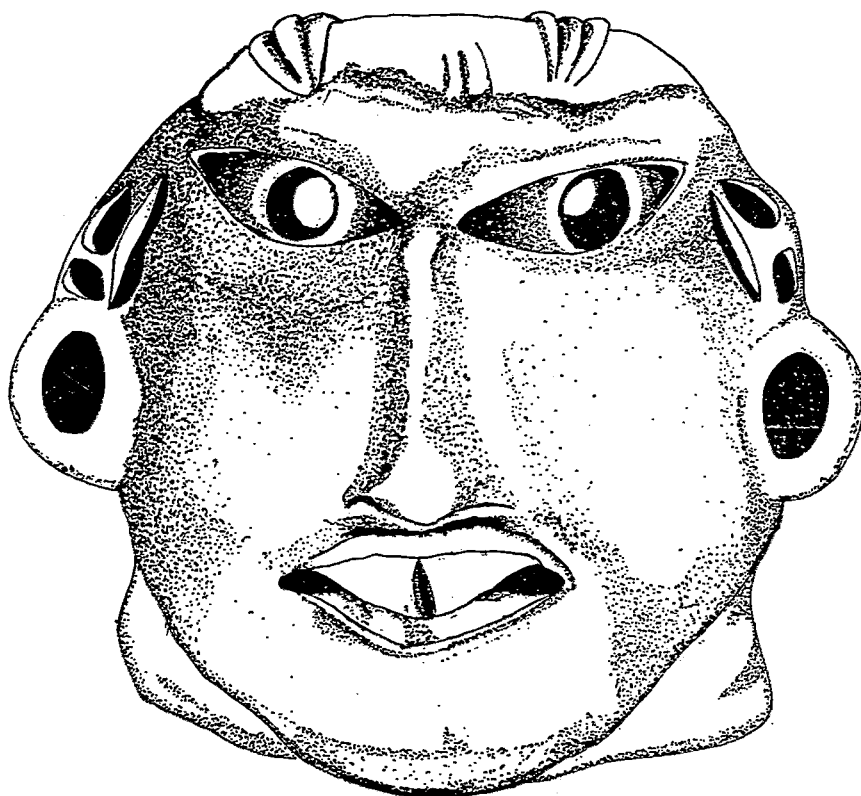


The Cahal Pech, Belize Project:
A Progress Report of The Second
(1989) Season of Investigations.



Jaime J. Awe, Cassandra Bill & Mark D. Campbell

March 1990

Trent University, Peterborough, Ontario.

The Cahal Pech, Belize Project, 1989 Staff & Crew

Director: Jaime Awe

Assistant Director\Surveyor: Mark Campbell

Assistant Director\Lab Supervisor: Cassandra Bill

Assistant Surveyor: Jim Conlon

Field Supervisors: David Cheetham, Lynn Patterson

Field Assistants:

Tara Bowsfield	Monica MacDonald
Tracey Courneya	Diane Maxwell
Heather Craig	Cynthia McDougal
Mary Degruchy	Sheryl Moran
Ron Fairman	Marcie Peck
Cindy Hill	April Nowell
Carol Howe	Brian Schnarch
Jennifer Lambert	Dave Widdis
Diana Lumsden	Lisa Wolthuizen
Claire Tkazuck	Margaret Wright

Field Crew:

Michael Bejos	Carlos Pinelo
Daniel Hernandez	Felipe Puc
Salvador Magana	Hilberto Pulido
Rene Pacheco	Hilberto Uk

Sponsoring Institutions: Canadian Commission for Unesco; Trent University; Tulane University.

Frontispiece: Preclassic Figurine Fragment from Str. B-4.
(Illustration by Monica MacDonald).

Introduction

The second season of investigations at Cahal Pech was conducted in May and June of 1989, under the sponsorship of Trent University, The Canadian Commission for Unesco and Tulane University. The project was also supported by the Cayo Branch of the Belize Tourism and Industry Association and by the Belize Department of Archaeology.

The 1989 season had four major objectives: 1) to test-excavate a couple of mounds in the site core that had not been sampled in the previous season; 2) to survey and map the immediate peripheral zone of the site; 3) to excavate a few structures in the periphery, particularly those that were threatened by modern housing construction or had been partially destroyed by looting; and 4) to ascertain the chronological limits and cultural complexity of Formative occupation at the site.

Excavations in the Site Core

Investigations in the site core were limited to Plaza B and Plaza G. In the former, excavations were conducted on Structure B-4 and in the Plaza floor. Excavations in Plaza G tested Structures G-1 and G-2.

Plaza B:

Since Structure B-4 had previously produced evidence of occupation and construction dating to the Middle Formative, and since one of our major objectives was to ascertain the temporal and cultural configuration of this occupation phase, we decided to

continue excavating this structure in 1989.

Our excavation unit descended approximately 5 meters below the surface of the structure and recorded a ceramic and architectural sequence that spans from the early Middle Formative (900 B.C.) to the Late Classic Period. Within the early Middle Formative stratigraphic levels we discovered a section of an apsidal structure and a large quantity of pottery. The latter has been placed in a new ceramic complex designated the Cunil ceramic phase. A more detailed description of this early period of occupation at Cahal Pech is provided in the short article that follows.

Initially our investigations were concerned with the site's diachronic development, plus a study of the cultural and socio-political relationship between Cahal Pech and sites in the Belize River Valley region. By the end of the first (1988) field season preliminary analysis of our data suggested that Cahal Pech was continuously occupied from about 900 B.C. to A.D. 800.

EARLY MIDDLE FORMATIVE OCCUPATION IN THE CENTRAL MAYA LOWLANDS: RECENT EVIDENCE FROM CAHAL PECH, BELIZE.

Jaime Awe,¹ Cassandra Bill,² Mark Campbell,³ David Cheetham⁴

(1) Institute of Archaeology, (2) Tulane University, U.S.A., (3) University of Toronto, Canada, (4) Trent University (Canada).

Introduction

After more than half a century of intensive archaeological research the early Middle Formative (or Middle Preclassic) period (1000-600 B.C.) continues to be one of the most enigmatic eras in the study of Lowland Maya prehistory. While several factors contribute to this situation, the primary cause for this obscurity lies in the fact that few sites have produced either contextual or stratigraphic evidence of occupation during this phase (Rice 1976; Andrews 1988). Consequently, any new site with evidence of Middle Formative occupation can contribute substantially to our limited knowledge of this pioneering stage of the Lowland Maya. This paper introduces one such site, Cahal Pech, where recent investigations have uncovered a stratigraphic sequence that tentatively spans the early Middle Formative to the Late Classic period. It provides a preliminary description of the site's early Middle Formative configuration and briefly discusses its possible regional affiliation.

Site Description

Cahal Pech is a medium-size Maya center located in the central Belize Valley region of western Belize (Fig.1). The site core consists of approximately 34 Classic period structures compacted on an acropolis (Fig.2) overlooking San Ignacio Town and the Macal branch of the Belize River. Most of the mounds within the core are located around seven plazas and include tall non-domestic structures and several range-type buildings. The central precinct also contains six plain stelae, one uncarved altar, two ballcourts and possibly a sweathouse (Awe & Campbell, 1988).

Settlement survey in the periphery has recorded and detected a large number of patio groups of varying types and sizes, a causeway, two reservoirs and a large creek that is presently dry. The settlement pattern tentatively displays a concentration of mounds within the vicinity of the reservoirs and creek, but with a marked bias towards locations on the high ridges to the south and southwest of the site core (Awe & Campbell n.d.).

Investigations

Prior to our study several individuals had conducted limited and sporadic research at Cahal Pech. Unfortunately, most of these investigations were either never published or were very brief and descriptive (e.g. Satterthwaite, 1951; Willey *et al.*, 1965). During the 1970's and 1980's several structures at the site were partially destroyed by looters. In an effort to halt these activities the senior author, with the support of the Belize Tourism Industry Association, The Belize Department of Archaeology, and the financial sponsorship of Trent University and the Canadian Commission for Unesco, organized the first major program of investigations at Cahal Pech.

