# Table of Contents

1994 Work in the Xunantunich Center  
R. M. Leventhal  

The End at Xunantunich: The Architecture and Setting in the Terminal Classic  
R. M. Leventhal  

Settlement Archaeology at Xunantunich, 1996  
W. Ashmore  

The 1996 Tunneling Excavations in El Castillo  
J. C. Miller  

1996 Excavations at Group C and at Structure A-32  
M. C. Church  

Excavations on the West Side of Plazas A-I and A-II  
T. R. Jamison  

The Ruler's Residential Plaza at Xunantunich, 1996 Excavations  
E. Harrison  

1996 Xunantunich Ceramic Research  
A. Preziosi  

The 1996 Excavations at San Lorenzo  
J. Yaeger with L. P. Villamil  

Xunantunich Rural Settlement Project - 1996  
C. Robin  

---

1  
9  
17  
28  
40  
59  
71  
90  
123  
151
1996 Work
in the
Xunantunich Center

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Introduction
The ongoing field research and tourist development within the Xunantunich site core continued in full-force during the 1996 field season. Major areas were excavated, buildings were consolidated, a frieze was replicated, signs erected, and a Visitors Center was constructed.

The 1997 field research, defined at the end of this introductory paper, will be the final season of work for the Xunantunich Archaeological Project. The research and development of Xunantunich has proceeded quite rapidly. Several pieces of information were identified early in the project which allow us to bring this project to an end.

First, in terms of this ancient city, we have learned many things about Xunantunich over the past seven years. First, it is a city which was constructed and occupied during the Late Classic (probably around 600 AD). There was a rapid period of construction and the city continued to be occupied into the Terminal Classic following the Maya collapse of 800-900 AD. The city was probably abandoned around 1000 AD (although final dates await completion of some C14 dates - presently being analyzed).

The changes and shifting aspects within the downtown section of Xunantunich have given us a view into the collapse within the Belize River Valley - a view not based upon warfare or total economic collapse but rather a broad systemic collapse of the entire social, political, economic and religious system.

Continued excavations and research over the past seven years have provided data which continue to fit neatly into our model for Xunantunich and for the Belize River Valley during the Late and Terminal Classic time periods.

Second, the Xunantunich Archaeological Project has focused much of its energies on the preservation and conservation of the architectural center of the ancient city. This has included work on individual buildings including most importantly the Xunantunich Castillo. Additionally, the two fragments of the A-6-2nd frieze have been the focus of major preservation and conservation work.

Third and finally, the development of the site for tourists has been a major part of the XAP work at Xunantunich. Specifically, there has been significant development of the tourist infrastructure at the site including the construction of a Visitors center, a Stela Museum/House, two storage buildings, two vendors buildings along with a first set of interpretive signs scattered throughout the site.

The 1996 Excavation Program
There were five excavation teams within the site core during the 1996 field season.

One team, under the direction of Ellie Harrison was focused upon Plaza A-III. Harrison attempted to identify the chronology of construction for the buildings of this
plaza. Structure A-13 appears to have been the last structure built and probably closed off the plaza on the south side. The relationship between Structures A-10, 11, and 12 remains unclear but it is quite possible that all three were constructed at the same time. Work within this plaza area clarified the initial map of this group. Most importantly, Structure A-11 was originally connected by two 'saddles' to Structures A-10 to the west and A-12 to the east. Excavations revealed that these 'saddles' were simply the result of fall, collapse and archaeological backdirt and not an ancient feature. Structure A-11 sits on the plaza floor, separated and independent from the side buildings.

Julia Miller, the 1996 field director, excavated a series of important tunnels into the Castillo. The tunnel from the south side of the building at bedrock penetrated more than 29 meters into the core of the Castillo. This excavation revealed a continuous Late Classic construction for the Castillo. It appears as though the first major construction at the site consisted of a platform/raised plaza dated to about 600 AD. Later buildings were superimposed on top of this structure. Preclassic fill was identified but always mixed with Late Classic material.

A second tunnel was placed mid-way up the north side of the Castillo in an attempt to define the final sequence of construction. It appears as though Miller was able to define the upper terrace edges of Structure A-6-3rd. The superstructure was not identified and may have been destroyed with the construction of A-6-2nd. Also, access to this A-6-3rd was not defined - this will be examined in 1997 if time permits.

David Wilson began excavation along the southern plaza of the Castillo and at the medial terrace on the south face of the building. In 1994 and 1995, preliminary excavations revealed an inset staircase which connected this medial terrace to the upper south plaza of the Castillo. Excavations in 1996 revealed a building on this medial terrace. It appears to be a longitudinal building extending east-west on this terrace. This building, Structure 26, blocked access along the staircases of this south side of the Castillo. A narrow passageway through the middle of the building allowed access to the final set of stairs to the upper part of the Castillo.

In addition, preliminary excavations were conducted to attempt to define the south plaza of the Castillo consisting of Structures A-27, 28, 29, and 30. More work is needed in 1997 to fully define this area.

Thomas Jamison examined several architectural connections and areas on the west side of Plaza A-1. Most importantly, he began to define the chronology of Ball Court 2 specifically as it relates to Structure A-8 and Structure A-1. Structure A-22, the east ballcourt structure was clearly built prior to Structure A-1. Jamison found the summit of A-22 and its association with the later Structure A-1 which did not cover A-22 but was added on to the east.

Finally, Minette Church conducted a series of excavations within the South Group, south of the Castillo. She examined Structures C-2 and C-3 and clearly found that these structures were not a ballcourt as had been argued previously. She identified these as two range structures facing each other - although the actual function of these buildings remains unclear. An earlier construction under Structure C-2 seems to show some sort of small defining wall with stairs to the north. However, again details are
unclear. However, Church did clearly find an occupational level associated with what appears to be stone removal and stone quarrying following the occupation and abandonment of this region of the site - most likely during the Terminal Classic period.

Church also began the excavations of Structure A-32 on the medial terrace of the north side of the Castillo. She began to define a very large room running east-west with no pass-through doorway as evident on Structure A-26 and A-13. However, more excavation is clearly needed in 1997 to fully define this structure and the terraces to the south.

**On-Site Tourist Developments and Conservation Activities**

Probably the most extensive work this season within the site core was focused upon the new west frieze of Structure A-6-2nd. This west frieze was first identified in 1993 and subsequently excavated in fragments each year and then reburied at the end of each season. It was determined, in association with the Getty Conservation Institute and consultants Rudy Larios V and Haydee Orea that it would be impossible to keep the frieze open and maintain its high quality of preservation. The soft plaster was going to deteriorate if exposed to the elements.

It was therefore determined that a full-scale replica should be built and placed immediately in front of the original. This would accomplish two important goals: 1. to allow the original to be reburied and preserved in perpetuity, and 2. the tourists would still have a view of this spectacularly preserved architectural ornament. Therefore, Rudy Larios V. along with several assistants created a fiberglass replica which was placed on the west side of the Castillo.

In addition, major consolidation work was completed on this western side of the Castillo below the frieze in order to create a solid base for this new ornament.

Interpretive signs were also placed throughout the site core directing tourists to all parts of the site and providing them with some basic information about the buildings and monuments of Xunantunich.

**The Entrance Area**

The entrance to the ancient city of Xunantunich was greatly revised in 1996. A new parking lot was constructed approximately 1/4 kilometer along the road before the actual entrance to the ancient city. Tourists must therefore walk up to the site.

At the entrance to the site in the old parking area, a new Visitors Center was constructed in 1996. This building, designed by Angie Hiltz of Los Angeles, provides some detailed interpretation and information about Xunantunich.

This information includes maps, photographs, drawings, text and a small model of the ancient city. No artifacts are displayed due to the lack of full-time security. However, the ancient city is presented and displayed in great detail - including the growth and development of the city, reasons for the collapse, and issues of preservation and conservation.
In addition, two vendor's buildings were constructed to create a formal open plaza area through which the tourist will pass along the way to the site. From this lower entrance area, a massive staircase was constructed which allows easy access to Plaza A-II and the actual site center.

The Xunantunich Archaeological project made great progress towards reaching its primary goals of research, conservation, and tourist development in 1996. More work is needed in 1997 and is detailed below.

**1997 Work Plan**

**Research**
There are some important questions which remain for the XAP research program in 1997.

**Site Center**
First, we will continue excavations within Plaza A-III of the site center. This is the rulers residential plaza. Excavations in 1996 revealed the nature of this plaza group and a possible chronology of construction for the buildings of this group. Most importantly, the 1997 research will focus on the building on the east side of the plaza, Structure A-12. We need to understand the nature of this building - was it a longitudinal range structure with a series of rooms as we suspect or perhaps something different. An additional reason for the excavation of this structure is that previous work revealed trash deposits on the east side of this building probably associated with Structure A-12 and the secondary structures to the east. These excavations will therefore complete the preliminary study of the Xunantunich rulers residence.

The Castillo will be the focus of a great amount of excavation and conservation work during the 1997 field season. In terms of excavation, there will be two foci of work: 1. the south side of the Castillo - examining access and the south plaza; and 2. the north face of the Castillo to continue to examine the upper part of the pyramid.

Access to the Castillo is an important part of a picture of the Late and terminal Classic periods at Xunantunich. We have argued that direct access from staircases to the top of the Castillo is blocked during the Terminal Classic. It is therefore crucial to understand the changes to the north and south sides of this building - specifically the nature of access and the existence of staircases.

XAP began the excavations of both the north and south sides of the Castillo in 1996 and this program will continue in 1997.

In addition, on the Castillo, basic excavations and clearing will be conducted on the east side along the medial terrace and within the south plaza.

The South Group, specifically Structure C-1, will also be the focus of some brief excavations. The south group appears to have been abandoned in the Terminal Classic. Last year's excavations appear to have revealed an extensive Late Classic occupation in this area along with a Terminal Classic period of stone removal. We want to follow-up on these preliminary findings. One of the most important structures is Structure C-1 for
it mediates between the main structures and plazas associated with the Castillo and the extensive Group C to the south.

Finally, we will continue the examination of the overall access to the site center. This will focus work on the edges of the architectural core. Specifically, Structure A-21 and the area on the west side of the site core will be examined. In addition, more work on the east side around the sacbe will be part of the 1997 field season.

**Outlying Areas**

Three areas of research will be conducted within the outlying areas of Xunantunich.

First, we will continue excavations at the outlying secondary center of Chaa Creek. Architectural clearing, test excavation and mapping will allow for an understanding of the possible relationship between this secondary center and the larger site of Xunantunich.

Second, detailed excavations of some of the smallest structures found on the survey will continue in an outlying area near the small site called the Chan Site.

Third, and finally, an examination of agricultural terraces will commence within the outlying settlement area around Xunantunich.

**Architectural Conservation**

Work throughout the site will continue to attempt to preserve the ancient architecture for the future.

Specifically, work on consolidation of the Castillo will continue. The west side of the Castillo has been the focus of much work during the past several years. The west frieze fragment was modeled and replaced in 1996 with a fiberglass replica. The original was permanently buried in order to preserve it. It is necessary to continue to consolidate the building behind the replica and below on the west side. This work will continue in 1997.

Consolidation work will also continue on the other parts of the Castillo. Specifically, we must continue to get the Castillo ready for a long period with minimal work. Therefore, work will continue on all of the flat areas to create surfaces where water will run off of the Castillo rather than penetrate into the substrate of the building. Water in the substrate weakens the core and stability of the structure.

