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Xunantunich Archaeological Project

1992

Introduction

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Introduction

The first major field season of the Xunantunich Archaeological Project was completed from February - July 1992. An extensive mapping, survey and excavation program was initiated and will continue for the next several years. The focus of this work is twofold: 1. to conduct research at and study this ancient Maya city; and 2. to consolidate these ruins and develop the site for tourism.

Xunantunich is an ancient Maya center located in the west-central part of Belize. Tourism is gradually becoming the focal point of much of the economic development within this part of the world and Belize is attempting to develop many of its tourist attractions. It is also participating in the regionally based *El Mundo Maya*. Xunantunich, which is easily accessible for tourists and is on the road to Tikal (another major stop of *El Mundo Maya*), is one of the archaeological sites in Belize to be targeted for development. With the projected dramatic increase in the tourist rate for Belize and specifically at Xunantunich, it is important to move forward rapidly with the scientific and conservation program for this ancient Maya city.

The Department of Archaeology within the Ministry of Tourism and the Environment of the Government of Belize started this program in 1992 in association with Dr. Richard M. Leventhal of the University of California, Los Angeles. Funding has come from the Government of Belize, the University of California, Los Angeles, and USAID. The 1992 field season was the first of what is projected to be 6-7 years of research and consolidation to be conducted at Xunantunich.

Setting

The ancient Maya center of Xunantunich sits on a hill-top in the western end of the Belize River Valley. The large architecture and hill dominate this section of the valley and can be seen from most locations up to 7-8 kilometers to the east. Access to the site today is from the paved Western Highway, across the Mopan River on a small car-ferry, and then along a rough dirt/stone road for about 1.5-2.0 kilometers. Approximately 8,000 foreign tourists and an similar number of Belizeans visit the site every year.
Although there have been references to Xunantunich in the scientific and tourist literature for the past 75 years, there has only been a minimal amount of extensive, detailed archaeological work at the site. Only the central portion of the site has been and is cleared today. The surrounding settlement is only now being surveyed and excavated.

The central portion of the site consists of a fairly compact section of large architecture grouped around three plaza areas oriented north-south (see map). Plaza 1, the southernmost plaza, and Plaza 2 are surrounded by large pyramidal structures. The largest and most imposing building at the site is Structure A-6, nicknamed the "Castillo." It is a building which rises more than 135 feet into the air above Plaza 1 and probably served as the primary ritual building for the site. The lower 2/3 of the building consists of a series of terraces built onto this impressive pyramidal structure. The upper section of the building shows evidence of two building phases. The earlier building phase consisted of a superstructure with an impressive plaster frieze encircling the upper portion of this building on all four sides. The north and south (or front and back) portions of this frieze were destroyed with the gradual deterioration of this building from its apparent abandonment around the 10th century AD to the beginning of the 20th century. The east side of the frieze has been excavated and, in modern times, almost completely reconstructed. The frieze on the west side is apparently still buried and will be excavated as part of the current plans for the site. During the last construction phase, much of this earlier superstructure was filled in and a new, more imposing building was constructed on top of the older building. Much of this final building has been excavated and reconstructed (Although much of this building is in jeopardy of collapse.).

Three carved monuments (stelae) were recovered on the north side of Plaza 1 along the edge of Structure A-1. They are presently protected under a thatch-roofed hut within this plaza area. All three of these monuments date to the end of the 8th and beginning of the 9th centuries AD. These monuments present the rulers of the site in different poses and dress.

Plaza 3, located to the north, is a raised plaza area surrounded by 7-12 meter high pyramidal structures. This plaza area was probably the residence of
the ruling family of Xunantunich and of the rulers portrayed on the carved monuments.

In addition to this central architectural group, three additional groups have been identified and preliminarily mapped. Groups B, C, and D are outlying plaza groups and may be associated with elite residences or important activities at the site. Dense settlement seems to extend out from this main site core into the valley area in all directions. However, no detailed maps of the settlement have been completed.

One of the most interesting aspects of the ancient city of Xunantunich is that it was apparently built around 750 A.D. near the end of the Late Classic and occupied for probably 200-250 years until 950 - 1,000 A.D. Xunantunich is constructed and continues to grow during the so-called collapse of the Maya. Therefore, while other cities such as Tikal, Caracol, Seibal, Dos Pilas, Altun Ha and others are beginning to fall apart and be abandoned, Xunantunich is newly constructed and the center of a large population base.

Therefore, several of the questions to be addressed by the Xunantunich Archaeological Project focus upon an attempt to understand who founded Xunantunich and why it was founded. In addition, we want to understand how Xunantunich could grow and develop during this time of political confusion and fragmentation throughout the Maya lowlands.

1992 Research

A six month field season initiated the Xunantunich project in 1992. Research this past year focused upon mapping the center and outlying areas of the city in order to begin to create a complete picture of this large ancient city. A most interesting discovery within the city was a large area of complex buildings and plazas, including a second ballcourt, behind the Castillo. In fact, we now know that the Castillo is not located on the edge of the city but rather exactly in the middle of the central portion of the ancient city. Not only is there a staircase on the front or north side of the Castillo (used today) but there was also a staircase on the south side leading to this new architectural group. We therefore have a new vision of the form and organization of Xunantunich.
Excavation work was also initiated this past year. Structure A-1, the building located in the middle of the main plaza, was cleared on both the north and south sides. At least three phases of construction were identified. This ancient pyramid did not have a superstructure on its top and had two stairways - one facing the Castillo to the south and the other facing the royal residence (Plaza III) to the north. Consolidation work and a final excavation trench will be completed in 1993.

The Castillo has slowly been deteriorating for the past 25 years and is in urgent need of excavation and consolidation in order to preserve the building for the future. For this reason, preliminary work was started on the west side which is in the worst condition. Excavation and consolidation of this west side will be conducted during the 1993 field season. Prior to consolidation, the west side of the Castillo will have to be cleared and excavated. We expect to find another plaster frieze similar to the famous frieze on the east side. However, we do not know the preservation of this new frieze.

The South Group, the architectural complex to the south of the Castillo, was also examined this year. Preliminary excavations into Plaza I were initiated in addition to test excavations throughout the extent of the group.

A large, elite residential plaza group, Group D, was cleared in 1992 and excavation was initiated at this portion of the site. Several buildings are in the process of being revealed. Part of this work also consisted of the excavation of a chultun (a sub-terrarium storage pit) which included several human skeletons.

Preliminary work was also conducted within the outlying reaches of the ancient city at two main areas. The first was an examination of a strange rubble-mound area about two kilometers to the northeast of the main center. The second was an initial set of test excavations in a formal mound group located near the Nabitunich Hotel.

Finally, work was initiated at the nearby outlying center of Actuncan (also called Cahal Xux). Preliminary test excavations and the examination of looter's trenches seem to indicate that Actuncan was first constructed during the Late
Consolidation of Xunantunich

A major part of this work at Xunantunich focuses upon the consolidation and preservation of the site so it can remain an important part of Belize in the future. This consolidation work is being conducted in association with the Getty Conservation Institute of Los Angeles, one of the best conservation and training organizations in the world.

The 1992 work on consolidation consisted primarily of an analysis of the needs and problems at the site. The actual consolidation work will be initiated at the beginning of the 1993 field season. The Getty Conservation Institute is focusing upon three main avenues of assistance for the Xunantunich Archaeological Project and the Government of Belize.

The first form of help is technical advice and assistance. In addition to the GCI team (Neville Agnew, Kathleen McDonnell, William Ginnell, Margaret MacLean, and Martha Demas), the Getty Conservation Institute has brought in Rudy Larios V., an expert in architectural consolidation, as the primary architectural consultant for the project. Sr. Larios, in conjunction with the staff of XAP and the GCI, began the analysis and creation of a consolidation plan for the site. Training of Belizean consolidation experts was also initiated in 1992 by sending Mr. Ruben Penados to Copan, Honduras for on-site training with Sr. Larios.

The second part of the GCI work at Xunantunich will consist of scientific testing. The scientific examination, analysis and study of the stone, the plaster, the mortar, and other architectural elements was initiated in 1992. The detailed testing program will continue during 1993.

The third major GCI work at Xunantunich will consist of a series of training courses in site management and object conservation and storage were planned in 1992 and will be initiated in 1993.
XAP 1992 - Intro

The 1992 Report

This 1992 field report consists of a series of papers written by the field crew which examine and detail the 1992 field mapping and excavation programs at Xunantunich. The first paper was presented the 1992 American Anthropological Association meetings in San Francisco.
Xunantunich Archaeological Project
1992 Research

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(Revised version)
What follows is a report on the first major season of excavation and architectural consolidation at the ancient Maya city of Xunantunich, a site occasionally also called Benque Viejo. The 1992 field campaign, completed in August, was the first of a projected 6-7 years of research and consolidation to be conducted at Xunantunich. This project was initiated at the invitation of the Department of Archaeology, Belize, and funding for 1992 came from the Government of Belize, the University of California, Los Angeles, and USAID.

Xunantunich overlooks the Mopan river, near the Guatemala border in west central Belize. The site is dominated visually by Structure A-6, also known as the Castillo, a famous and easily identifiable landmark for much of this part of the upper Belize valley. Although there have been references to Xunantunich in the scientific and tourist literature for the past 75 years or more (e.g., Thompson 1940; Satterthwaite 1951; Mackie 1961, 1985; Pendergast and Graham 1981), relatively little archaeological research has been done at the site. Only the central portion of the site core has been kept clear, and only now is the immediately surrounding settlement being surveyed and excavated.

The focal characteristic of Xunantunich, for our research, is its abrupt and late florescence. The civic core was apparently built around A.D. 700, near the end of the Late Classic and occupied for probably 200-250 years more, until A.D. 950 - 1000. In other words, Xunantunich was constructed and grew during the so-called decline and collapse of the central lowland Maya, when polities such as those based at Tikal, Caracol, Seibal, Dos Pilas, Altun Ha and others were breaking apart (e.g., Willey 1974; Marcus 1992). As developed below, we see this latter situation as contributing to Xunantunich's founding and florescence.

The primary questions of the Xunantunich Archaeological Project (XAP) therefore focus on placing this ancient city within the evolving social, political, and economic landscape of the upper Belize river valley. We are fortunate in that this surrounding landscape has been investigated extensively in recent years by a number of scholars including Anabel Ford (1985; Ford and Fedick 1992), Scott Fedick (1988; Fedick and Ford 1990), Joseph Ball and Jennifer Taschek (1991; Taschek and Ball 1992), Jaime Awe (Awe and Campbell 1992), James Garber
(Garber et al. 1992), and Paul Healy (1990). We also benefit greatly from important ongoing work farther afield, especially the work of the Chases at Caracol (Chase and Chase 1987) and work by Juan Pedro Laporte and his colleagues in the Dolores area of Peten (Laporte and Escobedo 1992; Laporte and Torres 1987), as well as the seminal research conducted at Barton Ramie by Willey and his colleagues (1965). These various scholars have asked diverse and complementary questions concerning the ancient population of the region. The most direct recent attempt to specify Xunantunich's role in this region is an important 1991 article by Ball and Taschek. According to their model, the site of Buenavista del Cayo, downstream from Xunantunich, was the Late Classic administrative center of the valley, subordinate and with direct ties to the larger center of Naranjo 15 kilometers to the west. In contrast, Xunantunich is presented as a 'regal-ritual center' which functioned not as an administrative or population center but rather as a retreat or 'castle on the hill' for the polity ruler. Part of our research, therefore, focuses upon an attempt to examine this organizational model further from the perspective of Xunantunich.

Ball and Taschek's valuable model outlines a synchronic organizational view. However, to understand Xunantunich more fully, we obviously must also consider hypotheses for its genesis. In a footnote to their article, Ball and Taschek (1991: 154, note 5) describe Xunantunich as possibly a 'frontier stronghold' for Naranjo in the volatile political climate of the 8th and 9th centuries AD. In general, we concur with a Naranjo derivation as a likely hypothesis, but to test this and other possibilities, we need to document the occupation history of the Xunantunich countryside as well as of the center itself. We also need to consider the wider comparative contexts in which a relatively few Belize valley centers, including Xunantunich, developed or acquired the 'right' to erect text-bearing political sculpture - stelae.

To elaborate: During much of its occupation, the Belize valley was characterized by relative decentralization of organizational structure and authority. The story of the occupation of the valley remains incomplete at this time. The earliest occupation in this part of the valley is currently known from Cahal Pech and other sites and appears to date to about 1000 B.C. (Awe, personal communication; Ford and Fedick 1992). Although we lack details of settlement density for most areas during the Middle Preclassic, research by Ford and Fedick and others shows clear and dramatic population growth within both the agriculturally productive valley bottomlands and fertile upland sections by the
end of the Late Preclassic and beginning of the Early Classic. Political centralization is also evident at this time in monumental construction at several sites and in erection of carved monuments in at least three centers scattered throughout the region. These centers are Blackman Eddy (Garber et al. 1992), Pacbitun (Healy 1990), and Actuncan (Willey, Bullard, Glass, and Gifford 1965), the latter located within the settlement area of Xunantunich, as noted later. Perhaps some or all of these signs were already marking the borderlands of the larger polities to which they are plausibly linked (esp., Pacbitun with Caracol; Actuncan/Xunantunich with Naranjo).

Quite varied growth histories have been documented at centers and regions across the Maya lowlands. However, as others have recognized before, there are important gross distinctions between other regions of the lowlands and the Belize valley. One of the most important distinctions is the scale of centralized hierarchical development.

Much of the southern lowlands is characterized by the presence of relatively large individual centers of the sort that have dominated both popular and scholarly thinking. In contrast, the Belize valley, one of the most fertile areas within the Maya lowlands and one of the areas of densest population, does not appear to become centralized in the same fashion as the rest of the lowlands. Prior to the Late Classic, the most imposing sites in the upper Belize area are small to medium-sized centers, scattered throughout the valley, centers such as Cahal Pech, Blackman Eddy, Buenavista, Nohoch Ek, and Yaxox. Besides being relatively small in size, none erect stelae after that initial (and limited) burst at the Preclassic/Classic transition.

In the Late Classic, there was an apparent shift in the political and economic structure of the valley. A number of relatively larger (if still not "gigantic") centers emerge, including Xunantunich, Buenavista, and El Pilar. Depending upon the interpretive models invoked, one can see these as collectively and synchronously reflecting an increase in the localized concentration of authority within the region. In this view, Xunantunich and Buenavista represent competing or hierarchically related centers. At this point, however, we believe this site pair—and perhaps other pairings—in the region represent staggered, partially sequential developments.

That is, as noted earlier, Ball and Taschek (1991) and their colleagues (esp. Houston, Stuart, and Taube 1992) have presented strong evidence that Buenavista was economically and politically subordinate to the megacenter of
Naranjo, and suggest (without elaborating) that the authority represented at Xunantunich was likewise derivative of the same Guatemalan site. With this we agree, but we believe the reasons and timing were different in the two cases. We suggest that Xunantunich essentially replaces Buenavista as Naranjo’s outpost, and that the layout of Xunantunich, the locally extraordinary monumentality of its architecture, and its locally unique carved monuments together reflect a pronounced political statement and intervention by Naranjo, to bolster and assert its authority within the valley. Like a number of our colleagues (e.g., Ball and Taschek 1991: 154, note 5; Schele and Freidel 1990: 385), we see such developments as linked to increased tension between Naranjo and its peers, especially Caracol.

1992 Research

A five-month field season initiated the Xunantunich Archaeological Project (or XAP) in 1992. Efforts this year aimed at establishing the framework or foundation for addressing the issues just described, and focused operationally on four major components: (1) mapping the center and outlying areas to begin to create a complete picture of this ancient city; (2) initiating excavation in the site core and testing in the immediate settlement area; (3) tightening the chronological framework through detailed ceramic analysis; and (4) exploring options for protective consolidation of architectural remains.

Mapping

Thanks to the collaboration of George Holley and William Woods of Southern Illinois University-Edwardsville, we began mapping with a Total Survey Station, which allows rapid and accurate recording with direct movement of the field data to the computer for plotting. In addition to incorporating use of this sophisticated, efficient, and increasingly widely adopted recording technology, we are exploring new means of displaying map data. That is, in addition to producing the standard Maler-convention maps which show the relative sizes and elevations of the ancient buildings (e.g., Graham 1978, for Xunantunich), we are creating software for detailed three-dimensional representations of topography and architecture, ultimately allowing us to visualize excavations volumetrically, to show the superposition of the constructions, and to simulate the consolidation schemes for the final
architectural presentation at the site. We are still in the process of finalizing this mapping system under the guidance of GIS and computer consultant Dr. Virginia Hetrick of UCLA. However, this past year, we completed mapping of the central area of the site, the area to the south of the main structure, A-6 or the Castillo, and Group D. We now have available the first products of this new visualization system—still in two dimensions—including all of Group A (Plazas 1-3, minus the Castillo), and a more detailed presentation of the structures of Plaza 3.

A most interesting discovery during mapping was a large area of complex buildings and plazas, including a second ballcourt, south of the Castillo. Some elements of this complex were known before, as Group C, but not its full extent or internal complexity. Indeed, we now know that the Castillo is not located on the edge of the city but rather, in the middle of the civic core. And not only is there a staircase on the front or north side of the Castillo (the one used today), there was also a staircase on the south side leading to this newly recognized architectural group. We therefore have a significantly new sense of the form and organization of Xunantunich.

Excavation

Second of the major 1992 programs was excavation. Structure A-1, the building located in the middle of the main plaza, was cleared on both the north and south sides by Field Director Thomas Jamison, of SUNY-Albany. At least three phases of construction were identified for the substructure. This ancient pyramid had two stairways—one facing the Castillo to the south and the other facing the royal residence (Plaza 3) to the north. On A-1 summit is a smaller platform with at least two, if not three, phases of construction. Much of this architecture dates to the Terminal Classic. A final excavation trench and consolidation will be completed in 1993.

During the 1992 field season, we conducted only minor excavations in the Castillo, a building that has been deteriorating slowly for the past 25 years and is now in urgent need of excavation and consolidation. For this reason, preliminary work was undertaken on the west side, which is in the worst condition. Prior to consolidation in 1993, the west side of the Castillo will be cleared and excavated. We expect to find another plaster frieze similar to the famous frieze on the east side. However, we do not yet know the state of preservation of this new frieze.
The area to the south of the Castillo provided some of the most intriguing material from the 1992 field season. This area includes a series of large plazas completely enclosed by a long linear set of platforms—possibly a parapet or the basal section of a perishable wall. This platform was tested by Sabrina Chase of Rutgers University, and found to be identical in form at each test location. Apparently, the southeast and southwest corners were originally open, but the southeast corner was later blocked with a retaining wall. The exact nature and interpretation of these architectural features remains uncertain in this early stage of our research. However, another series of long, low, linear platforms was found to the farther south. These features seem to be defining plaza space and may collectively relate to an attempt to limit movement of people into and out of the center of the city. Since this was a period of general political, social and economic upheaval throughout much of the lowlands, these linear features may relate to a tightening of social control within Xunantunich.

A large, elite residential compound, Group D, was cleared and excavation was initiated in 1992. This work, supervised by Jennifer Braswell of Tulane, consisted of clearing portions of a small palace-type building and excavation of a chultun, which included several human skeletons.

Preliminary work was also conducted within the outlying reaches of the ancient city, by Sabrina Chase (Rutgers), Jon VandenBosch (Pittsburgh), and Jason Yaeger (Pennsylvania). Initial observations indicate that Xunantunich was a much larger city than initially perceived but a formal settlement program awaits inception in 1993, and so it is clearly too early to attempt a population estimate.

North of the civic core, the small center of Actuncan was cleared, mapped, and tested by James McGovern of UCLA. This pyramid center appears to be largely Late Preclassic in construction bulk, and yielded a stylistically Late Preclassic carved monument, cited earlier. Actuncan was reoccupied during the Late Classic, and we believe this was an ancient seat of local authority, whose revered location was a major factor in Naranjo’s choice of location for founding Xunantunich.

Ceramic Analysis

A third major XAP program in 1992 was ceramic study, undertaken by Lisa LeCount of UCLA. Her primary goal this year was to establish a computerized ceramic catalogue in which sherds can be classified in respect to
compositional, decorative and formal attributes. With this ceramic catalogue, we can address two major questions. First, we are interested in identifying temporally diagnostic decorative or formal attributes useful in developing a ceramic chronology. Second, we are interested in correlating these attributes, to construct both stylistic and functional vessel types. Once ceramic types have been created, we can then begin to analyze the economic, social and political conditions under which people produced and used pottery.

This year, the ceramic analysis is focused on chronology building. In this effort, we benefit greatly from Thompson’s (1940) Benque Viejo ceramic study and Gifford’s (1976) for Barton Ramie. Excavation of a moderately sized plaza group located on a river terrace, across the Mopan from Xunantunich’s core, has yielded a series of floors and sealed fill deposits, containing pottery samples suitable for analyzing ceramic sequences. In contrast, excavations in the architectural core of Xunantunich encountered construction debris and single occupation surfaces and yielded shallow deposits. All deposits excavated so far, however, point consistently to the relatively short term but highly expansionary growth during Late and Terminal Classic.

Xunantunich Late Classic Ceramic Sequence: The early part of the Late Classic (AD 550-700) can be recognized by the presence of Thompson’s lateral-ridged dishes. These dishes, of Saturday Creek Polychrome or Mountain Pine Red types, make up about 3% of the early Late Classic vessel assemblage recovered to date. Additionally, calcite temper predominates at this time over ash temper, with ash tempered ware making up less than 5% of the assemblage. Polychrome pottery is also found in the largest percentages during the early part of the Late Classic (about 2 to 5% of all sherds). At this time, however, it is difficult for us to assign type-variety names to the majority of the polychromes because they are from highly eroded fill deposits.

Compared to the early part of the Late Classic, the late part of the Late Classic deposits yield the highest percentages of Dolphin Head Red, higher percentages of ash-tempered pottery (more than doubling, to around 10% of the assemblages), and very low frequencies of calcite polychromes. At this point, we see little change in the frequency of ashware polychromes from the early Late Classic. Thompson’s vinaceous-tawny ware, given the name Benque Viejo Polychrome by Gifford, is reported to be a diagnostic type.

The Terminal Classic (A.D. 850-1000) marks a dramatic change in the make-up of the ceramic assemblage. At this time, we find the presence of Fine
Orange carved vases and Miseria appliqué incensarios, and the virtual disappearance of Dolphin Head Red. In addition, such attributes as ‘piecrust lips’ on storage jars appear to be diagnostic, as do oven-shaped feet, rather than slab or tau-shaped feet, on Belize Red or McRae Impressed dishes. As noted by both Gifford and Thompson, the highest percentage of ash ware is found in Terminal Classic assemblages. Although we too find an increase in ashware pottery, the difference between Late Classic and Terminal Classic ashware frequencies does not appear to be statistically significant. We also find that polychrome pottery virtually disappears from the assemblage at this point. If the lack of polychrome pottery were due to weathering, we would expect a similar decrease in bichrome sherds. Calcite-tempered bichromes do disappear from the assemblage, but the frequency of ash bichrome pottery appears to remains constant from its late, Late Classic levels. We suggest therefore that cultural factors rather than weathering caused the lack of polychrome pottery in Terminal Classic assemblages.

One of the most identifiable stylistic changes apparent throughout the Late Classic assemblage is the modification of incurring lips on Mt. Maloney bowls. These bowls comprise approximately 30% of the vessel assemblage, making them the most common vessel type found in Xunantunich contexts. The lips show a change from smooth, rounded, and slightly tooled lip in the early Late Classic to more beveled, tooled and flattened lips in the later Late Classic. In the Terminal Classic, the majority of lips are tooled square, with the side of the bowl showing a sharp incurve near the rim. The frequency of these different lip types will allow us to develop a ceramic chronology based not only on rare, highly decorated type varieties found within temple or elite households but also on commonly used domestic vessel forms found in all contexts. The use of such modes, along with types and varieties will also allow us to temporally classify material from small lots, highly eroded fill or weathered contexts found at Xunantunich.

Architectural Consolidation
A fourth major focus of the Xunantunich work is the consolidation and preservation of the site so it can remain an important part of Belize in the future. Planning and the first steps toward this consolidation work were taken in 1992 in association with the Getty Conservation Institute of Los Angeles, one of the most respected conservation and training organizations in the world. Actual consolidation plans also benefit from direct and ongoing involvement of our
colleague, Arq. Carlos Rudy Larios V., whose noted expertise derives from extensive experience in such efforts at Tikal, Copan, and elsewhere. Consolidation efforts at Xunantunich in 1992 comprised technical evaluation of priorities for protective measures, and assessment of stability of construction fills used here by ancient builders.

Conclusions

Ancient Xunantunich was but one center in a complex evolving social landscape. But its unusually brief and late florescence and its locally unique possession of dynastic sculpture mark it as a place whose study is central to understanding that landscape. The 1992 season has begun such a study.
Acknowledgments: The Xunantunich Archaeological Project was developed in 1991 at the invitation of the Department of Archaeology, Government of Belize, then under direction of Acting Archaeological Commissioner John Morris. We would like to thank Mr. Morris, as well as the current Archaeological Commissioner, Alan Moore, and others in the Department of Archaeology, for their support and encouragement. We would also like to thank the Honorable Glenn Godrey, Minister, and Dr. Victor Gonzales, Permanent Secretary of the Ministry of Tourism and the Environment. Funding for the 1992 season came from the Government of Belize, Ministry of Tourism and the Environment; the USAID, and the University of California, Los Angeles.

The Getty Conservation Institute is an integral part of XAP. We appreciate the support and help of all members of the Getty Conservation Institute, specifically the director Miguel Angel Corzo. The GCI field team includes Neville Agnew, Kathleen McDonnell, Margaret MacLean, William Ginnell, Martha Demas, and consultant Rudy Larios V.

The 1992 XAP field crew included Richard M. Leventhal and Wendy Ashmore (directors), Thomas Jamison (field director), Lisa LeCount (lab director), Mike Artemieff, Jennifer B. Braswell, Sabrina Chase, Rinita Dalan, Lady Harrington, George Holley, Elisa Mendell, Louise Krasniewicz, Kathryn Maurer, James McGovern, John, Musser, Jon VandenBosch, Harold (Mick) Watters, William Woods.

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Thompson, J. E. S.

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The Excavation of Structures A-1 and A-4

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Structure A-1

Work on str. A-1 began with clearing around the north and south faces in an effort to define the stairways on either side of the structure. We then proceeded to investigate various features and anomalies found in this clearing. Finally, we began excavation of the building platform at the top of the substructure. For the most part, the excavations were carried out with 1x2 and 2x2 meter pits, depending on the area being cleared and the estimated location of architectural features. Other excavations, however, varied in size in order to best clear areas under investigation.

Substructure: North Face

The stairway on the north side of A-1 was quite well defined prior to excavation. Part of it had been exposed by previous excavators. Two trenches were started where either inset was thought to be located. Units were placed slightly north of the collapse from the structure and excavated to a well preserved plaster floor approximately five to ten centimeters below the surface. The floor provided an excellent surface to follow to the structure and under the collapse debris.

On the east side of the stairs, the floor was easily followed into the structure face and the inset of the stairway. It rises slightly towards the structure at about a three degree slope. Here the facing of the first terrace of the structure was found to be nearly fifty percent intact where it intersects the stairway. It is a battered terrace face lying at an angle of approximately eighteen degrees off vertical. At 100 to 105 centimeters above the floor on the east side of the stairs and 120 cm on the west side of the stairs, the face juts out about 5 cm to form the basal edge of an apron molding that is poorly preserved but clearly present on both sides of the stairs. Above the molding edge, most of the facing has fallen away exposing the core material of the terrace. This is true except in the corner where the stairs and face meet. There, the face is intact almost entirely to the base of the next terrace. The core material consists of small limestone cobbles and small irregular stones set in a marl matrix.

Although the facing is minimally preserved or absent from the molding edge to the base of the next terrace of the face, part of the top surface of the first terrace has remained intact on both sides. In each location, it consists of a small patch of floor about 2.6 to 2.8 meters above the plaza floor on which the terrace rests.

Rising above this first terrace, are three primary terraces that composed the structure face to the top of the pyramid. In addition to these, there is an indication that there may have been a small fourth terrace at the top edge of the structure. This
is suggested by some stones at the top of the west trench that may be the remains of a small terrace. The terraces all appear to have the same general form, although there are no traces of apron moldings except on the first terrace. These suggestions may be confirmed by further clearing on the north face of the structure.

As mentioned above, the stairway on the north side of A-1 had been partially excavated prior to our work at the site. The steps are intact from the plaza level up five or six steps and appear to be composed of large blocks with a heavy coat of plaster over the surface. Although the stairs themselves were not excavated this year, we did investigate their intersection on either side with the terrace faces. On both the east and west sides, the side of the stairs were preserved to a height of two courses of stone. The clean break at that level and seeming plaster on top of the second course on the west side, suggested that we may have been dealing with a small stair-side outset. However, upon completion of the excavation on the east to the terrace face, clear remains of vertical facing above the level of the second course indicated that the stairs did extend to the intersection with the face and there was no stair-side outset.

Examination of the intersection of the stairs with the terrace faces on the north face of A-1 indicate that these stairs were part of the early phase of the building visible today. Although we expect to find in the coming season earlier buildings within what we know as A-1, the building we see today itself underwent a series of modifications. However, these appear to all have been added to the south face of the building. We suspect that the stairs and terrace faces of the north side were the original form of the structure. These features may be identical to those underneath the additions of the south side.

Aside from the clearing of the structure face, some excavation was carried out in the plaza immediately north of the structure. Initially, the plaza floor was cleared in several units to allow for an informed approach to the structure. This clearing of the plaster plaza floor revealed small symmetrical breaks and irregularities in the surface in front of the stairs to the structure and in the insets at the side of the stairs. In an effort to find a pattern to these irregularities, we cleared the plaza floor in a large area extending the width of the stairs and running out from the stairs about 3 meters. In this area, several other irregularities were found that were similar to those in front of the steps, and at each corner of the clearing, areas of small stones instead of plaster were encountered.

Although the irregularities in front of the stairs were thought to be locations of caches or offerings placed through the floor and roughly plastered over,
excavation of several of these features revealed that the break in the plaster was only about five centimeters deep and stopped at an earlier plaza floor. Nothing was found in the fill of these disturbances. Perhaps they were formed by root action of trees on the site, but this is uncertain at this time.