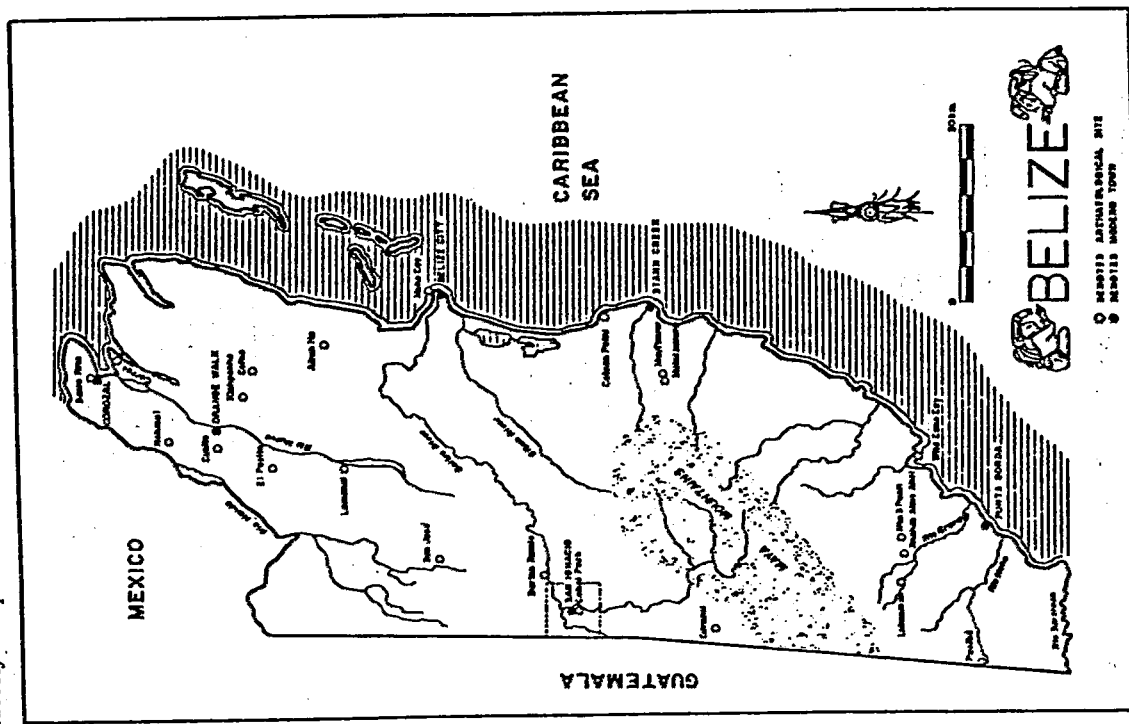


Fig. 1. Map of Belize showing location of Cahal Pech

of comparative cross-dating, the second (1989) season of research has tentatively a) confirmed our previous chronological sequence, b) identified the spatial distribution of Middle Formative loci, and c) has uncovered contextual data, in stratified deposits, dating from the early Middle Formative to the Classic Period (Awe et al., 1990).

The Early Middle Formative at Cahal Pech (1000-600 B.C.)

To date, evidence for early Middle Formative occupation has only been recorded within Plaza B. Contexts dating to this period were discovered underlying levels equivalent to the Mamom and Chicanel spheres, approximately six meters and five meters below the summits of structures B-2 and B-4, respectively. Most of the information provided below, however, comes from a large excavation unit that descended below the plaza level on structure B-4.

Data from these excavations indicate that the early Middle Formative inhabitants lived in small apsidal structures bordered in some areas by one or two tiers of roughly-cut limestone blocks. Inside, the houses appear to have had packed, or poorly plastered limestone floors. Several post-holes and a fragment of pole-impressed plaster suggest that the superstructures were constructed of poles and thatch and the walls consisted of wattle and daub.

The artefact assemblage includes ground and chipped stone implements, as well as pottery and ceramic figurines. While most of the latter display marked affinities to material from the southern and southeastern Maya Highlands, a few specimens resemble figurines from the Nacaste and Palangana phases at San Lorenzo, Tenochtitlan (Coe & Diehl, 1980). The pottery, which has been placed in a new complex designated the Cunil ceramic phase, consists mostly of monochromes, dominated by orange, red and brown slipped types. Flat-base dishes with flaring sides, tecomates and short-necked jars are most prevalent in the form repertoire. Surface decorations include grooving, incising, punctating, and some filleting.

Stylistically the Cunil complex material demonstrates ties with early Jenney Creek types from the Belize Valley (Gifford, 1976), with Swasey/Bladen material from Cuello (Kosakowsky, 1987), and Boley ceramics from Colha (Valdez, 1987) to the north. A number of tentatively identified northern Belize-like types at Cahal Pech include Ramgoat Red, Consejo Red and Tower Hill Red-on-Cream. Due to the preliminary nature of our analysis it is premature to rule out any relationship with ceramics from the central Peten or Pasion zone sites in Guatemala. Nevertheless, in a recent paper on Lowland Maya ceramics Andrews (1988) argues that pottery from the Xe complex in the Pasion area is distinct from early Middle Formative ceramics from the eastern Belize region of the Central Lowlands. If Andrews' hypothesis is valid, evidence suggesting ties between Cahal Pech and Pasion zone sites may not be present.

Animal remains, and ground stone tools, in the lowest stratigraphic levels suggest that the pioneering inhabitants of Cahal Pech practised a mixed subsistence economy based on foraging and farming. The presence of a relatively large number of fresh water clams (*Nepronaias ortomanni*) and jute (*Pachychilus indiorum* and *P. glaphyurus*) shells indicates some reliance on, and the exploitation of, riverine resources. It is also possible that they collected, and probably planted, macal (*Xanthosoma* spp.) which grows wild and ubiquitously by the banks of the Macal River.

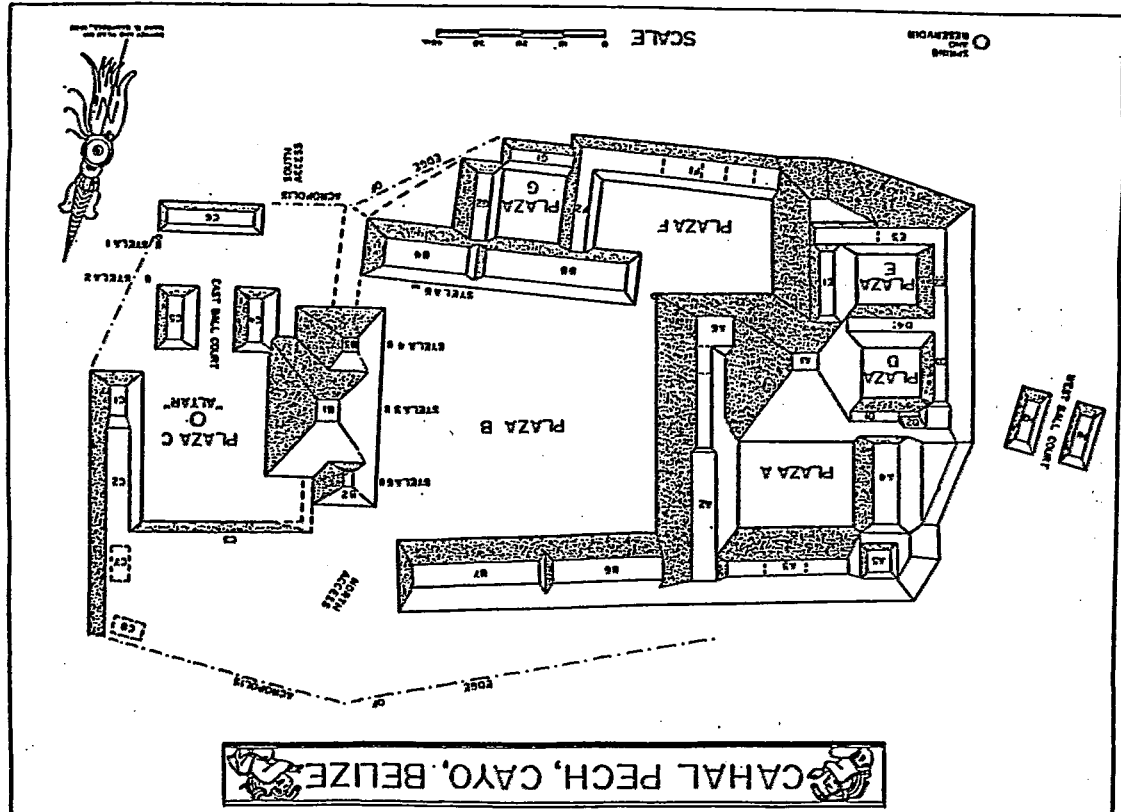


Fig. 2. Rectified plan of the site core at Cahal Pech, Belize

Since the sample of early Middle Formative (1000-600 B.C.) sites in the Central Maya Lowlands "is pitifully small" (Willey, 1981, 414) we decided that future investigations would concentrate on this aspect of the site's prehistory. On the basis

Conclusion

Presently, the ongoing nature of our field research and data analysis prevents us from making conclusive statements regarding the origins, cultural complexity and interregional relations of the early Middle Formative Cahal Pech community. Even at this stage, however, the site is providing another window through which we can view the pioneering processes that preceded the dispersal of precocious Maya villages during the late Middle Formative period. Furthermore, the Cahal Pech data, with its rare stratigraphic sequence, should contribute substantially to our limited early Middle Formative data base, and our understanding of Maya cultural genesis by clarifying several enigmatic questions regarding early Lowland Maya prehistory.