Consolidation work will also continue on the east and south sides of the Castillo allowing tourists a relatively easy point of access and point of view of the frieze. Most importantly, we will also construct another access point to funnel tourists onto and off from the Castillo to the south. One important thing needed on the Castillo is to relieve the pressure of tourists climbing the north stairs. We believe that a modern but rather-inconspicuous staircase on the south side of the Castillo will help develop a tourist circuit for the site and also help relieve the pressure of tourists on the single north-side staircase.
XAP 1996 - Introduction

Work will also continue and be completed on Structure A-1 located in the middle of the site. This structure was excavated several years ago and minor work is now necessary to complete the building and open it to tourists.

Finally, we will have a consolidation team going throughout the site and doing basic repointing work where it is most needed on exposed walls. This will allow the site to be completed this season.

The east frieze on the Castillo is in need of massive work. This is planned this season in association with the conservation program of INAH. The month of May will see Professor Haydee Orea and a class from the consolidation school in Mexico City working on the Xunantunich east frieze. We want to do a complete consolidation of this frieze which will allow it to be maintained for the next 5-10 years fairly easily. It is impossible to protect this frieze completely as it is semi-original (it has been renovated several times in the past) and made of plaster. However, we can recondition the frieze and leave it in the best shape possible.

Tourist Development

There are several basic infrastructural needs which remain at the site and we want to address all of them during this 1997 field season. There is a great need to complete work on the road and the parking lot. This was initiated in 1996 but was not completed in any workable way. Heavy equipment are necessary to finish smoothing out the road and then to finish the construction of the parking lot. Most importantly, side drains for the road and lot need to be constructed. However, it is important to remember that the road and parking lot need annual maintenance.

In 1996, a Visitors Center was constructed in the entrance area of the site. The building was associated with two vendors buildings, a new seating and eating building, and a staircase allowing entrance to the site. Now this area needs to be landscaped. Massive amounts of good soil must be brought into the site as the area around the Visitors Center was once the parking lot and only gravel is evident in the area - nothing will grow here. On top of the soil, grasses/sod will be placed along with gravel walkways.

Within this same entrance area, outhouses have been built. These outhouses were constructed on a new cement pad but utilized the old, rather dreary and tired metal buildings. Due to the lack of water within the area, only outhouses are possible - but it is possible to construct better looking and more pleasant buildings. This work is slated for 1997.

The only other construction planned for 1997 is a minor renovation of the Stela House. Following the construction of this building in 1993, it has become necessary to provide easier side-lighting for the viewing of the monuments and to eliminate bats from the building. This work is again planned for the 1997 field season.
The final tourist development for the site will consist of a second level of interpretive signs placed throughout the site area. This will provide the tourist with a more complete guide to the site and its interpretations.

We believe that this work, to be completed in 1997, will finish the basic excavation, consolidation, and tourist development of the ancient Maya city of Xunantunich. The future will bring to the forefront the major issue of annual maintenance. This is the key for Xunantunich in the near and distant future - not more excavation or large amounts of consolidation.
The End at Xunantunich: The Architecture and Setting in the Terminal Classic

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Beginning in 1991, the Xunantunich Archaeological Project (XAP) has attempted to examine the ancient Maya city of Xunantunich in the broad context of its developmental history within the western part of the Belize River Valley. Detailed mapping and excavations within the site center have revealed an interesting pattern of expansion and construction during the end of the Late Classic (700 - 850 AD) and then a period of contraction during the Terminal Classic (850 - 1,050 AD).

We have presented a model which argues that the collapse throughout the Maya lowlands did not have a single cause but rather was the result of a systemic political and social breakdown at the many centers in southern Mesoamerica. Xunantunich is one of the few sites which survives into the Terminal Classic and shows evidence of centralized authority with the construction of some large architectural units within the site core. The evidence from Xunantunich, therefore, reflects change with survival rather than attempting to explain change with abandonment.

**Late Classic Xunantunich**

The evidence that we have gathered to this point seems to indicate that Xunantunich appeared late into the already existing settlement system of the Belize Valley. Because of this late appearance in the Late Classic, Xunantunich appears to be an expanding center with minimal surrounding settlement.

The Castillo (Structure A-6) is located within the middle of the architectural core of the site. To the north, we speculate upon the existence in the Late Classic of a single large and expansive plaza which would include the area covered today by Plazas A-I and A-II. Structure A-1, therefore, did not exist until the end of this period. To the south of the Castillo, a series of architectural complexes, including several enclosed plazas, Ballcourt #2, and numerous additional structures and features, extends for another 1/2 kilometer. To the west, Group D appears to be a secondary elite residential complex. Clearly, this family is closely connected to the ruling family of the site core as evidenced by a sacbe which runs to the north of Group D and then turns and connects to Plaza A-I between Structures A-4 and A-6 (the Castillo). This is a formal, raised, and well-plastered roadway about 14 meters wide with parapets along both edges. During the Late Classic, a second major entry point has been defined between Structures A-2 and A-14. This consists of a large staircase and general entry area about 1/3 of a kilometer to the east. Another possible entry point has been identified to the west and appears to be associated with Structure A-21. Finally, Group B, also located to the west, appears to be a secondary residential group associated with the ruling family of the main group. I have argued that the family living at Group B may be more tightly connected to or related to the ruling family. Group B does not have evidence of an ancestral shrine as found within the site core (the Castillo) or within Group D (Structure D-6).

The end picture of Xunantunich in the Late Classic is of a site constructed and placed into an already existing settlement system of the Belize Valley. The initial construction of Xunantunich may be associated with Naranjo and an attempt by this much larger site to place itself into the Belize Valley and to identify its zone of influence. It begins to expand within its core area during the Late Classic periods. However, it never becomes a real focal point for attracting settlement within its immediate vicinity. This lack of settlement within its surrounding terrain does not necessarily indicate a lack
of political, social and economic control by Xunantunich of the surrounding area - possibly extending as far as Chaa Creek, Buenavista del Cayo and perhaps even to Cahal Pech.

The Terminal Classic
Changes occur very quickly within the terminal Classic. Although there is ample evidence for Xunantunich's survival for an additional 100 - 200 years, it also suffers from the developments of the surrounding collapse.

We do not find any evidence of increased warfare, we find no evidence of ecological problems or environmental change within the Belize Valley, we find no evidence of direct social unrest at the sites within the valley. We do find a broad systemic collapse which results in the eventual abandonment of sites throughout the region and finally Xunantunich.

During this period of the Terminal Classic, we can identify many changes within the site core of Xunantunich. These changes seem to be primarily associated with the contraction of the site focus. From a fairly large-scale site center with several large open plazas during the Late Classic, the site contracts to a focus upon plaza A-I which remains the only public space at the site.

The evidence for this change and contraction is interesting and requires some detailed presentation of architectural and archaeological information.

South of the Castillo
During the 1992 and 1993 field seasons, we cleared and mapped in detail the area to the south of the Castillo. We also initiated a series of test pits and trench excavations to clarify the chronology and to identify several features. An analysis of the pottery from these excavations revealed that there were no Terminal Classic sherds found within any part of this southern area of the site. This lack of terminal sherds dating to the final occupation phase was confirmed with later, additional excavations within this region. It appears as though this southern section of the site was abandoned after the Late Classic prior to the Terminal Classic.

Ongoing research within this area and on the southern flank of the Castillo clearly indicates that this abandonment was actually a gradual process.

Excavations in 1996 revealed three possible stages of construction and development on the southern side of the Castillo. The first stage of construction resulted in two outset staircases - one at the base rising from the southern plaza to a medial terrace and a second rising from this medial terrace to the upper plaza on the south side of the Castillo. Sometime during the final phase of the Late Classic (800-900 AD), access to the upper part of the Castillo was restricted with Stage 2 construction. This consisted of building a range structure or 'audiencia building' along the medial terrace between the two staircases. This 'audiencia building,' a common architectural form within the Belize Valley (see Cahal Pech and Structure A-13 at Xunantunich), restricted access both visually by blocking a view of the upper part of the south flank and also physically by restricted access through a central roofed portal. It also appears
as though the upper staircase was modified with an addition to the side terraces - effectively turning the staircase from an outset staircase to an inset one.

The third and final stage of occupation clearly relates to the abandonment of this south flank of the Castillo and the entire south side of the site. We have identified clear evidence that the area between the audiencia building and the terrace and staircase was abandoned and filled in with fallen material and washed-in soil. We have clear evidence of trash deposit within the upper part of this fall and possibly even a feature cut into the fall between the audiencia and stairs. I would argue, therefore, that during this stage of construction or occupation, the upper plaza of the Castillo remains in active use but that the southern flank and southern side of the Castillo are effectively abandoned and no longer in active use as a central part of the city.

North of the Castillo

As mentioned above, the our hypothesis states that originally there was one large plaza encompassing the area of Plazas A-I and A-II. The construction of Structure A-I results in the division of this area into two functionally separate plaza spaces. We can again identify this focusing process which limits the movement of people and contracts the public space down to just the southern part of the original space (Plaza A-I). A major excavation trench through Structure A-1 clearly indicated that the bulk of this building was constructed in a single construction phase.

The placement of Structure A-1 is most interesting on both the east and west sides. On the west side, Structure A-1 was placed over a pre-existing ballcourt (also originally dated to the Late Classic). However, this new structure did not completely cover the eastern ballcourt structure (#22). Rather, Structure A-1 only covered the western half of Structure A-22 thereby leaving the ballcourt intact. If the purpose of Structure A-1 is to create separate plaza areas and separate functional areas, why not cover over and eliminate this ballcourt. I believe that the ballcourt acts as an actual boundary between the plazas to the south and to the north. Ballcourts are ritual spaces utilized in the divination of the future and the past and as direct contacts with the underworld. Ballcourts, therefore, create liminal space between this world and the next world. By definition, therefore, the ballcourt is not an open alley as the architecture might present. Rather, the alley is closed perceptual space - Plaza A-II is separated from Plaza A-I.

On the east side of Structure A-1, we find a different system of blocking access and focusing activity upon Plaza A-I. The construction of Structure A-1 creates a narrow walkway between Structure A-1 on the west and Structures A-2 and A-3 on the east. The sequence for this walkway mirrors the partial and then final decrease in movement found on the south side of the Castillo.

Structure A-16 is a small, two-room superstructure surrounding a stela and altar in front of Structure A-2. It is unclear from this previously excavated and reconstructed building whether it had a corbeled arch, a perishable roof, or no roof at all - similar therefore to the stelae enclosures within the Twin-Pyramid complexes at Tikal. It appears as though this stela and altar had originally been placed in front of the staircase of Structure A-2 - mirroring the placement of stelae and altars in front of Structures A-3, A-4, A-7, and A-9. With the construction of Structure A-16 around the stela and altar,
these monuments become part of more private rituals and ceremonies. The narrow walkway is narrowed by Structure A-16 but also the stela house creates more private space.

The final, almost complete blocking of access along this eastern walkway is completed with the construction of a wall (called Motmot Wall) which extends eastward from the southeast corner of Structure A-1 to the north-south retaining wall for Structure A-3. This wall is both a freestanding wall and a retaining wall facing to the south and marking the public edge of Plaza A-I. Plaza A-II is closed to the public and, we believe, is only accessed by the elite family and various family retainers and other elite individuals. Plaza A-I remains the only area open to the public within the site core.