A much different irregularity in the plaza floor, however, did prove to be significant. As mentioned above, set north about 1.0 to 1.5 meters from each of the stair corners is an area of the plaza that is not covered by the smooth plaster at the front of the structure. These areas are covered instead by small rocks that appear to be fill of a pit in the plaza. We investigated one of these features by excavating a section of the feature north of the northwest corner of the stairs.

It appears that less than half of the feature was exposed by the extensive clearing of the plaza north of the stairs. Here the plaza floor was broken in a large area with the fill at and slightly above the level of the floor being small angular limestone rocks. We removed this fill to the level of floor 2, approximately 10 cm below floor 1 in this area. At this level the fill of what had become a distinct pit in the plaza fill changed from a light brown soil with the limestone rocks to a very dark brown soil with many small limestone cobbles and pebbles as well as a high concentration of *Pachychilus glaphus* shells (jute). Most of these shells had the spires cut or broken off as if they were food remains. However, the high concentration in such a conspicuous setting and the fact that the deposit seems to be solely *glaphus*, known to be associated with ritual deposits, suggests that they may signal some sort of cache or mortuary context.

Removal of this fill revealed the base of the cut into the plaza fill except in an area about 1.0 by .6 meters at the base of the pit. Here the cut continued and was filled with burned limestone rocks similar to those that were noted on the surface of the feature, small and angular in shape.

Unfortunately, the field season was nearly over when we exposed this new element of the deposit. Since it was clear that much more time was needed to excavate it properly, we chose to cover it until the coming season when we would have plenty of time to excavate it with care. As I mentioned above, there appears to be a similar deposit north of the northeast corner of the stairs. These may be two identical or at least contemporary deposits related to the construction of A-1, or to some event during its use.

Finally, a 2.0 by 2.7 meter pit was placed against the lowest step running north-south and excavated into the plaza on the axis of the stairs. This pit went through the two plaster floors on the plaza and some extremely hard fill to a depth.
of 40 to 50 cm below the surface of floor 1 where bedrock was encountered.

Substructure: South Face

The south face of structure A-1 is much more complicated than the north face. Initial clearing to define the base of the structure located construction just under the surface of the collapse debris. This was different from the north face where the collapse was very deep over the structure face. These, nearly, surface features appear to be additions to the structure that give the south face a different appearance than the north face.

First of all, the stairway on the south has been widened and extended out from the structure. Although this has not been confirmed to be a late modification, the lack of symmetry with the north suggests this to be the case. Preservation of the latest stairs on the south is poor. The large blocks are jumbled and steps are difficult to distinguish. Also, earlier excavation on the central axis removed a portion of the latest stairs, thus, making it even more difficult to interpret.

However, this earlier excavation revealed traces of an earlier set of stairs that appear to have been similar to the latest, but extending slightly less to the south; that is, covered over by the later stairs. A small trench into the old axial excavation allowed us to record these remains and also exposed a set of rough steps that appear to be construction stairs under the two sets of finished stairs. These construction stairs may be associated with the presumed late stair construction, but there is a possibility that they are the construction stair to the initial construction of the building we see today. If that is the case, the south face may have been differently configured from the north face from the start. Nevertheless, the south stairs are also much wider than those on the north. They are approximately 20 meters wide versus the 11 meters of the north stairs.

The sides of the stairs are also constructed differently than the northern ones. On the north the sides of the stairs appear to have been faced like the structure itself, with large block veneer facing. However, on the south, the sides of the stairs are constructed with some large blocks mixed in with many small slabs. They form a face that is very rough with no coursing and quite unstable due to seams running vertically through the face.

On both the east and west sides of the stairs, low terraces (approximately 45 cm high) are set in the inset corner between the stairs and the structure face. These are certainly late additions as is demonstrated by their placement over plaster floors and the base of the structure face. They were not tied in with the structure itself. A
plan view of these terraces shows them to be set, about 55 cm on the east and 70 cm on the west, away from the side of the stairs. The intervening gaps seem to be filled in with soil and blocked off at the southern ends with large blocks, even with the southernmost extent of the stairs. These areas have not been investigated as yet, but appear to be filled with no finished surface. They may or may not contain special deposits. In contrast, the terraces themselves were plastered and faced around their perimeters with large blocks. However, the condition of the terraces is poor due to erosion of the edges and removal of fallen facing, said to have been used in early reconstruction work done on the Castillo (A-6).

The only differences between the two terraces are the extent to which they line up with the stairs and their extent to the corner of the structure. The terrace in the southwest corner is constructed so that it extends further to the south, by about 65 cm, than the stairs. In the southeast corner, however, the terrace is even with the stairs. Also, the southeast terrace may not have extended to the corner of the building, as it appears to have done on the southwest. However, this suggestion is impossible to confirm due to erosion and disturbance of the terrace.

Behind, north, of these terraces we located the structure face. With the poor definition of the stairs on this side, we spent more time clearing this face in an effort to understand the complicated sequence of additions. Also, we were able to locate the two corners of the structure. The structure face on the south side appears to be quite similar to that on the north. It is composed of terraces running up either side of the stairway that are faced with large blocks, as on the north. However, the terrace faces show no signs of apron moldings, as does the lowest one on the north. Although, the height of the terrace appears to be quite similar. On the south it is about 2.65 meters high as opposed to 2.6 to 2.8 meters on the north. The other three terraces running up the south face are approximately 2.2 meters, 2.5 meters, and 2.2 meters respectively from base to top. These seem to be roughly consistent with the terraces on the north face.

Southeast Corner

An interesting feature connected to A-1 at the southeast corner is a low wall running from the corner towards structure A-3. This feature was visible on the surface prior to excavation. Like the low terraces discussed above, it appears to be a late addition.

There are two possible interpretations of this wall. One is that it was a freestanding wall that may have had a perishable wall on top of it. The other
interpretation is that it was a step up as one passed from south to north. Its construction and relationship to associated floors supports the latter interpretation.

The wall is constructed of small slabs of stone forming the edges, with small cobbles and soil as the fill. With two distinct edges being visible on the surface it initially appeared to be a free standing wall. Removal of the overburden and fill behind (north of) the wall revealed that the two sides were different. The southern edge has slabs that are fairly well aligned with the line of the face and form a low vertical face about 20 cm high. On the north, however, the slabs are much more irregularly aligned and suggest a face that was not free standing, but filled from behind. Arguing against this interpretation is the fact that there is no indication of the fill north of the wall being surfaced with plaster or composed of the typical marl and cobble fill seen elsewhere at the site. However, once the fill was removed, a plaster floor was found approximately 13 cm below the floor on the south side of the wall. Although not confirmed as yet, this floor appears to be an earlier one below that in the plaza to the south. Therefore, it is suggested that the "step" was constructed over an earlier floor at the same time as the late floor in the plaza. The only possibility that might refute this interpretation would be if the wall served as a boundary of an area lower than the plazas to the north or south. Further excavation in this area should confirm one of these interpretations.

Upper Building Platform

Once the substructure was defined as described above, we moved to the top to define the building platform that was visible prior to excavation as a slight rise at the summit. This definition was accomplished by extending the trenches on either side of the north face stairs across the summit to intersect the northeast and northwest corners of the building platform. Although the corners of the platform were somewhat vague due to deterioration, they were clear enough to locate and follow the lines of facing around the platform.

The latest manifestation of the building platform is a rectangular construction approximately 14 meters from east to west by 6.5 meters from north to south with a height of approximately 1.9 meters. These measurements are of the final phase, although erosion probably reduced the height slightly.

The top of the platform is covered with very rough and loose rubble. We excavated into this material in an axial trench, around an earlier excavation by Stewart, and in a narrow trench following floor remains from the northwest corner of the platform towards the east. The rubble appears to be uniformly rough and
loose. Any remains of plaster on top of this material is long eroded, if it ever existed.

The only deposit found in this rubble to date is a single skeleton placed almost exactly on the central axis (Burial 391/1-B1). Although the remains were in extremely poor condition, it is apparent from the location of teeth, cranial fragments and long bone fragments, that the individual was laid out in an extended position with the head to the south and feet to the north. There was no indication of a crypt or cist constructed in the rubble. The skeleton appears to have been placed in the rubble as it was being laid over the platform. There does appear to have been some kind of marker of this location, judging by the presence of three large blocks that were visible on the surface of the rubble. These appear to have been resting almost directly on the skeleton. There were no artifacts associated with the burial, though some sherds occur in the surrounding fill.

This rough rubble material may have been fill of a raising of the platform height in a late construction complete with plaster floor and a superstructure. However, the minimal fall around the platform suggests that it did not have a stone facing as elsewhere on the structure and almost certainly, had no superstructure. Therefore, I believe that the material was a late covering of the platform surface, possibly with a plaster floor, but without substantial facing around its exterior.

Definition of the platform outline was fairly straightforward. This was aided by the good preservation of the platform face that consists of a low, approximately 1 meter, vertical face of large blocks set in a similar fashion to the facing of the substructure. Very little fall was found around the platform, so it appears that the face was little more than what we found preserved, though an additional course or two had probably fallen from the top to bring the height to slightly over a meter. Walls and floor remains were followed around the perimeter of the platform except for the southwest corner that has not been excavated to provide wheelbarrow access.

An interesting find was a stone that was in the collapse debris on the north side of the platform. It was well shaped and appears to have had carving on one surface. That surface is divided into three square raised areas with lower grooves around and between them. The stone gives the impression of having had three glyph blocks on its face, but nothing can be discerned now.

One difficult area was the southern side where two rough lines of stone were found along the east end of the south face. One of these was a line of cobbles along the platform face. Another was a more substantial line that ran south from the platform face and makes a right angle towards the west. If this line is extrapolated
out, it would enclose the late steps on this side. However, the preservation of these lines was poor and they could not be followed out or picked up past the east edge of the steps.

Floor remains around the platform exist only within 1 meter from the platform. Otherwise, it is eroded so that only rough rubble fill is exposed to the edge of the substructure. Most of the patches of plaster appear at roughly the same level, however, on the east side there is an area that indicates there may have been at least two floors, possibly one being a refurbishment of the other. Due to the poor preservation of the plaster of this floor, it is difficult to say if the floor ran under the platform or lipped up to it. The only place this exterior floor retains a lip is under a late set of steps on the south face of the platform that appear to be contemporaneous with the rough rubble fill on top. Therefore, it appears that the floor lipped up to the whole platform and these steps are the only late addition over that floor.

The steps on the south face consist of three or four steps set against the face of the platform. The poor preservation of the steps and the rubble fill on top of the platform make interpretation difficult, but there may have been additional steps due to the height differential between the top visible step and the highest point on the fill (approximately 1 meter). Despite the poor preservation, it is apparent that the steps were constructed of fairly large blocks, approximately the same size as the platform face (ranging from 25 to 50 cm long by 10 to 30 cm wide and 15 to 30 cm thick).

To try to assess the sequence of construction of the platform, we decided to start a trench into the late steps that would eventually be continued into the platform. We followed a fragment of floor remaining to the south of the steps and removed the steps in a two meter wide trench. The floor lipped up to a low (25cm) terrace running along the platform face. The terrace consists of one step faced with, apparently, a single row of blocks set on edge with a plastered surface that lips up to the platform itself. On top of the terrace was a thin lens of very dark soil that may indicate burning against the face of the platform prior to construction of the later steps. A soil sample will be analyzed for botanical or other remains.

The plaster surface of this terrace was cut into and the fill of the terrace was removed. It consisted of 6-10 centimeters of plaster and mescla over cobble and mescla fill of about 25 centimeters. An interesting feature of the fill was the presence of about twenty to thirty 5-10 cm diameter nice quality chert cobbles. There were no associated artifacts, even sherds were scarce or absent throughout the fill. This material extended to another plaster surface about 15 cm below the level of the
floor to the south of the terrace.

With excavation into this terrace, we discovered that the platform had been constructed as one unit with the terrace. This interpretation is based on the fact that the finished face of the platform does not extend more than 10 cm below the plaster surface of the terrace. At that point it stops and rests on rubble fill seemingly identical to the fill of the terrace. All of this fill, that of the terrace and the platform, rests on a plaster floor that is 15 cm below the floor south of the terrace.

Several other details were discovered during excavation in this area. On top of the platform, under the rough fill, is a fine plaster floor that appears to cover the whole platform surface. In the northwest quadrant of the platform, the plaster surface lips up slightly before it is broken in a square area about 50 cm from east to west. The northern edge has a distinct lip, however, the lip diminishes and disappears about 20-35 cm to the south, with no lip apparent on the southern edge, where level plaster commences again. Although we at first thought this could be the remains of a superstructural wall that had been removed, Rudy Larios suggests another interpretation. He postulated that a superstructural wall within the fill of the platform may be breaking through as the platform fill has settled over the years. This suggestion may be investigated in the future excavations of the platform itself.

In addition to this feature, a north-south trench in the late fill encountered the remains of a possible superstructural wall on the south face of the platform. It is located on top of the platform face, on the west side of the late steps. The remains consist of a low, about 40 cm, wall of dry laid rough stone slabs running along the edge of the platform. This kind of construction did not appear in the three meter trench on the platform axis. If this is a wall, it may be a late construction laid over the platform surface. Since it appears to be a wall, rather than part of a cache or other offering, it seems to be the kind of construction that may have been in use for some time prior to the filling of the platform with the rubble. It may have been a wall defining an opening from the south steps to the space on top of the platform.

Finally, the plaster surface of the platform, under the rubble fill, was the location of extensive burning. The floor is burned in a swath running east to west on the northern edge of the platform. Approximately 80-90 cm south of the north face the burning is apparent. It may have extended further to the north, but lack of preserved floor makes this a guess. The band of burned floor is 1.7 meters wide with a heavy concentration of black soil and charcoal 50-80 cm wide running east to west in the middle. The south edge of this burning corresponds to the south edge of the possible wall remnant mentioned above. This coincidence may suggest the burning
took place in a rear room on the platform. No artifacts were found associated with this material. However, several soil and C14 samples were taken from this deposit for analysis.

In the coming season we will investigate the interior of the platform itself as well as the interior of the substructure.

Structure A-4

Excavation was begun around the northwest corner of structure A-4 in order to interpret an earlier trench excavated in the area by Schmidt. As it turned out, we exposed part of a complex of walls that seem to have formed several rooms and platforms added on to the west face of structure A-4 and A-3.

Structure A-4 is a large stepped pyramidal building on the east side of Plaza A-I. Schmidt excavated a large trench at the intersection of A-4 with A-3 to the north that cut through a low terrace added west of these structures and also cleared the faces of the structures where they intersect. This excavation left exposed the structure faces and the trench through the terrace and presented an interesting area of investigation. In order to describe these features it is best to present them in a sequence of construction for this area.

Substructure

From Schmidt's excavations it was clear that the substructure of A-4 had a stepped facade with apron moldings of at least three terraces. In an effort to locate the north edge of the stairs of A-4, we excavated a trench into the face of the structure. In this trench we located the face of the lowest terrace of the substructure and what appeared to be the side of the stairway. The structure face is battered with the subapron being about 7 degrees off vertical and the apron at about 19 degrees off vertical. The bottom edge of the apron molding juts out 5 cm and is about 75 cm above the plaza floor. Some plaster on the face and the plaster of the floor is quite well preserved in this area.

Extending out to the west from the face was a nearly vertical wall that, with further clearing, turned out to be a stair-side outset feature. It extends west from the substructure about 160 cm. It is unclear how high up the face of the substructure this outset extended, but it appears to have been at least 2 meters high and possibly as high as the first terrace that seems to have been about 2.6 meters. Following the outset to the south it became apparent that the west face was not close to vertical, as it is on the north, but is at a similar angle as the apron on the substructure. The
outset extends about 3.15 meters to the south along the face of the structure until it abuts another face extending to the west. This face appears to be the side of the stairs, however, we did not have time to confirm that interpretation this season.

Excavations west of A-4

As mentioned above, Schmidt's trench to expose the intersection of A-3 and A-4 appears to have cut through a low terrace built in front of the buildings late in the sequence. This may have been a construction similar to the stela house (A-16) located in front of structure A-2. In an attempt to understand these late features, we conducted fairly extensive clearing in an area from the south edge of Schmidt's trench to about 4.5 meters to the south. Within this area we encountered a confusing series of walls that may be interpreted as follows.

There seems to have been an accretionary growth of features in this area in front of A-4, and probably running all along the area from structures A-2 to A-4. The terrace trenched by Schmidt appears to have been the first addition. What remains of it, the preservation is quite poor, seems to have been a rectangular terrace built against A-3 and A-4, covering the intersection of the two buildings. This terrace was at least 1.3 meters high and extended about 4 meters and possibly as much as 5 meters west from the substructures. It appears to have been a single level, although the west edge of it is so eroded, this is impossible to confirm. This interpretation is based on a retaining wall running west from A-4 that has a clear southern face and retains structural fill to the north. It is constructed primarily of large thin slabs of stone, unlike other construction at Xunantunich. The western end of the wall is not clear. It may end at 4 meters where a large stone is located that may have been a corner at one time. However, another meter to the west is a facing running north south that may have been the western face of the terrace originally or in a later form. Partial dismantling of these features should aid in this interpretation.

Originally, or at a later time, a low 10 cm step was included at the western end of the structure. This was plastered and extended about 80 cm from the western face mentioned above. Again, the place of this feature in the construction sequence is uncertain.

Perhaps the most ambiguous element of this conglomerate is a wall that parallels the early southern face of the terrace. It is unusual in that where it is adjacent to (south of) the terrace face, it appears to have a face facing north. However, where it extends west past the end of the terrace face, it seems to be a
retaining wall facing south. Like the confusion above, partial dismantling of the wall might help to settle this problem. This wall ends at the edge of the low step on the west with a large stone that seems to indicate the wall made a turn to the north at this point. This possibility suggests that it is part of a later expansion of the terrace that has been substantially altered by erosion and removal of fallen stones. The apparent northern facing adjacent to the earlier terrace face can not easily be explained. One possibility is that a small chamber was formed by the two walls where they run parallel. If this were the case, we might expect to find the southern face of the later wall running its full length and the northern face being present only as the interior of a chamber. This possibility may be examined in the coming season with partial removal of a pile of stone set against the south side of this wall.

The floor that extends west from the face of A-4 runs very level until it drops about 5 cm at 4.5 to 4.6 meters from the face. There it forms a distinct edge running north-south and continues to the west. This edge of the floor may indicate a slight step up into a room or enclosure in front of A-4. The terrace to the north appears to have formed a northern side to such an enclosure. Constructions that may exist further south may have formed another side. Part of the reason this area seems like a room is that there is a line of stones that seem to block off what would be the entrance. This line of stone is located slightly east of the drop in the floor. It runs along about 20 to 25 cm from the drop and consists of large blocks set on edge and end to end. Being only one course, it is hard to say what kind of wall this was. As with all of the features discussed in this area, it may have been substantially altered by earlier excavations in the area.

A particularly apparent case of such activities is the pile of stones mentioned above that is located against the south face of the terrace. These stones were clearly laid in a wall kind of form, but it is so rough that chronology immediately became an issue. At first it appeared to be a late addition by the ancient Maya, however, removal of the fill to the south of these stones suggests it may be the work of archaeologists. The north profile of the trench to the south clearly shows that these stones are set in a matrix of dark brown soil. Although the western end of the stones is fairly level, to the east it rises up and onto what is clearly the original limey collapse debris from structure A-4. At the eastern end of the stones, there is a clear vertical line in the limey fall that marks the break between the light brown limey material and the dark brown matrix of the stones. Thus, it appears that these stones were placed in an old excavation.
1992 Excavations
South Group Plaza I and Nabitunich Plaza Group I

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This paper will discuss excavations initiated in the Xunantunich site center and in an outlying residential area of the site during the 1992 season of excavation. It will focus on work that took place in Plaza I, a small enclosed courtyard abutting the lower south face of Structure A-6, and on work within Nabitunich Plaza Group I, just east of Nabitunich Hotel. In all, eight operations and two single suboperations will be discussed.

The first half of the paper will describe and analyze the Plaza I South Group findings, while the second half will discuss the data produced by the Nabitunich Plaza Group I excavations.

**The South Face of Structure A-6: Plaza 1**

Plaza 1 is located in an area referred to as the South Group. This collection of long linear structures and small mounds begins to the rear of Structure A-6 with Plaza 1 itself. It abuts the Castillo to the south and encloses a small square area, bordered on each of its three open sides by a long, low construction. These are referred to as Structures 1-3. Investigation in the plaza began at the juncture of Structure 1 and Structure A-6 in order to discover the anatomy of both the south face of A-6 and its adjoining neighbor. This was the inception of Operation 17, which proved to be the most extensive operation within the plaza itself. Operation 17 was completed in 18 suboperations (units) and is best examined in two sections. The first section discusses suboperations 17A-D, F-H. These units composed an east-west trench at the point of overlap between the north end of Structure 1 and the lower south face of A-6. The second section treats suboperations 17I-R; these units made up a north-south trench extending up the south face of Structure A-6. Unit 17A was part of both trenches; it was the point of juncture for the two halves of Operation 17.

**The Anatomy of Structure One**

Units 17A-D and 17F-H at the juncture of Structure 1 and Structure A-6 revealed that Structure 1 was a low, stepped construction. Excavation uncovered a central platform, packed with rocks and cobbles, held in by two very low retaining walls or steps on either side. This central platform was 1.8m wide, and its fill varied in size from small rocks to large, angular stones, though the former prevailed. On either side of this high platform, wide steps descended. There was one such step to
the west of the platform and two to the east, the easternmost step leading down into what appeared to be a sunken plaza.

The three treads created by these steps or terraces showed a consistency of planning, the tread of each wide step spanning about a meter (from west to east, measuring .8m, .9m, and 1.10m), and the rise of each step, including the two demarcating the platform, measuring about 20cm in height with the exception of the east most rise—which, as noted above, led down into a notably lowered plaza—(from west to east, taken along the south border of each unit these stood 20, 22, 16, 22, and 40 cm high respectively). Two of the three step treads showed remnants of plaster floor, with only the first (moving, again, from west to east) revealing no traces of plaster whatsoever. Additionally, both the low plaza floor itself and the higher ground surface to the west of the first step retained their plaster coating.

The picture that emerged from Operation 17 was as follows: Structure 1 appeared to be a stepped parapet, reasonably uniform in construction, encircling a small sunken plaza with two other structures like it. No break or entrance was found in the construction. Operations 33, 34, and 36 were all undertaken to examine the form of Structures 2 and 3 which border Plaza 1.

Unit 17E was not directly adjacent to either the east-west trench or the north-south trench. It was located one meter south of unit 17F, and it was initiated in order to determine the depth at which bedrock lay along the north end of Plaza 1, as well as to locate the original plaza floor(s). No trace of plaster was located, but a layer of ballast was found near the modern surface; the original plaster floor appeared to have eroded away. Bedrock was found just below the layer of ballast, showing it to be high in this part of the plaza. This high bedrock (at an elevation of 174.20) contrasts sharply with the extremely low level of bedrock along the plaza’s southern edge: Unit 36D, next to Structure 2, was excavated to a depth of 171.1, and bedrock was not found. Within this context it is relevant to note that the majority of material removed from Unit 36 was large rock fill and re-used midden. This suggests that Plaza 1 was created by deliberately raising the south end of the plaza, packing it with fill until it reached the level of bedrock found along its north edge.

The South Face of A-6: Evidence From the North-South Trench

Suboperations 17I-R consist of a north-south trench on the lower south face of Structure A-6. This series of adjacent excavation units branched off of Unit 17A.

The north boundary of Suboperation 17J coincided with the first stone wall to mark the south face of Structure A-6. It proved to be the exact juncture between that
building and Structure 1, meeting the latter's two steps. The wall itself was made of small, rectangular shaped stones and was in a good state of preservation. Unit 17K, to the immediate north of 17J, was excavated in order to ascertain whether or not a there had been terrace above the first wall. None was found, and work was terminated 20 cm above the top of the wall on a layer of white, core-like material. Unit 17L to the north likewise showed no evidence of a terrace or prepared surface; work in this unit stopped at the first sign of white core, some 40 cm above the base of 17K.

Another east-west running wall was found in the north profile of 17L, this one coming to a corner. The vertical surface of the wall still retained bits of plaster; it was constructed of large, shaped, rectangular stones. Extruding over the top of the corner was a piece of plaster floor. It proved to be 52 cm below the level of another soft plaster floor at the base of Unit 17M to the north. The corner, with its plastered floor, clearly represented an earlier construction sequence than that of the higher floor in Unit 17M. To the west of the corner and above it, the north profile of 17L showed a layer of rocky fill.

Both Units 17M and 17N were terminated at a soft plaster floor, which, as previously noted, was about half a meter higher than the floor above the cornering wall. This higher floor ran over to the third east-west wall found in the trench, this time in the north profile of Unit 17N; it was constructed of medium-sized, shaped stones. As in the case of the 17L wall, the area west of this wall was packed with fill, in this case compact gravel.

Units 17O and 17P peeled off several strata of overburden and fall above the level of the 17N north profile wall until reaching a fourth east-west wall, this one cutting across Unit 17P. What remained of this wall was a brief line of stones extending from the center of the unit to its eastern boundary. In front of these stones (to their south) was a small patch of plaster. It was so small and isolated that it was initially thought to have fallen from above; however, careful examination both in Unit 17O and south of the wall in 17P showed the plaster to coincide with the base course of the 17P wall. This suggested that the wall had been built on a floor of the same elevation as the plaster fragment; it appeared that of the original floor, only the fragment remained.

If indeed this is the case, the following scenario emerges as a possible explanation of the relationship among units 17J-17P. The 17L, 17N and 17P walls all originate near the same place in the trench. Wall 17L begins 60cm from the trench's western boundary, wall 17N begins 86cm from the trench's western boundary, and
wall 17P begins 1 meter from the trench's western boundary. This suggests that they may have belonged to the same phase of construction. The 17P floor (represented by the plaster fragment) may have run from the base of wall 17P to the top edge of wall 17N, creating a terrace; at the base of wall 17N a floor beneath the one found may have run from the base of 17N to the top edge of wall 17L (represented by the fragment of plaster extruding out from above the corner of this wall) creating a second terrace; and a third floor, either below the white core-like material or simply eroded away at higher elevation, could have run from the base of wall 17L to the top edge of wall 17J.

Good evidence for this hypothesis exists in the 17M/17N floor, the extruding fragment of floor beneath it (arguing that the second, lower floor follows the same course as the first), and the similar points of origin of walls 17L, N, and P. The plaster fragment from 17P is less convincing, and the lack of a floor between wall 17J and wall 17L is inconclusive. However, this hypothesis presents the most coherent scheme suggested by the data at this time. It should be noted that accuracy of the system of terraces proposed here is testable through future excavation.

Units 17Q and 17R revealed a north-south running wall, a contrast to the previous four east-west running walls. It originated 33cm north of the south boundary of 17Q and ran to the north boundary of unit 17R (additionally, the wall was 90cm from the west boundary of the trench). No evidence of a plaster floor was found in either unit. Both units exhibited one kind of fill in their eastern halves and another in their western halves, roughly split at the point of the east-west wall in both units. The east half of both units contained ashes and burned materials: sherds and charcoal, with the greatest concentration of ash appearing in the eastern third of both units. The west half of both units showed no evidence of burning. Additionally, the east half of both units was packed with dry fill: closely compacted medium to very large angular stones. The west half of both units was filled by less compactly distributed smaller stones in a tannish-white matrix.

The north-south trench on the lower south face of Structure A-6 revealed what can be interpreted as a stepped pyramid with at least three terraces forming its lower level. More excavation north of unit 17R is needed to interpret the 17Q/R north-south wall, and more work east or west of the trench is needed to confirm or disprove the three-terrace hypothesis.

Confirming the Stepped Pattern: Structure One

Operation 33 was initiated in order to test the applicability of the discoveries
of Operation 17, which uncovered the north end of Structure 1, to the rest of that structure. It was completed in four suboperations (33A-D). Suboperations 33A and 33C-D were 1 x 2m units, while suboperation 33B was a 1 x 1m unit. The operation was located across the center of Structure 1; it was begun simultaneously with Operation 34 across the center of Structure 3. The question to be answered was this: would the stepped parapet pattern exhibited in Operation 17 hold true for the rest of Structure 1 and for the other two structures demarcating Plaza 1? In the case of Operation 33, the basic pattern uncovered in Operation 17 was confirmed. The center of Structure 1 followed the pattern established by the excavations of its north end, with some variation. The upper platform had widened, and was now 2.5m wide. The core fill at this point in the structure was made up of a higher proportion of large, angular stones, and even the small rocks were larger than their counterparts at the north end of the parapet. Flanking the platform on the west was the edge of the platform on which Plaza 1 was built, suboperation 33D even revealing the exact point of its juncture with a "west wing" jutting off of the plaza platform along the west face of Structure 1. This edge of both platform and building began 40 cm south of the northern border of Unit 36D, and adjacent to it along the remaining north 40 cm, excavation revealed the existence of the expected west step. East of the platform were two more steps, as surmised, the last leading down to higher plaza surface than was expected after the dramatic drop found in the same place at the north end of Structure 1.

The three treads maintained the previously noted tendency towards a 1m width, spanning 1m, .85m, and 1.10m respectively from west to east. There was a great deal more variation in the heights of the various rises than was evidenced in Operation 17; these measured, from west to east, 8cm, 29cm, 17cm, 11cm, and 18cm (measurements taken along the south boundary of Operation 33). This lent a more uneven appearance to the center of Structure 1, a less symmetrical visual impact than that of the north end of the building. Plaster was found only on the plaza floor itself in this operation; no trace of it appeared on any of the treads.

Additionally, a very small sherd scatter was found on the plaza surface. It appeared along the north unit boundary of suboperation 33B 40 cm from the lowest east step. The scatter was designated special deposit 33B/1-D1; it did not reflect the breakage of a single vessel, but of several vessels.

Thus, Operation 33 confirmed the pattern revealed in Operation 17. It strongly suggests that the entire length of Structure 1 follows the stepped parapet pattern.
Variations on the Stepped Parapet Pattern: Structure Three

Operation 34 was completed in five suboperations (34A-E). All were 1 x 2m units. It was located across the center of Structure 3 in Plaza 1. The operation revealed that Structure 3 also followed the basic pattern uncovered in Operation 17. However, the center of Structure 3 showed some variation as well. This may be due to important contrasts between the construction of Structure 3 and Structure 1; these are easily visible without excavation. Before we discuss the ways in which Operation 34 confirmed the pattern encountered in Operation 17, those differences must be noted.

Both Structure 1 (bordering Plaza 1 on the west) and Structure 2 (bordering Plaza 1 on the south) were long, relatively narrow constructions that maintained a reasonably uniform width all along their length. It is true that the north end of Structure 1 was somewhat wider than most of its length, but the disparity was not large. Structure 3, bordering Plaza 1 on its east side, was a different case altogether.