References

- Andrews, E.W. V. 1988 Lowland Maya Ceramic History. In: Clancy, F. & Harrison, P.D. (eds.). *Vision and Revision in Lowland Maya Archaeology*. Albuquerque: University of New Mexico Press.
- Awe, J. & Campbell, M. 1988 *Site Core Investigations at Cahal Pech, Cayo District, Belize: Preliminary Report of the 1988 Season*. Peterborough, Ontario: Trent University.
- Awe, J. & Campbell, M. n.d. *Preliminary Spatial Analysis of the Site Core at Cahal Pech, Belize and its Implication to Lowland Maya Social Organization*. Unpublished manuscript.
- Awe, J., Bill, C & Campbell, M. 1990 *Preliminary Report of the Second (1989) Season of Investigations at Cahal Pech, Belize*. Peterborough, Ontario: Trent University.
- Coe, M.D. & Diehl, R.A. 1980 *In The Land of the Olmec: The Archaeology of San Lorenzo, Tuxtlautilan*. Vol. 1. Austin: University of Texas Press.
- Gifford, J.C. 1976 *Prehistoric Pottery Analysis and the Ceramics of Barton Ramie in the Belize Valley*. Memoirs of the Peabody Museum of Archaeology and Ethnology 18.
- Kosakowsky, Laura J. 1987 The Formative Ceramic Sequence of Cuello, Belize. In: Rice, Prudence M. & Sharer, Robert J. (eds.). *Maya Ceramics: Papers from the 1985 Maya Ceramic Conference* part 1:15-35. Oxford: BAR International Series 345(1).
- Rice, D. 1976 The Middle Preclassic Maya Settlement in the Central Maya Lowlands. *Journal of Field Archaeology* 3: 425-445.
- Satterthwaite, L., Jr. 1951 Reconnaissance in British Honduras. *University Museum Bulletin* 16 (1):21-36, Philadelphia, Pennsylvania Press.
- Valdez, F. Jr., 1987 *The Prehistoric Ceramics of Colha, Northern Belize*. Unpub. Ph.D. Dissertation, Harvard University.
- Willey, G.R. 1981 Maya Lowland Settlement Pattern: A Summary Review. In: Ashmore, W. (ed.). *Lowland Maya Settlement Patterns*. Albuquerque: Univ. of New Mexico Press, 385-415.
- Willey, G.R., Bullard, W. R. Jr., Glass, J.B. & Gifford, J.C. 1965 Prehistoric Maya Settlement in the Belize Valley. *Papers, Peabody Museum, Harvard University*, 54. Cambridge.

HUICHOL ETHNOGRAPHY AND ARCHAEOLOGICAL INTERPRETATION

Eduardo Williams Institute of Archaeology

Introduction

The Huichol Indians of western Mexico inhabit one of the most isolated and inaccessible areas of Middle America (Fig.1). This isolation has meant that their aboriginal culture has survived with relatively few major modifications since the period of first contact with Western culture. This situation offers a unique opportunity to the anthropologist searching for ways to better understand native culture in this area of Mesoamerica. Huichol culture has often been used as an ethnographic model for analogy to aid in archaeological interpretation (see, for example, Furst, 1974).

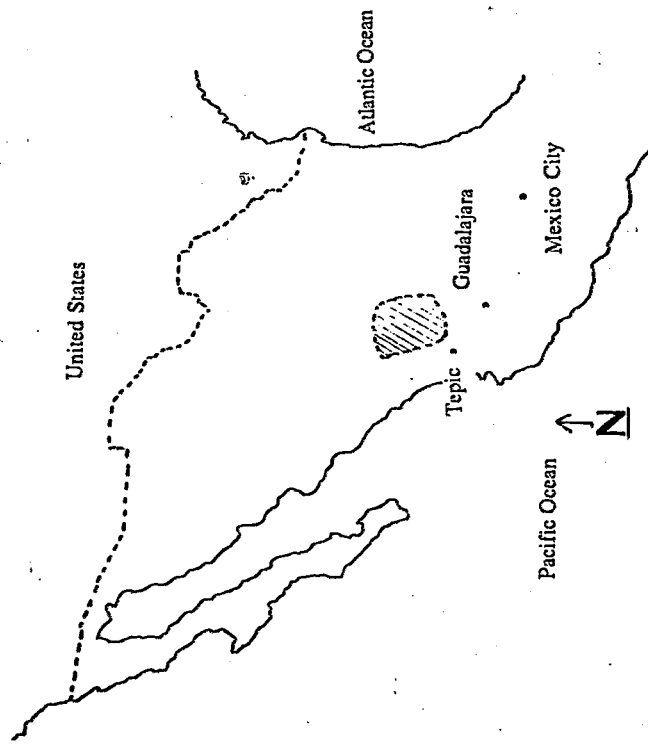


Fig. 1 Map showing approximate area of Huichol territory

The late Middle Formative and Late Preclassic material culture from the Str. B-4 excavation basically resembles that of the greater Belize Valley region and the Central Maya lowlands in general. Ceramics from the late Middle Formative period are essentially similar to Mamom horizon material. They included such horizon markers like Mars Orange ware, Joventud Red, Chuhinta Black and Sayab Daub-striated. The pottery of the Late Preclassic are also dominated by diagnostics of the Chicanel sphere, followed by the more regional Floral Park horizon ceramics in the Protoclassic period.

The excavation in the Plaza B floor consisted of a single unit located approximately 4 meters north of Str. B-4. The excavation descended just over two meters and exposed four plaza floors. The earliest has been tentatively dated to the Late Preclassic period which is contemporaneous with the construction date of Str. B-4 Sub. The subsequent plaza floors all seem to have been constructed during the Classic period; the second earliest floor during the Early (?) Classic, and the two most recent floors during the Middle Classic.

Plaza G

Two mounds were tested in Plaza G: Structures G-1 and G-2. On Str. G-1 we excavated three small units along the north face of the mound. These investigations indicate that the Structure was built during two construction phases.

The first architectural phase consisted of a very low platform with a single step leading down to plaza level. The platform most likely supported a pole and thatch structure which probably functioned as a residence for low status elite, or for elite attendants. Artefacts below the floor consisted primarily of broken pottery and chert flakes that date to the Early Classic period. The most interesting find in these excavations was a small (3 cm. long) projectile point. Although similar points have been found at sites in Belize and the Peten, most of them date to the Terminal Classic and Postclassic periods. Consequently, the Cahal Pech specimen may be one of the earliest examples of this projectile point yet found in the central lowlands.

The second construction phase of G-1 made few modifications to the existing structure. The height of the platform was increased by a few centimeters and a new stairway, three steps high, provided access to the courtyard. The final platform may have also supported a perishable superstructure which, like Str. F-1, may have been faced with two tiers of cut-stone along its base. Ceramics within the fill of the platform tentatively dates this construction phase during the early part of the Late Classic period.

Str. G-2:

Excavation on Str. G-2 began with a lateral trench placed along the long axis of the mound. Once the preserved architecture of the mound was delineated and exposed we then excavated a small

unit below the floor of a narrow room within the building.

These investigations indicated that there were at least two phases of construction on G-2. The earliest phase is difficult to describe due to the small size of our unit which tested the structure. It is possible, however, that the earliest structure may have consisted of a low platform which supported a perishable superstructure. Below the plastered floor of the platform we discovered a cache containing five ceramic dishes. Comparative dating of this pottery suggests that this initial phase of construction probably dates to the Early Classic period.

Considerably more effort was expended on the last phase of construction. The previous structure was completely covered with large boulders and rubble fill and a new building was constructed over it. The latter consisted of a fairly large, stepped platform which supported two rooms that were probably covered with a double vaulted roof. Although we only exposed one doorway facing Plaza G to the west, it is more than likely that several similar doorways provided access into the building from the plaza. A cache containing a single dish was located beneath the floor of another narrow doorway which provided access between the two rooms. Based on similarities between this vessel and others from the Tiger Run Complex at Barton Ramie, it is possible that the second construction phase of G-2 dates to the Middle Classic period.

It is also important to note that at the start of our

excavation on G-2 we discovered two United States coins which date to the first decade of the 20th century (1913, 1919). These coins, plus the bowl of an early 20th century ceramic pipe (found during the 1988 season) and the discovery of a burial of a negro individual at the site by the Balls, indicates that there may have been modern human activity at the site at the turn of the century. It is the senior author's opinion that these modern cultural remains were probably left behind by members of the British West India Regiment who may have camped at the site in the early 1900's. Future research will attempt to verify this hypothesis.

Mapping in the Periphery

Our survey and reconnaissance around Cahal Pech presently indicates that the site and its sustaining area probably encompassed a realm of approximately 16 or more square kilometers. At the nucleus of this territory was the central precinct or site core.

Just below the southern base of the acropolis there is a large spring that flows eastward to the Macal River. Presently this stream is seasonal but it may have been a perennial source of water during ancient times. In an area adjacent to the acropolis the spring seems to have been dammed by the Maya in order to contain a larger volume of water than would have been naturally available. About 400 meters southwest of the site core there is also a large reservoir that holds water all through the year.