The Castillo

An examination of the upper part of the Castillo also provides clear evidence of this reorganization and shift in focus away from the south, east and west and primarily towards the north and Plaza A-I. It is interesting to note that on this upper part of the Castillo, the south side and upper plaza with Structures A-27, 28, 29, 30, and 31, remain an integral part of the Castillo. The upper part of the Castillo remains focused in two directions - to the north and to the south, however, north remains primary.

As has been known for many years, Structure A-6-2nd, the building with the frieze, had rooms, doorways, and the frieze itself facing in all four directions. The construction of A-6-1st on top resulted in the covering of the frieze, rooms and doorways on the east, west and south. Only the north outer rooms remained open with the later building perched above. The frieze remained open to the north, the primary point of activity within Plaza A-I.

At the same time, however, we believe that the south central room of A-6-2nd remained open from a passageway through the fill of A-6-1st. This along with the upper plaza of the Castillo and Structure A-20 on the west side clearly indicates the continued use of the entire upper part of the building. Activities and construction were constant on the Castillo even during the Terminal Classic when access, movement of people and ritual activities were all focused upon Plaza A-I.

Access to the Site Core

Recent work on the access to the site has provided data which are consistent with this change and reorientation. As mentioned above, in the Late Classic, it appears as though there are three primary access points into the large central plaza area to the north of the Castillo. We believe that when Plazas A-I and A-II were initially one plaza, all three of these entry points were functioning. These include the walkway access in the vicinity of Structure A-21, the formal sacbeob connecting Group A with Group D, and the entrance area and large stairs which allow entrance to the site between Structures A-2 and A-14.

Recent excavations in these entry areas clearly indicate that the A-21 west entrance and the sacbeob east entrance probably continued to be used through the Late Classic into the Terminal Classic. However, the stairway entrance on the east side, which would have allowed access to the then closed off Plaza A-II, was dismantled and
therefore no longer in use during the Terminal Classic. The evidence that access to Plaza A-II was restricted continues to build with each excavation program.

Conclusions
In the recent past, archaeologists discussed the Maya collapse as a rather sudden and wide-spread event which caused the destruction of a political and economic system and the abandonment of the southern lowlands. Recent evidence from many sites throughout the lowlands has forced all scholars to rethink this event model. We now view the collapse as a rapid process of dissolution. Causes for this dissolution are still debated.

Evidence from Xunantunich, a center which survives in rather constricted circumstances, seems to indicate that the collapse is the result of a rapid breakdown of the entire political, social and economic system within the lowlands. As mentioned above, the examination of Xunantunich provides us with an unusually good vantage point from which to study the collapse - a vantage point of changes for survival rather than just collapse and abandonment.

The changes we identify from the Late Classic period of growth at Xunantunich to the constricted and restricted access of the Terminal Classic provides us with an incredible amount of information about the 800 - 1000 AD time period. As demonstrated above, sections of the site are abandoned, plazas are divided, buildings reoriented, and accessways dismantled in a process of redefining the central core of Xunantunich.

From this information, I infer the dissolution, most importantly, of the political and social system at Xunantunich. The ruling family, ensconced within Plaza A-III seems to be attempting to separate themselves more and more from the general population and to maintain their power and control by physically separating themselves from the Xunantunich community.

"This physical separation is not based purely upon walls and certainly not walls of defense. Rather, as with the ballcourt and Molmot wall, the separation is based upon a continued symbolic framework which delineates the nature of social organization within centers and within this world. The ruler's attempt to maintain power seems to have worked at this small ancient Maya city for a short time (between 100 and 200 years), but eventually, the system could not maintain itself and the final dissolution of the system was inevitable.

Xunantunich survives the collapse. Evidence from our recent excavations clearly indicate, however, that this survival is in much reduced size and circumstances. Architectural changes and reorientations provided a form of survival but the system was irreparably damaged and even a small, secondary center such as Xunantunich could not survive in the end. Collapse was inevitable.
Acknowledgments: There are large numbers of people who continue to be a major source of assistance for the Xunantunich Archaeological Project. The late Commissioner of Archaeology Harriot Topsey, Acting Commissioner Brian Woodye, Commissioner John Morris and the entire staff of the Department of Archaeology provide the primary support and assistance for this ongoing archaeological project. In addition, Minister Henry Young and Permanent Secretary Victor Gonzalez continue to support enthusiastically the project and the proposed touristic developments.

Within Belize, the greatest thanks must go to all of our workers who are a major part of the team as we continue to uncover the history of Xunantunich. All the people of the Village of Succotz continue to support us and our work. Specifically, we would like to thank the Village Council Chair, David Magaña. Many people gave us permission to walk on, survey on or excavate on their land and we thank all of them. We also want to thank Margaret and Rudy Juan for their hospitality and unceasing helpfulness as they solve new and continued problems.

This research comes together with the quality of the graduate students and professional staff. Few archaeological projects have a better crew. Thanks to Julia Miller (1996 Field Director), Eleanor Harrison, Thomas Jamison, Minette Church, David Wilson, Noelle Thomas, Aimee Preziosi, Cynthia Robin, Mike Artemieff, Lady Harrington, Lisa LeCount, Ted Neff, Jason Yaeger, and Jack Schram. The settlement program continues to be directed by Wendy Ashmore, the Co-Director of the project.

Support for this project comes from the Government of Belize, USAID, the UCLA Faculty Senate, the UCLA Institute of Archaeology, and numerous private donors. The Getty Conservation Institute is an important partner in the project. Also, the advice of Rudy Larios V is always vital in the consolidation work and research of the major architecture. Let me also mention our longtime foreman, Florentin Penados, who is an important part of the XAP team.
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Settlement Archaeology at Xunantunich, 1996

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Introduction

Although the settlement survey, per se, was completed in 1995, hinterland research continued in 1996 along several lines. This chapter summarizes results of these varied programs and places them in a larger context of Xunantunich settlement. One program was Jason Yaeger's continued investigation of the San Lorenzo settlement cluster, completed in 1996. The other full-scale inquiry was Cynthia Robin's new excavations in small-scale rural homesteads. Results of both programs are reported more fully in separate chapters of this volume. In addition, pilot efforts are summarized here for (1) investigation of Xunantunich terracing, by L. Theodore Neff, and (2) geomorphologic study of the Mopan and Macal rivers, by Jennifer Smith. Both of the latter are slated for fuller implementation in the 1997 XAP season.

Since 1992, XAP has developed rich and multifaceted data concerning ancient Maya settlement and society in and around Xunantunich. The survey provides the basic contexts for understanding Xunantunich, outlining trends in local settlement from Middle Preclassic through Postclassic times through transect and opportunistic samples of settlement (Ashmore 1993; Ashmore et al. 1994; Neff et al. 1995; Ehret 1995; Yaeger 1992; Yaeger and Connell 1993). Not surprisingly, the sequence parallels broadly the findings from other projects in the region (e.g., Ball 1987; Ford and Fedick 1992; Willey, Bullard, Glass, and Gifford 1965), the few, most striking differences attributable to either sampling effects or—more interestingly—truly variable ancient developments. Whereas sampling effects are perhaps most readily seen in the perceived distribution of Postclassic remains, ancient political, economic and other factors likely underwrote differential occupation histories in, for example, domestic sites of the Chan and Callar Creek zones (e.g., Ball 1987; Ehret 1995; see Ashmore 1995).

Although settlement traces from the Middle Preclassic are widespread throughout the region, occupation in subsequent periods is quite heterogeneous in specific distribution and scale. Broadly speaking, the populace of farmers increased to a Late Classic maximum in probably the eighth century, at which time a well-developed, four-tier settlement hierarchy seems evident, in a landscape extensively modified by hillslope terracing and other land management traces. Within that general pattern, just as flux is evident in the locus of paramount or competing authority among the major centers—Cahal Pech, Actuncan, Buenavista del Cayo, Xunantunich, and probably Guacamayo-Tipú (e.g., Ashmore and Leventhal 1993; Awe 1992; Ball and Taschek 1991; Graham, Jones, and Kautz 1985; Leventhal and Ashmore, in press), so too are parallel oscillations seen in growth at secondary centers and adjacent settlement (Ashmore et al. 1994; Neff et al. 1995; Ehret 1995). We also continue to discuss the potential roles in upper Belize valley fortunes played by larger, more distant cities, including Naranjo, Caracol, and Calakmul (e.g., Ashmore 1996; Ashmore and Leventhal 1993; Ball and Taschek 1991; Chase and Chase 1996; Martin and Grube 1995).

With these broad outlines in place, settlement research in 1996 focused on more detailed studies in household archaeology. Both Yaeger's and Robin's 1996 programs were informed by a developmental model for understanding ancient Maya settlement (e.g., Fortes 1958; Haviland 1988; Tourtellot 1988a, 1998b; Robin, in Neff et al. 1995;
Yaeger 1995), and together, they provide complementary insights on internal dynamics of domestic life for materially distinct segments of Xunantunich society in the Late and Terminal Classic periods. As a pair, these studies further complement XAP work reported elsewhere, from domestic compounds of higher echelons of ancient Xunantunich society, including Leventhal's ongoing probe of the royal compound, Jennifer Braswell's investigations of Xunantunich Group D, Sam Connell's study of Chaa Creek elite sites, Jennifer Ehret's examination of local secondary centers, and James McGovern's study of Actuncan. All the foregoing are further augmented and enriched by cross-cutting analyses of domestic ceramics (LeCount 1996; Preziosi, this volume), lithics (VandenBosch n.d.), and terracing (Neff 1996).

Excavations at San Lorenzo

For a fifth and final season, the residential settlement cluster at San Lorenzo continued as the subject of intensive investigation. (A puzzling set of nearby linear cobble features may not represent domestic occupation [VandenBosch 1992, 1993]). Since 1994, these have been conducted by Jason Yaeger (1994, 1995), building from earlier work by Sabrina Chase (1992, 1993), and assisted this year by Laura Villamil. In this work, Yaeger has sought to test a model for the structure and organization of rural Maya communities in the Late and Terminal Classic, using San Lorenzo as a case study. Thus far, a developmental model (e.g., Tourtellot 1988a) has proven a fruitful perspective from which to view the accumulated evidence.

During the 1996 season, his team completed clearing excavations in three groups, and since 1992, six of the total of 17 groups have been investigated by clearing up to 50% of platform areas and adjoining space. In addition, he extended earlier test excavations (Chase 1993; Yaeger 1994), such that now all but five individual San Lorenzo structures have been tested. Through all these probes, he has documented formal, developmental and functional variability within and among domestic groups. The general contours of this variability were broadly predicted but, as he notes, its specific details were sometimes surprising.

Yaeger has recorded an impressive degree of architectural variety within this hamlet-sized settlement, diversity in both construction materials and building forms. Features such as "step benches" are common here, as elsewhere in the Maya lowlands, and the occurrence of exterior porch-like rear terraces invites further consideration. Masonry, cobbles, rubble and earth were the common building materials, and he observes some temporal patterns in fill types and wall construction.