Beginning roughly at its halfway point and moving north, the structure began to widen until, at its north end, it assumed what could be interpreted as an L-shape, exhibiting a projection to the east and greatly expanding its width. This characteristic makes it clear that the findings of Operation 17 at the juncture of Structure 1 and Structure A-6 cannot be generalized to the juncture between Structure 3 and Structure A-6. Excavation of the north end of Structure 3 is necessary in order to establish what characteristics of construction are causing this widening of the structure, and what functional differences are thus represented between Structure 3 and its two companions.

Reflecting this tendency to widen, the platform of Structure 1 was 3.2m in width. The fill was made up of a smaller proportion of large stones; it primarily consisted of rocks slightly larger than those in the core of Structure 1. East of the upper platform were two steps, contrasting with the one step expected by analogy to Structure 1. West of the platform were three more steps, the two westernmost separated by only 25cm instead of the expected 1m. In exhibiting three "inner plaza" steps, Structure 3 also broke with Structure 1, which had only two "inner plaza" steps.

From east to west, the five step treads measured as follows: 75cm, 55cm, 25cm, 1.10m, and 45cm. This represents both a dramatic shortening of the treads and a greater disparity in width among them. A look at the height of step rises shows, from east to west, measurements of 19cm, 19cm, 7cm, 9cm, 12cm, 26cm, and 18cm
(elevations taken along the southern boundary of Operation 33). Again, a good deal of variation, although apart from the rises enclosing the central structure, all measurements hover in the neighborhood of 20 cm. The closely built steps made each rise appear higher than actually the case. The overall visual impact of Structure 3 was that of a much wider building than the other two, flanked by close, high steps on either side: certainly this structure is more likely to have supported a perishable building along part or all of its length than the other two. It would have provided a great deal more inside area for activity, storage, or habitation than the top of either of the other two constructions, and its steps seem simply wide enough to climb, not wide enough to linger on as is the case for Structure 1.

As was the case for the center of Structure 1, plaster was found on none of the treads, only on the plaza floor itself and the surface east of Structure 3. Taken together, these two structures pose the question of whether or not step treads were plastered down the width of each parapet. Perhaps only in the area of their juncture with A-6 were step treads plastered. Or, the lack of plaster along the centers of each structure may reflect poorer preservation of plaster due to differential use.

Again, as was the case in Operation 33, a sherd scatter was found on the plaza floor 40 cm away from the lowest inner plaza step. This was a larger and more dispersed sherd scatter than that of unit 33B, but its location mirrors that of the smaller deposit. It was designated special deposit 34A/2-D1. The appearance of these two scatters, along with those found in Operation 25, strongly implies a pattern. In total, three of the operations within Plaza 1 (Ops. 25,33, and 36) uncovered seven sherd scatters on the plaza floor near the lower parapet steps. Why do we encounter so many sherd scatters along the edges of these parapets? What activities took place in the plaza that resulted in their multiple occurrence? None of these scatters represented the breakage of a single vessel; all contained portions of several containers. Most of the scatters contained lithic fragments, some obsidian, as well. Further work within the plaza itself is needed to confirm or deny the presence of more scatters within this area, and to explore the activities these might represent.

The Final Stepped Parapet: Structure Two

Operation 36 was completed in four suboperations (36A-D). Suboperations 36A and 36D were 1 x 2 m units, while suboperation 36B was a 1 x 1.5 m unit and suboperation 36C was a 1 x 1 m unit. The operation was located across the center of Structure 2 in Plaza 1.
This set of excavations was begun after work on Operations 33 and 34 were well under way, and at its inception a strong case had already emerged supporting the hypothesis that Structures 1-3 all followed the same basic stepped pattern first established by Operation 17. Units 36A-D also revealed the same pattern, but Structure 2 was not as well preserved as Structures 1 and 3. The south face of the construction had collapsed, nearly eradicating the steps south of the central platform. At the time of excavation, there was no clear distinction between the south edge of the building and the south face of the platform. Fall and rubble graded from the area of the central core down the slope of the platform, and only fragmentary evidence of steps remained amongst the jumbled fall. In addition, no plaster floor was found at the level of the plaza surface next to the northmost parapet step. North of the northmost step, excavation revealed what was probably a stratum of ballast just below the expected location of the floor. It is likely that the original plaster floor had simply eroded away.

Because of the fragmentary nature of the building it is difficult to assess the width of the central platform as was done for Structures 1 and 3; it is simply unclear where the platform ends. However, the minimum width of the platform can be measured: it was at least 1.55m in width. The possible terminus of the platform is marked by a partial line of stones marks for this estimate. The fill was made of medium to very large angular stones (the largest measured 58 x 44cm); these proved to be both larger and less compactly distributed than those composing the platform of the other two structures.

North of the platform was a single step, while the southern part of the construction exhibited only the partial line of stones previously mentioned, possibly marking the south retaining wall of the central platform. This feature was too badly preserved to determine whether it had originally been a step or not. Other than this feature, there was no sign of anything but piled fall along the south face. The single tread on the north part of the structure measured 1.13m in width, while the step rises, including the north platform retaining wall, were 10cm and 35cm high respectively, moving from north to south. The measurement of 10cm for the northmost step is taken from the top of the ballast stratum to the top of the step itself.

No sherd scatters were found in this operation, and as usual, no plaster was discovered on the step tread. Unit 36D, on the plaza surface itself, was excavated to a depth of over 3 meters in order to explore the plaza fill. Two possible retaining walls were found extending partway down into the unit. The bulk of the plaza fill
consisted of re-used midden and angular rocks.

This structure followed the basic stepped pattern along its north face, although in an abbreviated fashion, with only a single step in evidence. The south face of the structure was too destroyed for any kind of accurate evaluation to be made. Structure 2 may have been a less elaborate version of Structure 1, or its south face may have departed from the pattern set by its neighbors. Considering the similarity between this structure's remains and Structures 1 and 3, the first hypothesis is probably correct.

A Plaza Entrance: Operation 25

Operation 25 was completed in eight suboperations (25A-H). Suboperations 25A-B and 25F were 1 x 2m units, Suboperations 25C-E and 25H were 2 x 2m units, and Suboperation 25G was a 1 x 1m unit. The operation was located at the juncture of Structure 2 and Structure 3 in Plaza 1. The eight units revealed a raised passageway between the two buildings, an alley that was blocked off sometime after it was originally built. The alley itself was 1.2m wide and measured 4m from its west entrance to the plug that divided it. It was raised above the level of the plaza, the step rise measuring 13cm in height. The surface of the alley was covered with a thick, well-preserved plaster floor that at one time had extended all the way to the edge of the step, but that was eroded away from the rise at the time of excavation. 1.7m east of the entrance, towards the center of the passageway, there were two areas that appeared to have been patched sometime after the original plastering.

The 80cm wide plug that split the passageway was composed of a central terrace bounded by two stone walls. Observation of the floor plaster revealed that the floor continued beneath the plug. This was not the case with the sides of the alley; the floor plaster lipped up to the low stone walls that bordered it. The difference in these two cases indicates that the plug was a later addition, since it was built after the floor was already in place, strongly suggesting that the alley was originally designed to allow movement between the two structures. East of the plug, the floor slanted upwards, rising dramatically (9cm) within a 50cm stretch as it moved east.

Excavation of Units 25E and 25H showed that the plug was probably positioned across the end of the alley since its east retaining wall was built onto the east wall of Structure 2. The east wall of Structure 3 was not located, however, as the north boundary of Unit 25E stopped too far south to observe its juncture with the barrier.
At the passageway entrance, the step rise was bordered by the southwest corner of Structure 3 on the north and a wide step (the northernmost step of Structure 2) on the south. This step followed the general stepped parapet pattern exhibited by Operations 17, 33, 34, and 36. Its tread was 1.10 m wide, running to the base of a second step (to the south) with a 20 cm rise. Unlike the step treads of Operations 33, 34, and 36 but like several of the treads in Operation 17, there were traces of plaster on this wide tread.

This Structure 2 step was bordered on the east by a short north-south wall that formed a corner with the south wall of the passageway. The alley itself was only 2 cm lower than the Structure 2 step; the step ran along its south edge for 30 cm before it terminated at the east-west wall. A pedestrian could have stepped up into the passageway from the plaza floor, or, if descending down the wide parapet steps of Structure 2, could have moved from the lowest step down into the alley.

The two walls bordering the alley (the north wall of Structure 2 and the south wall of Structure 3) were constructed of small, shaped stones; both stood 30 cm higher than the raised passageway floor and both were in a good state of preservation. The west wall forming the southwest corner of Structure 3 was very similar to the two walls bordering the alley; it stood 54 cm above the plaza floor and it was less well preserved than its counterparts. A single long, rectangular, shaped stone lay parallel to this wall. The stone was 25 cm away from the wall and appeared to be fall from somewhere further above on Structure 3. No markings were found on it.

The plaza surface showed remnants of two different floors, one immediately above the other. No sherd scatters were found on it within this operation. Five sherd scatters were found on the passageway floor, however. As usual, these were all made up of the fragments of several vessels, and most included lithic fragments as well as ceramic ones. In Unit 25D, these were designated special deposits 25D/3-D1, 25D/3-D2 and 25D/3-D3. In adjacent Unit 25E the special deposits were designated 25E/2-D1 and 25E/2-D2. In actuality, special deposits 25D/3-D2 and 25E/2-D2 were two parts of the same sherd scatter divided in half by a unit boundary (the east boundary of Unit 25D, also the west boundary of Unit 25E).

Operation 25 showed that one of the entrances to Plaza 1 was at the juncture of Structures 2 and 3. The location of other entry points remains to be seen; however, the juncture of Structures 2 and 1 are less promising in this regard because they border a sheer platform drop. The juncture of Structure 3 and Structure A-6 would be one possible place to look: it is clear that this area does not simply mirror
the design revealed by Operation 17 to the west (see Summary Form, Operation 17). Looking for a staircase descending down into the plaza from above (down the south face of A-6) might also prove fruitful. It is clear that access to this area was controlled at one time: the passage way is narrow in the first place, and the fact that it was blocked off indicates that traffic patterns were deliberately redirected, perhaps even to limit it further.

The big question remains: what was this plaza for? What activities took place here? The area was abandoned leaving multiple sherd scatters—not of single, dropped vessels, but of multiple vessel fragments—what behavioral pattern does this reflect? To the east and west, two "wings" flank Plaza 1; these contain small mounds. An analysis of the test pits in both of those areas should offer further clues.

Data From the East Flank of Plaza 1

Unit 18A was excavated in six lots (18A/1-18A/6) and was located east of Plaza 1. The unit was near the east edge of the platform, next to the southeast corner of Structure A-6. It was initiated in the hopes of finding midden deposit. The first lot of this unit was simply a surface collection; in this area sherds and lithic debitage were liberally scattered across the surface. The third lot (18A/3) revealed a layer of ballast; it appeared to be tilted, somewhat lower along the eastern third of the unit than in the western two-thirds. This was not surprising since unit 18A was on the downward eastern slope of the platform on which Plaza I and its eastern and western wings are built. The slope of the ballast followed the slope of the platform. Along the northern half of the eastern boundary of the unit two patches of plaster were preserved; elsewhere no traces of plaster floor survived above the ballast.

18A/4, 18/5 and 18/6 contained a remarkable amount of sherds, particularly large sherds, as well as other debris; these probably represented midden. Excavation stopped on top of a downward sloping stratum of marl which descended to the east quite sharply, a drop of 70 cm within a stretch of 1.5m.

Both the sheer amount of ceramics and their large were unusual in this unit. This area probably represents a discard area for the users of Plaza 1 and its flanking areas. Whatever occurred in the area as a whole, it probably involved the heavy use of ceramics. It would be useful to compare this data to that of other workers in the areas bordering Plaza 1.

An Outlying Residential Area: Nabitunich Plaza Group 1
Nabitunch Plaza Group I is located in a field next to the Nabitunch Hotel. Now a pasture for cows and horses, the area was once a residential neighborhood by the look of the many plaza groups clustered together on its grassy expanse. The field borders the Mopan river, a fact which may have made it an attractive place to build in the past. Plaza Group I is one of the larger household clusters with its tall central and south buildings balanced by a long, low structure along the north. The whole group is built on a platform. From the top of any of its structures one can easily see another large plaza group nearly 35m to the north, a single structure 40m to the east and the remains of one or two structures about 35m to the south.

Three operations, none extensive, were begun within Plaza Group I. Operation 70, consisting of a single unit, was placed in the courtyard to look for its floor and to examine its underlying strata. Operation 71 was nestled between the group's central structure and its south structure in search of midden, and Operation 72 ascended the west flank of the central building, uncovering the remains of several walls.

A Zone of Discard: Operation 71

Operation 71 was completed in three suboperations (71A-C). Unit 71B was a 1 x 1.5m unit; it was north of and adjacent to unit 71A, a 1 x 2m unit. At the base of these two units the burial of a single individual was found cutting across both of them; this burial, as well as all strata surrounding it and beneath it, was designated unit 72C.

Initially, the goal of Operation 71 was to locate a midden deposit. Excavation began with Unit 71A. This unit, begun in search of the debris that could provide general background information on the inhabitants of this plaza group and their activities, was positioned in a promising saddle area between two buildings.

Several layers of probable midden were located. These were recovered in lots 2-6, and perhaps in lot 12 (possibly a secondary deposit of midden re-used as fill).

A brief discussion of these deposits follows. Lot 2 was rich in bead and bead fragments and this was true of the unit as a whole. Three special finds came out of this lot: a stone bead (71A/2-P1), a small perforated disc of greenstone or jade (71A/2-P2) and a large fragment of conch shell (71A/2-P3). This lot also produced 5 human teeth and plentiful sherds and lithics. Lots 3 and 4 yielded many bone and charcoal fragments; the two lots together made up a level that was at one time a floor, although no evidence of plaster had survived within unit 71A at this level to be noted during excavation (the floor was revealed during excavation of adjacent unit
71B and was visible in the north profile of 71A despite its fragmentary condition. Lot 5 produced mano and metate fragments and a great deal of sherds, lithics, and bone. Additionally, this lot first revealed what was to be later identified as a wall constructed of some core-like material, now melted into near-oblivion. The wall apparently ran from the central building to its southern neighbor (running southeast-northwest). Lot 6 revealed a great deal of lithics/sherds, many bone fragments and 2 human teeth, and though lot 12 was clearly meant to be fill/lower ballast, it contained a very large amount of sherds and lithics in and amongst the rounded cobbles, suggesting a re-use of previously created garbage dump.

Numerous architectural elements were uncovered during excavation as well. A total of 3 plaster floors were identified within suboperation 71A, and one additional floor was shown to be have been existent in the unit at one time through later excavation in 71B. Two portions of wall were encountered. One of these was the previously mentioned wall, now disintegrated, which ran southeast-northwest and was probably constructed at the same time as the floor marking the base of lot 6 (71A Floor 1, 71B Floor 2), which abutted it. The other wall fragment was encountered in the northeast corner of the unit. Beneath the level of 71A Floor 1, cobble and sherd-interspersed fill provided a base for the first wall. The second wall (also running southeast-northwest) may have been built either concurrently with or sometime after Burial 1 (71C/1-D1), as its base was built up from the sascab surrounding the burial. However, only a small portion of this wall was revealed during the excavation of unit 71A.

Excavation of 71A was halted upon discovery of the south end of Burial 1. The stratum above the pit was a deep layer of lower ballast or fill, primarily composed of medium-sized cobbles and profuse sherds and lithics. The fill of the pit itself was very similar to this covering strata: full of cobbles above the skeletal remains, virtually identical to it in the color and texture of the matrix. The cobbles were somewhat larger and less compact in the pit above the body, but it is difficult to tell whether or not the body was interred, covered with stones, and then the whole area above it filled in some time later, or whether the burial was sealed under the deep layer of fill and ballast (represented by 71A lots 12 and 13) at once and a floor put on top (71A Floor 3, 71B Floor 4) to seal the whole thing.

The latter view is less probable when taking into account the northeast corner wall, since this wall is built just above the level of the burial and is plastered over by 71A Floor 4. Unless it is purely a retaining wall, one would expect it to have been put to some use besides framing the burial. Additionally, the north profile of Ops
71A-C suggests that the burial may have been partially or completely covered by the sascab-like material at the base of the northeast corner wall, and that this may simply have been overlooked during excavation. If this is indeed the case, the fill above the burial probably represents a later construction phase than that of the burial.

Unit 71B was excavated in order to remove all strata overlaying 71C/1-D1 and 71C/2-D1, Burial 1. All lots were planned units based on the north boundary profile of adjacent unit 71A. The first lot, 71B/1, removed all overburden and humus. The second removed midden deposits over 71B Floor 1 (these deposits were noted in Unit 71A as lots 71A/2-5). The floor was badly eroded and had not been recovered at all in unit 71A. 71B Floor 1 corresponded to the base of lot 71A/5.

The third lot (71B/3) went through 71B Floor 1 and stopped at the level of 71A Floor 1. It too contained a midden deposit. The floor, designated 71B Floor 2 in this unit, appeared at the base of 71A/6 in that suboperation. On this floor, within 71B/3, a mass of melted core-like material was found in the northeast corner of the unit. It consisted of a tan matrix holding together cobbles, rocks, and marl. The fourth lot (71B/4) continued down through 71B Floor 2 and stopped just above 71B Floor 3 (71A Floor 2), found at the base of 71A/8 in that unit. It was a well preserved plaster floor. Lot five, 71B/5, went through 71B Floor 3 and stopped at a soil change. It was a shallow lot that marked an obvious color and composition change in the ballast beneath the floor. 71B/6 continued in coarser ballast and stopped on 71B Floor 4 (Floor 3 in unit 71A, found at the base of 71A/10). This floor was very well preserved, a fact also noted in unit 71A.

The final lot in this unit went through the floor and consisted of a thick strata of very coarse cobbles, rocks and plentiful sherds; it also contained a large number of lithic cores and large flakes. This stratum may represent midden deposit re-used as fill. It corresponds to lots 71A/12 and 71A/13, in which the nature of the deposit was also noted. Additionally, this lot uncovered another section of the northeast wall first encountered in unit 71A/13; as previously noted, this section of wall cut across the eastern quarter of the unit, emerging from its southeast corner area and jutting out at a 30 degree angle. The lot was terminated above the northern three-quarters of the burial pit.

At the base of this lot another prepared surface, though not a floor proper, was uncovered. It appeared to be a thick layer of sascab-like material, a white matrix mixed with stones and sherds. This was the same material that provided a base for the northeast wall. It surrounded the north half of the burial pit; the southern half of the pit was encircled by grayish-brown clay.
Operation 71 uncovered midden deposits in all of the following strata:
1. 71B/2, corresponding to 71A/2-5
2. 71B/3, corresponding to 71A/6
3. 71B/7, corresponding to 71A/12-13; this strata probably represents midden re-used as fill

It recovered a total of five floors/prepared surfaces:
1. Floor 1 at the base of 71B/2, corresponding to the base of lot 71A/5; highly eroded in unit 71B, absent in unit 71A
2. 71B Floor 2 at the base of 71B/3, corresponding to 71A Floor 1 at the base of 71A/6; fairly eroded
3. 71B Floor 3 at the base of 71B/4, corresponding to 71A Floor 2 at the base of 71A/8; well-preserved
4. 71B Floor 4 at the base of 71B/6, corresponding to 71A Floor 3 at the base of 71A/10; very well-preserved
5. Sascab-like prepared surface at the base of 71B/7, not extending into unit 71A; well-preserved

Burial 1

The burial pit that marked the base of 71B/7 and the top of 71C/1-D1 was clearly distinguished from the sascab surrounding it because it was piled with stones, medium-to-small cobbles that were indistinguishable from the cobbles fill of all of 71B/7 and 71A/11-13. These stones and the material packed around and just beneath them composed lot 71C/1-D1. During excavation, a judgment call was made as to where the fill cobbles ceased and the burial pit cobbles began (but note that the north profile of Ops. 71A-C suggests that the burial pit was at least partially covered with sascab and that this may have been overlooked during excavation).

Lot 71C/2-D1 consisted of a layer of rocks, ranging from small to large, lying directly upon the skeleton, and all the matrix and material around and beneath it. There were probably between 10 and 20 of these rocks resting directly on the body; the largest was a flat slab (about 25cm x 20 cm) that lay on the crushed and flattened skull. Additionally, most of the long bone distal epiphyses were crushed by the stones.

The body itself was extended and it was characterized by differential bone preservation. Most of the bones were friable, except for the feet which were in quite good condition. Sex and details of age (beyond adult status) were undetermined.
The individual lay on his or her back, face turned to the west, right arm extended along side. The left arm was bent at elbow, the left hand had at one time lain over the sternum. The legs were crossed at the calf, the right leg straight with the left across it. The feet faced each other, intermingling both sets of phalanges. This individual had three inlaid teeth, two with jade, one with a dark stone (iron pyrite?). Two of these were visible in situ.

As previously noted, the burial pit was well-defined, apparently having been cut through the sascarb surface along its northern half. Immediately beneath the sascarb was an unmistakable layer of grayish-brown clay through which the pit had also been dug. The sascarb surrounding the northern half of the pit was white and contained various sherd fragments; it contrasted with the 4 floors above it, all smooth plaster floors. The edge of this unusual surface was quite distinctive; it appeared to stop abruptly at about the halfway point of the burial pit, suggesting that the burial was deliberately placed half within the area of sascarb and half jutting out into the uncovered gray clay.

The eastern edge of the pit was immediately next to a cemented mass of the sascarb mixture; this mass ran down the entire northern half of the pit. It rose at a tilted angle, meeting the base of the northeast wall jutting out of the eastern boundary of units 71A and B. The base of this wall was a good deal higher than the surface of the pit itself; 30 cm higher at the widest point between the two. As previously mentioned, it paralleled the burial pit and was made up of fairly large, well-shaped stones. Additionally, it was fairly short, of only two courses, and was covered by 71B Floor 4 (71A Floor 3).

The southern half of the pit was surrounded by the previously noted grayish-brown clay. Charcoal smudges and bits of charcoal were found all around the pit on the surfaces of lots 71C/3 and 71C/8. One charcoal sample was recovered from 71C/2-D1 (C14 Lab Sample #6) but none of the other traces, either surrounding or within the burial, were sufficient for collection.

Lots 71C/3-10 were all excavated in search of mortuary goods or other features relating to Burial 1. Lot 71C/3 consisted of all of the area surrounding the west half of the burial pit; it was 20 cm deep and contained sherds and charcoal. The lot was terminated at the level of the bottom of the pit. Below it, 71C/4 bisected the pit and consisted of all the area west of the centerline of the pit; it revealed the presence of two items beneath the feet of the individual. These appeared to be beneath the level of the bottom of the scooped out burial pit, however. They were distinctly embedded in the gray-brown clay below the pit and not in the soft, loose fill within.
the pit. One was a ceramic head, possibly that of a frog. It was designated special find 71C/4-P1. The second was a broken bone whistle, polished. It was given special find #71C/4-P2.

Below 71C/4 and following its dimensions exactly was lot 71C/5. Nothing of note was recovered and the lot revealed only a soil change. 71C/6 excavated the area east of the centerline of the pit and beneath the feet; it too showed little cultural material and seemed to be a natural level. 71C/7 lay beneath 71C/6 and followed its dimensions; this turned out to be a sterile lot that was taken down to the level of 71C/5. 71C/8 designated the area of sascab east of the pit (indeed, all the area surrounding the east half of the pit including the sascab). The sascab mass within this lot both contained and overlay small-to-medium sized cobbles and many sherds (see note above).

It is possible that the burial was covered or partially covered with this sascab matrix (this suggestion based on the North Profile Drawing of Ops. 71A-C) and that this was missed during excavation. If this is the case, the east wall was probably built later than the burial, used, and then even later covered over with fill and 71A Floor 4. This would imply that the cobbles of 71C/1-D1, B1 that seemed to grade into the fill may actually have been distinct from it.

71C/9 underlay 71C/8 and included its dimensions as well as all the unexcavated area east of the centerline of the burial pit. Few cultural materials were found in this lot; it was probably a natural level. 71C/10 underlay 71C/9 and followed its dimensions exactly. Nothing of note was encountered—this lot was brought to the same level as lots 71C/5 and 71C/7, ending excavation in unit 71C.

Operation 71, although consisting of only three units, provided a great deal of data. Further work in this plaza group should provide a context in which to interpret the temporal relationships among the architectural and interment features.

A Brief Look at a Residential Structure: Operation 72

Operation 72 was located on the west flank of the center structure of Plaza Group I. It was initiated in order to locate a structure wall; the goal was to evaluate both the construction type and the level of preservation of the buildings within this plaza group. The operation was completed in three suboperations, units 72A-C, all of which were 1 x 1m units.

No floor was found during the excavation of Suboperation 72A although a possible layer of ballast was located. The unit did contain metate fragments and the
usual bone, lithic and ceramic debris. Unit 72B, bordering 72A on the east, did reveal a poorly preserved floor and the side of an east-west running wall of several courses, possibly the side of a staircase. This wall was only slightly slumped; it was composed of medium-sized, shaped stones. A large (35 x 25cm) shaped stone was found in the northeast corner of Unit 72B; it appeared to have slipped off of a yet to be located wall to its east.

Unit 72C recovered what appeared to be an extremely slumped/melted wall that emerged from the east boundary of unit 72B. Initially, it looked like amorphous slump. Further excavation entered the area behind the wall, inadvertently mixing cultural material from the outside of the structure with that of the inside of the building.

Just outside of the building (west of the wall) was an area of plaster floor at the same level as the floor at the base of Suboperation 72B. Within the building (east of the wall), no proper plaster floor was recovered; instead, a sascab-like substance covered the floor at the same level as that of the area of plaster floor outside the structure. This substance contained embedded sherds and debris. It looked exactly like the substance partially surrounding Burial 1 in unit 71B at the base of 71B/7; however, that level was considerably lower in elevation than the sascab found at the base of 72C.

The north-south wall uncovered in this unit posed several problems. In all, three shaped stones made up the excavated section of the wall. Above this (presumably first course) line of stones was the previously noted amorphous mass of slump and melt that was removed during excavation. The remaining three stones were much too narrow, as they stood at the time of recovery, to have supported the large square stone found just to the west of the wall in adjacent unit 72B. This stone gave every appearance of having slipped off of the top of a north-south wall just to its east. Additionally, these three stones appeared to form a corner with an east-west running wall originally identified in unit 72B, possibly the side of a staircase. Yet, the juncture between the two walls was far from clear as the three stones in the north-south wall appeared to be tilted to the west enough to obscure the exact point of juncture between the two lines of stone. Two theories were proposed on what the wall represented:

The first suggests that the wall, as we found it, stood in place with all three stones in their original position. According to this theory, the whole structure had simply slumped to its west, pushing the tops of the stones out of alignment but not
affecting their bases. The corner meeting of this line of stones and the east-west line of stones (the possible staircase) was thought to be a true corner.

The second theory suggests that the three stones had fallen over, en mass, landing on what was originally their southern faces due to some unknown force. The corner that they appeared to form with the east-west line of stone (the possible staircase) was not actually a true corner, according to this line of thought.

In support of the first theory, the base of the three stones seemed well-aligned and stable. In support of the second theory, a mass forward topple would explain the presence of the large square stone found just to the west of the wall in unit 72B. Such an event would explain why the current line of stones was too narrow to support such a large second-course stone; the original orientation of the base line would have been of adequate width to underlie the large rock. The original orientation of the wall would also have put it at an appropriate height from which the stone could slide, producing its present-day location in the operation. Additionally, such a fall would have had the force to propel the large stone forward into its final position, where excavation revealed it.

In contradiction to the first theory, the three stones appeared strangely shaped, the northmost having an unusual saddle-like surface. It would seem unlikely that a large, square stone such as that found in unit 72B could ever have lain atop it. However, unexplained by the second theory is the whole problem of why all three stones fell en mass. Is such an event truly plausible? Ultimately, it is clear that further excavation in this area is needed, and that without more information no completely satisfactory explanation is accessible at this time.

The Courtyard of Plaza Group I

Unit 70A was located in the northeast quadrant of the courtyard in Plaza Group I. It consisted of a single 1 x 2m unit; it was excavated in fourteen lots, 70A/1-70A/14, to a depth of over four meters. Operation 70 was located several meters west of unit 72A.

The operation was initiated in order to explore the various strata beneath the plaza in Nabitunich Plaza Group I, and to generally expose the soil layers in this area of the site. The unit recovered very little in the way of cultural material but revealed a great deal in terms of the geological strata in this area.

The first lot revealed a humus layer interspersed with what was probably the
ballast underlying a now-eroded plaza floor; this lot (70A/1) produced an average amount of cultural material. Lot 70A/2 continued in ballast, which ceased at its base. 70A/3 contained a reasonable amount of cultural material grading to very little in lot 70A/4; in addition, the former showed the presence of some orange clay in its matrix, a trend continuing and expanding in the latter.

Lot 70A/5 consisted almost entirely of heavy orange clay with almost no cultural materials. From this point on all lots were sterile with the exception of lot 70A/8, which produced four small sherds of a light orange color (note also that beginning with lot 70A/5 we stopped screening the clay). For descriptions of the strata encountered, see 70A lot forms and profiles (these profiles contain Munsell color designations).

Summary

Although work in the Nabitunch Plaza Group was minimal compared to the more extensive excavations in Plaza I of the South Group, they provided a point of departure for further investigations. An analysis of the ceramics from Operation 71 in particular should produce a temporal framework within which to place the construction and use of Plaza Group I. Future work should turn to the north and south structures within the household group, examining them and comparing them with future work on the central building. The south structure within the group appears to have its own small courtyard; this taller, narrower building may provide evidence of specialized activities.

Within Plaza I at the site center, Structure 3 demands attention. Its wider north end and L-shape strongly suggest a different template than that of the juncture between Structure 1 and A-6. The meeting of Structure 3 and A-6 would be an appropriate place to search for an alternate entrance into the plaza; after the blockage of the southeast alley an alternate exit must have been utilized.

Additionally, more extensive excavation of Structure 3 should reveal functional differences between that structure and its neighbors.

Other questions remain: what exactly was the function of Plaza I and how did its east and west wings fit into this function? What is indicated by the frequent sherd scatters uncovered on the plaza and alley floor? Was the plaza a site of specialized activities utilizing and discarding large amounts of ceramics, or did the area simply become a convenient dump?