The density of prehistoric settlement in this area, and the

southern periphery in general, is relatively high. These settlements are generally located on top of knolls and hills, and particularly along the crest of a long ridge that extends for several kilometers to the south of the site core. The settlements in this area generally consist of mound clusters that vary in their overall size, morphology and configuration. One group, presently dubbed as Alcatraz, contains large non-domestic architecture, approximately 10 meters tall, plus an uncarved stela. It is situated about 500 meters south of the site core along the crest of the north\south ridge.

Some 100 meters southwest of the reservoir is another cluster of mounds, labelled the Figueroa group. The latter contains several "plazuelas" dispersed around a short sacbe (causeway). A larger causeway seems to connect the southern access into the site core with either the reservoir, Alcatraz, or a small group of mounds (Rockville) which lie about 100 meters south of the acropolis. Many similar "plazuela" groups are scattered over the southern periphery, on both sides of the western highway and Macal River.

To the east of the central precinct prehistoric settlements are fewer and more dispersed than to the south. This pattern is probably due to the rugged terrain on both sides of the Macal gorge which, in places, has a sheer drop of approximately 30 meters down to the river. Consequently most settlements in the eastern periphery are located on the more gentle rolling lands to the

southeast of the site core, along the flat crests of hills and within several small valleys east of the Macal River. Two fairly large settlements in this area include several mound clusters in and around the village of Cristo Rey, and a group of mounds often referred to as "Cayo Y" in the literature (Willey et al. 1965:313), but more appropriately renamed Xualcanil by Schmidt in 1970 (Belize Department of Archaeology files).

The Cristo Rey mounds include several "plazuelas" and solitary mounds on a relatively flat and small valley on the eastern bank of the Macal River. These mounds are approximately two kilometers southeast of the Cahal Pech site core and can easily be reached by canoe or by trails along the river. Unlike the more dispersed Cristo Rey mounds, Xualcanil (Cayo Y) consists primarily of a large courtyard group containing four fairly large structures. The tallest mound is a 10 meter high non-domestic structure from whose summit the central precinct at Cahal Pech can clearly be seen some two kilometers due west. Volumetrically, the largest mound in the group is a three meter tall by 15 meter long range-type building which is most likely vaulted. The size of the architecture at Xualcanil led Willey et al. (1965:313) to describe the settlement as a "small ceremonial ruin". Functionally, it is more likely that this group of mounds served as the residence of a wealthy elite family who were politically subservient, and probably kin-related to the elite residents of the Cahal Pech site core.

In terms of location and configuration, settlement to the west of the Cahal Pech site core resembles, to a large degree, that of

the southern periphery. Most of the mounds in this area cluster in small groups on top of low hills and on the crest of an east\west ridge overlooking the river bottomlands to the north. One of largest groups in this area is located in Graceland farm, about a kilometer and a half west of the site core.

Mapping and reconnaissance in the northern periphery will be conducted during the 1990 season.

Excavations in the Periphery

Due to time constraints excavations in the periphery were limited to two units in Str. 1 and Str. 2 in the Rockville group. As previously indicated, the Rockville group is located on the eastern edge of a contour terrace, approximately 150 meters south of the main acropolis. The group is comprised of four small mounds organized around a "formal" patio. Within the small courtyard there is also a chultun located approximately five meters north of Str. Rv.-1 and four meters east of Str. Rv.-4. During the 1989 season we tested Str. Rv.-1 and Str. Rv.-2.

Rockville 1:

Structure Rv.-1 is approximately 6 meters long by 4 meters wide and 2 meters tall. Our excavation on this mound was conducted in a 1.5 meter by 1.5 meter unit, placed in the center of the structure. This operation uncovered two plastered floors and a simple, extended burial of an adult persona.

The burial was located beneath the earliest floor, approximately in the center of the mound. The only grave good associated with the burial was a single obsidian blade which appeared to have been placed within the mouth of the deceased. Since the obsidian blade has not been dated by the hydration method it is presently difficult to determine the date of interment. Preliminary analysis of the pottery sherds from within the fill around the grave nevertheless suggests that the burial, and phase 1 of Str. Rv.-1, may date to the latter part of the Early Classic period.

Dating of the final architectural phase of Str. Rv.-1 also relies on our collection of pottery sherds. The latter indicate the last construction phase of this residential type building was conducted between A.D. 600-800.

Rockville 2:

Structure Rv. 2 is a small mound measuring about 5 meters by 4 meters and 0.70 meters tall. Surprisingly, our excavation in this mound yielded a multiple burial which included five adult individuals. The bottommost, and therefore earliest, burial contained a single individual in extended position, laid out in a shallow cist lined with cut stones. Directly above this grave two later interments were placed in similar positions and also within simple cists. The last two burials were located above Burials 2 and 3. Unlike the previous interments, however, they were simple

burials placed within a matrix of construction fill and sealed by the plastered floor of the structure. During excavation all of the earlier burials (Burials 1,2 & 3) showed signs of disturbance. It is possible that this disturbance was caused during the interments of subsequent burials. Because of the low height of Str. Rv.-2 it would have been imposible to avoid disrupting the earlier burials during the preparation of subsequent graves.

The grave goods associated with the five burials were relatively frugal. Burial 5, the earliest and richest of the lot, contained 2 pottery vessels (1 brown-slipped bowl and 1 unslipped jar), and 2 jade earflares. Burial 4 contained no grave goods. Burial 3 had a miniature jar between the femurs of the individual, Burial 2 had a ceramic disk, and Burial 1 had a small figurine. The tentative dating of these grave goods suggests that the earliest burial was conducted during the Early Classic period and the last interment deposited in the early part of the Late Classic period.

Conclusion

Surveying and research in the periphery of Cahal Pech presently indicates that the site is much more extensive than previously estimated. In view of this, and particularly because many of the settlements in this sustaining area are being threatened, we plan to concentrate much more research effort in this area in the future. These investigations will undoubtedly

provide us with a much clearer picture of the entire Cahal Pech community and greatly complement our understanding of the types of social organization described in the preliminary paper that follows.

Preliminary Analysis of the Spatial Configuration of the Site
Core at Cahal Pech, Belize And Its Implication To Lowland Maya
Social Organization.

By Jaime J. Awe , Mark D. Campbell & Jim Conlon

Fall 1989

Trent University, Peterborough, Ontario.

INTRODUCTION

The most striking feature of any large Lowland Maya site is its central precinct. This nucleated area of large mounds and plazas often overwhelms the archaeologist and tourist alike, conjuring images of ancient Precolumbian cities with priests poised atop gaudily painted pyramids enacting brutal rituals for witness by the peasantry below. Whilst these colourful and often romantic images of past life-styles may be a source of inspiration for many students of Maya Archaeology, several scholars (Haviland 1968, 1970, 1972; Hammond 1972; Kurjack 1974; Ashmore 1981) have demonstrated that careful observation and systematic analysis of settlement configuration can also provide important insights regarding the social structure of ancient Maya society.

In a historical review on the development of major theories concerning Maya social structure, Becker (1979) cited J.E.S. Thompson as the first Maya scholar to infer social interaction from his field observation. As early as 1927 Thompson popularized the notion of Maya "ceremonial centres" based on a dichotomous priest-peasant hypothesis of social organization. Several decades later, Brainerd (1956), in a brief but insightful paper, illustrated the significance of settlement pattern studies "and the inferences that could be made therefrom regarding social classes" (Becker 1979:15). More recently Haviland (1965) and Hammond (1972) demonstrated,

at Tikal and Lubaantun respectively, that a systematic process in data collection and careful analysis of settlement morphology can be important tools in the study of ancient Maya society. Since then Mayanists have generally accepted the premise that spatial organization reflects social organization, providing the researcher makes an explicit distinction between objectifiable data and social reconstruction (Ashmore 1981).

In this paper we will examine the spatial configuration of the central precinct at Cahal Pech. We will establish the basic unit of analysis by defining and delimiting the site core, based on its natural and man-made topography and morphology. Subsequently, we will establish a typological distinction between two patterns of plaza configuration evident in the site core: 1) semi-restricted access plazas, and 2) restricted access plazas. These will be employed as useful sub-units of analysis. Once the unit and sub-units of analysis are defined they will enable us to formulate testable hypotheses that will tentatively allow us to systematically reconstruct social organization.