Most documented remains at San Lorenzo pertain to the Late and Terminal Classic periods, which provide the foci for Yaeger's study of community dynamics. Earlier remains were noted when encountered, but were targeted for examination only via stratigraphic probes of trash and construction that outlined developmental sequences. For both the focal periods and earlier times, Yaeger's excavations have yielded rich and important evidence for localization of specific activities and roles within and among the various domestic compounds. At both household and community levels, the San Lorenzo data allow Yaeger to draw important insights about the ancient social order.
For both developmental and functional reasons, one of the more noteworthy unexpected finds of the 1996 season was a low circular platform, pertaining most likely to Middle Preclassic times. This feature was not evident on the surface, but was found buried within the later “north platform” of Group SL-13, as reported by Villamil. Labeled SL13-Str. 7, the San Lorenzo platform fits well in a growing corpus of round platforms known from the Middle or Late Preclassic, most roughly commensurate with Str. 7’s size (e.g. Powis 1996: Table 6).

Str. 7’s specific location is particularly interesting, in light of suspected Preclassic occupation in the adjacent south platform of the same group. That is, as Yaeger and Villamil note, SL-13 is the largest and most complex in plan of the San Lorenzo compounds, and its scale and location—set somewhat apart from other settlement—suggested to Yaeger long ago its possible focal role in the community. Excavation in 1996 suggested the south platform was built atop a natural knoll, plausibly at a time when earlier nearby probes suggest surrounding alluvial ground level was considerably lower (Holley, Dalan, and Woods n.d.; VandenBosch 1992). Discovery of Str. 7 suggested a ritual and civic as well as physical prominence for the location, a prominence continued or repeated later, in Late and Terminal Classic times. In Yaeger and Villamil’s view, this public role in the later periods is attested by the formal attributes cited above, by access patterns outlined in 1996 excavations, and by the abundant censers found therein at the SL-13 north platform.

Moreover, Yaeger and Villamil’s preliminary observations on the specific, chronologically sensitive censer forms at SL-13 suggest to them that the civic role of this group declined in the Terminal Classic, even as the community as a whole weathered the turbulence of the times. This accords well with earlier inferences about increasingly localized autonomy and self-sufficiency at household and small-community levels, with the contraction of authority held by paramounts at Xunantunich and its peer centers (e.g., Braswell, Keller and Yaeger 1994; Yaeger and LeCount 1995). Yaeger’s work at San Lorenzo contributes significantly, indeed, to our growing understanding of Xunantunich-area social dynamics at the end of the Classic period.

**Excavations in the Rural Hinterland**

Complementary and equally critical insights emerge from Cynthia Robin’s studies of smaller-scale household remains. While working on the XAP survey in 1995, Robin was struck by the unexpected abundance of small, single-period sites in the survey sample, especially on Transect 1 (T/A1; Robin, in Neff et al. 1995). From the vantage of a developmental model, particularly as invoked for Seibal settlement by Gair Tourtellot (1988a, 1988b), this situation suggested to Robin that the household developmental cycle had been truncated, and perhaps abruptly, for a relatively large portion of Xunantunich rural society at the end of the Classic period. To inquire further into this situation, she formulated a program for testing residential groups that would examine the range of domestic activities carried out at these unprepossessing and seemingly “undeveloped” sites. Were they full-scale residences? Was their occupation history truly as brief as it appeared? Could the seeming truncation of household development be extended to shed light on community-level development and functioning?
In 1996, Robin inaugurated study of single-mound sites in three distinct locales: (1) a six-site collectivity she dubbed the "Chan Noohol [Chan South] community," 300-350 m south of the imposing Chan site, (2) a pair of sites defining her "Chan Lak'in" (Chan East) community, and (3) another pair she called "Dos Chombitos Cik'in" (Dos Chombitos West). As she observes, each collectivity is associated with a waterhole (cf. Vogt 1969) and other possibly communal features, including variable linkage with hillslope terracing. Her aim is to seek the principles behind "small rural household and community emergence and contraction in the Xunantunich hinterlands." Drawing perceptively from earlier XAP household investigations (e.g., Braswell 1992-94; Yaeger 1994-96), she outlined a methodology that skillfully adapted activity-area testing methods from Sayil (Killion et al. 1989), Killion's (1992) ethnoarchaeological house-lot model, Tourtellot's and Haviland's developmental model applications, and her own ethnoarchaeological experience while working with John Lucy at Sisbecchen, Yucatan. The resultant methods include systematic two-stage, post-hole testing (Phases I and II) and extensive areal clearing (Phase III). Phase I tests recovered both artifact samples and soil samples for chemical analysis. In all phases, seemingly vacant terrain is accorded prominent attention, to balance investigation of constructed and open areas in the overall sampling of "lived" space.

In this first of two planned excavation seasons, Robin completed the full three-phase program at one Chan Noohol site (T/A1-071), began at two others (T/A1-072 and -068), and implemented a streamlined program in the two Dos Chombitos Cik'în sites (T/A1-152 and -153). Analysis of soil chemistry and fully detailed analysis of artifacts are still pending, but artifact distributions generally accord well with Killion's house-lot model. Her new site maps provide more detail than could the original survey versions, and attest to opportunistic ancient use of natural contours. As elsewhere in XAP excavations, construction is set on bedrock that has been stripped of top soil (e.g., Connell 1994; Yaeger, this volume). Robin reports that the range of features and artifacts encountered are consistent with the that expected in domestic compounds, and overall, her results support the complexity of space use in such compounds. Occupations thus far seem consistently Late Classic in age, based on diagnostic ceramics from an array of contexts, despite scattered older sherds recovered during survey in 1994-95. This important and innovative work will be completed in 1997.

Terracing Pilot Program

During the Xunantunich Settlement Survey, the survey team recorded abundant traces of ancient terracing. As reported earlier, documented terracing covers 0.42 km², 7.1% of the surveyed landscape (Neff, in Neff et al. 1995: 155). This is the northernmost extent of what was reported 70 years ago as a virtually continuous band of terracing extending north out of the Maya mountains (Ower 1927; see also Fedick 1994). Perhaps the most dramatic examples of such terracing have been documented at Caracol (e.g., Chase and Chase 1996; Healy et al. 1983); that seen around Xunantunich is smaller and generally less elaborate, more on a par with terracing reported around Pacbitun (Healy 1990, and personal communication, 1995). Indeed, some of the recorded terracing grades into arguably natural hillslope contours. Nevertheless, observed terraces define 191 instances of what we have termed "terrace sets," among which, intriguingly, four distinct formal types seem provisionally isolable (Gifford in Ashmore et al. 1994; Neff 1996; Neff and Gifford 1996). Survey, however, could provide only this tantalizing level
of information; excavation testing is required to refine our understanding of these important features.

For his dissertation research, L. Theodore Neff proposes further investigation of Xunantunich terracing. He plans to focus on terrace sets along T/A1, where terracing extent and variability are greatest. That choice also optimizes coordination with and direct complementarity to Robin's research. In 1996, with support from the University of Pennsylvania Museum/Department of Anthropology Field Funds program, Neff spent several weeks re-examining select terrace sets and gaining preliminary permission from landowners. His aim for 1997 is to investigate the variability in age, form, and function of these terraces, so prominent on the Xunantunich landscape but now known only from survey data.

Geomorphology Pilot Program

Jennifer Smith, a University of Pennsylvania graduate student in Geology, will implement a geomorphologic study, along the lines outlined in the NSF settlement archaeology proposal (Ashmore 1993). Smith spent approximately a week with XAP in early June 1996, acquainting herself directly with XAP research, the Xunantunich-area landscape, and the maps, air imagery, archive and personnel resources available for local geomorphic and geological inquiry. Smith, Ted Neff, Wendy Ashmore, and Smith's Penn advisor, Dr. Robert Giegengack, quickly reconnoitered the Mopan and the Macal rivers, from their confluence to, respectively, Benque Viejo and Vaca Falls. A formal proposal for 1997 research is being finalized in consultation with Smith's graduate advisors.

Discussion

Xunantunich settlement archaeology in 1996 delved more deeply into the broad descriptive outlines established in survey and earlier excavations. Increasingly, we see evidence of how communities were integrated, internally, with respect to one another, and in relation to overlords. And we have begun to understand better how these forms of integration changed, ultimately disintegrating by the close of Terminal Classic. Settlement findings in 1996, from San Lorenzo and the rural hinterland, further reinforce earlier suggestions of retrenchment and decline among the populace at large, in a manner paralleling the contraction of space and arguably authority evident in the civic core (e.g., Ashmore 1995; Braswell, Keller and Yaeger 1994; Leventhal 1994; Robin, in Neff et al. 1995; Yaeger 1995; Yaeger and LeCount 1995).

As we have asserted earlier, Xunantunich prospered then and survived into the Terminal Classic, but evidently not longer. And it seems ever clearer the populace north and east of the civic center likewise declined by the end of that span. What remains is a final season of data collection and then, completing analysis of the complex and multifaceted evidence gathered by XAP, toward resolving how the various components of society were organized, and what went wrong.

Future Directions
As noted, the fundamental fieldwork goals of the Xunantunich Settlement Survey were attained in 1995. Settlement research in 1996 allowed better focus on specific, intriguing aspects of those data. Most, but not all of the settlement fieldwork remaining for the final, 1997 season is implicit in the paragraphs above:

As indicated, Robin will continue examination of small rural sites on T/A1. Building on her work this year, she will consider further the structure and organization of occupation in what she posits are newly established household groups and fledgling communities, where developmental cycling was subsequently truncated or altered. Neff will pursue clearer understanding of the extensive and varied terracing documented in the area. Among the issues available for his scrutiny are not only the specific uses of individual terraces and terrace types, but also the relation of terracing to residential settlement. And Smith will implement geomorphic and geological study of the Mopan and Macal river drainages in our survey area.

Additional lines of projected "settlement" research round out the picture for 1997. Sam Connell will resume his field research in the Chaa Creek area, to investigate further a complex of elite sites whose occupants were important players in the political, economic, and ritual order of this part of the upper Belize valley (Connell 1993, 1994, 1995). Other settlement programs will continue in the analysis stage, including studies by Yaeger and by Jennifer Ehret. And while all of the foregoing collectively contribute context and complement for ongoing investigations within the Xunantunich site core (Leventhal, this volume), we realize the reciprocal truth, that the settlement data are fully understandable only when matched by information about those who governed the countryside. We look forward eagerly to 1997, to the new insights promised in all these inquiries.

ACKNOWLEDGMENTS: The Xunantunich Settlement Survey (XSS) was formed in 1992, at the invitation of Richard M. Leventhal, Director of the Xunantunich Archaeological Project (XAP). As part of XAP, we have pursued research under permit from the Department of Archaeology, Ministry of Tourism and the Environment, Belize. We gratefully acknowledge support and encouragement from Dr. Victor Gonzalez, Permanent Secretary of the Ministry, the late Mr. Harriot W. Topsy, Archaeology Commissioner, and preceding and subsequent Acting Commissioners, Messrs. John Morris, Allan Moore, and Brian Woodye. Ms. Teresa Batty has also facilitated our work greatly and with unfailing good humor. Continued funding for settlement study has come from the National Science Foundation (SBR93-21503) and the University of Pennsylvania, as well as general and generous support from XAP and Dr. Leventhal. Yaeger and Robin were awarded 1996 fellowships in the Fulbright IIE Program, and Yaeger's fieldwork was underwritten by an NSF Dissertation Improvement Grant. Field Funds from the University of Pennsylvania Museum/Department of Anthropology provided Neff's opportunity for 1996 fieldwork with XAP.