Excavation in the plaza center, as well as in the areas flanking the courtyard will be necessary in order to answer these questions.
The Excavations at Group D

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General Orientation and Statement of 1992 Goals

Group D at Xunantunich is located southeast of the site center, Group A. Group D is approximately 100m south and 50 m east of the south east corner of structure A-6, "The Castillo", which is the largest structure at the site. Group D occupies part of the same hilltop as the Main Group A, but is topographically separated from Group A and Group C by a ravine running approximately north-south. Given its close proximity to Group A, the large size of the pyramidal mound on the platform around which Group D is focused, and the identification of two plain stelae associated with the group, the Group was tentatively identified as an elite residence area. Group D is defined currently as the main platform on which D-6 (the largest structure in the Group) is built and all the buildings on the hilltop around it.

The 1992 investigations in Group D were intended as a feasibility study for future research on elite social behavior of the occupants of Group D at Xunantunich during the Terminal Classic period of ancient Maya culture. The objectives of investigation for the 1992 season were as follows:

First, to identify all mounds associated with the group and map them.
Second, to gain an understanding of the time span of occupation and spatial arrangement of use-areas through test pit excavations.
Third, to begin stripping excavations of certain structures to determine the past configuration of structures, to determine whether existing mounds represent contemporaneous occupation, to determine the time span of use, and to collect an artifact sample adequate to formulate hypotheses about building and Group functions.
Fourth, to excavate the chultun located just off the north west corner of the main platform Group D to consider function as well as date of use.

These four goals were designed to provide data on which to build a more detailed excavation plan and specific set of theoretical issues to investigate. All four goals were met.

Summary of 1992 Results and Future Directions.

A detailed summary of excavation results follows this brief overview. The principle features of the Group are the main platform (D-8) and its temple-pyramid (D-6), long, medium-height structures to the N (D-7), S (D-12, D-13), and East (D-15), and a wide, deep
plaza (PI-2) sloping down to the south and oriented with other buildings. This feature is
tentatively identified as a limestone quarry. The structures in the Group are generally
oriented approximately 75-80 degrees (mag) E of N for east-west oriented structures 10-15
degrees (mag) W of N for north-south structures. The orientation of D-9 is very similar to
the orientations of structures D-7, D-10 and D-13, which are arranged approximately
perpendicularly to the quarry area between D-10 and D-11. Even the apertures of Chultun 1
are set at approximately 75 degrees of E of N. The patterned orientation of the group's
buildings gives cohesion to the Group, although the buildings themselves are not tightly
clustered around the platform. This argues that the buildings surrounding the main
platform are not accretions but integral components of Group D. Group D is a "group"
focused patio cluster," centered around the platform D-8, and one of the elements in the
cluster is the plaza plan 2 arrangement consisting of Structures D-1 through D-3.

Excavation on the N side of D-7 revealed an assemblage of elite household ceramics
and surface excavation on the top of this building revealed room walls, so this structure
has been identified as an elite residence. The other long, medium-height structures have
been tentatively identified as residences as well since they are generally the same shape. D-
1, D-2, and D-3 conform so closely to the Maya residential patio group that these mounds
have been identified as residential. The function of D-9 was not indicated as clearly by
ceramic assemblage, but the sherds represent non-elite household goods.

Chultun 1, Group D, contained three human burials, probably of elite individuals,
which also date to the Terminal Classic period.

Ceramic evidence indicates that Group D was occupied as early as the Formative
period and through the Early and Late Classic, but that the principle occupation and the
latest configuration of mounds date to the Terminal Classic Period, identified by Benque
Viejo IV ceramics by Thompson (1940). Formative period ceramics were discovered in
very small quantities both as surface finds and in construction fill. However, construction
and use of two buildings off the platform, Strs. D-7 and D-9, took place in the Terminal
Classic.

Artifacts recovered in excavation so far include very little exotic material such as
obsidian, non-local chert, marine shell, jade, or fine ware ceramics.

Preservation of architectural remains in Group D is fair to good. Floors were not
preserved in the two structures excavated, D-7 and D-9. They were not revealed in other
Group D excavations this season, either, but since the other excavations were off the
platform they were not expected. The masonry is not well preserved in the Group;
absolutely no plaster remained on the small area excavated on the N side of D-7 and the
large building stones are very soft and decomposed. The building stones on the S side of
XAP 1992 - Braswell

D-7 were collapsed and very badly decomposed. D-9 showed adequate preservation of the small block masonry of which it is built, although the building's eastern end was heavily eroded, and the top of the structure was eroded into the fill so that no original surface remained. The other buildings in the group, with the exception of the main Structure D-6, are likely to be in similar condition.

The preservation of D-6 is uneven. A large trench was cut by looters into the western side of the structure and possibly into a tomb. The center of the pyramid has subsequently collapsed leaving an empty core to the structure. Nevertheless, a room with plaster walls on the top of D-6 remains in good condition, although partial clearing of this room in the past has encouraged plants to grow and some very large trees and plants are rooted in the walls of the room and the core of the building.

Based on these results, future field work is planned, including, but not limited to:

-- Excavation of structures tentatively identified as residences. This is important to identify how many elite or other residences existed in Group D to begin to formulate ideas about the social and political organization among these residents.

-- Excavation and consolidation of Str. D-6. This structure is tentatively attributed to the Terminal Classic period. The trench, however, reveals more than one phase of construction. The history of this building needs to be established based on excavation results. Salvage efforts will aim to recover any information on the looted tomb, and may provide information regarding the creators of the principle pyramid of the Group and their ideological world. Excavation of the room(s) on the top of the pyramid will contribute to information on the use of the building by its elite occupants, and will be necessary for comparison with the larger elite buildings in the Main Group A.

-- Test excavation of vacant terrain, especially between Group D and Group C.

-- Precise mapping of structures, the second chultun, and other features to the East of the Group D platform and topographic mapping of land forms on which the Group's structures are built.

-- Excavation of Chultun 2 to the East of the Group D platform for functional and chronological comparison with Chultun 1 and other chultuns.

--Laboratory analysis of recovered artifacts, as well as chemical and physical analyses of soil and other samples, also remains to be done.

Excavation Results by Operation:

The following is a list of operation numbers and pertinent locations:
Group D
Op. 20, suboperations A-U excavations of Str. D-9, a low platform west of main platform.
Op. 21, suboperations A-C excavations of Chultun 1, Group D, NW corner off main platform.
Op. 23, suboperations A-B excavation in Str. D-8, the main platform, including clearing looter's trench.
Op. 26, suboperations A clearing looters' trench in Str. D-6

Summaries of the locations of operations and suboperations precede detailed description below.

Operation 5
General Summary:

Operation 5, continued from last year, investigates depositional history in areas off the main platform D-8. In general, these excavations indicate sparse deposition of occupational refuse around the group. The sparseness of the refuse deposits, however, could be due to three different causes: First, the failure of refuse to remain near the structures due to the steep slopes of the hillside behind the structures; second, the reuse of midden soils in construction; third, sparse occupation of the group. Additionally, since the areas sampled are only a small part of the Group's surface area, we may have not found thicker refuse deposits that exist.

Excavation details:

Test pits were excavated at various places off the platform D-8 as 1 x 1m or 2 x 1m suboperations. Some suboperations were isolated test pits, others were adjacent and formed small trenches. Three general areas were investigated: near Str. D-6, between D-10 and D-11 tentatively identified as a quarry, and between Str. D-7 and the platform Str. D-8. 20 cm arbitrary levels were dug as separate lots for no natural stratigraphy was apparent. All lots were screened with 1/4" mesh except for those between Str. D-7 and the platform D-8. Soils in the group are generally soft and easy to dig.

Test Pits Associated With Str. D-6:
General summary:

Occupational refuse was sought to date the platform occupation. No middens were encountered.

Excavation details:

Suboperation G, between Str. D-6 and D-5. 1 x 1m. Matrix was uniform gray-brown soft loose earth and pebbles. A paler gray stratum could be seen in the northeast corner profiles beginning about 168.03 cm to 167.90cm above sea level.

Suboperation I, north of Str. D-6 between Str. D-6 and platform looters' trench. 1 X 1m. Matrix was dark brown soil with broken limestones and roots, the soil above bedrock here was only 21-44cm thick. Tiny slate particles were recovered here.

Investigations In Quarry Area

General summary:

These excavations sought information pertaining to the creation and use of a large lower area between Str. D-10 and Str. D11. The area was suggested to be a quarry, an access route to the main platform D-8, or a natural depression in which we expected garbage from the main platform or occupations on the tops of D-10 and D11. Modification of bedrock in suboperations H, J, and K lends support to the idea that the area was a former quarry. The paucity of ceramics in this trench and the near absence of ceramics in others (suboperations N and Q and suboperations L and M) suggests that the area was kept clean, and therefore may have been used as a public access route, which is also suggested by its orientation and its unobstructed width.

The presence of ceramics only in the trench of 5 H, J, K suggests that these ceramics are the refuse generated by occupants of a structure now represented by the D-10 mound, rather than refuse off the platform. Lack of ceramics in 5N & Q and 5L & M suggests that the northern part of the mound called D-11 on our map may be simply the east side of the quarry feature, and may not have been surmounted by residential structures.

Excavation of a test pit Op. 5T resulted in recovery of lithic debris tentatively identified as chert tool refurbishing debris.

Excavation details:

Suboperations H, J, K, east of Str. D-10. 3.4m X 1.4m. Matrix was soft dark brown soil over lighter brown soil as trench neared modified bedrock. Human teeth and small bone fragments were discovered in the north profile after excavation was completed.

Suboperations L & M, east of Str. D-11. 4 X 1 m. Matrix was a shallow layer (20-30
cm) of soft, very dark brown organic soil over gently sloping unmodified bedrock.

Suboperations N & Q, east of Str. D-11 and north of suboperations L & M, 4 X 1m. Matrix was very dark brown soil in 30-40 cm layer over gently sloping unmodified bedrock, disturbed by tree roots action in the east.

Suboperation T, north of suboperations H, J, K. 2 X 1m. Excavation of this test pit revealed three strata. The uppermost, below the humus, was dark brown soil and occasional pebbles in a 35cm layer. The second was a grayish brown layer between 20-50cm thick, thicker in the east than in the west. The lowest layer of light brownish gray soil contained in the south profile a concentration of the chert flakes which had been recovered throughout the test pit.

Investigations Between Structure D-7 And The Platform D-8

General summary:

This excavation between Op. 22A and Op. 23B cleared the surface layer in a strip 2m wide between excavations of Str. D-7 (Operation 22) and the platform D-8 (Operation 23).

Excavation details:

Suboperations O, P, R, S, and U. 8 X 2m. Matrix was a thin layer of dark grayish brown soil with some broken limestone rocks. Bedrock appeared 20cm or less from the surface in suboperations R and S, but was not reached in suboperations O and P. Suboperations O, P, R, and S consisted of one very dark brown stratum. Suboperation U contained two strata, the upper black-brown soil of the humus and root zone, and a lighter, dark brown soil which represented the leaching out of some of the fill soil from the platform construction. Suboperation U also contained some fallen cobbles from the construction of the platform wall.

Operation 20

General summary:

Operation 20 was the excavation of Structure D-9, a very low platform without superstructure running east-west from the western edge of the main platform D-8. Rectangular excavation units (suboperations) either 2 X 1m or 2 X 2m were laid out and excavated one by one to determine the size of the building by following the outside walls. Each suboperation was excavated to bedrock as only one lot because no stratigraphy was evident in any unit. Lots were not screened. The matrix was humus over uniform dark black-brown organic soil, Munsell 10YR2/1 black to 10YR3/3 dark brown, soft and easy to dig.
Excavation details:

Structure D-9 is a long, low platform built directly on bedrock lacking any evidence of plaster surface or superstructure. The platform was built of a retaining wall of various-size small cut stones placed directly on unmodified bedrock. The retaining wall is only one stone deep and has only one exterior face. Up to six courses make up the retaining wall. No evidence of mortar could be seen between the stones, nor was there good evidence of a floor abutting the building, although there was a patch of plaster in suboperation Q. Within the retaining wall, the fill consisted of loosely aggregated fist-sized cobbles in a dark, organic matrix no different than the surrounding soil. Suboperations A,B,G, I and J created a north-south cross section of the structure revealing that the maximum height off bedrock of the platform in its present configuration is approximately 60cm (171.11m above sea level). There was no evidence of a superstructure, and the upper surface of the mound was eroded down into the fill.

The platform is 4.08m wide at its western limit. Its south wall is oriented 75 degrees, and may have met the main platform perpendicularly, but we do not have positive evidence that it actually met the platform. If it did, its length would be approximately 26m. The bedrock on which the platform is built rises near the platform. The structure as preserved is higher in the east, towards the platform, than in the west, but since the bedrock below is also rising toward the east, the difference in height east to west is probably an accident of preservation. The farthest east suboperation excavated, Op. 20S, reached bedrock at 167.41m above sea level, higher than the height of any currently standing wall stone. These data indicate that Structure D-9 may not have needed masonry construction to connect to the main platform. The building may have been a low flat structure rising the same height along its length, needing less height built off bedrock in the east than in the west. This would mean that the structure along its length was at least as high as 167.41m. The minimum height of the structure therefore should be adjusted from 60cm to at least 90cm.

Ceramics recovered from this Operation were in general of moderate size and very eroded, indicating that they were from fill and/or shallow deposits around the outside of the building. A good sample was recovered from 20F near the west wall of the structure. Worked sherds were also encountered near the west wall in suboperation H. Ceramics such as pie-crust rims and flaring lip jar fragments give a Benque Viejo IV (Terminal Classic) date to the building, both for construction fill and occupation. A few Late Classic diagnostic sherds were recovered, as well as some basal flange bowl fragments attributed to the Early Classic. The earlier sherds may have eroded out from the platform as they were
discovered in the suboperations closer to the platform where there was no structure wall in evidence (suboperations R, S, T).

Operation 21

General Summary:

Excavation of Chultun 1, Group D was carried out as Operation 21. Suboperations A and B excavated under the eastern and western apertures, respectively, and the 2 human burials at the bottom of the chultun were excavated as suboperation 21C. All lots were screened with 1/4" mesh. The stratigraphy of the chultun from top to bottom was observed in even, uniform, distinct layers and can be summarized as follows:

A. Overburden and surface wash-in
B. grayish brown soil above gravel
C. gravel layer in gray soil
D. soft white powdered limestone below gravel
E. soft gray soil surrounding human bones

Soil samples were taken from each Stratum except A.
Within Stratum B under the eastern aperture was a lens of yellowish-white soft powdery limestone interpreted as material fallen from the chultun ceiling. Within Stratum C was a very poorly preserved adult human burial (Op. 21B/1-B1). Within Stratum E was a well preserved dual interment of adult males (Op. 21C/1-B1).

Excavation details:

Chultun Form

The general form of the chultun is one domed chamber which has two apertures. The eastern aperture is more broken than the western, but the remains of the eastern aperture indicate that they were both approximately the same size, about 45cm in diameter. Neither aperture could be said to be "primary", although the eastern aperture was discovered first. The burial of two men at the bottom of the chultun was centered more under the second aperture. The apertures are aligned at 75 degrees.

The excavation of the chultun removed all the dirt and remains in the western area, corresponding to the area of suboperation B. This section was excavated to a white, uniform (but not flat) level which corresponds to the original bottom of the chultun, on which the two burials of the dual interment (Op. 21C/1-B1) were placed with the circle of stones which formed their grave.
There are three 'niches' within the chultun, all located in the western area.

The southernmost niche is the largest. Its base is at the same level as the bottom of the chultun. After excavation, the southern niche is the 103cm at the deepest, 80cm wide, and 100cm high at the tallest. The tallest and deepest points are on the east side of the niche, the west and south ceilings follow the dome shape of the chultun. This niche was completely excavated, and contained nothing except some small bones which likely pertain to the dual interment.

The east wall of this niche may be an artifact of excavation. East of the current niche a balk remains consisting of the gravel layer, the white layer, and the gray layer which contained the dual interment including some of the stone of the grave (Strata C, D, and E). When this balk is excavated what appears now as a niche might be better described just as the southern limit of the domed chultun.

The western niche is not completely excavated. It was the location of the uppermost burial (21B/9-B1), and this burial was directly over the head of Individual 1 in the dual interment, although the upper and lower burials were separated by the white layer Stratum D 16 cm thick. The earth in the area of this niche is extremely hard and has to be excavated with a geology hammer, destroying most of the osteological and artifactual remains. At present the niche is shallow; 25 cm tall, 38 cm wide, and 30cm deep at the deepest to which we excavated. Since on the north side of this niche the chultun wall bows out into the chultun, the north wall of the niche measures about 50 cm deep. The place where the chultun wall bows out is directly under the western aperture.

Above this western niche, the chultun wall is covered by a concrete-like white matrix with white chert and limestone gravel within it. This matrix, the gray gravel layer below it (stratum C), the white layer (Stratum D), and the gray layer above the head of Individual 1 of the dual burial (Stratum E) were all extremely concreted. The matrix probably became concreted through water action or other post-depositional processes and was not intentional.

At the base of the niche as excavated, foot bones and other bones of Individual 2 can be seen still imbedded and broken off in the concrete material. These could not be removed in excavation this year.

The northwest niche lies north of the western aperture and is much smaller, more formally defined, and higher than the other two. Clearly excavated to its original limestone chultun walls, the niche is a rectangular recess set into a more dome- or oven-shaped rounded-rectangle recess. The width of the first, shallower recess is 64 cm, its depth is 15 cm and its height is 30-39 cm. Centered within this recess and created at the same base level is the rectangular niche 30cm wide, 28cm tall, and 30cm deep.
There is some evidence of the gravel layer with some yellow ceiling collapse adhering to the northeast edge of this niche. The white layer (stratum D) seems to be the base at which the niche is cut into the chultun wall. Excavation of 21C/1-B1 made it clear however that near this niche the carved bedrock of the chultun floor slopes up to a higher level than below the dual interment, so the white layer and the gray layer below it (strata D and E) are very thin in front of (east of) this niche.

The eastern half of the chultun will need clearing out in 1993. Some of the gravel layer remains to the west of the area excavated as Op. 21C/1-B1 for the dual interment. Collapsed limestone from the ceiling appears to be filling a recessed area of the chultun's east wall; the chultun is possibly greater to the east than currently understood.

In the southeast area excavation reached the white layer (Stratum D), but the soft white material remaining in the side walls may be indicating that excavation dug through either natural soft limestone (sascab), or through extensive ceiling collapse and the original chultun limits have not been determined here. Ceiling collapse identified in other areas of the chultun, however, appeared more yellow and not as uniform in texture.

Investigation of the original limits of this chultun is planned for 1993.

Chultun Burials

The uppermost burial was excavated as Op. 21B/9-B1, below the gravel of Stratum C in a hard-packed gray clay-like matrix overlaying a white limestone layer, Stratum D. The soil was extremely hard packed and contained clay, making it very difficult to excavate. To the south of the human remains, the stratum was much softer and easy to dig, and an assemblage of relatively non-eroded sherds was recovered. The elevation of the bones was 165.31-165.36cm above sea level.

The burial was discovered in the area described as the westernmost niche, above. The lot which contained this burial was approximately crescent-shaped, bounded on the N, W, and S by the natural limestone chultun walls under the second aperture. The eastern limit was arbitrarily defined. On the chultun wall west, above the hard-packed gray area which contained the bones, was an extremely hard concrete-like material whitish in color with chert and hard limestone pebbles within it. The hard matrix around the bones and in the general area made recovery of both bones and artifacts extremely difficult.

Teeth and bones were recovered. The size of these remains suggest the burial of an adult.

Two other human skeletons were found on the bottom of the chultun, located under Stratum D. Bones from this dual interment were first identified in Op.21B/8-D1, but the bones were excavated as one suboperation and one lot, Op. 21C/1-B1. The lot
containing the two skeletons occupied a roughly oval area about 2m east-west and 1.5m north-south, slightly to the west of the chultun's center.

The burial consisted of the primary interments of two individuals, both adult males, and both extended. Individuals 1 was more robust than individual 2. Individual 1 was face-down with his head to the W, on top of Individual 2 which was face-up with his head to the E. Each was associated with a turtle carapace at the torso, both in the same position relative to the spine and pelvis, ie in front of the pelvis, facing out, away from the body in front of the spine. The tortoise shells (Op.21C/1-P1 & P2) were not recovered intact, but were associated with individual 2 was perforated on the inside, likely for suspension. No other ornaments or associated artifacts were recovered with these remains.

Dates and Interpretation

Ceramic artifact fragments recovered from Suboperation A were more abundant than those from Suboperation B or C. In general, the upper strata of the chultun contained eroded sherds from various time periods including the Terminal Classic forms and wares, Formative flanges and eroded Mars Orange sherds, Flor Cream (Chicanel) and micaceous ware of the Early or Proto Classic, and Late Classic sherds of Benque Viejo III, among others. The sherds associated with the uppermost burial were not eroded and represented Terminal Classic or Late Classic ceramics. Sherds from the dual interment were very sparse, but the burials might be attributed to the Terminal Classic because they are perhaps related to the interment above them, and since other evidence from the Group suggests the major occupation during the Terminal Classic.

These two men buried at the bottom of the chultun were likely interred at the same time. They were laid out on the soft white limestone at the bottom of the chultun within a group of encircling stones, and were covered with a specially-prepared white limestone material. The bodies were centered within the chultun, slightly to the west. The chultun formed for them a tomblike chamber with smooth walls and ceiling. The tomblike aspect is enhanced by three niches carved into the northeast and southwest corners and western wall. The mixed sherds in strata above the burials suggest that the chultun tomb was prepared and the bodies interred, and then the chultun was filled up carefully with earth scraped up from the surface of the group. Since bedrock is so shallow, the earth used to fill the chultun contained various old sherds which had been deposited around the group from past periods. Another possibility is that after the deposition of the gravel layer Stratum C, the chultun was allowed to remain empty and filled up with washed in dirt and sherds. The undisturbed aspect of the gravel layer and the uniformity of the chultun contents argues against the second possibility.
The larger, more robust individual 1 seems to have been older than the smaller one beneath him, Individual 2. The bodies had their heads to opposite directions, E and W; it was the larger individual 1 with his head to the W. Both wore turtle shells on the front of their bodies, and neither wore ornaments of material which remains today.

The careful preparation of their tombs, their physical robustness, and their tortoise shell ornaments suggest that these two individuals were from among the elite residents of Group D.

**Operation 22**

**General summary:**

Structure D-7 was partially excavated this year as Operation 21. Structure D-7 is located north of the platform on a downhill slope. The structure is a long range-type structure with evidence of rooms on the top and a possible staircase or other outset feature on the north side. Plain Stelae 12 (continuing Graham's (1978) enumeration) is located slightly up slope near the southwest corner of Structure D-7. The structure was built on an occupation level with evidence of Terminal Classic and Early Classic ceramic sherds. Below the building's occupation surface, an infant burial was encountered associated with Classic ceramics. A large primary garbage deposit on the north side of the building contained elite household garbage of the Benque Viejo IV Terminal Classic period, including a sherd of Tinaja Red, an imported ceramic type.

**Excavation details:**

Excavation cleared a 3m wide strip in the front (south side) of the structure in suboperations A, B, C, and D, and 6 X 2m of the rear (north side) in suboperations E, F, and G. Together with G, H and I created a 2m shallow axial strip excavation of the surface up to suboperation J, which was located on the crest of the structure. Thus a shallow axial strip running from the south to north sides was excavated on the building with deeper excavations at the bases of the south and north structure walls. 2 X 1m or 2 X 2m excavation suboperations were laid out on the structure. Most lots were screened with 1/4" mesh.

The structure before excavation was very disturbed by *tusas* (ground moles). Excavation revealed that the building stone is very soft and decomposed. This decomposition and slumping caused difficulty in excavation of the south side since it was not clear that the building stones which appeared in suboperations C and D revealed the true south building wall. But the line of stones in the south, albeit slumped and decomposed, was oriented approximately 70-80 degrees. This is close to the orientation of
the north wall which was in place (suboperation F) and two courses high, and also similar
to the orientation of Structure D-9. The similarity of orientation indicates that the
arrangement of stones in suboperations C and D do provide evidence of the south wall of
Str. D-7.

The level at which this south wall is built is under question, however, since the base
of the wall in suboperations C and D is almost 2m higher than the base of the north wall in
suboperation F. Neither side of the structure is built on bedrock, in contrast with Str. D-9
and the platform D-8. Ceramics of early periods excavated from the lower lots of
Suboperation F suggest an earlier occupation level before the construction of this building.

The north wall is constructed of large limestone block masonry; only two courses
remain in 22F. A basal molding about 25cm wide runs along the portion of the north wall
visible in the 22F excavation. The basal molding is only two stones high (about 25cm) and
a fragmentary infant burial (Op. 22F/4-B1) surrounded by numerous sherds was
encountered about 6cm below its lowest point. The burial was located in a corner created
by the basal molding and a sloping, outset feature with a very eroded surface which
extends from the north wall. The feature is oriented 350 degrees, the same as the
orientation of the stone wall-lines at the crest of the structure in 22J. This sloping, outset
feature may be badly decomposed staircase. The burial of the infant was below the surface
associated with the outside of Str. D-7's north side, even though plaster floors were not
encountered on either side of the structure D-7. The infant's body was either placed in a
midden associated with occupation before the construction of Str. D-7, or was put under
the surface or floor at the corner of the northern staircase after the structure had been built
and was in use. The arrangement of the remains within the corner suggests that the
second possibility is more likely, but stratigraphy is ambiguous.

If the outset feature is a staircase or another kind of access feature, it encourages
speculation about whether the north side of Str. D-7 was an entrance point for the group,
or whether the north direction was of ideological importance, as it was in the main plaza,
Group A, and at Actuncan, which have a definite northern focus. It also calls into
question the working assumption that the south side of D-7 is the front of the building.

The wall lines in 22J are extremely straight and well-aligned and do not seem to
have suffered much decomposition or slumping. However, the lines were only exposed
about 5cm, so the preservation may seem better now than it proves to be.

The ceramic sample which gives evidence of D-7 as an elite household comes
primarily from Suboperation G, lot 1. Only a few vessels are represented, and they include
jars, oven-footed bowls, and incurring rim bowls. Piecrust rims, flat rim incurring bowls,
and lateral ridge bowls which are present are Terminal Classic markers.
Operation 23
General summary:

Operation 23 consists of investigation of Str. D-8, the main platform of Group D on which Str. D-5 and D-6 was built. The first, suboperation A was clearing out a trench looters had cut into the platform north of Str. D-6. The trench had been dug to smooth, hard bedrock upon which the platform was built. Suboperation B was located at the south end of the shallow excavation trench between Str. D-7 and the platform D-8. The shallow trench was excavated as Operation 5 O, P, R, S, and U; Operation 23, suboperation B was an excavation adjacent to Op. 5U.

Excavation details:

Suboperation A: The trench was cleared as one lot and not screened. Ceramics were collected from the collapsed walls of the looters' trench. The looters cut a north-south trench .85m at the widest and 5.83cm long which curved slightly to the SE. It is located at the extreme north-eastern corner of the platform, so it is not likely that the looters discovered any caches or burials. The platform seems to end a few centimeters east of the trench, where there is a much lower area just a few centimeters off bedrock (the location of the Op. 5I test pit) between the NE corner of the platform and the north slope of Str. D-6. In the southern side of the trench a small patch of plaster could be seen representing the platform's upper surface, although no evidence of this plaster was revealed by suboperation B excavation. The construction material revealed by the trench seemed to be large cobbles fill, but the walls were to slumped to be sure of this.

Suboperation B. 2 X 2m. Excavation exposed two strata, a dark brown soil layer below the humus, and a dark grayish brown layer which was not removed, as this layer represents the structure fill of the platform. The construction material here did not seem to be large cobbles fill. A rough line of stones, in one place three stones high, was revealed in this suboperation and represents the cobble wall which enclosed the structure fill, forming the platform's north wall.

Operation 26
General summary:

Operation 26 investigates Str. D-6. This year, only suboperation A was carried out, clearing out the exterior part of the collapsed looters trench in the west side.

Excavation details:
As suboperation A, excavators completely removed the fall which had filled up the trench, stopping at the entrance of the cavern which was created as the ceiling of the looters' tunnel caved in. The trench is .56m wide by 6.84m long as was filled with 75-100 cm of collapse. The interior space is very large, perhaps 3 X 3 X 3m, making the upper rooms of the building very unstable. The core material seems to be large limestone rubble and occasional reused blocks without much dirt matrix.

Sherds and chert were recovered from the collapse debris, along with a flashlight bulb presumably of the looters. Two chunks of plaster painted red were noticed among the rocks and debris which is piled up outside the trench. This is possible evidence that the looters found and destroyed an elaborate Maya tomb.

The trench wall shows that the latest exterior wall of this building was built on top of an earlier floor which extends in about 110 cm, rises over a step, and meets an earlier battered exterior wall. The inner exterior wall appears to have only two or three courses remaining in place. The floor does not extend east beyond the later wall; it appears to have been cut through on both sides of the trench.

**Future Excavation Plans.**

Future excavation plans for Group D involve building on the evidence gathered in order to enhance our understanding of the cultural life in Group D.

First, operations begun in 1992 need to be completed. The original limits of chultun 1 need to be determined. Excavation of Str. D-7 must be completed to determine whether there was a north or south staircase and also to determine the location of the base of the south wall. The configuration of walls on top of Str. D-7 will be ascertained and the eastern and western limits determined. Axial or corner caches will be sought in Str. D-6 and D7, as well as occupation debris in rooms and remains of the tomb in D-6. Excavation carried out to define the shape of the platform itself will help decide if there was really a step up to the platform on the west side.

Second, new excavations will be needed to complete archaeological investigation of the group. We need to determine the configuration of structures D-10, D-12, and D-13, which way they faced, and whether they were really residences. They will be compared with Strs. D-1, D-2, and D-3 which are also likely to have been residences. We must find out if D1-3 were contemporary with the rest of the group. We want to investigate whether there was a family tomb in D-2, and how it differs or is similar to the one in D-6. Is the space between the D Group and rise up to the C Group really devoid of platforms? We
need to understand what was taking place in this area and investigate the possibility of "invisible" structures in the Group. We want to determine access routes to and within the group. Investigation also must look into what may be north of Str. D-7, especially if we find a north side staircase to that building.