SITE CORE DESCRIPTION, DELIMITATION AND DEFINITION

Cahal Pech is a medium-size Maya site located on the outskirts of San Ignacio Town, in the Belize River Valley Region of western Belize (Figs. 1 & 2). Investigations conducted by the authors in 1988 (Awe 1988; Awe & Campbell

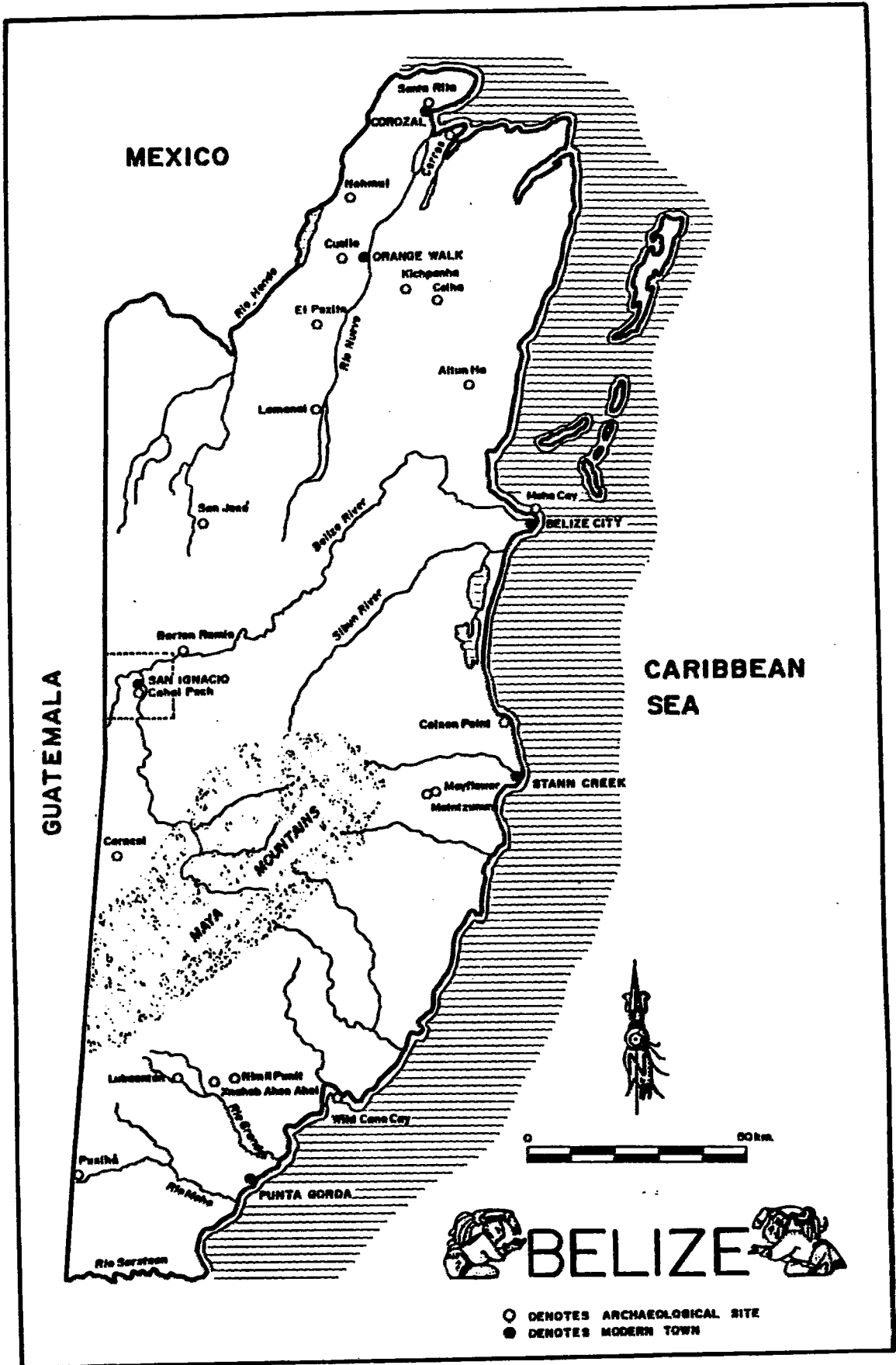
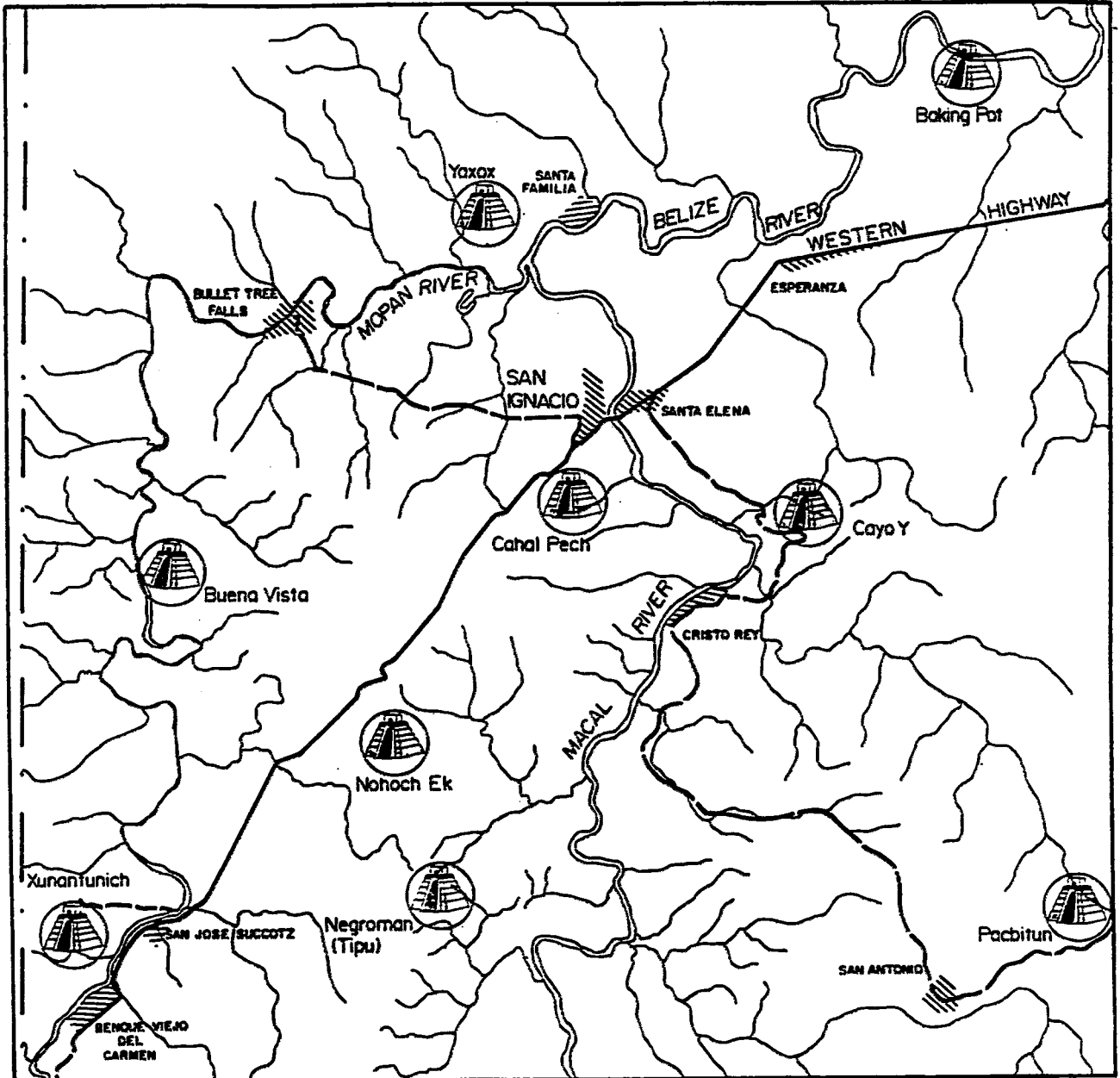


Fig. 1: Map of Belize showing location of Cahal Pech (Inset is enlarged in Fig. 2)

PLAN TO SHOW ARCHAEOLOGICAL SITES IN THE MACAL - MOPAN RIVERS REGION OF CAYO, BELIZE



denotes archaeological site denotes modern town denotes paved road denotes unpaved road