We owe much to the men from Succotz and Benque Viejo who have worked with us and shared their knowledge of the local landscape. Most particularly, we thank Don Lucrecio Chan for his years of gracious and untiring leadership of our local crew. We greatly appreciate the friendship and support of Rudy and Margaret Juan and their family, and the residents of San Jose Succotz, Benque Viejo, and San Ignacio Cayo. Many of these families have allowed us generous access to their property, and we are immensely indebted to them, individually and collectively, for allowing us such opportunities. I extend personal thanks to all members of XAP, and particularly those who signed on with XSS and gave so much of their time, energy, enthusiasm, and intelligence to gain the insights we now share about local settlement: Sam Connell, Jennifer Ehret, Chad Gifford, Missy Morrison, Ted Neff, Cynthia Robin, Kevin Schwarz, Jon VandenBosch, and Jason Yaeger. Special thanks to Mike Artemieff, Tom Jamison, Brandon
Lewis, Julie Miller, and Richard Leventhal, for friendship, unceasing support, and constructive challenge.
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The 1996 Tunneling Excavations

in

El Castillo

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Introduction

The Castillo at Xunantunich has been the focus of archaeological research since the 1950s (Department of Archaeology 1970, 1991; Satterthwaite 1950, 1951; Mackie 1961, 1985; Leventhal et al. 1992; Sanchez 1993; Robin 1994). Until recently, this research has focused on an understanding of the final phase architecture and of the stucco frieze on the east and west sides of Str. A-6-2nd. In 1995, an additional level of understanding of the Castillo was begun with the initiation of tunneling excavations into the mass of the platform on both the north and south sides (Miller 1995).

Tunneling excavations have certain benefits in exploring the earliest levels of platforms as large as the Castillo. These deeply buried levels may be reached with deep trenching. However, the area exposed at the base rarely can justify the amount of matrix that would need to be removed to reach the deep levels. Trenches allow a more flexible and less destructive manner of reaching these deeply buried constructions. In tunneling excavations, a much smaller volume of fill is removed. Tunnels may be targeted in response to the features encountered in the course of excavation allowing more to be exposed than in a trench which removes an equivalent volume of fill.

However, tunnels have a major limitation. The fill of the structure to be tunneled must be of a type that is sufficiently dense and cohesive that the upper levels of the fill will not collapse when a tunnel is dug through the lower levels. The 1995 excavations were a test of the suitability of the fill of the Castillo for tunneling. A test pit excavated in 1994 into the western wing of the Castillo (Robin 1994) exposing an earlier building, known as Quetzal building, suggested that the fill was sufficiently dense and cohesive to be a good candidate for tunneling. This contrasted with the fill of Str. A-1 (Zeleznik 1993) in which loose fill, unsuitable for tunneling, formed the majority of the construction. The results of the 1995 tests were mixed with one area, at the base on the north side of the Castillo, being too loose for tunneling, while two other areas, Quetzal building and the base of the Castillo on the south side, being entirely suitable (Miller 1995). With this, plans were made to continue the tunneling during the 1996 field season.

The goals for the tunneling program for 1996 were, first, to continue the tunnel on the south side of the Castillo (Op 196) to locate the earliest constructions in the area of the Castillo. Second, to continue the excavations in the Quetzal building (Op 204) to define the dimensions of an interior room of this building. Third, to place tunnels to locate earlier buildings below Str. A-6-2nd (Ops 226 and 232 on the south side of Str. A-6 and Ops 238 and 239 on the north side). These excavations will be described below. For each excavation area, the description begins with the location of each of the operations and a brief summary of the architecture and is followed by the architectural sequence of the area.

Terminology

Terms such as platform, structure, substructure, building, and terrace are used following the definitions in Loten and Pendergast (1984). The architectural sequences presented for each of the operations below will be described in terms of construction events. A construction event is defined as the initial construction or any subsequent modification of an architectural feature, including, but not limited to, additions, replastering, repainting, resurfacing floors, partial or complete destruction, and partial
or complete burial (Miller, n.d.). This is preferable to other terms, which describe the occupation or use of a building, when discussing sequences of buried architecture with few or no artifacts found in situ since there is no indication of the actual occupation or use of the structures.

**Methods**

Two types of excavations were used in these operations: clearing excavations and subsurface or penetrating excavations (trenches and tunnels). The methods for each will be discussed separately.

**Clearing excavations**

The clearing excavations were located in areas which were selected for tunneling excavations to expose the final architecture. Each location was assigned an operation number. Within each operation each unit opened to expand the surface area being excavated was designated a suboperation. The size of each suboperation was determined by its relationship to the architecture being exposed. Suboperations were between 1 and 2 m wide and between 1 and 2 m long. Within each suboperation, excavation lots were defined based on natural stratigraphy with thicker strata being arbitrarily subdivided into 20 cm or smaller levels. All lots, with the exception of the surface lots, were screened and all artifacts were collected.

**Penetrating excavations**

The penetrating excavations began when the masonry facade or stucco surface of the final phase architecture was removed or, in the absence of masonry, where the matrix changed from overburden to structural fill, based on changes in soil color and type and orientation of the stones. At that time, a new operation number was assigned. In the subsurface excavations, the suboperation designator were changed each time a stucco surface or a wall was removed. In this way, all of the lots associated with a single construction episode were given the same suboperation designator. However, in a number of instances, the suboperations include material from different construction events because the defining walls or floors were not preserved to the same extent as the fills. These can be separated through the excavation lots.

The size and shape of the tunnels were determined by following several principles developed by the Early Copán Acropolis Program, Copán, Honduras (Sharer et al., 1992). The width of the tunnel, averaging 1.2 m at the base, is determined by the width of a wheelbarrow. The height of the tunnel, averaging 1.8 m in the center, is determined by the height of people, wearing hard hats, working in the tunnel. The tunnel is shaped like an arch, widest at the base and rounded on top. The lots in the subsurface excavations were changed based on both soil characteristics and by horizontal distance in the excavation. Each lot was 1 m or less in horizontal extent and varying thickness, depending on the soil characteristics and architectural features. Lots were screened with the exception of those in which the matrix was determined to be sterile after screening previous lots from the same fill event.

The feasibility of tunneling was determined by the author in consultation with Richard Leventhal, Rudy Larios, Getty consultant to the Xunantunich Archaeological Project, and with the excavators digging the tunnels. A number of factors are used to determine the feasibility of tunneling, with safety being the overriding concern. The
first factor is the type and compactness of the soil holding the stones which were used in the fill. The soil must be firmly packed with no pockets of loose soil or of pockets with no soil between the stones. Fine grained soils are more suitable for tunneling than coarser grained soils. For example, soils which contain sand are less cohesive and therefore less appropriate for tunneling. It is not possible to tunnel in loosely packed soils. Second, the distribution of the stones used in the fill which should not be in direct contact with one another, with no soil between them. When the stones are surrounded by compacted soil, the soil holds the stones and prevents them from falling from the ceiling of the tunnel. The higher the ratio of soil to stones, the more likely that tunneling will be feasible. The third factor to consider is the thickness and type of material above the entrance to the tunnel. If the tunnel is entering at the base of a structure, the final phase architecture above the tunnel entrance should be cleared so that the preservation may be assessed. It is safer to tunnel below well preserved or consolidated masonry architecture, which has structural integrity, than to tunnel below unconsolidated architectural fill. If the tunnel must be started below unconsolidated fill, there should be a vertical face of material at least two meters thick above the entrance to the tunnel. If the tunnel does not pass below preserved architecture, this vertical face allows the overlying matrix to be assessed in cross-section for type and stability and leaves sufficient unexcavated material to support a person passing above the entrance to the tunnel.

Ideally, the tunnel entrance will be beside an architectural feature such as a terrace or building wall with a stucco floor forming the base of the tunnel. This ensures that the tunnel is at an occupation level increasing the probability of locating other architecture and special deposits. The tunnel then follows the known architecture, branching as it encounters other structures. It is possible to excavate a tunnel through fill without a structure for a guide but the information gained from this sort of tunnel is limited in value.

North Side, West Wing
Operation 204

The tunneling excavations into the Quetzal building initiated in 1995 (Miller 1995) were continued in 1996. The 1995 excavations revealed the exterior of an addition to the building as well as a door to the interior of the building which had been blocked with stone masonry in antiquity. The 1996 excavations began with the removal of the masonry plug and the excavation of a tunnel to determine the dimensions and plan of the room. Two suboperations (G, H; Fig. 1) were defined this year. Suboperation G, was a tunnel with two branches, one (2.6 m) to locate the south wall of the room and the other (2.3 m) to locate the west wall for a total of 4.9 m excavated this year. Suboperation H consisted of two 0.5 m X 0.5 m probes below the surface of the bench and the floor.

No artifacts were found in situ on the bench or floor or cached below the bench or floor.

Three interior walls of Quetzal building, a bench, and the floor of the room were exposed in this excavation. Excavations ended when the dimensions of the room were determined and samples of the fill of the building had been taken.
Operation 204 was completely backfilled before the end of the season.

Architectural Sequence

The first construction event revealed in this year's excavation is the construction of Quetzal building. The exterior dimensions of this building are still unknown. The interior plan is somewhat clearer. There were two ranges of rooms, one facing to the northwest, the other to the southeast. Based on this year's excavations, there was no access between adjacent rooms, either through the back walls or the side walls. This is similar to the plan of Str. A-13, although there is currently no evidence for a passageway through Quetzal.

Three walls and both sides of the doorway were revealed allowing projection (using symmetry) of the complete size and plan of the room. The interior dimensions of the room are 1.85 m (NW-SE) by 3.4 m (NE-SW). The entrance to the room is 1.95 m wide. A 1.15 m wide bench runs across the back wall of the room. The complete height of the room was not determined but the north west corner of the room was exposed to a height of 2.3 m and the vault spring had not yet been reached. The fill of the bench and substructure, as revealed in Suboperation 204H, consisted of medium to large cobbles with fairly loose soil around it.

The walls and bench of Quetzal were covered in plaster and painted red. In areas where the stucco was broken, there were traces of an initial, coarser, base coat with no paint followed by one (on the south wall) or two (on the west wall) coats of a finer and harder stucco with red paint. There were traces of burning on the surface of the bench.

The second construction event revealed in the 1996 excavations was the filling in of the Quetzal room and blocking of the doorway. The room was apparently filled from the ends into the center. A series of fill walls were exposed before the southwestern wall of the room was reached. These walls faced into the center of the building. The final masonry plug in the door was laid in a mortar which differed from the fill in the room in both color and texture. The plug was constructed after the fill of the room was in place. It is not known whether the fill reached the top of the vault in the entire room and, if it did, how this was accomplished.

No artifacts were found cached in the fill of the room. Artifacts were found in the fill soil. The fill of the Quetzal room differs from the fill in other in that it appears to have come from near a living area (dark grays and browns in color, containing artifacts) rather than directly from a quarry (no artifacts, white to yellow or orangish in color).

The building sequence in this area continues with those construction events described in the 1995 report on this area (Miller 1995).

North side, central area
Operation 238

This operation was a surface excavation. The goal was to locate and expose any preserved architecture in this location. Op 238 had two suboperations (A, B; Figs. 2 and 3) and exposed a total of 6 m². No masonry was located. The operation stopped when the matrix changed to that commonly found as fill. The excavation in this area was
continued in Op 239.