In general, the aim of the 1993 season will be to fill out the culture history of Group D. When were the structures built, occupied, and abandoned? Information will be sought to figure out if the residents of Group D were part of one large family/lineage group or whether it was a general residential area. If it was a general residential area, we want to know whether the residents were all of the elite class or whether there is evidence of social stratification within the "neighborhood." If there is evidence of social stratification in the Group, where did the poor people live, the retainers of the elite? Test excavations in vacant terrain will investigate whether people were growing food near this residential area, and if food production/residential areas were strictly delimited. Excavation and artifact analysis will enable us to discuss what other economic activities were taking place, whether there was any production of tools or pottery, or evidence of a market area.
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1992 Study of Actuncan (Cahal Xux)

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Introduction

As part of the 1992 season of the Xunantunich Archaeological Project a site survey and test excavations were performed at Actuncan, a minor center located approximately two kilometers north of the Xunantunich site core and situated on a small hill just above the river terraces to the west of the Rio Mopan. This work resulted in the completion of a site map, the discovery of a carved stela fragment, and the derivation of a tentative occupational history, beginning with the site's founding in the Late Preclassic, its abandonment toward the end of the Early Classic, and its reoccupation for a brief period in the Terminal Classic.

Previous Excavations At Actuncan

At least two archaeologists have previously worked at Actuncan. Unfortunately, neither archaeologist left adequate documentation of his activities at the site.

In late 1924, Thomas Gann (1925) spent at least several weeks working at the site, which he named Actuncan (Snake's Cave). As far as can be determined, his excavations were restricted to the mounds we have identified as Structures 1, 5, and 6 (see maps). Aside from these excavations, he also discovered the undecorated Altar 1.

As reported by Willey, et al. (1965:316), Michael Stewart visited Actuncan in 1954. He named the site Cahal Xux (Place of Wasps), apparently unaware of Gann's previous visit. Although Stewart left no record of his activities at the site, Willey, et al., note that he "discovered fragments of a sculptured stela near the base of the temple." The carved stela fragment we identified as Stela 1, found at the base of Structure 4, is probably one of these fragments.

Looting At Actuncan

Sometime prior to 1976 (Jaime Awe 1992:personal communication), Actuncan was moderately looted. This looting consists of trenches and tunnels into all of the major buildings at the site (see maps), including (1) one tunnel deep into the heart of Structure 1, and a shallow trench into its northwest corner; (2) trenches which essentially bisect both Structures 2 and 3; (3) a ten meter long tunnel into the center of the front staircase of Structure 4, with shorter tunnels (five to eight meters) along the east side of the staircase and into the west face of the building; (4) a huge trench into the front staircase of Structure 5 which cuts all the way through its
superstructure and trails off into three short tunnels in its interior; and finally (5) a
long trench into the north face of Structure 6 which bisects its northern 'wing'.

Although these trenches and tunnels have been quite damaging to the site's
architecture (especially to Structures 2, 3, and 5), they do not appear to have
disturbed any tombs, caches, or other important sealed contexts (I am unable to
make this statement for Structures 2, 3, or 5 since the looting has been so destructive
to these buildings that only a very careful study of the trenches and backdirt will
shed light on this question). In addition, it is possible to glean some information
from a careful study of these trenches. For example, a profile of the looter's tunnel
into the staircase of Structure 4 (see drawing) reveals that the building underwent at
least five major phases of construction - phases which might be dated by means of a
ceramic collection from the profile. Tunnels into Structures 1 and 5, and the
remaining tunnels into Structure 4 reveal similar clues to the history of these
buildings.

The 1992 Actuncan Site Map

As was revealed this season (see map), the site consists of three primary
structures (Structures 4-6) and six smaller structures (Structures 1-3 and 7-9). These
structures are located atop a man-made platform approximately seventy-two by one
hundred twenty meters in size, which is artificially raised three to five meters above
the underlying hilltop. One low structure (not shown on map) is located off the
platform approximately twenty meters to the west of the central pyramid. It is hoped
that further survey in 1993, will locate more structures, including an elite residential
area, and this hope is reinforced by the information that a number of large mounds
(Rudy Juan 1992:personal communication) and possibly two or three courtyards
(Willey, et al. 1965:316) are located on a low ridge just north of the site.

The site's three primary structures form a U-shaped configuration, opening to
the north, around a small (52 m. x 56 m.) plaza. The central pyramid (Structure 4), at
the base of the 'U', dominates the site, reaching a height of approximately nineteen
meters and is surmounted by three 'temples', also in a U-shaped configuration. The
largest of these temples (Structure 1) rises another eight meters above the summit of
Str. 4, for a combined height of almost twenty-seven meters. Gann (1925:87-8) notes
that this "temple contained originally three stories, but the uppermost had entirely
fallen, and the chambers of the two lower stories, at least four in number, have been
completely closed in by the fall of the roof comb and the greater part of the top
story." Structures 2 and 3 comprise the east and west arms, respectively, of this 'U'.
Structure 3 is unusual in that it appears to be oriented at an angle to the other buildings.

Located approximately fifteen meters to the northeast of Structure 4 is Structure 5, an eight meter tall pyramid topped by a stone superstructure, of which one room is still identifiable. It is flanked on the north and south by two lower (four meters tall) 'wings'. Structure 6, fifteen meters to the northwest of Structure 4, and flanked on the north and south by five meter tall 'wings', stands seven meters above the plaza surface, and was excavated by Gann (1925:88) who found it "to be composed almost entirely of flint cores." The remaining buildings, Structures 7, 8, and 9, are all very low structures located in the plaza. Structure 7, in the western half of the plaza, is a long rectangular building running north/south. Centered along the north edge of the platform and perpendicular to Structure 7 is Structure 8, another long rectangular building. Finally, Structure 9, a small relatively square building at the extreme northeast corner of the platform, is oriented approximately forty-five degrees off the orientation of the other buildings.

A large circular stone was discovered sitting in front of the broken remains of an uncarved stela in the middle of the plaza by Gann and identified as an altar (Gann 1925:88). The present archaeological project identified this as Altar 1, and also discovered fragments of several uncarved and one carved stela (Stela 1) scattered about on the plaza surface in front of Structure 4. As mentioned above, it is likely that Stela 1 was previously discovered by Michael Stewart in 1954.

The site as a whole is oriented at fourteen degrees west of magnetic north (346°), and while acknowledging the uncertainty inherent in determining the orientation of unexcavated buildings, with the exception of Structures 3 and 9, all of the buildings at Actuncan appear to very closely adhere to this orientation or its perpendicualrs.

Ceramics And Chronology

A combination of factors, primarily ceramic evidence, but including architectural and iconographic clues, tentatively suggests that the initial construction and occupation of Actuncan date to at least the Late Preclassic/Protoclassic (300 B.C.- A.D. 250), and that the site was not permanently abandoned until the Terminal Classic (A.D. 850-900). Within this long sequence, however, ceramic and architectural evidence indicate the likelihood of an occupational and building hiatus in the Late Classic (A.D. 600-850).
The ceramic evidence which forms the bulk of the data on which this chronological interpretation rests was recovered from two test pits into the site platform. Both excavations extended to a depth of three and one half to four meters below the present ground surface, and neither reached sterile levels prior to being shut down due to time constraints. Although the stratigraphic levels of the two pits did not correspond exactly, the ceramic sequence was essentially identical. The earliest strata consisted of two and one half to three meters of platform core which was laid down in a single construction phase and sealed by a plaster floor. Within this strata we encountered ceramics dating to the Late Preclassic (Flor Cream and Hillbank Red) as well as ceramics dating to either the Late Preclassic or the Protoclassic (Mars Orange, Sierra Red) (Lisa LeCount 1992:personal communication; Gifford 1976; Sabloff 1975). Above this floor in the main plaza we uncovered two more floors, each of which ceramically date to the Late Preclassic/Protoclassic. At the very top of the sequence we discovered the remains of a badly eroded floor both overlain and underlain by a mixed ceramic assemblage of diagnostic Late Preclassic/Protoclassic and Terminal Classic (Benque Viejo IV) sherds. In this entire sequence not one Benque Viejo III (Late Classic) sherd was discovered.

Architecture And Chronology

The site's final architectural style and layout appear to be characteristic of the late Protoclassic or the beginning of the Early Classic (ca. A.D. 250). Specifically, the triadic U-shaped configuration of the 'temples' found on the main platform (Structures 4, 5, and 6) and repeated on the summit of Structure 4 (Structures 1, 2, and 3) is characteristic of this period.

It has been suggested . . . [by Peter Mathews and Ian Graham] . . . that this "Capitoline" arrangement (so termed because it reminds one of the arrangement of Michelangelo's buildings on the Piazza del Campidoglio) is diagnostic for the Early Classic period (von Falkenhausen 1985:120).

A similar configuration is found in Structure A-V at Uaxactun (Proskouriakoff 1963:111-117), in the North Acropolis at Tikal (von Falkenhausen 1985:120), and on the summit of Caana at Caracol. Other stylistic elements which suggest an Early Classic date (von Falkenhausen 1985:127-8) for the final construction phases of Structures 1 and 5 include inset corners on Structure 1 (also found on Structure B-20 on Caana at Caracol), and apron moldings on Structure 5. Admittedly, this evidence
is weakened by the fact that Xunantunich Structure A-4, which probably dates to a later period, exhibits similar embellishments, raising the possibility of a regional tradition of continuing such stylistic traits into the Late Classic.

Several of the building techniques used at Actuncan support (1) a Late Preclassic date for the site platform, (2) a Late Preclassic to Early Classic date for Structure 2 and the final construction phases of Structure 4, and (3) a Terminal Classic date for Structures 7, and 8. At least two different construction techniques utilized in building up the main platform at the site appear to be diagnostic for the Late Preclassic. The first of these was the use of very large limestone slabs in a thick sascab matrix (Richard Leventhal 1992:personal communication), and the second was the use of huge chert cobbles in a heavy clay matrix (Jaime Awe 1992:personal communication).

It is clear from a study of the axial looter's trench into Structure 4 that at least the last three construction phases were built on top of a plaster floor. Similarly, a study of the looter's trench into Structure 2 reveals that it too was erected on a plaster floor. Von Falkenhausen identifies this technique of laying the floor first and building on top of it as either Preclassic or Early Classic:

Whereas Preclassic and Early Classic builders first laid out the floor and then built the walls onto the floor, the process in the Late Classic was abbreviated and rationalized, so that first the walls were finished, and the floors were laid as the final stage of construction” (von Falkenhausen 1985:132).

Structures 7 and 8 are unique at the site in that they are very low constructions whose limits are defined by the linear placement of stones set on end. Wendy Ashmore and Richard Leventhal (1992:personal communication) identify this construction technique as reminiscent of the Terminal Classic.

Iconography And Chronology

The lone carved stela discovered at Actuncan has not yet been analyzed. However, a cursory examination of the monument by Nikolai Grube and an examination of photographs of the monument by the project iconographer, Virginia Fields (Los Angeles County Museum of Art) has led to the very tentative conclusion that the stela 'looks early' (Richard Leventhal 1992:personal communication).

Stela 1 is an irregularly shaped oblong stone slab, measuring less than a meter on a side, and approximately 35 cm. in thickness, which is carved on one side. It
portrays a standing individual whose upper torso appears to face the viewer, but whose lower body faces to the left of the viewer. With both hands the figure grasps a staff or bar diagonally across its chest. The head of the figure, as well as the upper end of the bar, are broken off. The lower end of the bar (to the right of the viewer, and 'behind' the figure) appears to be 'feathered', and it terminates in a series of undulating curls. A curving appendage sprouts from the middle of the bar and wraps down across the torso and behind the waist of the figure. The figures feet are also broken off. The figure itself is adorned with what appear to be arm, wrist, and ankle bands, and a branching curl emerges from its hip and hangs down behind its legs, encircling a sphere which also appears to be attached to the figure's hip. The space around the figure is filled with loops, curves, curls, and spheres.

Tentative Chronological Conclusions

Our interpretation of the above data, admittedly speculative, is that sometime in the Late Preclassic a large building program was initiated at Actuncan. In a single construction phase the platform was laid and the earliest phase of Structure 4 was erected. Prior to A.D. 250, the plaza was twice resurfaced and Stela 1 was erected. In the Early Classic Structures 1, 2, and 3 and the final construction phases on Structures 4 and 5 were completed. The Late Classic comprised a construction and, presumably, an occupational hiatus. During the Terminal Classic the site was again reoccupied, perhaps by squatters who built Structures 7 and 8.

A note of caution must be interjected at this point. There is increasing debate about the ceramic definition of the Early Classic time period outside of the central Peten in general, and in the Belize River Valley in specific. At its extreme, this argument suggests that those ceramics diagnostic of the Early Classic in the central Peten are either not found, or are found in negligible quantities, in Early Classic contexts outside of that area, and that Preclassic ceramics were used well into the Classic period in these contexts (Lincoln 1985). This view has been promoted for the Belize River Valley by Jaime Awe (1992:personal communication), who sees a long Preclassic ceramic sequence at Cahal Pech and its environs immediately followed by diagnostic Late Classic ceramics (with no nonceramic evidence of occupational hiatus), as indicating an Early Classic occupation of the valley even in the absence of diagnostic Early Classic ceramics. This possibility, coupled with the conceivable use of anachronistic construction techniques and architectural traits in the Xunantunich/Actuncan micro-region, raises the potential for an Early Classic, rather than Preclassic, dating of the founding of Actuncan as a monumental center.
Actuncan And The Xunantunich Archaeological Project

The purpose of the archaeological work at Actuncan is twofold. In terms of a regional perspective, an examination of sociopolitical evolution at Actuncan will tie in with similar work being performed at sites throughout the Belize River Valley to shed light on the integrative processes at work in the Late Preclassic/Early Classic which eventually resulted in the hypothesized Late Classic centralization of political control by Xunantunich.

A related, but narrower, topic of interest is the specific relationship between the sites of Xunantunich and Actuncan. Assuming a chronological overlap in the occupation of the two sites (an assumption which will be rigorously investigated), it would not be unreasonable to expect to find evidence of intensive interaction between the two populations. Whether this interaction is discovered to be the founding of Xunantunich by the people of Actuncan or the conquest or co-option of Actuncan by Xunantunich, it would have played a major role in the evolution of both sites.
Profile of looter's trench in Structure 4.
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Excavation of Rubble Mound Features in the Periphery

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Setting

The area investigated by Operations 50 and 51 lies just above the east bank of the Belize River, approximately 1.8 straightline kilometers from Xunantunich's Group A. Following the river, Xunantunich's main plaza is somewhat less than an hour's moderately paced walk from the site.

Presently, most of the area is utilized as a pasture for cattle and horses. Open fields extend across the area to the north and east of the site. To the south of the investigated area is a forest of moderately dense undergrowth. Approximately 200 m to the southeast, rises a large hill which is the western spur of the hill upon Mr. Juan's hotel, the XAP field camp and the area of the Nabintunich Mounds are located.

Mound Classification

The open area contains several mounded structures which appear to be concentrated in the central portion of the study area. Most of these are characterized by rather sparse soil and vegetation cover. These bare surfaces revealed unmodified chert and limestone river cobbles, some flaking debris, a few ceramic sherds and rarely "formal" stone tools (i.e.: chert bifaces and blades, and a mano).

The mounds exhibit a variety of forms, though none of them exceeds 90 cm in height. Mounds in two parts of the site (Strs 21, 22, 23, and 14 and 15) are arranged in a manner suggestive of formal plazuelas groups. That of Strs 21, 22 and 23 appears to be enclosed on three sides while that of Strs 14 and 15 is enclosed on two sides in an L-shaped arrangement. The association of these two mounds is indicated by a slight rise or step-up from the ground surface to the south into the "plaza" area.

The mounds in this area may be tentatively classified according to their general morphology as indicated on the surface. The three broad categories established are: 1) long linear mounds, 2) isolated rectangular/circular mounds and 3) rectangular/circular mounds attached to linear features. To these three may be added the category of linear features though they are not expected to represent structures.
The first group, long linear mounds, are the most striking feature of the site. These are long, narrow, and with one exception, straight. Although these appear as the most massive structures at the site, their heights do not greatly exceed those of the other types. The upper surfaces of some of these mounds have areas which step-up c. 23-45 cm above their lower surfaces. The topography of these mounds suggest that their architectural layout often consisted of more than one element. Morphologically, these areas of differing surface elevations define distinct architectural spaces. Although this indicates a partitioning of the space on individual mounds, the significance in terms of any functional differentiation is unknown.

Isolated mounds are most frequently quite low (c. 20 cm) though Str 3 is c.71 cm in height. They are small in overall area and this makes it difficult to determine their exact shape and orientation. Their rather circular shape today is probably due to their small volume; originally, they were likely square or rectangular. Their small area and height (volume) probably resulted in their rather circular appearance today. This makes it difficult or impossible to determine their original form and orientation.

Attached mounds are those which are connected to low linear constructions which associate them with other mounds. These tend to be larger than the isolated mounds and thus present a more discernible shape and orientation. The linear features connecting these mounds are low (15 cm - 40 cm) and narrow enough that they do not obviously appear to have supported individual structures. Str 11 is attached to a long linear structure (Str 20) by a step which apparently demarcated an "interior" area to the west. The other two examples of attached structures are a pair of mounds connected to each other by a low narrow, flat-topped feature (Strs 4 and 5).

Rather than displaying distinct morphological features themselves, grouped structures are defined on the basis of their apparent associations with adjacent structures. in patterns reminiscent of plazuela groups. Two examples of these are seen with Strs 21, 22 and 23 enclosing a plaza bounded on three sides and Strs.14 and 15 forming an L-shaped group. It should be noted that excavations did not reveal any evidence of a prepared plaza surface.

A particularly interesting type of feature noted in the course of the mapping is the linear features seen in the open area devoid of mounds to the
west of Str 14. These were noted as being long, very low and very narrow lines on the surface. If not for the apparently drier conditions of the soil on these features which showed as dry brown grass, they most likely would not have been seen as their height is less than 15 cm. These linear features are c. 40 cm wide, spaced 1.5 m to 2 m apart and extend for up to 32 m. Only the most easily discernible of these were plotted on the map, though several less distinct ones were spread across this area.

An alternative, cross-cutting classification of the structures may be obtained by examination of the mounds' surfaces. It was noted during mapping that the mounds have varying degrees of vegetation cover. Some of them are virtually barren of grass cover and exhibit only cobbles, while others (particularly to the north and east) are well covered with grass (though none have cover as dense as that on the Nabitunich Mounds). The amount of grass cover is probably related to the amount of soil incorporated within and accumulated on the structures. It may also be notable that the edges of the upper surfaces of the more cobbled covered mounds seem to be a favored location for a low bushy plant (name unknown). As suggested by the excavations of Strs 14 and 23, this is due to nature of the construction materials and perhaps how well they are able to retain soil and moisture. Perhaps unfortunately, no attempt at such a classification scheme was attempted.

Mapping

In order to gain a spatial perspective on the area of cobbled mounds investigated in Operations 50 and 51, some efforts were directed to producing a map of the site. The result is presented here in the form of a 1:500 scale Maler map of the site.

The method employed was to make a sketch map and place a series of temporary datums (nine) at structure corners across the area as control points. Mapping was accomplished using a Brunton compass for determining angles with distances paced off and later converted to absolute measurements. Following this, a transit was used to shoot in and establish the coordinate locations of the temporary datums. This information was used to compensate for cumulative errors inherent in the pace and compass technique and to rectify the structures after they had been hand plotted. Structure elevations were determined with the aid of a hand held level and a
home-made rod marked in 10 cm intervals. In most cases, these relative elevations were taken from 1-3 m off opposite sides of the structure.

The resultant map is judged to be accurate and representative of the area. As checked by the transit, the error introduced by the pace and compass technique was in the range of .05-.07 m per linear meter traversed in the course of a looped circuit. No checks were made on the accuracy of structure elevation measurements, though we expect that any errors are consistent and within 10 cm of their actual height above adjacent ground surface.

Nevertheless, in reading this map several cautionary notes are indicated. First, it should be noted that the size of the mapped structures is quite small. For the smaller structures it the exact shape and orientation were not clearly discernible. In spite of this limitation, the locations and relative sizes of the structures are expected to be accurately represented, as are the forms and orientations of the larger structures.

A second aspect to be noted is that the map may give a false impression of the formality of the structures. Maler maps have traditionally been employed to locate much larger structures and monumental buildings. None of the architecture here is large enough to suggest having served as a substructure containing multiple free-standing superstructures.

A third comment must be made regarding the contour lines indicated on the map. These show only relative drops in elevation occurring at greater distances from the central area of the site. Though it is not the highest point at the site, monument 92-17 may be considered as the center away from which the contour lines represent sequential drop-offs in elevation. These lines show only relative drops in elevation as no attempt was made to accurately measure these changes in elevation. While changes in elevation were not measured, the contour lines on the west side of the map are plotted so as to follow the edges of the series of previous river terraces. Following standard geological usage, Terrace Zero (T 0) is the first terrace above the present day river while T 2 (upon which most or all of the visible structures are built) is the second terrace above the present day river.

Finally, we cannot assume the comprehensiveness of the southern portion of the map. While most of the mapped portion of the site lies in open pasture, the southern portion is forested and covered with moderately dense undergrowth. The bulk of the time allocated for mapping was devoted to producing an accurate map of the areas immediately surrounding the
excavated portions of the site and little time was spent in the overgrown area. Only the largest structures in this area were mapped. A few other, smaller structures not on the map are known to exist here. Nevertheless, the overall impression gained from reconnoitering in this area is that the unmapped structures here are neither as large nor as dense as in the well surveyed areas.

Previous Work / Stratigraphy

Previous excavations (Op.11) in this area were conducted by G.R. Holley. The focus of those excavations was to identify significant features of the area's stratigraphy and to explore the reasons for anomalies in the remote sensing (electromagnetometer, EM) survey headed by R.A. Dalan. The EM survey by Dalan and subsequent excavations by Holley were carried out in the presumably "vacant" areas to the north and east of the visible structures and focus area of Op.50.

The report by Holley of Operation 11 was particularly relevant to the interpretations of Op.50 and is summarized here. Op 11 established that the terrace on which the structures of this group had been constructed was composed of a thick (c.1 m) layer of sand with pebbles and cobbles which had been deposited in a number of episodes during which the river shifted its course. According to these interpretations, the river's course prior to the deposition of these sands was to the east of the present day terrace at the base of the hill forming a spur of the hill upon which Mr. Rudy Juan's home and hotel are located further east. Sometime prior to the Late Classic, the river shifted its course to the west. This was accompanied by powerful, high velocity flooding which resulted in the deposition of the sands. It was also suggested that this may have formed a sandbar before the river settled into a course to the west of the terrace. Today the river lies to the west in a deeply cut channel. The reader is advised to refer to Holley's report for a more informed review of these depositional episodes. Suffice it to say here that all structures investigated in this area (Op.50 and Op.51) had been built on these sands and dated to the Late Classic (primarily Benque Viejo III), except for the Proto-Classic house (Op.50A and B).

Goals / Objectives

The goals of both Operations 50 and 51 were to define the nature of this site in chronological and functional terms and to use these to relate the site to
the major local center of Xunantunich approximately 2 kilometers upriver.

Operation 50 was concerned with excavations off the mound structures and had three major foci: 1) definition of stratigraphy, 2) recovery of cultural materials from middens and 3) determining the reason for the various linear features to the west of Str 14. The objective of the first focus was to gain an understanding of the (primarily) natural as well as any cultural depositional episodes in the area. The results of this was expected to correlate with the findings of Holley's work (Operation 11) and be useful for comparisons of construction sequences of structures from across the site. Sub operation A was particularly oriented in this direction, though Suboperations I-Z provided additional information.

The objective of the second focus (recovery of midden material) was to obtain a sizable sample of cultural remains. With these, we hoped to both define the period(s) of construction and utilization of the structures at the site as well as draw some preliminary inferences regarding the activities which took place on and around the structures. Suboperations A and I-Z had this as a major objective.

The final focus of Operation 50 was the linear features to the west of Str 14. While regularity left little reason for doubting their cultural origin, we expected to confirm this. The primary objective was considered to be determining what cultural modifications resulted in the present day surface indications and whether they were modern or contemporaneous with the construction and occupation of other areas of the site. Though these were features visible on the surface, their assignment to Operation 50 (rather than 51) was more on the basis of their location off obvious structures (mounds) than being in "vacant" or "empty" zones.

Operation 51 excavations centered on examination of the mounds at the site and had two major foci: 1) definition of the architecture and 2) recovery of cultural material from fill and/or primary contexts.

The objective of the first aspect was to determine the construction techniques employed, whether the mounds were buildings or substructures/platforms, if floors, walls, etc. were present that could provide us with evidence of structure functions via in situ remains. Additionally, we desired more precise definitions of structure area, volume and orientation.

The second focus had as its objective the recovery of cultural materials from either in-situ or fill contexts that could be used for chronological
assignations of structure construction and/or use as well as inferring the types of activities that took place on the structures and in their vicinity.

In summary, the objectives of Operations 50 and 51 were oriented to natural stratigraphy, chronological placement, functional assessments and architectural definitions. While all of these are somewhat distinct, each of them was also considered to be interrelated in the overarching goal of linking this site with the center of Xunantunich. Considering the sizes and often unusual (i.e.: linear) forms of the mounds, as well as their density and unusual arrangement we were particularly curious whether they served as habitations or for some other purpose.

Subops A and B form one such group. Subop A was originally opened for the dual purpose of a) seeking refuse deposits associated with the mound structures, and b) to define the natural stratigraphy and/or cultural stratigraphic sequence of the area around the mounds on the sandbar terrace. The stratigraphy showed a series of alluvial deposits characteristic of high intensity high velocity floods to low velocity floods and perhaps colluvial deposits as well. The depth of excavations here presented us with a deep chronological profile extending back to ca. 1 A.D. and is one of the aspects distinguishing subops A and B from other subops of Op.50.

However, the more significant reason for distinguishing these from the rest of Op.50 was the location of the remains of an early structure. This was most likely a house dating to the Proto-Classic, and perhaps earlier. These remains included an earthen floor, post molds and a possible hearth or pit feature. After finding this, subop B was opened adjacent to A in the hope of being able to more accurately define and record it. However, it was realized that this structure was far too complex and at too great a depth (ca. 1.6m) to adequately excavate with the care it demanded in the short amount of time we could devote to it. The intact sections of floor and the lower portions of the pit’s profile were covered with perforated plastic sheeting and excavations were closed in order to preserve the structure for more focused future investigation.

Operation & Suboperation: 50 A

After removal of a 10-15cm layer of overburden composed of black fine sandy loam, we reached a level of dark brown sandy loam with pebbles. The pebbles ranged from 0.3-3cm in diameter and made up ca. 30% of the matrix
which was 10-15cm thick. Many of these small pebbles were broken and fragmented, and this level was determined to be an occupation surface. Below this came a thick (60-70cm) layer of medium to coarse sand with pebbles in two distinct strata. The upper one differing primarily in that it contained cobbles and was stained by organics, both of which were lacking in the lower stratum. The presence of extremely waterworn sherds indicate that they were deposited after much movement and abrasion during the alluvial deposition of these strata. Some minor lensing of sands and pebbles indicate that these strata were deposited during recurrent flooding episodes. This parallels the results obtained in much of Op.11 and we were most certainly dealing with some of the same depositional episodes. Below this was a thin layer of a brown, fine sandy silt which capped two distinct silty clay deposits. These strata may belong to the same alluvial and/or colluvial deposits found in Op.11.

At a depth of ca. 1.55m below the surface (70.85m), the remains of a small structure was encountered. This presented itself as two distinct circular post molds and a dark clayey zone along the SW corner of the unit. These were intrusive to a layer of fine sandy to silty yellow clay. Due to the presence of Chicanel sherds above this, we immediately suspected that we had encountered a PreClassic house floor (50 A/7 D-1). Set within this floor near the SW corner of the unit were several sherds which appeared to be from an intact or nearly intact bowl. A decision was made to collect these for analysis, and the floor area around them was excavated and a soil sample taken (50 A/7 D-1). Since the heavy clay matrix was making it impossible to recover the friable sherds intact, a 30 x 40 cm unit (50 B/1-4) was opened to give us more working room adjacent to subop A's SW corner. This was excavated in four lots in stratigraphic levels.

The opening of this unit did not make removal of the sherds any easier, and in fact only brought additional complexities to light. Visible on the surface of the floor in subop B were ashy areas and scattered flecks of what appeared to be fire reddened soil. Although only a single small stone was seen in the vicinity and no lensing or concentrations of fire reddened soil were seen, we suspected that we were dealing with something more than just the edge of a house floor, perhaps a pit feature of hearth. Rather than proceed much further in this direction we chose to take a crosssection of the post molds and abandon the excavation. Since the focus of the Op. did not include
this early time period and time was not abundant, it was deemed better to leave it as intact as possible for a future investigation which could devote to it the time and care it demanded.

The post molds belonging to this structure were 15cm in diameter, ca. 60cm apart on-center and 40-60cm away from the outer edge of the extant floor surface. They were revealed to be just over 30cm in depth. In section they were seen to be straight (unshaped) on one side, with the other side narrowed but still retaining parallel sides. This gave them a key-shaped longitudinal section. The narrowed side of both posts was on the north side. The profile of the unit revealed several additional bits of information as well as some cautionary notes. Among these latter is the fact that the floor surface was not immediately identified during excavations. In part the reason for this was that we dug Lot 6 in a 40cm level with the expectation that it would be the final level of the unit. This has implications for the depth of the post molds as well as their distance from the outer edge of the house floor. Unfortunately, the precise location of the floor's upper surface could not even be seen in the profile after close observation due to the fact that its interface with the overlying matrix was indistinguishable. Thus it would also appear that the silty clay material of the floor is composed of the same material which eventually buried the house. This may imply that the occupation period of this house was relatively short (perhaps befitting of its perishable/ephemeral nature). Based on the angle of the pit's side and lenses of ashy areas and snail shells, excavation could have penetrated as much as 15cm. An alternative is that the house actually lacked a formally prepared floor surface and that the silty clay deposits simply filled in an occupation surface which had been scooped or repeatedly swept out by the occupants, or simply compressed by their activities.

A second, perhaps more interesting aspect of the profile was a localized lens of snail shells in the east wall. The excavators wonder if this was the residue of a meal (or meals) which were deposited just outside the house walls. With some knowledge of the behaviors of these creatures, it could be determined if this is a viable possibility, or if it was the result of their natural behaviors.

The preliminary analysis of the ceramic materials provided by L. LeCount (project ceramicist) is instructive in interpreting the chronological placement of the features and the stratigraphic sequence of this unit and the
Lots 1-3 were composed of a mixed assemblage of Pre-Classic to Late Classic materials. These lots went to a depth of ca. 70cm below the surface and into the upper portions of Stratum IV (alluvial sands).