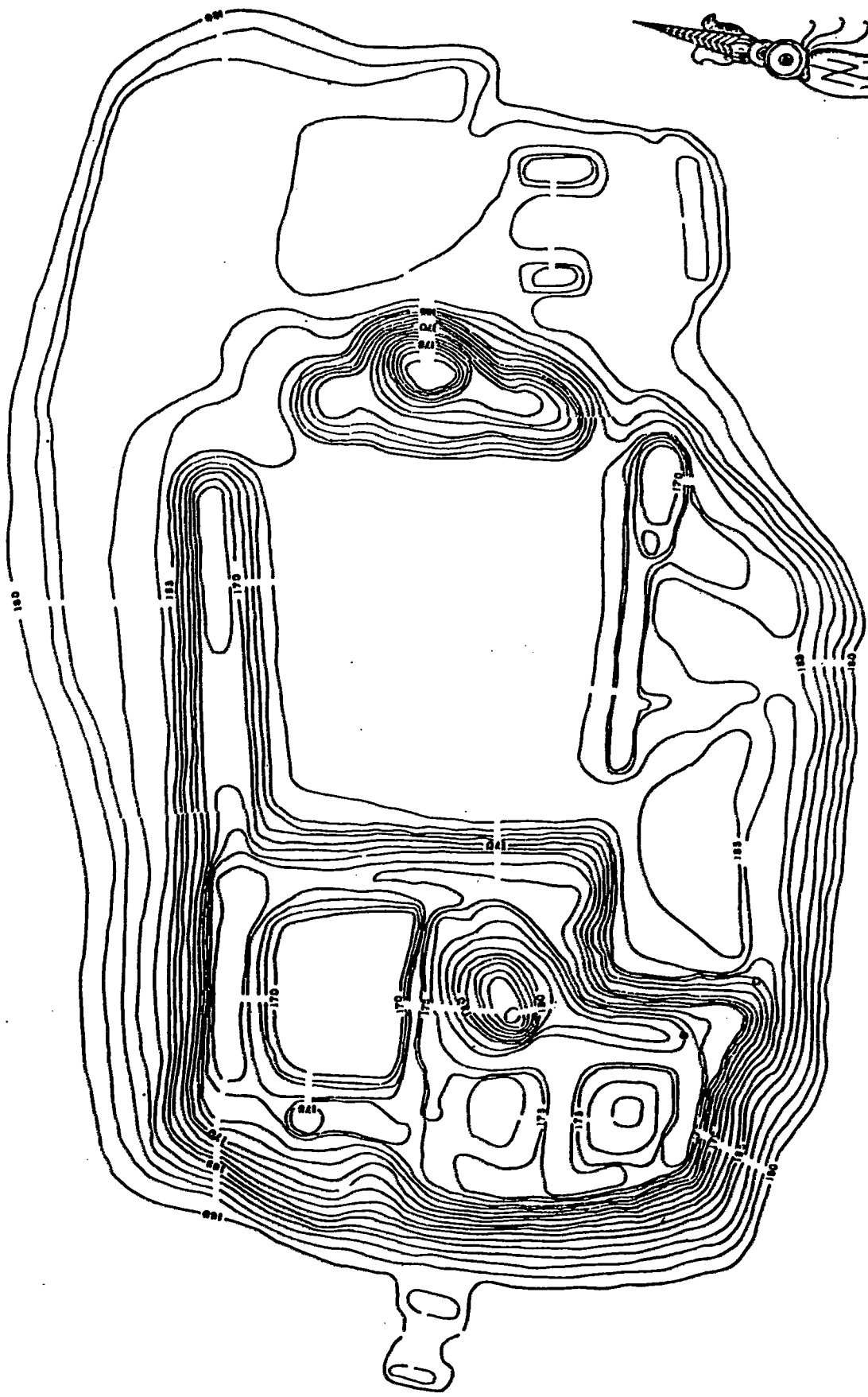
Fig. 2: Archaeological Map of the Macal-Mopan Rivers Region, Cayo District, Belize

1988) revealed that the site core consists of at least 34 structures compacted on top of an acropolis slightly larger than one hectare in size (Figs. 3 & 4). The majority of the mounds are located around 7 plazas and include temple pyramids and several range-type buildings. The tallest structure is A-1 which stands approximately 25 meters tall. The site also contains 2 ballcourts, 6 plain stelae, 1 altar and possibly a sweathouse.

During the initial season of research approximately 30% of the mounds within the core were partially excavated. Preliminary analysis of the data recovered indicates that the site was occupied by the early Middle Preclassic (900 B.C.) and abandoned around A.D. 800. The discovery of several large Late Preclassic structures directly beneath Middle Classic renovations also suggests that the greatest developments at the site occurred during these periods.

As indicated above, the 34 mounds within the site core delineate seven plazas. The largest, previously referred to as the "Central Plaza" by Satterthwaite (1951), is designated as Plaza B. The main plaza, however, is Plaza A which together with Plazas D and E comprise the western sector of the acropolis. The mounds surrounding these three plazas are tightly clustered, completely enclose the courtyards, and appear to have allowed very limited access to and from the eastern sector. The eastern sector of the acropolis is

CAHAL PECH, CAYO, BELIZE

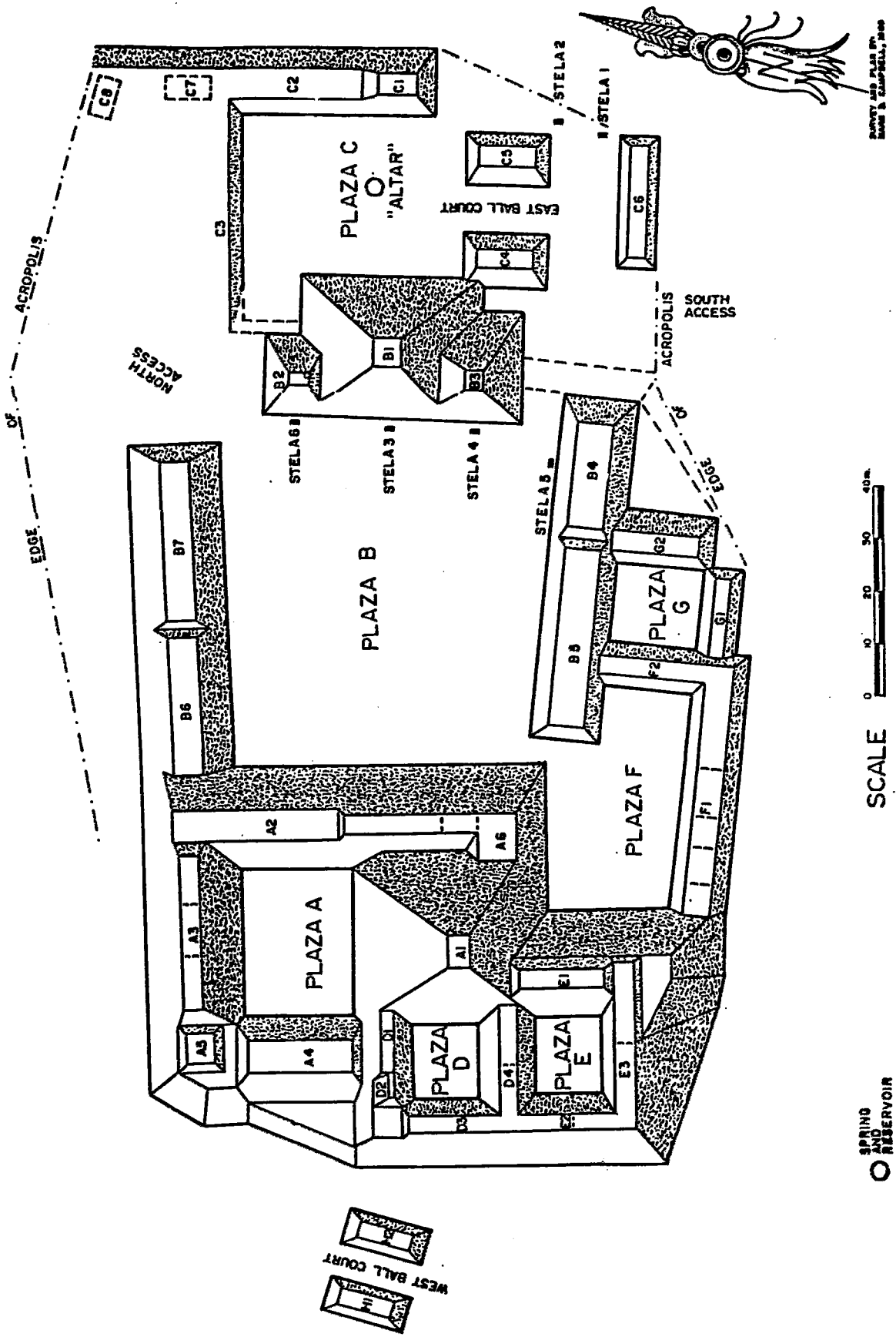


DRAWN AND PLACED BY:
DAVID S. CARROLL, 1989

SCALE 0 10 20 30 40

Fig. 3 : Contour Map of the Site Core at Cahal Pech, Belize.

CAHAL PECH, CAYO, BELIZE



PROPERTY OF THE BELIZE ANTIQUITIES DEPARTMENT

SCALE 0 10 20 30 40 m.

SPRING AND RESERVOIR

comprised of Plazas B, C, F and G. Mounds delimiting these plazas are less clustered than those of the former courtyards but are located in such a way as to provide access via only two routes into the acropolis. These access points are located north and south of the juncture between Plazas B and C (Fig. 4). They are also the only areas that provide a gradually ascending approach to the site core. All other points around the perimeter of the latter have a sheer rise of approximately five meters or more. Range-type structures, which almost entirely circumscribe the site core, further add to its acropoline nature.

While time did not permit us to conduct much mapping outside of the site core we did survey and plot the ball court on the lower western base of the acropolis and a natural spring on its southwestern side. The immediate area around this presently dry spring appears to have been dammed in order to contain a larger volume of water than would have naturally been available.