Operation 239

This operation is a tunnel excavation. The goal of this excavation was to locate completely buried architecture below Str. A-6 at this level. The tunnel extended 11 m south under Str. A-6. Four suboperations were defined (A-D; Figs. 2 and 3). Suboperation A consisted of the fill of the final terraces. Suboperation B consisted of a floor resurfacing and the ballast below. Suboperation C was the removal of the earlier floor and the matrix below it. Suboperation D is the fill of the lower of the two terraces. Because the floor which defines the upper boundary of 239B and 239C was removed in antiquity, this distinction was not initially apparent and some of the lots excavated as a part of 239A are in fact part of an earlier construction.

No artifacts were found in situ in this operation.

Two terrace walls, a later stucco surface, and a resurfacing of this later surface were revealed, along with several fill retention walls. Excavations were terminated at the end of the season.

The entrance to Op 239 was sealed at the end of the season to allow excavation to continue in 1997.

Architectural Sequence

The earliest construction revealed in these excavations are two terraces and the surface at their base. The lower of the two terraces is 2.55 m high. It has an 0.55 m tall basal molding. The surface of the terrace is 2.75 m wide. The second terrace is only preserved to 1.3 m high with a 0.75 m high basal molding. The surface at the base of the first terrace is probably the surface of another, lower terrace. At this time the superstructure associated with these terraces is not known. However, the terraces are further south than the base of Str. A-6-2nd and therefore must be associated with an earlier superstructure than is currently known.

The next event was the construction of a terrace (now destroyed) which buried the lower of the two terraces as well as the basal molding of the upper terrace. Although the facing stones of the terrace were removed in antiquity, changes in the fill color and material suggest that the new terrace was no less than 4 m north of the previous terrace.

The next event was a resurfacing of the terrace. Since the surface is not preserved to its intersection with a terrace face it is not possible to tell if there was an additional terrace face associated with this or not.

The final event revealed in the Op 239 excavations was the construction of the final terraces. The terrace face was either removed in antiquity or collapsed after the abandonment of the site. These terraces were apparently constructed at the same time as Str. A-6-2nd as there were no terrace walls or changes in the fill encountered in the tunnel that could be associated with the location of the base of Str. A-6-2nd.

South side, base of platform

Operation 196
Operation 196 was started in 1995 (Miller 1995) to locate the earliest occupation under the southern side of the Castillo. Although the tunnel only reached 1.9 m in 1995 a number of different construction events were defined. The 1996 excavations continued the initial tunnel and created two branches (Fig. 4). A total of 38.5 m was excavated this year as follows: 17.3 m in the initial tunnel (for a total length of 19.2 m), 15 m in the first branch, and 6.2 m in the second branch. The tunnels extended to a point 26.7 m inside of the platform, approximately 21 m south of the center line of the platform. Eight suboperations were defined in 1996 (D-K; Figs. 4 and 5). Two of these (D, E) are continuations of suboperations started in 1995. Subop F was defined to expand the tunnel entrance. The remaining suboperations were defined as the fill behind each of the terraces or between two floors. Suboperations E and J, although separated initially, are from the same construction event and were combined in the branch tunnels.

While the original plan had been to continue the tunnel straight north under the center of the Castillo, this proved to be impossible because the level of the bedrock rose too close to a stucco surface. We were unable to penetrate this surface and continue to tunnel because the fill above the surface, as revealed in several small probes, was not suitable for tunneling. The angle of the bedrock surface suggested that it was lower to the west, a tunnel branch was started at a point where it was possible to stand comfortably. The branch tunnel ran at an approximately 60 degree angle to the original tunnel. The elevation of the surface of the bedrock did descend to the west and the tunnel was reoriented to the north, again to try to reach the center of the platform. Eventually, however, the bedrock again rose to a level that was too close to the stucco surface to allow further excavation. Probes above the stucco surface again showed that the fill above the surface was unsuitable for tunneling. A second branch was started, extending northwest along the same line as the initial part of the first branch. The bedrock continued to descend to the west and eventually the tunnel was shifted to the north again. Unfortunately, the field season ended before the tunnel could be extended to the north.

Two special deposits were defined in this operation. Special Deposit 1 consists of a broken ceramic jar lying on the upper surface of one of the fill strata. This does not appear to have been deliberately cached, rather, it appears to have been a jar for carrying water used in the construction process which was dropped into the fill and broke.

The second, Special Deposit 2, consisted of a small pit (0.53 m N-S X 0.3 m E-W) in the penultimate platform surface (see below). It did not extend into the fill of the platform and was capped the final floor. This deposit had bird bones in it including bones from at least one large and one small bird.

The tunnels revealed three sequential terrace walls, the stucco surfaces that form the top of the platform, an anomalous stucco feature, and the resurfacing of a terrace. Excavations were terminated at the end of the season.

The entrance to Op 196 was sealed at the end of the season to allow tunneling to continue in 1997.
Architectural sequence

The earliest construction event recognized in this tunnel is a large platform with two terraces. The lower of these terraces was completely removed in antiquity, leaving only a small step of modified bedrock to indicate its location (Miller 1995). The lower terrace was approximately 1.6 m high with a 7 m wide surface (based on projections of both the wall and the surface). The lower 3 courses (0.6 m) of the second terrace wall (Belize wall) were revealed in the tunnel. This wall may have had a 0.3 m high basal molding which was removed when the terrace was buried, based on the fact that the floor at the base ends approximately 40 cm south of the base of the wall and the fill types seen in this area continue below the base of the wall. The second terrace has been projected to be 2.4 m high, based on the elevation of the stucco surface at the top of the fill. This stucco surface was very decomposed over most of the excavated area, visible only as an intermittent strata of fine grayish material. However it was preserved very well in one area. In this same area a stucco feature was found. The western side of the feature was exposed. It has slanted sides and rounded corners and rises 0.18 m above the surface of the floor. It was 2.2 m long. The northern edge was also exposed but it ended after 1 m, with a cut made in antiquity. A series of filled postholes extending into the fill of this platform were also revealed. Most of these appear to have been associated with this construction, perhaps as posts for perishable structures on top of the platform. It is not possible to discern any patterns in the known postholes. The entire area below this platform appears to have been cleaned down to the bedrock before the first building was constructed with the fill brought in from another area.

The second construction event in this area was the expansion of the platform with the construction of Macal wall. This extended the platform 0.75 m to the south. Although no direct connection was made between the terrace walls and the stucco surfaces above, it is hypothesized that the second floor encountered in the tunnel was constructed at the same time as Macal wall. This extended the height of the platform approximately 0.30 m. The lower 0.65 m of this wall was preserved. It was constructed on top of the surface of the lower terrace of the original platform.

The third construction event was another extension of the platform to the south. Mopan wall is located 1.1 m south of Macal wall. It also was built on top of the stucco surface of the lower terrace of the original platform. The lower 0.7 m of this wall were exposed in this tunnel. A third floor exposed in the ceiling of the tunnel probably was associated with this wall.

The fourth construction event revealed in the tunnels was a resurfacing of the terrace surface south of Mopan wall.

The fill of the first construction event includes both sterile material and material from cultural contexts. The fill of the later platforms is primarily from cultural contexts.

The architectural sequence continues with the events described from the 1995 excavations (Miller 1995).

South side, base of Str. A-6
Operation 232

Operation 232 is a tunnel into the terraces at the base of Str. A-6, at the level of
the plaza to its south, approximately on the center line of the building. It is located below Op 226, Subops L, M, N, O (see Wilson, this volume). The goal of this operation was to locate earlier constructions below Str. A-6. This operation was a trench through the base of Peach wall and continued as a tunnel below the construction wall to the north (Figs. 6 and 7). The trench was 1.35 m long and the tunnel was 3 m long for a total length of 4.35 m. Four suboperations were defined (A-D). Suboperation A includes some material from both B and C as the floors used to define these suboperations did not extend as far as the fill below them.

No artifacts were found in situ in this operation.

Operation 232 revealed a terrace wall and the surface at its base, a resurfacing of this floor, and two later floors. Excavations ended after the terrace wall was penetrated and the fill was determined to be unsuitable for tunneling.

Operation 232 was completely backfilled at the end of the season.

Architectural sequence
The earliest construction revealed in these excavations is Sky wall and the stucco surface at its base. Sky wall was preserved the full height of the tunnel (1.6 m). It has a 0.45 m high basal molding (extending 0.25 m from the face of the wall). The stucco surface at its base was preserved 1.8 m south of the base of the wall. This terrace wall does not seem to correspond in elevation to any of the walls revealed on the north side of the Castillo in Op 239. The fill of Sky wall included large stones and loose soil. The superstructure associated with this terrace is unknown, as is the level of the base of the terraces.

In the second construction event, the stucco surface at the base of the wall was resurfaced with a thin layer of stucco (0.05 m thick). This surface may have been cracked and damaged before it was buried as traces of a black soil, unrelated to the overlying fill, was found in the cracks of the floor.

The third construction event revealed in this tunnel is a stucco surface that buried the basal molding of Sky wall. This floor ended 1.1 m south of the wall although the fill stratum associated with it continues for an additional 1.5 m. The location and height of the associated terrace wall is not known.

The fourth construction event is another floor which buried an additional 0.6 m of Sky wall (for a total reduction in apparent height of 1.2 m). This floor is also destroyed 0.8 m south of Sky wall although the fill stratum associated with it extends an additional 2.1 m. The location and height of the associated terrace is not known.

The final construction event revealed in these excavations was the construction of Peach wall and its associated construction wall as the base for Str. A-6-2nd. This corresponds to the final construction event revealed in Op 239.

The fills of the earlier construction events contained soils from cultural contexts while the fill of the final construction was almost sterile.
Conclusions

The 1996 tunneling excavations have expanded our understanding of the construction of the series of buildings which formed the Castillo. The earliest known construction, from Op 196, was a large platform which may have supported perishable structures as well as other, more permanent ones. This platform was extended to the south several times, without significantly changing its height. Eventually, this platform was completely buried. Ceramics found in the fills of these platforms include sherds from the Preclassic but also include sherds from the early part of the Late Classic indicating that this large platform was started during the Late Classic. It is possible that there were remnants of an earlier occupation of the area which was scraped up and used as part of the fill of this earliest Late Classic platform.

At this time there is no direct connection between these early and the Quetzal building or the terraces revealed in Ops 232 and 239. The Quetzal building was buried by one of the terraces supporting Str. A-6 (Robin 1994). This may suggest that Quetzal was contemporary with the terraces exposed in Op 239 although there is currently no hard evidence to confirm this.

The presence of numerous stucco surfaces associated with the same walls suggests more frequent, smaller scale modifications of the buildings on the Castillo rather than large-scale earth moving endeavors. This correlates well with the architectural sequences exposed in the 1995 excavations at the base of the north side of the Castillo and outside the Quetzal building (Miller 1995) in which many small modifications of the appearance of the exterior facades of the buildings were revealed.

The past two seasons have demonstrated that tunneling excavations are feasible at Xunantunich. These tunnels have extended the understanding of the occupation and growth of the area which became the Castillo beyond what conventional excavations can provide.
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Zeleznik, Scott
Fig. 1

Op 204

Plan of Excavations (1996)

Note:
Subop D is a 1995 excavation.