Lot 4 included a portion of the bottom of this stratum. From this lot, two pieces of Mars Orange ware and five pieces of calcite tempered wares point to a Pre-Classic date.

Lot 5 contained ceramic materials broken down as follows: six pieces of Mars Orange, four with waxy slip (Chicanel) and 22 with calcite temper. This lot included Strata V and VI, dating them fairly well to the Pre-Classic.

Lot 6 contained what was referred to as a "good Pre-Classic assemblage"; one which had a fairly sizable number of sherds with none post-dating the Pre-Classic.

The three sherds recovered from the floor/pit feature were Negroman variety of the Floral Park complex. Though this is usually associated with the Proto-Classic, its "intrusive" nature at Barton Ramie opens the possibility for an earlier date in the upper river valley (LeCount, personal communication).

In summary, it appears that the major, high velocity flooding which laid down the coarse sand deposits occurred prior to the Late Classic. Lot 5, dating to the Chicanel phase is from the deposits immediately pre-dating the onset of (potentially) catastrophic flooding and shifting of the river course to the west (see summary for Op.50, and Op.11 report for discussions of stratigraphy). The presence of Negroman sherds directly associated with the house may however point to the initiation of major flooding during the ProtoClassic.

Subops C-H were excavated in order to explore and define the nature of a series of very subtle low linear features. On the surface these features were most visible only due to different patterns in the pasture grass, the elevations of these linear features was <15cm. These features were parallel lines of about 40cm in width, spaced 1-2m apart and stretching for as much as 32m west from the structure. Since these subops investigated a feature visible on the surface it may be thought that they would have more accurately been classified as belonging to Op51. These linear features were not considered to be structures and they were assigned to Op50 more on that basis than as having been in "vacant" or "empty" zones.

The linear features were composed of a series of parallel lines of
slightly higher elevation (<15cm) in an open area, devoid of surface indications of architecture. These features were subtle enough that they probably would not have been identified except for the fact that the grass on them was less green and shorter than in the lower areas between them. These lines were ca. 40cm wide, and were separated by intervening areas of ca. 1-1.5m. They were closely associated with the mound excavated in Op.51 F-J. They appeared to abut, or nearly abut the west side of that structure and some of them extended nearly 32m between this structure and the area defined by the linear structure excavated in Op.51 L-O. One of our initial suspicions was that they may have been the result of modern agricultural practices.

Subops C-H were so positioned to gain a cross section of one of the more visible of these features and the lower areas on either side of it. Subop C began in the area to the south of one of the selected feature and subsequent excavations proceeded north over and to the other side of it. After horizontally exposing it and drawing it in plan view it was removed to obtain a cross section view of it in the trench profile.

The results of these procedures showed that the feature was a thin, narrow band of small limestone cobbles and pebbles. It was 80-90cm wide and 10-20cm thick. Neither north nor south side, nor the top or bottom of the feature could be defined by anything more formal or prepared than the surface of these cobbles. The areas on either side of the feature were largely devoid of any stones. These cobbles had been laid directly on the surface of the medium to coarse yellow brown sand. Unlike the other examples of architecture investigated in this area (Ops. 51 A-E & K and 51 F-J), there was no deeper organic staining immediately below the feature.

During the excavation of OP.50C, a dark stain, intrusive to the yellow brown sand below was noted in the NE corner of the profile. This led to the excavation of Subop. E to provide us with a view of it in plan and its designation as 50G/1 D-1 with the expectation that it was a cultural feature of some sort. After completion of the trench through the linear feature, this was pedestalled, and sectioned along an axis formed by the east edge of subops C and D. This revealed the stain to be circular in plan and semi-ellipsoidal in section. It was only after careful excavation of this stained matrix that it was determined to be no more than the remains of a tree. Several fragments of fibrous, woody material were recovered which looked like they had come from a palm tree. It is notable that several other such stains were found across
the area of Ops. 50 and 51. Cocoyol palms are the most common palm in the area today, though a few cohune palms have been seen within a radius of ca. 500m.

The excavation of these subops revealed that the features were simply narrow thin bands of small cobbles separated by intervening areas lacking cobbles. No other features were found associated with them and interpretations are highly speculative. One of the initial suspicions was that they were modern agricultural features. While excavation seemed to indicated that they were constructed in antiquity (Late Classic, Benque Viejo III), this does not rule out an agricultural function. They seemed too narrow, long and closely spaced to have been structures. The tentative suggestion, based primarily on negative evidence, is that they were agricultural features for water and/or soil retention. This can only be assessed by a direct and focused study. Perhaps detailed analysis of chemical and physical constituents of the soils and their micro-stratigraphy, in conjunction with botanical/palynological studies could elucidate the functions of these features.

In summary, their location beneath the dark layer of overburden seemed to disconfirm the notion of their modern origin. Their small, narrow size, length and closely spaced intervals do not suggest structures. No post molds or "finished" surfaces were evident. Neither are the excavators aware of any examples of such architecture in the Maya area. Based largely on this negative evidence, we offer the tentative and speculative suggestion that they are some kind of ancient agricultural feature. Two possibilities suggest themselves in this regard. One is that they were constructed to serve as water and/or soil retention devices or possibly even irrigation conduits. The other possibility is that they were fortuitous clusters of stones which resulted from repeated disturbances to the soil during planting and tending of a field. Some support for their agricultural nature may be found in the fact that there is no zone of deep organic staining below the features themselves. This is unlike the other structures excavated in this area which showed marked staining below them. Arguing against an agricultural function is that a pebbly "occupation" surface was identified in the areas between the linear features. Though it is true that the density of pebbles was lesser in the areas between the features, it may call into question the determination of an occupation surface elsewhere. For we had found areas that completely lacked such pebbly layers (i.e:Op.50T), and we must question why, if this was an agricultural
feature, did such a layer develop here. Nevertheless, we can presently offer no
other potential functions for this feature. Evaluation of their possible
agricultural function can only be by a detailed, in depth investigation. Such
an investigation could profit from analyses of the physical and chemical
properties of the soil and their microstratigraphy in conjunction with
botanical/palynological studies.

Refuse Deposit Ops 50 M & N

Subops I-Z had as their explicit objective the location of refuse deposits
associated with the structures in the area. It was hoped that this would nail
down the chronology for their construction and occupation as well as be
helpful in determination of the functions which took place in the vicinity. In
spite of placing several 1 x 1m units across the area adjacent to structures, only
a single refuse deposit was located (Ops 50M and 50N) off the east side of Str
15.

These deposits contained an abundance of ceramic materials, though
lithic remains were not noticeably common. However, analyses of materials
from Operations 50 and 51 did not include quantification at this stage and no
statistically reliable comparisons are possible. Nevertheless, it was obvious
that several times more ceramic materials per excavated volume was
recovered from these units. and analysis revealed it to be essentially entirely
of Benque Viejo III materials. The occurrence of artifacts noticeably decreased
upon reaching the level of the flood deposited sands. We are confident in
assigning the date of this deposit and the use/occupation of Str 15 to Benque
Viejo III / Late Classic times. Based on the overall uniformity of the site’s
stratigraphy, this is believed to be contemporaneous with the construction
and use of other structures at the site.

With the exception of the quantity of ceramics, these units did not
differ from any of the other excavations. No carbonized or faunal remains
were encountered, nor did the soil textures colors or general characteristics
differ. This deposit does not seem to represent a wide range of refuse types
(i.e: food remains) one expects from household activities (i.e: food
preparation and disposal). However, as no faunal remains were recovered
from anywhere in the site, it is possible that it is a function of poor
preservation.

Subop. 50K was placed off the end of a linear structure off
the west edge of the upper terrace. It produced very few artifacts but did
delineate the western limit of the terrace upon which the structures of the
group were built.

A second objective was to define the stratigraphy just to the west of the
terrace upon which the structures were built. It was located off the end of a
linear structure which abutted the west edge of the terrace.

Despite excavating to a depth of 1.5m. the yellow brown sands with
pebbles and cobbles seen across the terrace were not encountered. Two strata
were found which differed from those found elsewhere. The first of these was
a dark brown hard packed clayey loam which was ca. 50cm thick. We
interpreted this as being largely a post-occupational deposit. Below this was
hard packed brown clayey silt. It was suspected that this may be related to the
deposits found beneath the yellow brown sands in Op.50 A due to the
similarities in appearance and elevation. This stratum produced an
abundance of snail shells, and neither stratum produced very much
artifactual material.

If the hard packed clayey soil is of the same deposit as seen in Op 50A,
as we suspect, the yellow brown sands deposited while the river shifted to the
west either were not deposited this far west, or had been subsequently washed
away. It also appears that this may have been the exposed river bank or first
terrace above the river during the occupation of the mounds in this area. If
this was the case, it may have provided a (narrow ?) zone of rich agricultural
soil for the occupants.

OP. 50P The explicit objective of this subop was to locate refuse deposits
which could be used for assigning the structures in the area chronological
affiliations and functional interpretations. It was located off the south side of
the linear structure (Str 20) associated with Op. 51L-O further to the NE. Based
on those excavations, this subop was determined to lie off the back side of the
structure.

After removal of a dark sandy loam layer, encountered two and
possibly three cut stone blocks of about 20-40cm. These were totally
unexpected in this area since all other excavations revealed rather ill defined
architectural remains. These appeared to be associated with a layer or pocket
of coarse dark yellow brown sand and pebbles and an area of cobbles.

It is possible that this material is no more than fill. But this raises the
question of where the cut stones come from. There may be the remains of a
low platform or other type of architectural feature here. This is significant not just for the implications of "invisible" subsurface architecture in this area, but also that this architecture may have much more formally and elaborately constructed. These possibilities remained unexplored as the op. objectives lay elsewhere at the time.

Subop 50V was located off the north edge of an small isolated mound structure (Str 3) in the north central area of the group. It showed that the sandbar upon which the group was constructed had a distinct drop-off in the area of this structure, and that a different post-occupational deposit has been laid down to the north. It also showed that this structure was much higher (>1.5m) than its surface indications would suggest, at least on its north side, perhaps making it one of the tallest structures in the area. An important implication of this is that additional structures, contemporaneous with those in the investigated area, may be invisible and scattered across the area to the north. This possibility needs to be investigated further.

The three strata encountered in this unit were quite different than those found in most other Op.50 excavations. The layer of very dark brown sandy loam was thicker here, up to 20cm thick. No pebbly layer of an occupation surface was found. Rather, we excavated through a layer of packed fine to medium brown sand with no cobbles or pebbles. Below this stratum we encountered a layer of sand which appeared to be from the same deposit as elsewhere: yellow brown medium to coarse sand.

A concentration of cobbles in the SE corner of the unit that appeared to have been from the adjacent mound continued through the second stratum and it appeared that it was constructed on the same yellow brown sand surface as the excavated structures in the area. This indicates that the second stratum we found in this unit was a post-occupational deposit, and it wasn't seen in any other excavations. It also shows that the mound had originally been much higher (perhaps 1.7m) in antiquity, at least along its north face.

One of the more important implications of the nature of these deposits and architecture is that an unknown number of other smaller structures may lie to the north, having been buried by this later deposit. There is a slight ridge stretching from the NW and SE sides of the mound and the drop off on the north side of this is likely related to the slightly different depositional history of the area to the north.
Operation: 51
Suboperations: A-P

Subops A-E and K were situated on a mound (Str 23) which was part of a formally arranged plazuela group consisting of two parallel structures with a smaller structure at one end of them. This arrangement formed a formal plazuela type of group bounded by structures on three sides. The fairly large size of this mound and its membership in a rather formal group made it a likely candidate for both definable preserved architecture and perhaps the remains of a residential occupation.

Excavations began on the south side of this structure, apparently its rear side, and proceeded through it into the plaza-like area formed between it and its two neighboring structures. As was expected, the architecture of this structure was extremely ephemeral in terms of defining its exact limits during the course of excavations. Clear views of the structure's architecture and construction techniques were gained only by close and concentrated study of the excavations' profiles.

These profiles showed that the structure was composed primarily of chert and limestone cobbles, ranging in size from 315cm in diameter. Larger chert cobbles of ca. 12-15cm in diameter defined the bottom outer edges of the construction. Within the structure was a prepared surface of small pebbles and gravel of 0.5-3.0cm in diameter. This surface was firmly packed, suggesting that it may have been an occupation/activity surface. No evidence was found for the existence of more finely finished surface on this pebble layer. It is possible that an earthen or sand floor once topped these pebbles and has since been totally eroded due to exposure to the elements (especially flooding). It seems unlikely that a plaster surface would have left absolutely no trace for us to recover despite exposure to the rigors of the elements. If this was the case, then account must be taken for the abundance of loose cobbles above this layer. These cobbles may have been part of the walls, being held in place by wattle. However, their small size (38cm) would have made it difficult to retain the in such a wall and they would have had to have been daubed into place as well. No pieces of burnt daub were recovered in Op51, though it was not infrequently collected in Op11. It is thus quite possible that it was not identified during excavations of Op51. The extreme looseness of these cobbles in this layer does not indicate that occupation or activities ever took place on it.
Beyond the limits defined for the structure itself, no formally prepared surfaces were found and it is doubtful any had existed. However, here as elsewhere in Ops 50 and 51, a level of packed loamy soil with pebbles, flecks of marl and tiny broken pebbles suggested an occupation/activity surface.

Operation: 51  
Suboperation: A

Op. 51 A was the first unit of a trench which went through Str 23 which was part of a plazuela-like group. This group was composed of a pair of long, east-west oriented structures and a smaller mound between them at the east end forming an area enclosed on three sides.

Op. 51 A was placed off the south (back) side of Str 23 which enclosed the south side of the plaza, and the trench proceeded from this through the approximate center of the mound and into the plaza. This trench came to include Ops. 51 A-E and K. No in situ architectural features were identified during the excavations, it was only after careful observation of the trench profile that the structures architecture became clearly visible. Therefore, the discussion will focus on the sum of results from all these subops.

At the beginning of excavations, Str 23 presented itself as a mound 16m long, 5m wide and about 50cm high. The surface was composed of chert and limestone cobbles which covered about 50% of the surface area and some short grass and scrubby vegetation.

A concentration of chert and limestone cobbles in the NW quadrant of subop B was the first subsurface indication of subsurface architecture. But we were unable to identify any stone alignments demarcating the limits of construction and disturbed fall at this point.

The profile revealed that the structure was composed of cobbles lying on a prepared layer of pebbles. These had been placed directly on the surface of the yellow brown sands of the flood deposit. The pebbles averaged from 0.25-3.00cm in diameter. On either end of the mound, they tended to be somewhat smaller (0.253), often fragmented and made up 15-30% of the matrix. Directly beneath the mound these pebbles were larger (.5-3.0cm) and made up 40-60% of the matrix. The matrix here was more of a yellowish brown and was quite firmly packed. In the west profile, this area extended from the junction of subops E and K south, and through most of subop C. At these two ends the limits of the denser layer of pebbles was difficult to distinguish but appeared to coincide with cobbles which were somewhat larger than the "average".
This was most easily seen at the south end of Op51 P's west profile where large chert cobbles demarcated the layer of dense pebbles. The thickness of this layer beneath the mound was 822cm.

Above this dense pebble layer was a layer of cobbles in a matrix of black clayey loam. This stratum was 3.5-6m wide, with the wider section being that in the east wall profile. These unshaped chert and limestone cobbles averaged ca. 12-15cm and composed 6080% of the stratum. On both sides of the trench near the center of this layer was an area 1.5-1.9m wide of very loose cobbles. The majority of cobbles in this area were of limestone and smaller than cobbles in other areas with an average size of from 3-8cm. There was very little soil matrix surrounding these cobbles which made up ca.90% of the stratum here. The extreme looseness in this area made it difficult to maintain vertical excavation walls and the east wall of subops C and K collapsed. Clearly, the density of the cobbles in this stratum and the lack of soil are responsible for the cobbled appearance of the mound's surface.

The following conclusions are based primarily of the appearance of the west profile as it had more integrity and was easier to "read". The overall width of the structure was somewhere between 3.5 and 6m, probably closer to the lower end of this range as seen in the west profile. We estimate the width to have been no more than 4m. It appears that the larger chert cobbles at either end served as a sort of foundation for the cobbles above and as a retaining face for the inner prepared layer of pebbles. While the pebbly layer continues beyond the apparent limits of the central construction, the much lower density of pebbles outside the structure is not suggestive of a formally prepared surface. The firmly packed nature of the pebble surface within the structure indicates that it may have been an activity surface. It is not likely that this had once been covered with an earthen floor as we would then expect a much deeper penetration of the organic staining of the sands upon which it was placed.

If this pebble layer was the interior floor surface, then account must be taken of the mounded deposits of cobbles above. The extreme looseness of some areas of the cobble layer indicates that it may be fall rather than fill. The small size of the cobbles in the loose area would have made it difficult to hold them in place on a wall. The may have been retained in position by a combination of wattle and daub. No postholes were identified nor were any pieces of daub recovered from the excavation of this structure. The not
infrequent occurrence of daub in Op.11 suggests the possibility that it was simply not identified here.

One implication of the assertion that the pebble layer was an interior floor/activity surface is that the structure was not elevated much above the surrounding terrain. These pebbles were placed directly on the yellow brown sands of the ground surface. The mound visible on the surface today, in this case, would be the result of fallen walls rather than the presence of an elevated substructure.

Finally, the construction of this architecture, whatever its true form may have been, on the surface of the flood deposited sands places it in a position contemporaneous with the other features excavated in Ops 50 and 51 (excepting, of course the Proto Classic house floor in Op.50A and B).

Subops 51F-J were located so as to cross through a long low grass covered mound (Str 14) which seemed to form one side of an L shaped group near the east edge of the zone of mounds. The south end of this structure was connected by a step-up from the ground surface to the south to another smaller grass covered mound. The fact that the step-up between these two structures does not continue on either the east or west side of this group suggests that it was an artificially constructed feature defining one side of the group. Due to the presence of relatively dense grass, it was suspected that this structure was constructed using a different technique than that excavated in subops A-E and K. It was also hoped that the grass was indicative of a greater accumulation of soil and that this soil may have served to provide a greater degree of protection for the architecture allowing more ease of identification during excavations.

During excavations no architectural features or elements could be identified in situ, and it was only in the profile that the structure's general form could be ascertained. This profile demonstrated that this structure was even more amorphous than that seen on subops A-E and K. The mound was composed entirely of uniformly sized cobbles ranging from 3-5cm in diameter. No larger stones which could have served as retaining or foundation stones were found to define a clear demarcation of the architecture. Neither was a prepared surface of any sort revealed. The homogeneity of this construction material and lack of any discernible interior surfacing seems to indicate that the form of this structure was one of a substructure, perhaps upon which an entirely perishable superstructure was
erected. However, no evidence (i.e. postmolds, foundation braces, daub) for any such structure was found.

Outside the structure, no evidence was found for a finished surface was found. However, as elsewhere in Ops 50 and 51, a layer of packed loamy soil with pebbles was found which was interpreted as an activity surface.

Operation: 51  Suboperation: F

Op. 51 F was the first unit opened to explore the nature of Str 14 that was a member of what appeared to be an L-shaped semiformal group. It was 4-5m wide, 22m long and stood 30-40cm high. It was the longer of the two mounds and was oriented roughly north-south. The surfaces of both mounds were largely covered with grass unlike the more cobble covered mounds such as was excavated in Ops.51A-E and K. This mound appeared to be associated with the long parallel linear features stretching across the open area to the west (see Op.50 C-H).

As no in situ architectural features were identified during actual excavations and architectural data can only be obtained from a summary discussion of the entire profile of the trench through this structure, this section will summarize the results from all subops in this trench. These are Op.51 F-J inclusive, and 51P.

Since this was a grassy mound we expected that it had more soil accumulation/build-up than the mound excavated in Op.51 A-E and K. We hoped that this layer of soil would have protected the architecture to a greater degree and facilitate its identification during excavation.

After excavating the trench through it, this structure was revealed to be a very simple cobble mound, built directly on top of the coarse yellow brown flood deposited sands. This layer of cobbles was fairly undifferentiated. The cobbles averaged 3-8cm in diameter and made up about 90% of the stratum's matrix. The remaining material was a dark clayey to silty loam interspersed among these cobbles. Virtually all of the cobbles were limestone with very few chert cobbles present.

There was no evidence for a prepared surface of any kind. The pebbly layer beyond the limits of the mound which we determined to be the occupation surface was made up of pebbles .5-1.5cm composing ca.10% of the matrix. This pebbly layer clearly did not extend within or beneath the mound as did the one seen in Op.51A-E and K. Even where these pebbles formed a
discrete layer outside the structure, they made up much smaller proportion of the matrix. This makes it appear that this mound may have served as a substructure for a perishable structure above.

Subops L-O crossed a step-like feature which appeared to demarcate the concentration of small structures that included Strs 21, 22 and 23, excavated in Op 51A-E and K. Although one of the original goals of Op 51 was to explore the nature of the linear structures time did not permit this and these subops are not properly classified as on a linear structure. Rather they cross a step like feature which extends from the north end of a linear structure (Str 20) and connects to a small mound structure (Str 11). This excavation was selected for its association and similarity to the linear structures. It was also hoped that it would allow us to better understand the spatial arrangement of this area viz a viz the orientation or focus of some of these structures.

Somewhat surprisingly (since this was the smallest structure excavated) this was the only structure which revealed an in situ architectural element identified during the course of excavations. This was an alignment of large chert cobbles which served to define the east edge of the step feature. These appeared to have been laid as basal "foundation" stones for the east edge of a low cobble structure. This structure had been built on the edge of what appeared to be a naturally raised ridge-like area of the underlying sand deposits. This supports the idea of a sandbar having existed in the river at some time. The pebbly layer we had identified elsewhere as an occupation surface was found only to the west of this structure. It therefore seems likely that this feature served to define an inner area of activity surface to the west and an outer area lacking evidence for intensive activity or use. From this we can tentatively assert that the linear structure faced to the west and was the eastern extent of the immediate focus for the structures between it and the present day river.

Operation: 51 Suboperation: L

This unit was the first opened to investigate the nature of a step-like linear structure near the central part of the mound zone. This structure abutted the end of a large linear structure to the south and a smaller mound on the north. It appeared to define and separate the open area containing the long, low linear features (Op.50 C-H) to the east and the cluster of mounds to the west. This summary will consider all the subops concerned with this
structure (Op. 51 L-O).

The area of mounds to the west was at a slightly higher (ca. 40cm) elevation than the open area to the east. We wished to see if this was the edge of a natural terrace (perhaps a sand bar) or totally artificial. Although one of the goals of Op. 51 was to excavate one of the larger linear structures, time constraints precluded this. This low feature was selected as a sort of compromise since it was associated with and a direct extension of the linear structure to the south. If not being able to provide information from which to infer functional assignations for the linear structure, we expected it to provide us with some idea of its construction viz a viz whether it was a partially natural ridge or a totally artificial modification to the ground surface. Furthermore, we expected that we would be able to infer whether the focus or orientation of the linear structure was to the open area to the east or toward the mound cluster on the higher surface to the west.

In spite of the fact that this was one of the smallest architectural features investigated and suspected of being among the most poorly defined, it was the only place we were able to identify in situ architectural elements. This was an alignment of chert and limestone cobbles found at the base of Lot 1 in subop M. The alignment's north-south orientation delimited the lower west edge of the step like feature. No such alignment was found along the west edge of the feature.

After continued excavation failed to reveal any additional identifiable in situ architectural remains, excavations were continued deeper into the sand deposits along the northern 50 cm of the units in order to gain a clearer profile view of the construction. This confirmed our initial suspicion that the alignment served to define the base of the east edge of the feature. Above and behind (west of) this alignment were placed pebbles and cobbles with an average size ranging from 5-12cm. The pebbles and cobbles made up ca. 40% of this layer. To the west of this cobble and pebble layer we encountered a dark pebbly layer which we interpreted as the occupation surface. No indications of such a surface were found to the east of the construction. Finally, we noted that the surface of the layer of coarse yellow brown flood deposited sands with pebbles and cobbles sloped downwards to the east.

In summary we drew four conclusions from these observations. First of these is that this is an artificially constructed feature. Secondly, it was built
on the edge of the slope of a natural rise on the surface of the flood deposited sands. This may have been the sand bar posited by Holley to have once existed in this area. The third conclusion was that the presence of an identifiable occupation/activity surface up on the higher terrace-like area to the west and lack of such a surface to the west indicates that the focus or orientation of Str 20 to the south was westwards. Finally, its construction directly on top of the flood deposited sands indicates it to be contemporaneous with the other investigated structures in the area (excepting, of course, the Proto-Classic house in Op.50 A and B).

Summary
In summary, we are able to state that most, if not all, visible structures in this area were built directly on the upper surface of the coarse yellow brown sand deposit. Ops. 50 and 51 demonstrated that the date of this deposit probably post-dates the Proto-Classic and was completed by the Late Classic. Furthermore, no Terminal Classic materials were found and the vast majority of the diagnostic ceramics date to Late Classic/Benque Viejo III times. Although we are able to state with confidence that the area represented by the visible structures dates to the Late Classic, further analysis needs to be done to begin to define the nature of the activities performed in the area. However, the arrangement of some of these structures into rather formal plazuela type groups and the presence of (a few) manos and a metate suggest a residential function for at least part of this area. The lack of numerous refuse deposits and general paucity of artifactual materials in conjunction with no post-construction modifications to the structures and a minimal investment in architecture suggests a short term and/or very low intensity occupation.

Artifact Analyses
Unfortunately, intensive analyses of material recovered from Operations 50 and 51 have not yet been conducted. At this stage only very preliminary analyses have been completed and comparisons with Xunantunich or even intrasite comparisons cannot yet be made with any degree of confidence. A preliminary type-variety study of ceramics from selected Lots has been graciously supplied to the author by L. LeCount, project ceramicist and has already been referred to in the above discussions. Faunal remains consist solely of shell and no analysis of these has been conducted.
Examination of the lithic material was carried out by the author and consisted only of identification of "formal" tool types i.e.: bifacial implements, blades, ground stone. A total of 15 pieces of flaked stone implements and 5 pieces of ground stone were recovered. The flaked stone implements considered here do not include utilized flakes.

Cores: Three chert cores were recovered. Two of these were bidirectional (Ops 50 F and 51 C), while the third was multidirectional (Op 50 Y).

Blades: A total of four chert blades were recovered, two each of triangular and trapezoidal cross sections. One of each of these forms was recovered from contexts contemporaneous with the structures at the site (Ops 50 A and 50 C), while the remaining two came from levels pre-dating the onset of major flooding of the area (Op 50 A).

Pick: One pick-like implement was recovered (Op 50 Y). Although it is defined here as a pick due to its overall shape, it is unifacially worked and exhibits battering and step-fractures along one of its lateral margins.

Adze Pre-form: A single large bifacial pre-form was recovered (Op 50 N). Its status as a pre-form is based upon what appears to be a production failure near its distal end in the form of a perverse fracture.

Large Bifaces: Two large bifacial implements were recovered, one of chert and one of limestone. The chert specimen (Op 50Y) is triangular in outline with a convex cross section and shows extensive battering along its distal (broad) end. The limestone biface (Op 51F), while not complete, appears to be more nearly oval in outline, with only a slight taper at its proximal end and is convex-convex in cross section. Its distal end has been terminated by the removal of a singular, large flex-fracture probably related to use.

Projectile Point: A single projectile point of chert was found (Op 50F). This specimen was basally notched and nearly complete, missing only the distal-most tip which had been lost as a result of an impact fracture.

Hammerstone: One hammerstone was recovered (Op 51 N). This did not
show evidence of extensive utilization as very little pecking was seen along the margins and only two flakes had been fractured off its surface.

Obsidian: Two pieces of obsidian, both blades and both of a similar, uniform gray material were found. These examples come from in or adjacent to Str 14 (Ops 50F and 51J).

Ground Stone: Five pieces of ground stone were recovered: three manos, one metate and one piece which resembles a "smoother". Two of the manos (Ops. 51D and 51M) and the metate (Op 50Q) are of a pinkish to gray granite with large crystals. The two manos are square in cross section and convex-convex in longitudinal section. The metate has a "turtle-back" form. The remaining mano (Op 50J) is of a gray granite composed of a finer crystal structure than the pinkish-gray material of the other pieces, and is plano-convex in both cross and longitudinal sections. It may be worth noting that all examples of ground stone were recovered from the central portion of the site.
WEST PROFILE OF TRENCH

Scale = 1:20
50 cm

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Xunantunich Settlement Survey
Preliminary Report

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Introduction

Since Gordon Willey's pathbreaking work, *Prehistoric Maya Settlement in the Belize Valley*, Maya scholars have been increasingly aware of the analytical potential of settlement studies. In the 1980's and 1990's, the study of settlement patterns has become a prominent avenue of research in the Maya area (Ashmore 1981; Culbert and Rice 1990; Vogt and Leventhal 1983). With this increased volume of research, the sophistication of settlement pattern studies has risen in terms of methodology, analysis, and the breadth of interpretative issues addressed.

Recognizing the importance of settlement research, the Xunantunich Archaeological Project (XAP) has included plans for a comprehensive settlement survey. This survey formally began in 1992 with a two month pilot project in June and July.

The Xunantunich Settlement Survey (XSS) has two main goals. The first is to understand Xunantunich as an ancient community. Much has been written about the biases inherent in archaeological projects that focus only on the civic-religious core of sites. XAP is committed to understanding the whole of the ancient Xunantunich society, from elites to commoners. To accomplish this, complete survey will be carried out in as large an area around the site as possible; this would usually be termed "peripheral survey." We hope to be able to delimit and survey the whole of Xunantunich, although the western sector might be problematic given that the Guatemalan border lies approximately 3/4 km from the site core.

Second, XSS also intends to place Xunantunich into a larger regional context. XAP has the good fortune to be working in an area that is currently witnessing an intense spate of archaeological research. Current or recent work in the Upper Belize Valley includes work at Cahal Pech and Baking Pot by Jaime Awe and James Conlin, at Cahal Pech, Buenavista, and Arenal by Joseph Ball and Jennifer Taschek (Ball and Taschek 1990), in the region between the Mopan River and El Pilar by Anabel Ford and Scott Fedick (Ford and Fedick 1992; Ford 1991; Fedick 1988, 1989), and at Blackman Eddy by James Garber (Garber et al. 1991). Although Ford and Fedick's BRASS project is the only one that has focused principally on settlement survey, each of the other projects has been interested in questions of settlement distribution and has included some research in that direction. At Xunantunich, XSS aims to produce a data set that will be comparable to those being generated by these other projects in order to confirm, critique, or expand on the inferences that are being made in the region. This possibility of regional cooperation is an exciting one that
has rarely been achieved in the Maya area, the work in the Copán Valley being a possible exception.