Reconnaissance in the immediate periphery of the site center revealed an extensive system of natural terraces upon which are several dispersed plazuela groups. Previous survey by the senior author also suggests that a large percentage of Cahal Pech's support population was located on both banks of the Macal River, especially to the south, east and west of the site center. Settlement on the northern periphery is not as

dense as in other areas and contains only a few scattered plazuela groups such as the Melhado site (Willey & Bullard 1956). Several factors may account for this pattern.

Primarily, this area lies in a low flat valley between the two branches of the Belize River and is susceptible to periodic flooding. Secondly, it contains some of the most arable soils in the region. The area may therefore have been primarily used for agricultural pursuits rather than for residential purposes (Awe & Campbell 1988). Future research will involve intensive survey and mapping throughout the site periphery.

In brief, Cahal Pech exhibits features typical of most Lowland Maya sites. The site core can be defined as the spatial unit that: a) exhibits the greatest concentration of large mounds and plazas, b) is higher in elevation than the surrounding area, and c) is delimited by structures circumscribing a natural acropolis or central precinct.

SEMI-RESTRICTED AND RESTRICTED ACCESS PLAZAS

Of the seven plazas within the site core we can distinguish between two types: 1) semi-restricted access plazas, and 2) restricted access plazas. Plazas B, C and F are semi-restricted access plazas and are bounded, but not enclosed by mounds. Entry to the site core is limited to two access points which lead into Plazas B, C and F. This indicates that the flow of traffic into the site core was purposely channeled

through and into these courtyards via these two access routes.

Plazas A, D and E, which are examples of restricted access plazas, are entirely bounded on all sides by mounds. Presently, access into these plazas is obtained only by traversing the tops of the mounds. In prehistoric times, however, access was obtained through doorways within the perimeter structures. Two such doorways were discovered penetrating the spinewall of structure A-2 (a double vaulted, range-type building bordering Plazas A & B) and between Structures A-4 and D-1.

The two plaza types also display several other morphological differences. For example, the graphs entitled "Plaza Areas", "Plaza Elevations" and "Plaza Locations" (Table 1) demonstrate that Plazas A, D, and E (restricted access plazas) are smaller in size, higher in elevation, and further from the points of access to the site core than Plazas B, C, and F (semi-restricted plazas). The accessibility of Plazas A, E and D was therefore low, suggesting that activities in these courtyards were probably restrictive or private, and that residence in these domains was exclusive of membership.

Conversely, the accessibility of Plazas B, C, and F suggests that these plazas were less private and that activities within them were less restrictive. The reason for this may have been that these plazas (especially Plaza B) were

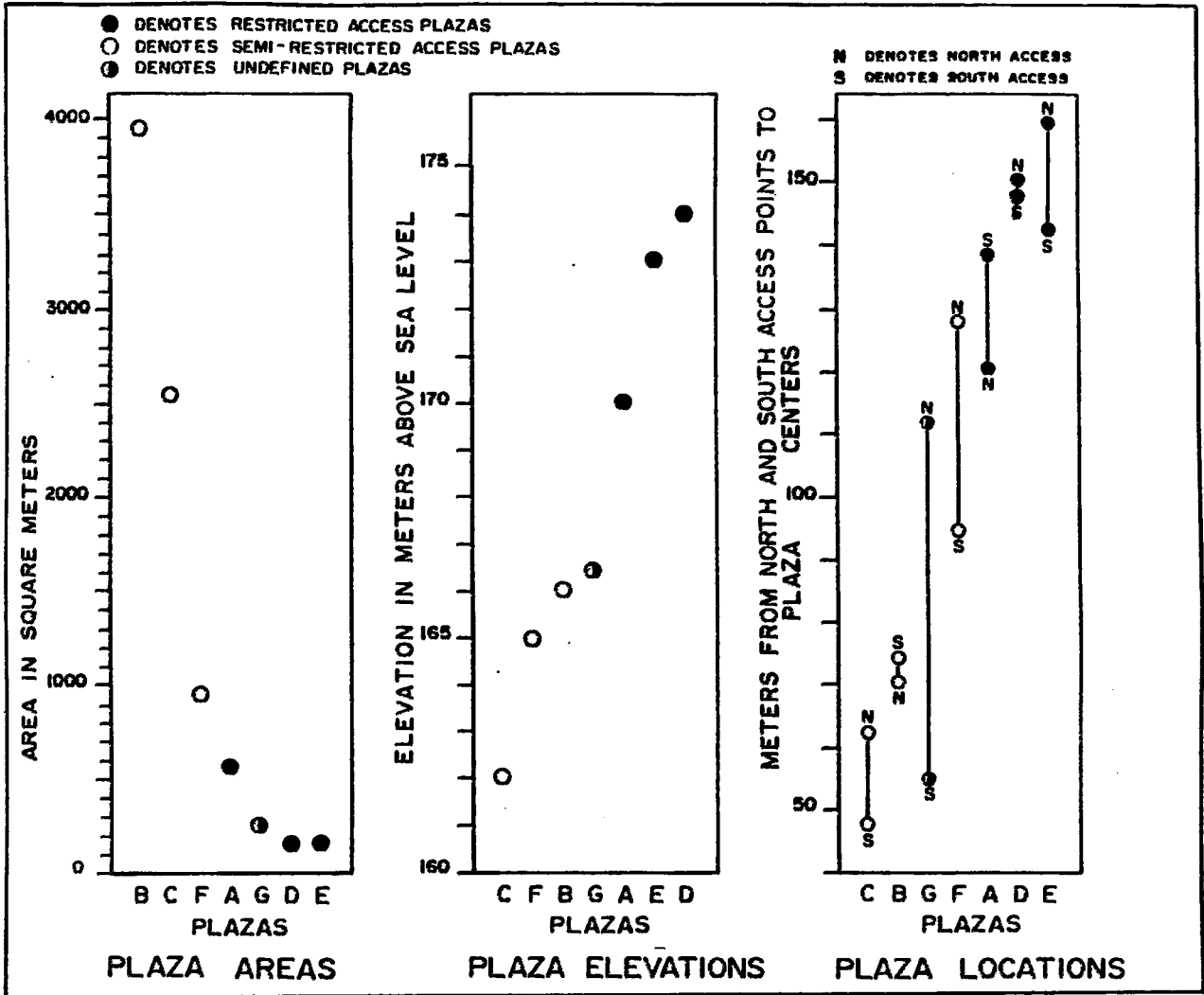


Table 1: Graphs comparing plaza areas, elevations & locations

Graph A compares plaza areas in square meters.

Graph B compares plaza elevations in meters above sea level.

Graph C compares distances in meters from north and south site core access points.

probably used for both civic and religious, community-related functions. Interestingly, the morphology and location of Strs. B-1, B-2, and B-3 and the position of Str. A-2 strongly resembles a variant of the E-group pattern identified at Uaxactun (Ruppert 1940; Awe & Campbell 1988). According to Cohodas (in Ferguson & Royce 1984:168) activities associated with these E-groups may have been open to the populace. It is therefore quite possible that Plaza B and the semi-restricted plazas were particularly accessible because activities held within them were periodically open to the general public.

The typological grouping of Plaza G is problematic. Although it is almost entirely bounded by mounds, the plaza is open on the southeast corner and the mounds on its southern and western borders are small and less than one meter in height. When comparing plaza areas, elevations and locations (Table 1), Plaza G appears to be an intermediary plaza type, thus suggestions regarding the accessibility or restrictive nature of this plaza are presently difficult.

Another interesting feature, especially in terms of location, is the western ballcourt. It is situated outside of the acropolis and does not exhibit any associated feature which might restrict viewing, access or public participation. It is also clearly visible from atop the exterior mounds of Plazas A, D, and E, allowing the residents of those plazas to view the ritualized game without mingling among the common folk below.

While allowing some degree of public participation, the eastern ballcourt is situated in Plaza C, thereby curtailing unlimited public access to games played in that plaza.

It is important to note that the above settlement configuration at Cahal Pech only comes into vogue between the 6th and 7th centuries A.D. Excavations on Structures A-1, A-2, A-4, D-2 and E-1 indicate that prior to this period Plazas A, D and E were not enclosed by mounds and that there was open access between them and Plaza B. Thus, formative settlement in the core area can best be described as open in character. This "open" pattern is similar to the settlement configuration evident at other sites during the Preclassic Period (Scarborough 1980:305; Potter 1985). In a recent discussion regarding the trends in Maya urban planning, von Falkenhausen (1985:130) stated that through time, "Particularly within complexes, there is a trend from open towards enclosed spaces...". In the same volume, Potter (1985:142) adds that monumental architecture at some sites "...changed from fundamentally ritual-oriented, open access structures to elite residential compounds with controlled access". The Cahal Pech data is consistent with these observations and suggests that between Preclassic and Middle Classic times the morphology of the site core had evolved from a simple "open" configuration of structures to a highly complex configuration of restricted and semi-restricted plaza groups.

