally manufactured in the Peten, although they may have enjoyed a brief respite with the Baking Pot site core elite before finding their final resting place at the Bedran Group.

SUMMARY

Several observations regarding the significance of our research methodology must be examined here. The main thrust of Garber et al. (1990:17) site distribution analysis is the apparent spatial regularity of similar sized sites at around 10 kilometers. This 10K zone has important implications for site investigations. It suggests that, in order to understand intracommunity organization, an area of almost 100 square kilometers must be considered the operative areal extent for investigation. This is too enormous for any single project to successfully complete both the necessary and excavation operations with the limited funding that most are operating under. However, the five kilometer transects proposed for the Xunantunich Archaeological Project (Yaeger 1993:119) shall provide a large database with which to begin more fully analysing the entirety of site level dynamics.

There is no reason why a similarly large scale survey could not be undertaken at Baking Pot. At the same time, BVAR researchers could continue to employ the settlement group level of analysis to continue the facilitation of middle level settlement studies. As investigations progress over the next several years a full range of settlement units, as at Cahal Pech, should come to light at Baking Pot. In the meantime, we have begun the initial phases of intragroup analysis at Bedran, and coupled with future investigations at the Naxima Settlement Cluster, will be able to make observations regarding intragroup relationships.

Both the Bedran and Naxima Settlement Clusters are roughly 2 kilometers from the site core of Baking Pot. This is the limit of survey which has taken place to date at Cahal Pech where we already knew of the Melhado Group (Willey and Bullard 1956). It is only recently that excavations were begun at a substantial settlement unit designated the Zubin Group (Iannone 1993a), also around 2 kilometers from the site core of Cahal Pech. This has important implications for researching intracommunity relationships.

Garber et al (1993:20) have noted that minor ceremonial centers, such as Actuncan, Manbatty, Zinic, and Zopilote, occur within two kilometers of sites with ballcourts (Xunantunich, Blackman Eddy, and Cahal Pech) and likely "functioned as ancestral shrines for lineages or sub-lineages that were related to the ruling lineage of the main site core". A similar role for Zinic has been proposed by both Conlon (1992:87) and Iannone (1992:114). Cheetham et al (1993a:167) also proposed an "intimate association with the lineage(s) represented within the site core" of Cahal Pech for the "specialized ceremonial architectural grouping" (Cheetham 1993a:169) of Zopilote.

This designation is significant for unlike Zinic, which has two potential residential mounds within its grouping, the main group at Zopilote is comprised only of large temple structures. The lack of incorporated residential structures at Zopilote suggests that it must have operated, in at least one way, differently from Zinic. The multiplaza Zubin Group, on the other hand, may represent a third, more autonomous role than either Zinic or Zopilote (G. Iannone, Personal Communication 1993). However, the exact nature of the relationship between core elite and their affiliated peripheral elite in the Belize Valley remains to be revealed through further survey and excavation.

There is enough evidence to suggest that deposits and architecture of the eastern shrine at Bedran mirrored not only Baking Pot's Group II, but also similar manifestations in the site cores of Cahal Pech and Buenavista, and even as far away as Rio Azul and Tikal, suggesting the Bedran Group inhabitants were very much a part of the upper echelon, fully participating within the "Great Tradition" (Gossen and Leventhal 1993:211) and "peer-polity network" (Freidel 1986). How, or why, this relationship existed is a question which needs further examination. The answer seems to revolve around identifying the potential role Bedran fulfilled in regards to the social, political, and economic realm of Baking Pot.

Several conditions may have been in effect at Bedran. One probable function could have included producing surplus foodstuffs for the consumption of those inhabiting the high density area nearer the Baking Pot site core. Whether this was exacted or redistributed by the ruling elite in the core such as at Nohmul (Harrison 1990:110) or simply a service driven by economics (Freidel and Scarborough 1982:133) is debatable. A second mode of production could have included the growing of commercial crops specifically for elite consumption and/or distribution. These crops could have include cacao, cotton, and copal. Again, it is unclear whether these goods would be core directed requirements or Bedran's chosen economic pursuits. They could of course be both. What is evident is that Bedran was capable of producing more than it needed for its own consumptive purposes and any surplus was either core elite dominion, for which Bedran may be rewarded, or, economically driven production, which Bedran would be rewarded with increased potential for acquiring status items, as long as they were mindful of proper maintenance of their kinship ties.

We suggest there was a mutually dependent relationship between the Bedran lineage and the Baking Pot core elite. This interdependence is displayed in the close kinship ties exemplified by the Bedran Groups capabilities to acquire and display high status items, as well as participate in ritualistic practices similar to those demonstrated in the site core. In return for continued participation in this relationship the Bedran elite likely provided valuable support services in the form of surplus foodstuffs, elite consumptive items, or both. This enabled Baking Pot to participate fully within the per-polity interaction sphere and thus afforded Bedran similar rewards and increased status. Reciprocally, as Baking Pot's fortunes waned so to did those of the Bedran Group.

This agricultural surplus was the result of successful exploitation of the labor force in the manipulation of the environment. The control of land and labor was maintained through the settlement cluster peoples participation in the ritualistic displays and offerings to the gods performed by the Bedran elite, legitimizing Bedran's position in the elite stratum of society and perpetuating allegiance to, and patronage of, the Bedran Group lineage. The relative security offered to settlement cluster inhabitants by the surplus foodstuffs likely played a key role in their continued participation within this elite directed operation.

DISCUSSION

The question still remains whether the Bedran Group inhabitants were rulers, or, were themselves ruled. The answer to this question is largely dependent upon ones operationalization of the term "ruler". If reserved for identifying kings within the cores of major centers then the Bedran lineage head would have to be excluded from this designation. The interrelatedness of Bedran and Baking Pot elite characterizations leads us to conclude that there was no less than a primary elite presence at Bedran, directly related through descent, marriage, or affiliation to the ruling family of Group II.

The Bedran community was dependent upon not only kinship ties but the successful exploitation of land and labour. The economic productivity of this small area in the periphery of Baking Pot demonstrates its importance in maintaining kinship based status differentiators during the Late Classic period (Conlon 1992:84-85).

CONCLUSIONS

Our small scale research focus takes years to have any direct influence upon the analyses of regional dynamics. Our research is ultimately more costly both temporally and monetarily, but it is also a reliable way to begin to develop larger scale polity analyses. We thus do not feel compelled to follow those that profess regional studies as the only viable methodological doctrine, but in fact, scrutinize with a healthy scepticism those that would contend their regional perspective has more important implications for intracommunity analyses. On the contrary, we propose that our research has equally viable implications to those concerned with regional models which may need readjustment after more intensive excavations within these regions are performed.

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