In the broadest sense, the goal of XSS is to understand the factors that influenced settlement patterns in the Xunantunich region and how these factors changed through time. This latter issue is especially interesting to us, given the apparently late and abrupt florescence of Xunantunich as a local center of power in the Late and Terminal Classic periods. How did this new concentration of religious and political power influence pre-existing settlement patterns in the region? By combining the peripheral work with a series of transects radiating out from the site core, we hope to be able to address issues of land use and land tenure, social organization and its changes, shifts in political power in the valley, and issues of the influence of ideology and power in deciding settlement location.

Given these ambitious and obviously long-term aims, the 1992 XSS season was conceived of as a pilot study. In a nutshell, we wanted to spend some time getting to know the area in order to better prepare for full-scale survey beginning in 1993. There were three principal goals for the 1992 season:

1) Survey and map parts of the settlement area around Xunantunich. This would provide an initial database from which to build hypotheses for future work in the periphery.

2) Reconnoiter the region around Xunantunich, especially in the areas where we considered placing our transects. This would give us preliminary data with which assess and refine our proposed survey methodology and to create some expectations and hypotheses to evaluate in future seasons.

3) Conduct some efficiency and feasibility studies regarding surveying methodology and test pitting. This would allow us to identify and work out methodological problems before initiating full-scale survey work in 1993. It would also give us a means to estimate the time it will take to complete future survey work.

Each of these goals will be discussed below, along with the results.

**Settlement Survey**

As stated above, one of our goals for 1992 was to examine the patterning and
density of settlement in the Xunantunich periphery. To this end, we surveyed slightly under 70 hectares. The survey area was actually composed of two spatially disparate parcels: approximately 42 hectares on the Archaeological Reserve lands surrounding the site core of Xunantunich and some 27 hectares of land belonging to Dr. Dorrell Biddle and Mr. Rudy Juan. The Reserve land was characterized by relatively mature forest; most of the area had been cleared for agriculture at some point prior to its purchase by the government in the 1960's (P. Valdez, personal communication, 1992). This second parcel lies approximately a kilometer northeast of the Xunantunich site core on the other side of the Mopan River. The vegetation on the second parcel was roughly half cattle pasture and half secondary growth; the secondary growth was in various stages of re-growth, since much of the area had been cleared and plowed within the last 15 years and smaller patches re-cleared for milpa in the time since (D. Biddle, personal communication, 1992). As will be discussed below, the nature of the vegetation effected both the efficiency of survey and the visibility of archaeological features.

In the Spring of 1992 an opportunistic survey was carried out in the Reserve lands, during which some brechas were cut north and east of the site core. After reconnoitering the edges of the Reserve lands, we decided that it would be best to use the brechas cut earlier in the year as reference lines, similar to the centerlines of transect surveys. In some areas these brechas had to be extended all of the way to the edge of the Reserve; in other areas, the spring brechas were too far apart for convenient survey, and we cut new brechas oriented to magnetic North. The earlier brechas tended to be aligned East of North. On the non-Reserve lands, we cut one E-W brecha that bisected the parcel of secondary growth from the Mopan River to its eastern edge. Another E-W brecha was laid out down the center of the parcel of cattle pasture.

All survey was pace-and-compass using a Brunton. The pacings along the various brechas were easily related to known features such as the edge of the Reserve, roads, and fence rows, providing ready checks on accuracy. Pacing, especially on areas of sharp changes in relief, is inherently less accurate than transit or tape survey. However, given the goals of the 1992 survey, the ability to cover a large area quickly outweighed the slight loss of accuracy. The survey itself consisted of cutting ephemeral picados between brechas. These picados ran approximately perpendicular to those brechas (the picados invariably were oriented to magnetic North) and were spaced according to the visibility; the goal was to space picados such that no mounds would be missed between them, but such that there would be
minimal overlap in the area surveyed. Because the Xunantunich Reserve is a biological as well as archaeological reserve, we attempted to cut the picados so as to minimize the impact on the natural vegetation; nor did we want to cut excessively on the privately-owned properties. When a mound (or other cultural feature) was encountered, it was cleared just enough to permit discerning its form. Some non-mound features were found that were obviously cultural: artifact scatters, quarries, chultunes. A few other features that seemed to be cultural in origin, but could have been natural, were mapped in and their unusual or questionable nature noted. Rough topographic notes were taken to allow an intuitive topographic map to be made of the survey areas. Eventually, all cultural features and topographic features were mapped at 1:1000 scale.

We employed two slightly different methodologies in the two survey areas. On the Reserve lands, we would wait until several mounds had been identified and then go back and pace them in using paced reference points on the main brechas. In the other survey area, I attempted to count paces while cutting picados, eliminating the need to re-walk picados. This procedure saved time, but was not quite as accurate, since uniform pacing was not always possible while cutting through secondary brush. Regardless of the pacing procedure, each mound or other feature we found was sketched in a fieldbook and any interesting observations regarding the mounds were made. If there were diagnostic sherds visible on the surfaces of the mounds or in the backdirt around looters' trenches, these sherds were collected and brought to the XAP ceramicist, Lisa LeCount, for analysis.

The survey identified over 100 mounds outside the Xunantunich site core. The great bulk of these were small rectilinear or roundish mounds under one meter in height. There were a few larger mounds and some formal groups of mounds arranged around patios. In addition, the survey identified several possible quarries on the slopes north of Str. A-11 and north of Group D, two chultunes east of Group D and a few possible chultunes elsewhere on the Reserve lands. A number of unusual mounds were found that either seemed too small to be house mounds but contained cultural materials, or looked like cultural features but were lacking in visible artifacts; most of these were mapped. A few non-mound features were also identified including both artifact scatters and possible bed-rock modifications in the form of terracing.

The topography of Xunantunich is quite interesting. The site core is located on a high ridge that drops precipitously to the north, south, and the west, except for the area around Group B and Str. A-21; the western edge of the Xunantunich
Reserve runs just west of the main N-S axis of the site, and some parts of the site core (e.g. Group B and Str. A-21) actually lie outside the Reserve. To the southeast of the site core, the terrain drops to a level area that lies between Group C and Group D. Group D is of course located on a relatively flat area which slopes precipitously down to a *corozal* to the north, and more gently to the south and east. Northeast of the site core, the land falls in a few levels to the same extensive bajo north of Group D, then rising to a high but small flat area. This flat area is surrounded by steep slopes, although these are punctuated by flatter spots to the east. The far east of the Reserve has a small stand of *corozo* palms that is connected to the larger central *corozal* by a deeply dissected streambed. Another streambed runs north-northwest from that larger *corozal*, down the gentle slope that characterizes much of the northern sector of the site, down to the very deeply dissected stream that loops into the Reserve from the north. The northeast corner of the site is a low, flat *corozal*.

The settlement patterns in the immediate periphery of Xunantunich (i.e. in the Reserve lands) were surprising. Mound density was low for the immediate periphery of a decent-sized site — ca. 100-120 str/km². Compare this with 235 str/km² for Tikal, 275 str/km² for Seibal, and 200 str/km² in the Uplands region of Anabel Ford’s BRASS transects, but 118 str/km² in the "rural" areas of the Belize Valley (data taken from Rice and Culbert 1990:30-1, Ford 1990). The nature of the terrain might be a factor contributing to this low density. Xunantunich is of course on a rather high ridge, and the Reserve lands are characterized by some steep and rocky slopes that are not heavily built upon, except for the slope immediately north of Str. A-11. Furthermore, much of the flat area in the Reserve is fairly soggy in the rainy season, judging from the drainage patterns and the dominance of the *corozal* palms. Not surprisingly, it is the gentle slopes and higher flat areas where settlement clusters. Another possible reason for this low structure density corresponds with our understanding of Xunantunich as a site of rapid growth and collapse: it could be that the quick development of the site core meant that little of the local population relocated in the immediate vicinity of the site, and that those groups that did relocate did not have time to grow and expand accordingly to the developmental cycle demonstrated by Haviland (1988) and Tourtellot (1988).

This latter explanation accounts for another anomaly in the settlement immediately surrounding Xunantunich: the lack of architecture grouped into patios, almost ubiquitous at most Maya sites. The vast majority of mounds are solitary, although there are a few groups of two or three mounds clustered together. However, there are only three examples of mounds formally organized around
patios. This contrasts with the data from the parcel across the river, where multi-mound groups dominate, and patio groups form a much larger percentage of the occupation, probably indicating in part a longer time of settlement and expansion, adding structures as families grew. Another possibility would be that some of the mounds counted in the Reserve lands, especially those located on the steeper slopes, were not residences, which would consequently skew the structure:patio group ratio and exaggerate differences between the two survey areas. It should be noted that both Ford (1990; Ford and Fedick 1991) and Willey et al. (1965) found that solitary mounds predominated in the Belize River Valley; however, the stark contrast between the patio groups just east of the site and the lack of patio groups immediately surrounding the site still requires explanation.

Another interesting finding of the 1992 survey was the presence of early occupation in the site periphery. Although we did not expect the whole of Xunantunich to be built upon virgin soil, excavation data from the site core strongly support the primacy and predominance of the Terminal Classic component. However, the three mounds that were given preliminary dates showed evidence of BV II (2 mounds), BV IIIa (3 mounds), and BV III (1 site) components. It should be stressed that these datings are based on just a few diagnostic sherds from an opportunistic and limited surface sample restricted to the northeast sector of the Reserve lands. However, it is surprising not to find any Terminal Classic (BV IV) sherds. These dates make it clear that Xunantunich was not built in a void; the question they raise is how the site’s growth affected those living in the area and the nature and extent of the BV IV occupation and its implications for social and political organization at the site.

To summarize and conclude, the 1992 survey on the Reserve lands found a number of interesting feature that merit further study: quarries on the slopes north of the site core and Group D, several non-mound features, bedrock modifications in the form of ledges, aguadas and other possible means of water control, and another two-hole chultun like the one in Group D. (N.B.: Excavations by Jennifer Briggs-Braswell in Group D promise to provide more detailed data on the use and modification of the natural terrain at Xunantunich.) Additionally, the settlement survey revealed some intriguing patterns in terms of structure density and the kinds of structures present in the area. These two topics will be of special interest as we begin to tease apart the dynamics of growth and decline of ancient Xunantunich. Also critical to the understanding of the ancient community of Xunantunich will be a complete survey of the land between the site and the Mopan River to the north.
and east. We did not have permission to survey this land for most of the 1992 season, but visual inspection from the Reserve lands and from high vantages east of the river revealed a good deal of large architecture and possible terracing in this area.

The survey area on the other side of the Mopan River provided an interesting contrast to the Xunantunich Reserve in many ways. As noted above, the vegetation was completely different, consisting of secondary growth and cattle pasture. The terrain lacked the sharp relief of the Reserve area, characterized instead by gradual slopes down toward the river with some broad terraces. It should be noted that although these terraces appeared to be natural, William Woods, a geomorphologist, examined them and assured us that they are artificial (W. Ashmore and R. Leventhal, personal communication, 1992). The investigation of these topographical alterations will be important as we begin to examine the Xunantunich region in terms of an ancient cultural landscape.

There were clear differences in settlement between this area and that found on the Reserve land. The density of mounds was approximately double that found on the Reserve lands; furthermore, this settlement was characterized by a much higher frequency of multiple-mound sites and patio groups. Some possible explanations for these patterns are essentially the inverse of those discussed above for the Reserve lands: it is possible that this area, more suited for settlement, was more densely occupied than Xunantunich even in the Terminal Classic; and, it is possible that these groups have longer occupational histories. In stark contrast to these very clearly formally organized patio groups, there are a number of rough cobble mounds just north of the survey area. These mounds were excavated by Jon VandenBosch but remain enigmatic due to the scarcity of artifacts found there; they could be similar to the chert mounds found at Becán (Thomas 1981).

One extremely interesting feature is that there are a dozen or so mounds and patio-groups than are organized approximately east-west running down toward the river. These intuitively appear to form a coherent community given their distance from other clusters of mounds, their spatial organization, and their common orientation of ca. 65° East of North. The relationships of communities like this to Xunantunich and the changes in those relationships through time should prove to be an exciting topic of investigation as survey and excavations in the settlement area proceed. Excavation in one group here (Nabitunich Group 2) by Sabrina Chase and some test pitting by this author revealed dates spanning the range from BV II to BV IV. Again, these are preliminary dates based on limited samples.
The 1992 settlement survey clearly has provided the XAP investigators with a number of preliminary issues that merit exploration in the next few years. However, the summer's work proved valuable for refining the survey methodology that we will use in the future. For example, we now have a good idea of the spacing needed to assure maximal coverage with maximal efficiency in different types of vegetation. Also crucial to our future research design, the experience gained in the 1992 season has allowed us to begin to form a typology with which to organize and analyze the survey data in future years; this typology development is especially important to us as we begin to design a relational database for the analysis of that same data (e.g. that of Sayil, see Sabloff and Tourtellot [1991]). While we expect to modify our classification system and typology as we encounter new situations in the field, the 1992 data gives us a base with which to begin building our system before we initiate our full survey program in 1993.

Perhaps most important, the 1992 work has made it clear that vegetation cover will have a great impact upon both survey procedures and results. In dense secondary growth, spacing between survey picados will have to be fairly small. Furthermore, progress will be slow because of the difficulty of moving through the brush and the necessity of looking harder for ancient structures. In contrast, survey through cattle pastures, if they are not overgrown, will be easy. Other complicating factors include the nearness of bedrock, especially on steep slopes, and the height of grass in cattle pastures. If bedrock is close to the surface, distinguishing modified bedrock features, such as those found during test-pitting at Nohmul (Pyburn 1989), from natural features will be a problem. The identification of non-mound features will be difficult in the forest especially if it is rocky, since rocks seem to be a key indicator of non-mounded features. Also, if the grass in a cattle pasture is not clipped low, it can be easy to overlook lines or scatters of rocks indicative of cultural features. In secondary growth, it is often surprisingly easy to see non-mounded features because there is often such a dense layer of brush that it shades out growth on the ground surface, and rocks are clearly visible. The lack of low surface vegetation in corozales makes them areas of great visibility; unfortunately, it does not appear that they were favored for settlement. Another factor near the river will be the role of alluvial deposits in obscuring or burying cultural features. Clearly, then, the problem of archaeological visibility is a difficult one that needs to be addressed in order to assure the accuracy of the data. In order to monitor the effects of vegetation on our survey results, we plan to record the types of growth and their extent and then routinely check the settlement data for significant differences that
would require a methodological adjustment.

One final factor worth analyzing will be the agricultural technologies that are used or have been used in the area. In the data from the pilot season, it should be noted that plowing may account for the rounded contours found in some of the mound groups in Dr. Biddle's land. Plowing and other modern agricultural practices are especially disruptive of archaeological remains, altering the formal characteristics of mounds and mixing stratigraphy. On the flip-side of the coin, however, projects in northern and central Belize (Fedick 1988; Yaeger 1991) have found relatively high structure densities in plowed fields. This is probably because the action of the mull-board plow churns the soil, bringing sub-surface remains from non-mounded or buried features to the surface where they are easily visible. While the importance of non-mound features - so-called "invisible structures" - remains a topic of debate, several scholars have convincingly shown them to be important aspects of Maya settlement systems (Chase 1990; Johnston 1992; Pyburn 1990). The gradual spread of the use of the plow in the region provides us with the chance to opportunistically survey plowed areas in order to see if patterns of increased structure density hold for the Belize Valley.

Regional Survey

The XSS will not only examine the ancient community of Xunantunich, but will collect data pertinent to questions of regional settlement. The main component of that regional research will be a series of transects starting at Xunantunich. These three transects will be approximately 5 km long and 400 m wide. A fourth transect, wider and not as long, will eventually be surveyed between the site core and the Guatemalan border. To assess the feasibility of surveying these transects and determine what archaeological remains might be found in the area, a week of the 1992 survey was spent doing regional reconnaissance, walking or riding in the truck along access roads. The walking surveys were carried out mostly along existing trails, inspecting any mounds and mound groups visible from the paths. A map showing land ownership was carried, and we noted the owners, vegetation types, agricultural use, and archaeological remains on most of the parcels crossed. This allowed us to plot the archaeological groups on the plat map and estimate the proportions of different types of vegetation along each transect. Small collections of diagnostic ceramics were taken from surface remains and looters' backdirt in some groups; these were taken back to the laboratory and dated, revealing occupation from BV II to BV IIIb.
Our reconnaissance revealed, not surprisingly, that the region around Xunantunich contains many small groups of mounds, often arranged around patios. Settlement did not appear to be distributed evenly over the land, even when topography was factored out. Instead of a ribbon-type settlement located along the riversides, riverside groups were complemented by hilltops that were loci for patio groups, a pattern also found by Jaime Awe (personal communication, 1992) in the area south of Cahal Pech, just a few kilometers east of our study area. Settlement on the hilltops and in the lower areas clustered into what appear to be small communities of some kind. The nature of these settlements, why they are located where they are, how they relate to larger sites in the area (e.g. Xunantunich, Buenavista, Nohoch Ek, Arenal, or Actuncán), and their role in changing settlement dynamics are important questions to be addressed by the XSS.

The regional reconnaissance also suggests that large architecture tends to be restricted to the site cores of Xunantunich, Actuncán, and the sites that will form the termini of the transects. The regional settlement does contain groups characterized by formalized layout and substantial size (i.e. over 2 meters high) such as Xunantunich Group E, the Succotz Group, the group on the hill NW of Xunantunich, and the Nabitunich groups. It will be interesting to examine the distribution of civic-religious architecture as we attempt to piece together the region’s political structure and its history (see de Montmollin [1987, 1989] for a provocative use of this kind of data). Using the transect data we also hope to examine issues of agricultural adaptations, economic patterns, social organization, and ideology and how they are reflected in settlement patterns.

Some of the most useful results of the regional survey were the pragmatic ones. We were able to become familiar with local topography and geography, especially in areas where the transect will pass. It seems that the transects will cross-cut all of the major topographic types in the region; the extent to which these correspond to soil types remains to be studied. We also were able to determine how modern settlement was distributed throughout the region, an important consideration of any transect survey. Modern land use in much of the valley consists of cattle pasture, with some milpa and plowed-field agriculture, both of which mean easy survey. Some pockets of secondary growth and forest do exist, especially south and west of Xunantunich. Furthermore, we were able to begin to identify which landowners we would need to contact to begin work in 1993.

**Efficiency Studies**

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Most of the questions that the XSS hopes to pose are clearly rather complicated ones, and excavation data will be needed to answer many of them. Such excavation is planned as the second phase of the settlement project. However, in order to be able to provide a little more data upon which to design a sampling strategy for excavations, we have been considering the feasibility of placing shovel test pits in each of the features we survey. While the conclusions one can draw from the shovel test pit data are limited, they are much quicker to dig than 1 m x 1 m test pits and they should at least provide a preliminary understanding of the latest occupation of the groups tested. Additionally, it seems best to do some kind of preliminary test during survey to avoid the hassle of re-locating all of the surveyed mounds and digging test pits as a separate phase of the settlement study.

We dug a few shovel test pits in the 1992 season (Operation 73, Suboperations A-F) in order to assess the feasibility of incorporating a shovel test pit program in our transect survey. The three main questions we had were:

1) Will shovel test pits provide sufficient ceramic material for a preliminary chronological assessment?
2) Can that ceramic material be adequately analyzed in the field or must it be brought to the lab for washing and examination?
3) How much labor would have to be devoted to such a program and would it be worth the data retrieved?

The answers to the first two questions seem to be positive. We experimented with different placements of the shovel test pits in order to determine where we would likely encounter more artifacts; local topography and group lay-out seem to be the two over-riding factors influencing artifact distribution. If well placed, we would find 75-100 sherds in a 50 cm diameter, 50 cm deep shovel test pit. While not large enough to permit any major analysis, the samples all provided sufficient diagnostic sherds to allow a preliminary chronological assessment. The second question was also important. Lisa LeCount, the XAP ceramicist, pointed out that the limited information (i.e. mostly chronological) gained from shovel-test lots would not merit cleaning, sorting, and cataloging the collections. She and Dr. Wendy Ashmore, director of the XSS, both have argued for an in-the-field diagnostic sort. To test this, we subjected the lots from the pilot program to two analyses, one before washing and one after. Some discrepancies were apparent, especially involving slip color and some paste qualities. Black slips and micaceous ware were consistently not identified without washing. However, being aware of these potential problems
will result in a more careful attention in the field to these factors. In the end, all parties involved in the pilot program agreed that a preliminary analysis in the field is accurate and the best solution. We also kept track of the time it took to dig each shovel test pit in order to determine how much extra labor would be needed for this part of the survey. One or perhaps two extra people would be needed on a 10 person crew to put one or two shovel tests in each group. The labor investment will be worth the data obtained.

During our settlement survey, we kept track of the amount of time (in terms of person-days) spent on each parcel we surveyed. Looking at the different areas of the parcels, we were able to calculate a rough survey rate (in terms of person-days per hectare) for each of the three major types of vegetation (forest, secondary growth, and cattle pasture). These figures proved what we already knew, namely that secondary growth is by far the slowest for survey. Because we observed the types of vegetation present in each of the proposed transect routes during our regional survey, we were able to also make a rough estimation of the time it will take to survey each transect.

Summary

Despite its limited duration, the 1992 XSS pilot season can be considered a success. We surveyed some 70 hectares around the site and on the other side of the Mopan River. The results, as discussed above, reveal a rather limited settlement around the site core of Xunantunich. Interestingly, that settlement may begin as early as BV II and may not reflect the BV IV peak that seems to occur in the site core. Regional reconnaissance shows definite clustering of settlement into communities in the areas between the major sites of the region; however, major civic-ceremonial architecture seems to be limited to the larger sites already identified in the region. The pilot season also allowed us to test a different methodologies, both survey techniques and shovel testpitting, in order to work out a research strategy for future work. Perhaps most importantly, the preliminary data gained from the 1992 season have allowed the XSS members to begin focusing on specific research questions to be addressed by the project.

Acknowledgements

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results of the pilot season and translating them into future plans. Of course, without the keen insight, infallible humor, and hard work of Tino Penados and Eduardo Chi, the 1992 season would not have been nearly so successful or enjoyable - ¡Gracias! Thanks also go to Dr. Dorrel Biddle and Mr. Rudy Juan who graciously allowed us to survey parts of the properties. Financial support for the author's travel costs and subsistence expenses were generously provided by a Lisa-Lynn Brody-Foley Memorial Grant, administered by the University of Pennsylvania Department of Anthropology.
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Xunantunich Ceramics - 1992

Lisa LeCount
University of California, Los Angeles
The 1992 field season was the first year in which a systematic study of the Xunantunich ceramic assemblages was undertaken. The primary goal of the ceramic research was to establish a computerized ceramic catalogue in which sherds are classified in respect to compositional, decorative and formal attributes. With this ceramic catalogue, we can address two major topics. First, we are interested in identifying temporally diagnostic decorative or formal attributes useful in refining the Xunantunich ceramic chronology. Secondly, stylistic and formal types will be constructed by correlating attributes. Once ceramic types have been created, we can then begin to analyze the economic, social and political conditions under which people produce and use pottery.

**Xunantunich Archaeological Project Ceramic Catalogue**

The XAP ceramic catalogue is a hierarchically constructed computer code system designed to measure the frequency and weight of sherds which share attributes within a given provenience (ceramic appendix 1). Each sherd is characterized by temper and paste composition, surface treatment, formal characteristics, formal style, decorative technique and decorative style. These variables make up a basic set of attributes to describe pottery. Additionally, sherds are coded for type variety names. By using both modal and type variety classification systems, we feel that this catalogue allows researchers to address numerous research questions. As new information is gathered, the catalogue can be modified to incorporate new ideas regarding ceramic types.

Ceramic composition, a combination of clay and inclusions types, is identified by visual inspection of the clay body; only a 20x hand lens is used to define composition types. Types which contain mixtures of inclusions are classified by the most distinguishing material. This is most evident in the micaceous types which are composed predominantly of sand but contain highly distinctive micaceous inclusions. Paste color is used to distinguish wares exhibiting fine grain or small quantities of temper such as Mars Orange and British Honduras wares. Paste color is not quantified using a Munsell standard at this initial analytical level. Rice (1987:333) concludes that variation in paste color is due to a number of factors such as firing time, temperature and atmosphere as well as the size, amount and distribution of impurities. Since there are numerous factors which determine paste
color within a given clay, detailed petrographic studies are needed before we can accurately determine the range of variation within a compositional type.

Surface treatment is characterized by surface finish; primary and secondary slip color; and primary, secondary and tertiary paint color. Surface finish is used to characterize the final additions to the surface and to record the existence of a slip including its quality (matte, low polish, high polish, etc). In this initial ceramic description, only the presence or absence of a slip and its most intensive surface technique is recorded. Although this may not give a clear picture as to the location and the variation of the slip on any one ceramic piece, it does provide a basic index of the overall production quality of the sherd. Due to weathering, many slipped sherds can not be classified as to the quality of their slip and therefore recorded as unknown. Slip and paint colors are nominally described based on a range of Munsell colors. As with slips, the location of the paints are not recorded.

Vessel forms are identified using Sabloffs' (1975:22-27) established conventions for formal types. Plates, dishes, bowls and vases are defined by a ratio of vessel height to maximum diameter. Jars, specialty forms, lid types, miniatures, figures, worked sherds and other forms are also recorded. Rims are further classified by their stylistic variation using rim curvature and lip and rim detail. Rim curvature is defined as the shape of the shoulder-to-rim curvature on necked vessels and the base-to-rim curvature on neckless vessels. This attribute helps define the different formal types within the broad categories of bowls, dishes, vases and jars. The lip and rim detail is designed to quantify known chronologically diagnostic lip forms such as Thompson's pie crust rim in the Terminal Classic (1940:11). Other formal variation such as flange, ridge and angle types; spout types; handle types; foot types; and base types are recorded.

The decorative technique is quantified by using a hierarchically based set of decorative methods. Basic decorative techniques include carving, incising, impressing, painting, appliqueing, tooling, modeling and texturing. Within these decorative techniques more specific information can be recorded; for example carving can be plano-relief, molded-carved, or gouge-incised. Stylistic elements are described in general compositional terms such as single elements, simple repetitive, abstract/geometric, representative, glyph or composite.

Ceramic type and varieties will be recorded by a series of codes. Although type variety schemes have some inherent problems, many established ceramic type varieties are recognized as having chronological and spacial importance. The most widely used type variety scheme in the Belize River Valley was developed by James
# CERAMIC SEQUENCES FOR THE BELIZE RIVER VALLEY

<table>
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<th>BENQUE VIEJO**</th>
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* J. Gifford 1976
** J. E. S. Thompson 1940

Table #1
Gifford for the Barton Ramie Project (1976). Like most type variety schemes, Gifford's pottery types were created for delineating spatio-temporal frameworks in the construction of a ceramic chronology.

I view ceramic change and continuity as a result of social, political and economic factors which affect ceramic attributes independently. In other words, the economic factors which may promote the selection of certain ceramic forms are independent of the social or political factors which affect pottery styles. Type variety schemes tend to overlook formal variation and in many cases variation within a ceramic type. Due to the grouping of attributes under a given type variety name, this method does not record detailed information on the type and amount of decorative techniques. In addition, type variety systems overlook questions regarding long term continuity in ceramic types (Lincoln 1985:63).

Modal analysis, on the other hand, measures attributes independently. The advantage of modal analysis is its ability to define one attribute or a set of attributes which can be combined into types. Independent formal and stylistic types may crosscut one another for it is not inconceivable that formal types used for cooking, preparation and storage of foods will exhibit different styles conveying social or ethnic identities. Because of the differing rates of attribute change, I consider the socio-political and economic causes of attribute selection one of the most interesting questions to be addressed by ceramic analysis.

This ceramic catalogue is considered a first step to more in depth analyses and is not intended to measure all possible attributes. The use of catalogue numbers given to each group of like ceramics within a provenience will enable researchers to easily access the catalogued attributes and merge them with detailed information to address more specific questions.

Chronology Building

This year, the ceramic analysis is focused on creating a chronology. In this effort, we greatly benefit from Thompson's 1940 Benque Viejo and Gifford's 1976 Barton Ramie ceramic chronologies (ceramic table #1). By using previously recognized attributes or types we can test their viability as chronological markers in an effort to continue refining the ceramic sequence at Xunantunich.

Benque Viejo Ceramic Chronology

Thompson's Benque Viejo ceramic chronology is based on his 1938 excavations. These excavations were largely confined to Group B, a residential plaza
unit west of the main architectural core. Excavations in Structure B-1 and B-2 revealed substantial architectural modifications and a possible ritual cache providing Thompson with stratified deposits for his ceramic seriation work. The ceramic seriation developed by Thompson focused on these Group B sherds which he assigned to Benque Viejo III and IV phases (140: Table 1).

Thompson's sample of Benque Viejo Ia sherds was derived from an unknown location within Group A (1940:8). He classified these sherds as Benque Viejo Ia because they were stylistically similar to Uaxactun Ia (Mamon phase) ceramics. The Benque Viejo Ib assemblage was based on excavated collection from A. M. Tozzer and R. E. Merwin's 1909 Peabody Museum excavations located "in Mound 1, southwest of Benque Viejo" (1940:8). At this time, the exact location of Mound 1 is unclear. It is quite possible that the mound was located a substantial distance from the architectural core of Xunantunich. Furthermore, Thompson states that the BV II ceramic assemblage was

"precariously established on the strength of three basal-flange-bowl sherds in a group of sherds (Cat. No. c/5100), largely of Benque Viejo IIIb, in Peabody Museum, Harvard University, and on the strength of three or four basal-flange-bowl sherds with later deposits in Group B. The former were also excavated by Tozzer and Merwin in 1909. Their provenience was Mound 2, in a milpa just outside Benque Viejo Village" (1940:8).

Given the lack of stratigraphic control in the Benque Viejo I and II collections, and the relatively unknown provenience of Tozzer and Merwins excavations, it can not yet be determined whether Xunantunich was occupied during these periods. Presently, there are no deposits dating before or during the Early Classic period within the core of Xunantunich.