Quetzal building
Fig. 2

Ops 238, 239

Plan of Excavations
Fig. 3

Ops 238 and 239

Profile of excavations

239B is a resurfacing above 239C
Fig. 4
Op 196
Plan of Excavations (1996)

Key:
Wall
Posthole

N

0 1 2 3 m

I, E  Macal wall
H, E  Mopan wall
D, G, E
F (widening entrance)
Fig. 5

Op 196
Profile of primary tunnel

- Belize wall
- Macal wall
- Mopan wall
- Platform surfaces continue in branch tunnels

Subop E continues as the lower 20-99 cm below J
Subop G is a second floor (not shown) at the base of D and above E
Fig. 6

OP 232

Plan of Excavations

D
Sky wall
A, B, C
Construction wall
A
Peach wall

N
0 1 2 3m
Fig. 7
Ops 226 (partial), 232
Profile of excavations
1996 Excavations at Group C

and at

Structure A-32

Minette C. Church
University of Pennsylvania
Introduction:

Excavation over the past five years at the Xunantunich site core has yielded a wealth of information about changes in the spatial relationships of the architecture at the site during the Late Classic and Terminal Classic periods (Leventhal et al. 1992; Leventhal ed. 1993; 1994; 1995). The Xunantunich elite seem to have weathered the political and social upheavals of the 9th century well in comparison to other elite centers in the central Maya Lowlands (Leventhal 1994). However, new adaptations to the changing social environment were necessary, and tracing associated patterns of architectural construction and abandonment in the site core, as well as the contemporaneous changes in the surrounding settlement area, has been a basic goal of the Xunantunich Archaeological Project, co-directed by Dr. Richard Leventhal of UCLA, and Dr. Wendy Ashmore of the University of Pennsylvania (Ashmore 1994, 1995; Leventhal 1994). The 1996 excavations at Group C, the southernmost group at Xunantunich, and at A-32, the range structure on the front of the Castillo (Str. A-6), shed new light on the dynamics of construction through time, and set the stage for further excavation to answer new questions.

Group C:

Group C is a constellation of buildings located just south of the Castillo (Str. A-6) and the rest of Group A, at Xunantunich [Fig.1]. It includes two east-west oriented range structures, C-2 and C-3, which were the focus of our 1996 research. These parallel structures frame a flat plaza area, bounded on the east by a long, low, smaller unexcavated mound. Str. C-4, tentatively interpreted as a bath or sweat house (Schmidt 1974), is located just west and slightly north of Str. C-3. The sweathouse is also near a C-shaped plaza group (formed by Strs. C-5, 6 and 7) located just south of Str. C-3. Str. C-8, a long, low mound further south, may have formed the southern boundary of the site core at one time (Schmidt 1974) [Fig.2].

We have little excavation data from Group C. In 1991 Jason Yaeger tested the plaza between Strs. C-2 and C-3 (discussed below). He also placed a test unit in the patio of the C-5, 6, and 7 group, excavating the patio fill and finding a posthole in the bedrock at the base of the unit. In the 1950s Michael Stewart excavated the possible bath/sweat house, Str. C-4; unfortunately he left no notes. Linton Satterthwaite (1952) notes that most archaeological examples of sweat houses, such as those at Piedras Negras, are associated with public spaces, as is true of the one in Group F at Tikal (Coe 1988). However, all the information Satterthwaite collected on sweat houses in the ethnographic and ethnohistoric documentation suggest their use had shifted by the Colonial Period, and they were by that time associated with residential areas, often single households (Satterthwaite 1952). The bath/sweat house in Group C, while it may be in association with a public plaza, certainly differs from the Tikal and Piedras Negras examples, since it is also associated with a residential group. We know nothing more about this structure.

From a broader site perspective, however, we do have some hints as to the relationship between Group C and the Castillo (and Group A), thanks to excavations in 1992 by Sabrina Chase, in 1994 by Cynthia Robin and in 1995 by Linda Neff (Chase 1992; Neff 1995; Robin 1994). Robin and Neff found large quantities of Late Classic II refuse thrown down on top of the stairs and terrace which would have provided access to the Castillo from the south, indicating that direct formal access to the Castillo from
Group C was discontinued by the Late Classic II. Chase found that the patios/plazas that abut the Castillo’s south edge were used in the Late Classic II, but not in the Terminal Classic. These findings, contributing as they do to the general research interest in the construction and abandonment episodes that shaped the spatial dynamics of the site through time, led us to explore Sts. C-2 and C-3. Part of the goal was to determine if the period of construction and occupation of these features corresponded with that of the southern access to the Castillo. Excavation results confirm that this group was abandoned at the end of the Late Classic; no ceramics recovered in 1996 post-date the Late Classic II ceramic phase (Preziosi, personal communication 1996). This fact places Group C within the general hypothesized pattern of overall site contraction between the Late Classic and Terminal periods (Leventhal 1994).

Aside from determining the latest period of habitation for Group C, we also wanted to answer questions about the morphology and function of Sts. C-2 and C-3, specifically. Up until the beginning of the 1996 excavation season, some had proposed that Sts. C-2 and C-3 formed a ballcourt (Leventhal et al. 1992, Schmidt 1974). The general relationship of these buildings to each other as long, generally parallel mounds favored the ballcourt interpretation. However, factors which did not support this hypothesis included their east-west orientation, in contrast to most Maya ballcourts which are oriented north-south; their distance from each other, which would have created an unusually wide alley; and the fact that the buildings are in fact not perfectly parallel and are very slightly off-set. In 1991 Yaeger placed test excavations between Sts. C-2 and C-3 to find out if there was a plastered plaza level and a ballcourt marker between the two. He found no marker, although there is a plastered surface there. In 1996 we focused on the architectural morphology of Sts. C-2 and C-3 to evaluate the ballcourt hypothesis.

The following section details the excavation strategy and preliminary findings of the 1996 season. Continued work on these two structures, as well as the plaza group just south of them, is under consideration for next season, in light of the unexpected and intriguing results of this year’s work.

Excavation Strategy

In order to determine the form of Sts. C-2 and C-3, we began trenching excavations starting in the plaza between the two, and continuing up and over each mound. Operation 241 began in the plaza just south of Str. C-2, trenching north at its estimated midpoint. It also encompassed some clearing excavation along the top of the mound. Operation 242 was similar, starting in the plaza just north of Str. C-3 and proceeding south at its estimated midpoint. Each operation was comprised of Sub-operations A - P, most of which were 1 x 2 m in size [Fig.3]. The two operations are described separately below. With these excavations we hoped to define the architecture of the structures on either side of the plaza, in order to determine if they had the sloping sides common in ballcourt construction. If there were rooms on the structures, which we suspected there were, given the uneven topography along the tops of the mounds, we wanted to examine their size, shape, content, and orientation.

(Operation 241)

In the excavations at Str. C-2, we found no battered platform or high platform wall which might have formed the side of a ballcourt. So the new emphasis was on
exploration of at least two of the rooms on the structure, including a central one, to try
to determine form and function. We accomplished this by running east-west
excavations along the top of the range structure, branching off the north-south trench,
in order to determine room morphology (shape of benches, orientation of
structures/placement of doorways, etc.), and estimate total room and bench
dimensions. Below is the reconstructed architectural sequence, organized in phases,
from earliest to latest. I have designated phases with roman numerals; letters signify
construction episodes and activities that fall within a phase.

Quarrying predating Str. C-2, Phase Ia:

We recovered clear evidence of that there was activity at this locus both before
and after the construction and primary occupation of Str. C-2. In Op. 241F, just north of
Str. C-2, we uncovered portions of an “isolation trench” for quarrying limestone blocks
(see Woods and Titmus 1993) [Figs. 4 & 5]. Overlying this feature was the ballast and
plaster of the plaza surface north of the structure, in Ops. 241G and F, indicating that the
quarrying activities predated both the northern plaza area and Str. C-2. It probably
also predated the stairs which we found underlying Str. C-2 [Fig.4]. These stairs may
well have sat on the northern plaza area, although we lack a direct stratigraphic
connection between them.

“Sill” and Staircase predating Str. C-2, Phase Ib:

An unusual staircase comprised of two steps drops down to the north from what
appears to be an east-west running "sill", 58 cm wide, found at the juncture of Ops. 241B
& 241C [Fig. 6]. The plastered surface of what would become the plaza between Strs.
C-2 and C-3 lips up to the sill’s plastered south face, which is 62 cm tall. We excavated
through the plaster immediately south of the sill and found unusually thick, at 15 cm.
Part of this thick plaster layer underlies the south face of the sill, suggesting multiple,
but indistinguishable, plastering episodes for this plaza. Two broad steps drop down
from the sill’s north side, with plaster covering the entire sill and staircase feature. The
top step drops 37 cm from the sill to the second step. The second riser drops 29 cm, and
the final riser drops 8 cm or so to what was probably a floor/plaza surface of some
kind, not far above bedrock. Only a small patch of plaster lipping off the bottom step
survived here.

This stairway is probably related to the plaster surface found above the quarry
trench in Ops. 241G and 241F mentioned above. However the surface we exposed at
the base of the steps is separated from the surface we exposed above the isolation
trench by roughly 3.5 m. We would have had to completely bisect Str. C-2 to expose the
relationship between these steps and the plastered layer north of the structure, and we
did not have time to do this. We do know that the plastered plaza level to the north,
overlying the quarried area, is 6 cm higher than the plaster at the base of the steps, and
so sits roughly at the level of the first riser.

In contrast, we do have good evidence that this sill and stair were
contemporaneous with Str. C-3. The plastered plaza surface south of the sill and that
which lips up to Str. C-3’s substructure (see below) were only 2 cm different in
elevation, so we are relatively sure they are the same surface. This plaza area would
have extended north from the front of Str. C-3 to meet the sill and steps, prior to the
construction of Str. C-2. Str. C-2’s substructure sits atop this plaster surface. As a result
we know that Str. C-3 predates Str. C-2, though they both had only Late Classic II ceramics (Preziosi, personal communication, 1996).

The sill is an unusual feature, unlike anything excavators at Xunantunich have encountered. The only things even remotely similar are features that Sabrina Chase describes in her report of the excavations of South Group, Plaza I, located just south of the Castillo. She describes these constructions as “a stepped parapet, reasonably uniform in construction, encircling a small sunken plaza with two other structures like it” (Chase 1992:37). The platform of Chase’s Str. 1 varied from 1.8m to 2.5m in width, and that of her Str. 3 is 3.2m, and so both are substantially wider than the Group C sill. It is also unlikely that the sill in Group C encloses anything, although we have not uncovered much of it, and it is mostly obscured by the later Str. C-2. Chase’s features had two steps on one side of the platform and three steps down to the sunken plaza, whereas there was probably no step on the south side of the sill, only the 62 cm drop to the plaza. Overall the comparison is the closest we have, but it is unsatisfying. However, we can be sure that the sill was some kind of boundary feature demarcating the edge of the plaza north of Str. C-3 before the construction of Str. C-2.