DISCUSSION

In his analysis of the site core morphology at Lubaantun, Hammond (1972:285) states that common sense suggests that the traffic plan at Maya centers would call for low accessibility into private, residential areas, and high accessibility into public areas. Furthermore, the accessibility of particular sections of the site may reflect their degree of elitism and exclusivity. Thus, the degree of restrictiveness and/or accessibility of the plazas at Cahal Pech (and Lowland Maya sites in general) may be indicative of a socio-political hierarchical system.

If we accept this premise, the difference between the two types of plaza configurations (restrictive v.s. semi-restrictive) at Cahal Pech suggests that a hierarchical system existed among the elite residing in the site core. Elite living in Plazas A, D, and E may have enjoyed a higher status than elite living in Plazas B, C, F and G. Furthermore, the physical boundaries between the restricted access plazas (A, D and E) plus differences in the size and quality of their architecture may also indicate differences in rank among the elite residing in these respective courtyards.

If we were to reconstruct the socio-political, hierarchical system of the site based on settlement configuration, the size and complexity of structures in Plaza

A, and the restrictive nature of that courtyard, would suggest that the highest ranking elite were based in this plaza. Elite of slightly lower rank, with possible kinship affiliations, resided in Plazas D and E. Finally, nobles with lower status than the former, plus craftsmen and elite attendants, probably occupied (semi-restrictive) Plazas B and C, and F and G respectively.

According to Freidel (1981) this type of spatial segregation is typical of societies exhibiting a social hierarchical system.

"The normal pattern in nucleated complex communities is spatial segregation into distinct districts or neighbourhoods reflecting social class. Spatial segregation inhibits casual face-to-face interaction between social unequals and permits an upperclass monopoly on information. While inevitably involving more legwork, spatial dispersion can accomplish the same objectives" (Freidel 1981:375).

In a more recent article, Webster (1980) drew further attention to the relationship between site morphology and social organization. In his study of Chacchob, Cuca and Dzonot Ake, he suggests that settlement configuration can imply "social barriers that spatially segregated, in symbolic terms, a population already politically and economically stratified"

(Webster 1980:483). He adds that the clustering of major architectural complexes examined from an extended household perspective...

"suggests that there were several elite establishments which, although probably ranked in terms of political influence and wealth, nevertheless were spatially and to some extent socially distinct segments of a larger organizational center" (Webster 1980:842).

According to Santley (1988) similar spatial and social patterns were developed in the Mexican Highlands. In a recent paper on the utilization of space by households in the Valley of Mexico he argues that,

"...the process of increasing socio-cultural complexity and economic stratification covaries with an increasing concern with the creation of private or restricted access space, which is reflected by where households erect walls to impede viewing or entry by outsiders. This process has the effect of restricting information on household resources to members of the domestic unit and to only those outsiders that the household deems as appropriate" (Santley 1988:5).

Based on the concept that spatially distinct units

represent socially distinct segments of society, we propose that the spatial configuration observed at Cahal Pech suggests that there were several differentially ranked elite households residing in the site core. Secondly, the spatial distinction observed between the restricted and semi-restricted access plazas indicates further social inequality between the inhabitants of these two types of plazas. Thirdly, and as indicated earlier, the site core at Cahal Pech is topographically separated from its sustaining area. The natural slope of the acropolis and the perimeter mounds create an effective wall separating the internal elite from the lower classes below. While these physical boundaries may or may not have explicitly served for defense, they could have been implicitly designed to: 1) restrict the flow of traffic into the core area, and 2) restrict the flow of information out. This suggests that not all people had unlimited access to the site core at all times, thus maintaining the "divine" right of the elite over access and information.

Our preliminary analysis of the site core thus demonstrates distinct spacial sub-units indicative of a complex hierarchical system of elite residency and rule. Furthermore, we hypothesize that social and political cohesion was maintained through close and loose kinship ties among the elite groups within the core and between the elite and peasant groups residing in the periphery.

CONCLUSION

The site core morphology and the typological distinction between plazas based on configuration, accessibility, size and elevation suggests that a highly stratified elite group operated and resided within the site center at Cahal Pech. The restricted access plaza (Plazas A, D & E) are indicative of private space reserved for the upper echelon of the society. At the same time, the physical isolation between these three courtyards further suggests the presence of three distinct, and possibly related, elite groups who resided and performed private rituals within the confines of their respective plazas. Conversely, the semi-restricted plazas (Plazas B, C & F) probably served as residence for elite of lower status and as civic spaces for public ceremonies, administration and possibly market places.

Although significantly smaller in size than Tikal, Palenque or Caracol, Cahal Pech nonetheless exhibits a single concentrated complex of Middle Classic architecture and settlement configuration more common to sites with more complex political authority. The typological distinction between the plazas in the site core, and between the latter and the periphery, infers the presence of a highly complex hierarchical system at Maya Centers by at least the Middle Classic Period. Finally, the architectural segregation of and within the site core may have been an effective method of controlling the flow

of people into the central precinct and the flow of information out. This indicates that the elite's ability to maintain power may have been partially dependent on their monopoly over divine and civic information, and on their ability to control who saw what, when. Segregation in this sense may be analogous to the curtains in a play; not everything that happens on stage is suitable for public viewing or participation.

Hopefully, subsequent excavations will shed more light on: 1) intra-elite social differentiation among the three restricted plazas, 2) intra-elite social differentiation between the elite residing in the site core in general, and 3) elite-peasant social differentiation between residents in the site core and the population residing beyond.

REFERENCES CITED:

- Ashmore, W.
1981 Some Issues of Method and Theory in Lowland Maya Settlement Archaeology. In Lowland Maya Settlement Patterns. ed. W. Ashmore, University of New Mexico Press, Albuquerque.
- Awe, J.J.
1988 The Cahal Pech, Belize Development Project: A Report to the Canadian Commission for Unesco/CIDA Assistance Program. Ms., Trent University, Ontario, Canada.
- Awe, J.J. & M.D. Campbell
1988 Site Core Investigation at Cahal Pech, Cayo District, Belize: Preliminary Report of the 1988 Season. Ms., Trent University, Ontario, Canada.
- Becker, M.J.
1979 Priests, Peasants and Ceremonial Centers: The Intellectual History of a Model. In Maya Archaeology and Ethnology, eds., N. Hammond & G.R. Willey, pp.3-20. University of Texas Press, Austin.
- Brainerd, G.W.
1956 Changing Living Patterns of the Yucatan Maya. American Antiquity 22:162-164.
- Ferguson, W.M. & J.Q. Royce
1984 Maya Ruins in Color: Tikal, Copan, Quirigua. University of New Mexico Press, Albuquerque.
- Hammond, N.
1972 The Planning of a Maya Ceremonial Center. Scientific American 226(5):83-91.
- Havilland, W.A.
1965 Prehistoric Settlement at Tikal, Guatemala. Expedition 7(3):14-23.
1968 Ancient Lowland Maya Social Organization. In Archaeological Studies in Middle America. M.A.R.I. Publication 26, Tulane University, New Orleans.
1970 Tikal, Guatemala and Mesoamerican Urbanism. World Archaeology 2:186-198.
1972 A New Look at Classic Maya Social Organization at Tikal. Ceramica de Cultura Maya 8:1-16.

- Kurjack, E.B.
 1974 Prehistoric Lowland Maya Community and Social Organization. M.A.R.I. Publication 38, Tulane University, New Orleans.
- Potter, D.R.
 1985 Settlement. In A Consideration of the Early Classic Period in the Maya Lowlands, eds., G.R. Willey & P. Mathews, pp. 135-144, Institute for Mesoamerican Studies, State University of New York at Albany.
- Ruppert, K.
 1940 A Special Assemblage of Maya Structures. In The Maya and Their Neighbours, eds. C.L. Hay et. al., Appleton Century, New York.
- Santley, R.S.
 1988 Household Utilization of Space During the Formative Period in the Basin of Mexico. Paper presented at the 21st Annual Chacmool Conference, Calgary, Alberta, November, 1988.
- Satterthwaite, L., Jr.
 1951 Reconnaissance in British Honduras. University Museum Bulletin 16(1):21-36, Pennsylvania.
- Scarborough, V.
 1980 The Settlement System in a Late Preclassic Maya Community: Cerros, Northern Belize. Ph.D. dissertation, Southern Methodist University, University Microfilms, Ann Arbor.
- Thompson, J.E.S.
 1927 Ancient Maya Civilization. Museum of Natural History Popular Series #25, Chicago.
- Von Falkenhausen, L.
 1985 Architecture. In A Consideration of the Early Classic Period in the Maya Lowland, eds., G.R. Willey & P. Mathews, pp. 11-134, Institute for Mesoamerican Studies, State University of New York at Albany.
- Webster, D.L.
 1980 Spatial Bounding and Settlement History at Three Walled Northern Maya Centers. American Antiquity 45:834-844.