The strength of Thompson's Benque Viejo ceramic sequence lies in his Late and Terminal Classic phases - Benque Viejo IIIa, IIIb, IV. With a large sample size of 3948 painted rim sherds derived from stratigraphic deposits located in Group B, Thompson classified ceramic types based on composition, form and stylistic attributes. His ceramic types and their temporal assignments were found to be highly representative of the assemblages recovered from stratified deposits excavated this year. Because of the replicability of Thompson's seriation, many of his diagnostic stylistic elements are used in the XAP ceramic catalogue.
Barton Ramie Ceramic Chronology

Because of its close proximity, many of the ceramic types identified by Gifford (1976) at Barton Ramie are also found in Xunantunich deposits. Gifford's chronology, utilizing the type variety technique, has become a standard for describing and comparing assemblage found in the Belize River Valley. Barton Ramie type varieties are therefore coded into the XAP ceramic catalogue.

As stated by Lincoln (1985:55), one of the problems with the Barton Ramie type variety system is that it was created solely by ceramic analysis without the use of stratigraphic information. Lincoln successfully shows how some type varieties, especially the Hermitage and Tiger Run materials, are not temporally discrete (1985:58-63). Given that these materials are used to define the enigmatic Early Classic assemblages, more chronological work must be done to solve this problem.

Results of The First Years Research

Excavation of a moderately sized plaza group (Op 71 B) located on a river terrace outside Xunantunich's core zone, has yielded a series of four floors and associated fill levels suitable for analyzing lengthy ceramic sequences (ceramic figure #1a). Analysis of the ceramics from the stratified deposit suggest that the ceramic assemblages at Xunantunich can be divided into three phases - Late Classic I, Late Classic II and Terminal Classic. Within Op 71 B, the first 3 lots consisting of the last floor and surface materials are associated with the Terminal Classic occupation of the plaza unit. The Late Classic II phase assemblages are found in Lots 4, 5, and 6. These lots are associated with two floors and their intervening fill. A thirty centimeter fill level below the earliest floor (lot 7) yielded ceramics pertaining to the Late Classic I occupation of Xunantunich.

Excavations in the architectural core at Xunantunich focused on temple fall and occupation surfaces. The plaza fill and occupation levels yielded shallow deposits between 20 and 50 cm in depth. One excavation unit (Op 18 E) exhibited two distinct fill deposits separated by a floor associated with the construction of the Castillo's basal platform (ceramic figure #1b). Excavation lots 1 and 2 are above the floor and correspond to the Late Classic II assemblage whereas lots below lot 3 correspond to the Late Classic I assemblage. Lot 3 may be mixed containing the floor and sherds from both Late Classic I and II assemblages.

Ceramics frequencies from the two suboperations were used to construct a preliminary ceramic chronology. The frequency of wares, diagnostic types and attributes have been provided in table form Op 71 B (ceramic table #2) and Op 18 E.
Figure #1: 1a Op 71B soil profile
1b Op 18E soil profile
(ceramic table #3). The following is a brief discussion of the Late Classic and Terminal Classic assemblages found at Xunantunich.

Late Classic I

The early part of the Late Classic period correlates to Thompson's BVIIIa and Gifford's Tiger Run phases. As Gifford (1976:192) states, the Tiger Run complex is transitional between Early and Late Classic assemblages and is difficult to describe for two reasons. First, the Tiger Run complex is the least well represented assemblage at Barton Ramie. Secondly, the assemblage is comprised mostly of local pottery types which are intermediary between well known types. Thompson's work also confirms the transitory nature of this assemblage stating:

"Differences between the sherd groups of the two subphases (BVIIIa and BVIIIb) are ... mostly questions of preponderance of various wares rather than a sharp break, since neither group is pure...On the other hand, significant Table 2 71B changes in percentages are revealed" (1940:9-10).

At Xunantunich, this Late Classic I assemblage has yet to be found in primary deposits. Presently, ceramics assigned to this phase have been found only in fill deposits confirming Gifford's and Thompson's statements concerning its short term, transitional nature.

The Late Classic I assemblage at Xunantunich is best recognized by two ceramic types. First, there is the presence of Thompson's lateral ridged dishes. These dishes, called Mountain Pine Red or Saturday Creek polychrome type varieties in Gifford's scheme, make up about 3% of the Late Classic I vessel assemblage (ceramic figure #2a). Secondly, calcite tempered polychrome pottery is also found in the largest percentages during the Late Classic I phase (about 2 to 5 % of all sherds). These calcite polychrome sherds are most likely those identified by Gifford as the Saxche and Palmar ceramic group or the Saturday Creek polychromes. Given the eroded nature of the calcite polychromes recovered from the fill deposits, we were unable to assign type-variety names to the majority of the sherds. Additionally, calcite temper predominates over ash temper, with ash temper making up less than 5% of total ceramics recovered.

Late Classic II

Thompson's BVIIIb and Gifford's early facet Spanish Lookout complexes are
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percent of total sherds
* percent of vessel forms
** percent of Mt. Maloney incurving bowls

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percent of total sherds
* percent of vessel forms
** percent of Mt. Maloney incurving bowls

Table # 3
Figure 2: 2a Lateral ridged dishes
2b Miseria applique incensario
well represented in primary deposits at Xunantunich. Thompson noted (1940:9) that during this time, there is a marked increase in both ash temper ware and polychrome painted ceramics. Lateral ridged dishes found in the BVIIIb deposits are assumed to be the result of depositional mixing. Gifford assigns the type names Benque Viejo Polychrome and Belize Red to the numerous ash wares noted by Thompson. Gifford states the Dolphin Head ceramic group is one of the most distinguishing types of the early facet Spanish Lookout complex (1976:226).

At Xunantunich, we have also found that the Late Classic II assemblage is marked by high frequencies of Dolphin Head Red and ash ware pottery (averaging above 10% of the assemblage). Unlike the Late Classic I assemblage, calcite polychromes decrease substantially while ash ware polychromes remain at their previous levels. Many other decorative techniques such as incising, punctuating, notching and tooling (such as gadrooning and fluting) appear to reach their highest frequencies. Types such as McRae Impressed (ceramic figure #3), Silver Creek Impressed, Platon Punctated-incised, and fluted Benque Viejo Polychromes are good examples of the highly elaborated styles found during the last phase of the Late Classic.

In general, the Late Classic assemblage appears to consist of many types which exhibit only minor differences in frequency. This observation was also noted by Thompson, who assigned BVIIIa and BVIIIb subphases to account for the slight change in assemblages. The most diagnostic types which separate the Late Classic I and II phases at Xunantunich appears to be lateral ridged dishes and calcite polychromes.

Terminal Classic

Thompson states that "Benque Viejo IV represents a clean break with the past, since most dominant forms are absent from earlier deposits" (1940:10). Like Thompson, I view the Terminal Classic as a dramatic change in the make-up of the ceramic assemblage.

At Xunantunich at this time, the amount of investment in decorative techniques such as incising, punctuating, notching and tooling decline. The highly decorated McRae Impressed may be replaced by a simpler and smaller notched dish. Painting also declines in frequency. Although bichrome pottery remains constant at its Late Classic I levels, polychrome painting virtually disappears from the assemblage. The lustrous red slipped, Dolphin Head bowls and dishes also disappear. In place of these decorative techniques, applique modeling appears on
several vessel forms such as storage jars with pie crust shaped impressions on the lip and spiked appliques on incensarios. The spiked Miseria applique incensarios (ceramic figure #2b) replace the Pedregal Modeled incensarios.

Unlike Gifford (1976:226) and Thompson (1940:11) who conclude that the highest percentage of ash ware is found in the Terminal Classic, we find that ash ware frequencies appear to decline within Xunantunich deposits. I suggest that there may be a link between the decrease in ash ware pottery and the decline in elaboration of stylistic techniques discussed above. It can be argued that clay with inclusions of fine ash results in a highly plastic medium, well suited for decorative elaboration. If the Late Classic II elaborated ash ware dishes, bowls and vases were no longer used to express Terminal Classic symbols, it could account for the decline in the frequency of ash ware pottery.

Mount Maloney Microseriation

One of the most identifiable stylistic changes apparent throughout the Late and Terminal Classic assemblages is the modification of Mt. Maloney incurving bowl lips. Mt. Maloney bowls comprise approximately 30% of the vessel assemblage, making it the most common vessel type found in Xunantunich contexts. These bowl lips (ceramic figure #4) show a change from smooth, rounded, and slightly tooled lips in the Late Classic I phase to more bevelled, tooled and flattened lips in the Late Classic II phase. In the final Terminal Classic phase, the majority of lips are tooled square with the side of the bowl showing a sharp incurve near the rim. Given larger sample sizes in the future, it may be possible to separate the Late Classic period into more than two phases based on the microseriation of Mount Maloney bowl lips.

Conclusions

The ceramics data recovered so far from more than 200 excavation units within the core area of Xunantunich suggest that the occupation of the core area was relatively short term but highly expansionary during the Late and Terminal Classic period. The site of Actuncan has yielded Preclassic and Protoclassic materials which may help solve the Early Classic ceramic chronology problems within the Belize River valley.

The microseriation of Mount Maloney lip types and tabulation of diagnostic attributes will allow us to develop a ceramic chronology based not only on rare, highly decorated type varieties found within temple or elite households but also on
Figure #4: Mt Maloney microseriation
commonly used domestic vessel forms found in all contexts. The use of both
attributes and type varieties give us greater ability to temporally classify small lots,
highly eroded fill or weathered contexts found at Xunantunich.

Finally, it is clear that major changes in the access to clay materials and the
expression of symbols occurred between the Late Classic to the Terminal Classic
periods. Given the marked change in the Terminal Classic decorative styles,
techniques and materials, I suggest there was a substantial change in both the
symbolic representations produced on pottery and the organization of ceramic
production.

The traditional techniques used to produce symbolic representations, such as
painting and tooling decline, while modeling becomes more frequent. This shift in
both public and privately used pottery styles may have been the result of a change in
power and ideational structures within the Xunantunich royalty and elite.

Leventhal suggests that the displays of power and ideology may have shifted from
private displays like those found on pottery to more massive public displays.
During the Terminal Classic at Xunantunich, temples were elaborated and stela
were carved supporting this idea.

This re-orientation in the type and location of power and status symbols
would also suggest a change in the types and numbers of craft specialists found
during this time. Continued examination of pottery decorations, forms and
composition in conjunction with other architectural and artifactual studies will
help elucidate these and other larger socio-political and economic changes at
Xunantunich.
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Sabloff, Jeremy A.

Thompson, J. Eric E.
1940 "Late Ceramic Horizons at Benque Viejo, British Honduras." *Contributions to American Anthropology and History*, No. 35, Carnegie Institution of Washington, Publication 528, Washington, D.C.
Ceramic Appendix #1

CERAMIC CATALOGUE: MASTER CODES

COMPOSITION: TEMPER AND PASTE
1. Temper and paste type
   0. Unknown
   1. Ash
   2. Non-ash (Calcite, Opaque carbonate, Sand)
   3. Fine orange (Fine and soft)
   4. Mars orange (Orange, fine and hard)
   5. Coarse sand, micaceous material, brown paste
   6. White (opaque) calcite, homogenous

SURFACE TREATMENT: TYPE, COLOR AND TECHNIQUE
2. Surface finish
   0. Eroded
   1. Matte
   2. Polished with low luster
   3. Polished with glossy luster
   4. Polished waxy

3. Primary base slip color
   0. Eroded
   1. No slip
   2. Black
   3. Orange to Red
   4. Light orange
   5. Brown
   6. White or cream
   7. Smudged gray

4. Secondary slip color
   0. Not present
   1. Black
   2. Red
3. Smudged

5. Primary paint color
   0. Not present
   1. Red
   2. Black
   3. White/cream

6. Secondary paint color
   0. Not present
   1. Red
   2. Black
   3. 

7. Tertiary paint color
   0. Not present

FORMAL CHARACTERISTICS

8. Primary form
   00. Unknown
   01. Body only
   02. Neck only
   03. Unknown rim
   04. Jar rim or pedestal base

10. Open form (Plate, dish, bowl or vase)
11. Plate (Height less than 1/5 its diameter)
12. Dish (Height between 1/3 and 1/5 its diameter)
13. Bowl without constriction (Height no more than equal but no less than 1/3 of its diameter)
14. Bowl with constriction (Height no more than equal but no less than 1/3 of its diameter)
15. Vase (An unrestricted or simple restricted)

20. Closed form (Jar, tecomate, etc)
23. Tecomates
24. Neckless ollas

30. Specialty forms
31. Comals
32. Incensarios
33. Drum
34. Incensario grate

40. Lids
41. Flat
42. Truncated-conical
43. Scutate
44. Conical
45. Basin
48. Incensario lid with handle
49. Possible lid or pedestal base for incensario

50. Miniature
51. Plate
52. Dish
53. Bowl
54. Vase
55. Jar

60. Figurines

70. Worked sherds
71. Pendant (w\hole)
72. Sherd with prefired hole
73. Modified round disc
74. Spindle whorl (w\hole)
75. Bead
76. Worked edge (tool)
80. Fried clay mass

90. Thompsons' "Masher"
91. Small round ball ("Foot ball")

FORMAL STYLE: RIM CURVATURE, LIP DETAIL, FLANGES, ANGLES AND APPENDAGES

15. Rim curvature (if neckless then this variable pertains to the base to rim curvature, if necked then this variable pertains to the shoulder to rim curvature. Column # 36)
   0. Unknown or not measured
   1. Flared
   2. Outcurved
   3. Rounded
   4. Vertical
   5. Incurved
   6. Inflared
   7. Closed

16. Lip and rim detail (Not measured except for known chronologically diagnostic markers. Column # 37-38)
   0. Not measured
   1. Pie crust (Thompson 1940:f42) BV IV
   2. Flaring lips on jars (ibid:f43) BV IV
   3. Flat lips on incurved bowls (ibid:f50) BV IV
   4. Bowls w/ recurved rims (ibid:f51)
   5. Widely flaring necked jars w/ flat lip
      sometime grooved (ibid:f52) BV IV
   6. Outflaring necked jars w/ flat lip (ibid:f6q-t)
   7. Highly beveled, smoothed lip on incurved bowl
      (June 22, 1992)
   8. Slightly beveled, tooled lip on incurved bowl
      (July 14, 1992)

17. Flanges, ridges and angles
0. Absent
1. Flange
2. Medial flange
3. Basal flange
4. Z-angle
5. Basal angle
6. Basal ridge (Lateral ridge)
7. Lip flange
8. Interior offset (26 May 1992)
9. Combination 6 and 8 (17 July 92)

18. Spouts
0. Absent
1. Unknown
2. Supported
3. Unsupported
4. Open

19. Handles
0. Absent
1. Unknown
2. Strap (Vertical or Horizontal)

20. Foot form
00. Absent
01. Join (may be either foot, handle or other attachment)
10. Foot Solid
11. Nubbin feet
12. Conical feet
13. Slab feet
14. Tau-shaped feet
15. Pedestal
16. Ring
17. Columnar
18. Truncated-cone (tall)
19. Truncated-cone (short)
20. Foot Hollow
21. Mammiform
22. Hemispherical
23. Bell-shaped
24. Oven-shaped
25. Conical
26. Bulbous
27. Nubbin
28. Columnar
29. Effigy

21. Base

0. None present
1. Present unknown
2. Flat
3. Round
4. Incurved
5. Truncated-conical
6. 
7. Pedestal
8. Countersunk circle (ibid:f15)

DECORATIVE TECHNIQUE AND STYLE

22. Primary technique

00. Absent
10. Carving
11. Plano-relief (Low relief)
   Cutting out clay as background for a design
12. Molded-carving
   Clay deeply cut then design embellished by incising or modeling
13. Gouge-incising
   Cutting/gouging out areas to create pattern
20. Incising
21. Sharp, prefired

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22. Groove, prefired
30. Impressing
31. Punctating
32. Notching
33. Stamping
34. Perforating
35. Impressing
36. Cane stamping
40. Painting
41. Positive
42. Negative
50. Applique
51. Spikes
52. Thin raised lines
60. Tooled
61. Chamfering
62. Fluting
63. Gadrooning
70. Modeling
71. Hand made
72. Mold made
80. Texturing
81. Striating
82. Irregular to regular drag marks
83. Stucco

9. Secondary technique  (Same codes as above)

10. Stylistic element
   0. Absent
   1. Single element
   2. Simple repetitive
   3. Abstract/geometric
   4. Representative
   5. Pseudo-glyph
   6. Composite glyph and geometric
Xunantunich Today: Images of the Past and their Use in the Present

Kathryn Maurer
University of California, Los Angeles
I would like to give special thanks to the people of San Jose de Succotz for their help, participation, and insight into this project. Specifically I would like to thank Mr. David Magaña and Mr. Alfego Panti for all of their time and attention. Above all, I am indebted to Dr. Richard M. Leventhal whose practical and intellectual support have given life to this project.
Today, in the village of San Jose de Succotz, the predominantly Maya village which lies two kilometers down a dirt road and across the river from the ruins, they tell of a doorway -- *La Puerta* -- on "El Castillo," the main pyramid of Xunantunich. Some, they say, have been lucky enough to see the doorway, although none have dared enter. They say it lies on the south-east corner of the pyramid but if you look for it, you will not find it. In fact, in all of the reported sightings of *La Puerta*, none have been able to locate it again when they have returned with witnesses.

Although no one is really sure what *La Puerta* is, and a few do not believe in its existence at all, some residents of Succotz say that this doorway leads to an underground passageway between Xunantunich and Tikal, two sites they believe to be central to the world of their ancestors, the ancient Maya. Others say that *La Puerta* is a short-cut from the pyramid down to the Mopan river, a short-cut which the ancients used in order to facilitate the drawing of water. Still other residents of the village claim that this doorway on "El Castillo" is the entrance into the world of the ancient Maya for the privileged few who have earned their passage from our flawed present-day world into the timeless and immortal existence of the ancients.

Whatever its function may be, *La Puerta* does represent a real doorway connecting the modern Maya people of Succotz to the archaeological site of Xunantunich. It is a real doorway connecting the past to the present, and affecting the lives of those who live near the ruins today. If not a physical reality, *La Puerta* is a narrative reality of the ruins, a reality which demands attention in a project which seeks to uncover and reconstruct images of the ancient Maya of Xunantunich. *La Puerta* along with the other modern Maya narratives about the ruins and their ancient inhabitants constitute an image of the past which deserves a place next to the images created by the foreign archaeologists in their study of the ruins.

Recently, with the expansion of the international tourist industry in Belize and the growing number of archaeological projects in the region, there has been an increased focus on the ancient Maya ruins. Yet few scholars—or tour guides—recognize the genuine interest of the modern Maya people in their heritage, and the relationship that exists for them between their past and their present. With their focus strictly on the past, archaeologists can easily overlook the modern Maya's valid and meaningful vision of the ancient Maya, and they are often not aware of the construction and manipulation of images of the past in order to validate the present.
As a graduate student of Folklore and Mythology at UCLA, I therefore joined the Xunantunich Archaeological Project in June of 1992 at the invitation of its director, Dr. Richard M. Leventhal, in order to explore the significance of the archaeological site to the people of Succotz, and to document and analyze the narrative reality of Xunantunich. In this first six-week visit to Succotz, I concentrated on acquainting myself with the people of Succotz, their oral history, their folklore, and any economic, political, ideological, or spiritual use of the ruins.

I began my fieldwork by observing the physical relationship of Succotz to Xunantunich. Succotz, a Spanish speaking village approximately 10 kilometers from San Ignacio on the Benque Viejo road, is the closest village to the archaeological site. In fact, all tourists travelling to the site, and all archaeologists excavating there, must go through the village in order to cross the river by the Xunantunich ferry and climb the two-kilometer dirt road to the ruins. Because of this physical proximity to the ruins, the residents of Succotz have been involved with the ruins since their discovery by foreign scholars over 100 years ago and they have continually participated as paid laborers in its excavation throughout this century.

Despite Succotz’s close involvement with Xunantunich, the site is often associated with the larger village of Benque Viejo, two kilometers from Succotz on the Benque Viejo road. I later found this association to be a sensitive issue to many residents of Succotz who are bothered by the placement of Benque Viejo next to the site of Xunantunich on many maps of Belize. In fact, in my first few conversations with residents of Succotz, I learned that they consider themselves Maya, and descendants of the ancient inhabitants of Xunantunich, whereas they consider the population of Benque Viejo to be mestizo, and not at all related to the Maya of Xunantunich. Thus, from my first conversations with the people of Succotz, I found this privileging of their link to the ruins to be a strong factor in the makeup of the community.

In order to learn more about Succotz and its relationship to Xunantunich, I conducted approximately a dozen taped interviews with residents of Succotz. When conducting an interview, I would visit the interviewee in his or her home or workplace and ask general questions regarding the history of the village, the history of Xunantunich, personal experiences involving the ruins, and local folktales and legends which often reveal beliefs about the past. Early on, I discovered that many people were concerned that the knowledge of their history and traditions was quickly vanishing, and they felt a sense of urgency that I interview the older people.
of the village before it is lost forever. I therefore focused my interviews on the elders of Succotz whom I found both interested in my questions and willing to participate in a study which they hoped would ultimately benefit their village.

In these interviews, I became aware of a complex relationship between the modern Maya people and their past, a relationship which many people of Succotz characterize as integral to their survival, and a relationship which many feel is all too quickly disappearing. Although not all the people in Succotz consider themselves direct descendants of the Maya of Xunantunich, most feel that their identity as Maya is directly linked to their ancestry of the ancient Maya of the Yucatan and the Peten. Most, I found, claim to be Yucatec Maya, but still insist on direct descent from the ancient Maya of Xunantunich. Those who make this claim suggest that before the arrival of the Spaniards, the inhabitants of Xunantunich fled to the Yucatan, and now, after the War of the Castes in the Yucatan, the present generations have returned to their original homeland.

In addition, I found that for all of the interviewees, the past represents a healthier and more rewarding way of life than that of today. In "the old days"—up to the generation before the oldest living members of Succotz—crops were more plentiful, children listened to their parents, the elders were respected, the village worked as a unified community, and there was only one religion. Even the ancient Maya, they say, although they were not Catholic, still worked closer to God and were blessed in their existence. They tell of piles of wood that carried themselves by the utterance of a few words, houses that would build themselves, crops that needed no manual labor, and other magical feats. In short, the past represents what many feel is absent in today's materialistic society, and something which the community as a whole must strive to recover.

In addition to interviewing the elders of the community, I also spoke with several workers at archaeological sites in order to explore the folklore of the ruins and to determine if and how the local people's participation in excavations both affects and is affected by their beliefs about the past. I found a pervasive belief that the ruins were or still are encantadas, a state which implies that the ruins are enchanted or inhabited by some spiritual being and/or have been affected supernaturally due to their antiquity. Manifestations of this enchantment include La Puerta, the appearance of strange animals, people reported missing near the ruins, and the sound of a rooster crowing. Although this belief did not seem to deter anyone from participating in the excavations, some did mention not wanting
to take anything from the site for fear of illness, and avoiding the *mal viento* which affects the first person to open a tomb.

I also found that the workers whom I observed and spoke with take a great interest in archaeology. They seem concerned with how the archaeologists reconstruct the sites and the images of the ancient Maya that will be portrayed in these reconstructions. In addition, I spoke with one man who insisted that if the archaeologists would only consult the local people more, they would have a more complete picture of the way of life of the ancients. After all, he said, the present day local people still confront the same obstacles that the ancients did in both land and climate. This same man acknowledged that he has learned much from the archaeologists about his own past, for which he is grateful, but he would like to see a greater exchange of ideas.

As far as I know, no ceremonial rites are being performed at Xunantunich, although a few elders mentioned that "it would be a good idea" for the archaeologists to perform a ceremony to ask permission in order to excavate the ruins. If, in fact, the ruins are still inhabited by the spirits of the ancients, then in order to avoid their wrath, and to show due respect, it would be necessary to ask their permission to continue the excavations. Even those who do not believe that the ruins are still *encantadas* acknowledge that this might be a good idea.

In my brief stay in Succotz and my initial investigation into the beliefs about the past, I concentrated on establishing a foundation from which to proceed with an in-depth study of this complex phenomenon of oral traditions about the past affecting the present life of a community. From my informal interviews and casual observances I can discern the need to research this important topic which bridges the disciplines of folklore, ethnography, and archaeology, and which helps to mediate between the foreign scholar's and the native inhabitant's interpretation of the past.

Perhaps most importantly, these preliminary interviews demonstrated the often individualistic nature of the construction of images of the past. Just as the archaeologists cannot agree on their images of the ancient Maya, in Succotz there is not one unified vision of their ancestors, nor any one characterization of the relationship that exists between their past and their present. Some say *Xunantunich* means "stone maiden," while others say it means "stones of golden bees." Some consider the excavations a threat to the traditions of Succotz, others see them as essential to their economic and political survival. What they all do seem to agree on is the intimate connection that exists between Succotz and Xunantunich. As one
man expressed, there are no words to describe the connection he feels to
Xunantunich -- the ruins are a part of him.

Everyone connected to the archaeological site--the local people, the
archaeologists and other foreign scholars, the tourists, etc.--holds an image of the
past which is both meaningful and valid. It is important to recognize that the
images created by archaeological inquiry form only one version of the past and fit
only one group's needs. I suggest here that an exchange between these diverse
visions can be valuable to all, and can offer insight into the ways in which
individuals throughout space and time conceptualize and utilize the past. In this
annual report of the field season of excavations at Xunantunich, I have therefore
attempted to provide a glimpse of other references to and uses of the past which all
form part of one whole: Xunantunich.
XUNANTUNICH ARCHAEOLOGICAL PROJECT
ARCHIVAL RESOURCE

Lady R. Harrington
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During the early stages of planning the scope and parameters of the Xunantunich Archaeological Project (XAP), Commissioner of Archaeology of Belize, John Morris, and Project Director, Richard M. Leventhal, agreed that a full archival resource for the use of scholars was a first and vital step in the investigation of the Xunantunich site. Dr. Leventhal named me the archivist for XAP.

The initial stage in collecting the archival material for XAP was quite simply to go into the reference library at the University of California, Los Angeles (UCLA) in order to learn as much about the site as possible and to begin assembling a pertinent bibliography. Also, we photocopied as much material as practical in order to make it available for study by members of the project working at UCLA, and to provide a working archive for the field in Belize.

The second stage of research was conducted in the Department of Archaeology in Belmopan, Belize. As we would expect, there is a wealth of photographs, letters, reports, field diaries, plans, sketches, etc. that have been deposited with the Department and collected by them. The great assistance of the personnel of the Department of Archaeology is testimony to their support of the idea of a full archival resource on Xunantunich. This was the beginning of the creation of an archive of Xunantunich materials not limited to published works.

The next phase of the XAP archival investigation was to write to various individuals, museums, libraries where materials seemed likely to be located. From the responses, we plotted the geographic distribution of materials and set priorities of which collections to visit.
Fortune smiled upon our research with a very favorable air fare to Britain where we had been assured, through extensive correspondence, that there was abundant material. The research in Britain began at the Museum of Mankind in London where material from Gann's early work, and a small amount of later material from Michael Stewart's work is stored. Then I went to Kent to spend the day with former Commissioner Hamilton Anderson's widow. She continues to be vitally interested in Xunantunich and is very generous with material from his archives.

Next, I spent a week at the University of Glasgow working with Dr. Euan MacKie who was director of the Cambridge Expedition to Xunantunich in 1959-60. Dr. MacKie shared photos, diaries, inventories, sketches, plans with extraordinary generosity. He also arranged work space and photo copying access near his office in the University's Hunterian Museum. (Since it was off-term, student resident hall living was available at extremely modest rates.)

The next location for research was Cambridge where the University Museum houses artifacts from the Cambridge 1959-60 expedition. I was taken to the off-site storage to view the artifacts. This was not without effort on the part of the museum to assign two persons to take me some miles out of town to this facility, to move and open boxes, and to put artifacts out for photographing. Additionally, and quite without anticipating, I was able to meet with a member of Michael Stewart's family who promised to look for any archival materials from his several seasons at Xunantunich in the 1950s. Our research so far has produced scant material from Stewart's work.

Finally, I went back to London for a day at the off-site storage of the Museum of Mankind to view and photograph artifacts, again principally from Gann's work. The items I had previously flagged as of special interest to the XAP research had been separated out and brought to a viewing area. As
with the experience at Cambridge, it is not without effort that a museum arranges for this sort of access and it is certainly appreciated.

The next location for the XAP archival research was the University Museum at University of Pennsylvania. The research archivist at the museum had assembled their pertinent materials for ready access. This consists principally of the Satterthwaite materials dealing with his work on the excavation of the frieze on Structure A-6 in 1950. There are dairies, field notes, photo records, plans, letters. Of course this material is of major interest and will be of great benefit in working on this fascinating aspect of Xunantunich.

There are still two major locations for materials still to be investigated. One is the Peabody Museum at Harvard where the Carnegie materials are housed. The other is Peter Schmidt's materials in Merida. As soon as practical we will study these collections.

Photographs are an invaluable resource for information. Many photographs and slides are being copied to form a permanent collection as a major component of the XAP archive. An additional component is of course regional materials. We are collecting this material principally from publications and from the Department of Archaeology at Belmopan.

The immediate task is to put the archival material on to a data base so it can be called upon by researchers. Using Paradox 4.0 we have designed a program which lists the most pertinent aspects of the material. This program will select a variety of categories as called on by a researcher. The program can be added to or amended as needed. Presently the categories include: the site, the focus of the information (for example: A-6), date of the information, type of information (letter, plan, etc.), originator of information, recipient, location (Belmopan, Cambridge, etc), where within that location (folder AC 44, etc), does the information refer to: architecture,
consolidation/reconstruction, chronology, ceramic, lithic, cache, burial, etc.; photo reference, and finally a section for comments.

At present the XAP archive has hundreds of items, and they are of varying importance as individual items, but collectively they are of enormous importance to the investigation of the Xunantunich area. The history of Xunantunich emerges through these documents including the effects of several hurricanes, building of the ferry and the access road, dedication ceremonies to celebrate the opening of visitor facilities, and the shortage of funds for certain projects.

This is not a finite group of materials. As we collect and assemble, more and more pertinent information comes to our attention. It is extremely gratifying to experience and benefit from the spirit of interest and cooperation this project has received from 'keepers' of archival materials. There is a real sense of pleasure and support for this project's dedication to assembling as much material as possible for research in the XAP area.

A copy of the XAP archival resource is housed at Xunantunich where the field work is being conducted, a copy is at UCLA which is the headquarters for the research. Additionally, portions are shared with the Getty Conservation Institute as it applies to the work they are conducting on the project. Ultimately a full copy of this archive will be the property of the Department of Archaeology of Belize as was envisioned by Dr. Leventhal and Commissioner Morris.
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