Str. C-2, Phase II a:

When the Maya began building Str. C-2, they incorporated the sill as the second step in a three step staircase to the top of the substructure platform. A step was added to the south side of the sill, breaking up the 62 cm rise from the plaza into a 36 cm rise from the plaza level to the step, and a 26 cm rise from the top of the step to the top of the sill [see Fig.6]. The plaza floor south of the sill does not lip up to this later step, indicating that the Maya did not replaster the plaza when they put in the step, and built Str. C-2. This step was somewhat destroyed, only evidenced by harder soil and mescla roughly in the shape of a step, and a narrow strip of plaster lipping up from its tread to the south face of the sill. This plaster is the second plastering episode on the sill. The earlier episode ran down the north side of the sill to join the Phase Ib steps. This second plastering, though, lipped up to the edge of the Str. C-2 substructure, which formed the third riser of the stairs.

Although the substructure facing is not preserved, we can infer its existence from the trench profile and the fill episodes revealed there. The substructure fill that sits north of the sill and over the Phase Ib steps is composed of dry-laid chert cobbles with very little soil matrix at all. This fill is capped by a construction floor, the remnants of which we exposed in the north and west profiles of the trench (Op. 241D). This lower fill episode apparently forms the bulk of the substructure, and the construction floor sits c.25 cm above the second step (what was the “sill”). A final layer of fill above this construction floor probably forms a building platform atop the substructure, surfaced with a finished plaster surface which was floor of the rooms in Str. C-2. The south face of this building platform is also not preserved.

I estimate that there was a single row of five rooms in the range structure, given the amount of space along the top and the length of the rooms we exposed [Fig.7]. The doorways faced south, towards Str. C-3, and those of Str. C-3 faced this structure. Table 1 contains the dimensions of the rooms and those of the interior features and walls. We excavated the central room, Room A, and that immediately west of it (Room B). Like the rooms in Str. C-3 (discussed below), these had C-shaped benches, and at least the
west room (Room B) was largely painted red. We also found considerable evidence of
burning on those benches with plaster surfaces intact.

We were not able to determine the full thickness of any of the walls of the
structure, as the exterior faces of both north and south walls were gone. We found no
vault stones in the collapse, and it is not possible that there was a thatched roof on Str.
C-2. However, It is also possible that the Maya foraged through these buildings for
stone late in the Classic II or Terminal Classic, discussed below as Phase IIIa.
<table>
<thead>
<tr>
<th></th>
<th>Str. C-2, Room A</th>
<th>Room B</th>
<th>Str. C-3, Room A</th>
<th>Room B</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Width, N-S</strong></td>
<td>2.53 m</td>
<td>2.55 m</td>
<td>3.03 m</td>
<td>3.03 m*</td>
</tr>
<tr>
<td><strong>Length, E-W</strong></td>
<td>4.86 m*</td>
<td>4.51 m*</td>
<td>6.00 m*</td>
<td>7.67 m 1</td>
</tr>
<tr>
<td><strong>East Bench</strong></td>
<td>unk.</td>
<td>0.82 m</td>
<td>1.25 m</td>
<td>2.14 m</td>
</tr>
<tr>
<td><strong>West Bench</strong></td>
<td>1.00 m</td>
<td>unk.</td>
<td>unk.</td>
<td>1.27 m</td>
</tr>
<tr>
<td><strong>Width</strong></td>
<td>2.00 m</td>
<td>1.80 m</td>
<td>2.03 m</td>
<td>unk.</td>
</tr>
<tr>
<td><strong>Bench Height</strong></td>
<td>0.60 m</td>
<td>0.51 m</td>
<td>0.65 m</td>
<td>0.55 m 2</td>
</tr>
<tr>
<td><strong>Doorway</strong></td>
<td>1.67 m</td>
<td>1.60 m</td>
<td>2.00 m</td>
<td>unk.</td>
</tr>
<tr>
<td><strong>North Wall Thick</strong></td>
<td>unk.</td>
<td>unk.</td>
<td>0.85 m</td>
<td>unk.</td>
</tr>
</tbody>
</table>

* = extrapolated measurement based on assumption of room symmetry - not totally excavated

**Patolli** designs in Str. C-2, Phase IIIb:

Some time after the original plastering episode of Str. C-2 (we encountered no evidence that there was more than one) the Maya etched two patolli boards into the plaster. We found a rectangular board etched into the red-painted floor, squarely in the middle of the doorway of Room B [Fig.8], and an oval one etched into an area of plaster that had been darkened from burning, on the west bench of Room A [Fig.9].

The boards in Str. C-2 may have been etched into the surfaces at any time after the last plastering episode had dried, and after a burning episode on the bench in the case of the oval design. Although many scholars have argued that graffiti and patolli boards are creations by "squatters" after the abandonment of sites, we know that much of Str. C-2 collapsed or was intentionally dismantled, including the bench with the oval design, damaging the design in the process. If it the structure was dismantled (see below), then these designs existed in the Late Classic II or Terminal Classic periods, prior to the site’s abandonment.

**Possible stone-robbing at Str. C2, Phase IIIa:**

I will use four criteria in my discussion of the possibility that stones were systematically robbed from Strs. C-2 and C-3. The first criterion is: is there sufficient volume of rubble to account for the collapse of the walls, terraces, and benches. In the case of Str. C-2, we did find a large volume of rubble collapse. The second criterion is: were there enough cut facing stones in the collapse debris to account for the wall, bench, and terrace faces. We found some, but not much cut stone in the collapse south

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1 There is a patch of plaster in the east bench of Room B (242M) where I expected the east wall of the room. Despite the fact that this plaster lies in what looks like wall fill (see map), it forces me to extend the bench surface, and hence the width of the room, significantly further east.

2 This measurement assumes that the floor of Room B is at the same elevation as Room A.
of the building, from either the south wall or the south face of the substructure. We found the benches in a similar state, and the few in situ bench facing stones that we found were of very soft limestone. These findings may represent poor preservation, rather than stone-robbing. However, more light is shed on this issue by the third criterion, which concerns how much in situ facing stone we found. The answer is very few. Not even a first course remained of the south face of the bench in Room B (we never defined the south edge of the collapsed edge of the bench in Room A). The same is true of the exterior face of the south wall, and the south face of the substructure platform, even where adjacent plaster preservation was very good. Finally, I consider internal room stratigraphy. Superstructure collapse overlay the benches, suggesting that, prior to collapse, facing stones from the benches in both rooms were ripped out; in fact the face of the back bench in Room B was completely removed, and we determined its position only from the position of floor plaster lipping up to where it had been. The fact that clean, light-colored (10YR8/2) collapse debris directly overlay clean but broken plaster benches and the floors, without an intervening layer of soil, suggests that the building was not allowed to collapse slowly over the course of time. One would especially expect such an intervening layer if the structure had a perishable roof, and we found no vault stones in the collapse. Because Group C was abandoned well before Group A, I believe the Maya may have raided stone from this area after its primary occupation for use in later construction farther north, probably in the Late and/or Terminal Classic. In Ballcourt 1 (see Jamison, this volume) builders in Group A reused blocks, including vault stones, in the facing of the southern basal terrace of A-18.

Possible stone-working at Str. C-2, Phase IIIb:

Perhaps related to later stone-working in this area, we found a thick, dark stratum with large blocks of limestone, lying exclusively in Room B, above the room collapse and below the humus [Fig.10]. This stratum of post-collapse ashy matrix is enigmatic. It may be debris from later quarrying activity at the quarry area east of C-2, although it is odd that the ancient Maya would haul such waste material up hill to dump it, as there are other quarry debris piles forming ridges along quarry areas the east and west of the C group structures (Leventhal 1996, personal communication). It may be that after "quarrying" or raiding large stones and broken blocks from the structure, the Maya worked them on them on top of the collapsed structure, in the swale that had been Room B. Wall and possibly roof collapse lies under this stratum, but on top of the floor and benches. The hypothesized stone robbing activities at Str. C-2 could have caused the collapse of the room walls, and stone-working continued after the collapse, creating this unusual stratum.

Further evidence for the hypothesis that stone-working activity continued here consists of stone tools we found around this stratum, at the interface between the humus and the top of collapse around Room B. These tools include a rose colored chert bifacial chisel, as well as other large, irregular, chopping tools which could have been used for quarrying (Woods and Titmus 1993). However this explanation does not account for the quantity of ashy soil matrix in the Phase IIIb stratum. Curiously, we found a broken, amber glass bottle, manufactured between the last quarter of the 19th century and 1903, in this stratum, albeit in an ant nest.

Str. C-3 (Operation 242)
This operation was situated so as to bisect the other half of the putative ballcourt, Str. C-3, at its midpoint [see Fig.3]. It soon became apparent that this was also a range structure with rooms on top. This structure is in many ways simpler than Str. C-2. The preservation is better, and there seems to have been less destruction/dismantling in antiquity than at Str. C-2, which lies 15 m closer to construction activities in Group A. We have only cleared the latest phase of construction, which is well preserved, so we do not know if there are more construction phases intact below the structure, although we do know that the plaza surface ends at the substructure platform, unlike that at Str. C-2 where it passes under the substructure.

Str. C-3, Phase Ia:

Str. C-3 faces north toward Str. C-2, which in turn faces it. The building sits on a 48 cm substructure platform. The substructure's north edge was not preserved, again perhaps due to active dismantling, in either area where we looked for it (Ops. 242B and 242P). Its rear, southern face was intact and was battered at an angle of ca.10°. On top of the substructure, a 30 cm high platform forms the base of the building. It is inset 25 cm from the back edge of the substructure and 1.7 m from the front (north) edge. On the northern side, this building platform was outset 5 cm beyond the building walls to form a basal molding.

The building itself is composed of three large rooms, each roughly 3 by 6 meters, oriented east-west, and each containing a deep and wide C-shaped bench [Fig.11]. We excavated much of the center room, Room A (Ops. 242D-G). This room had a very wide bench, and we found broken ceramic vessels in the doorway, signs of burning on the floor and benches, and vestiges of red paint on the floor and on stones from the collapsed vault and doorjamb, indicating that much of the room interior was painted [Fig.12]. In addition, an east-west trenching excavation branching off from the north-south one cleared the length of a second room, Room B (Ops. 242H-M), just east of Room A. Room B also had a large bench, with some evidence of burning on it. Dimensions of the rooms are given in Table 1.

Unlike Str. C-2, Str. C-3 was clearly vaulted. We found vault stones collapsed onto and in front of the benches of both rooms. In Room A it appears that a wooden lintel collapsed some time after abandonment. Two courses of the vault above the lintel fell, with the beveled faces down, onto and in front of the south bench, which had itself collapsed or been robbed from at some point before this incident [Fig.13]. Again, perhaps robbing of stone hastened the collapse of Str. C-3 by undermining support for the vaulted roof.

Patolli design and in situ vessels at Str. C-3, Phase Ib:

The corner of what is probably another rectangular patolli board was uncovered in Room B, along the back bench (south). As is the case with those in Str. C-2 described above, this could have been etched into the plaster at any time after it had dried, and here too we have found only one coat of plaster. Also, like the design on the bench in Str. C-2, Room A, this patolli design is associated with a burned area on the bench plaster.

The rooms of Str. C-3 were swept clean of almost all refuse, so that all the sherds we found (which were not many) came from collapse, and date to Late Classic II. Most
were small and very eroded. The only in situ ceramics (also LCII) were in the center of the doorway of the middle room (Room A), where we found fragments from 2 vessels situated around a vessel base. This deposit sat on a burn stain on the plaster floor, though the sherds themselves did not appear charred [see Fig.12]. We also found evidence of burning on the northern portion of the bench in Room B, near the patolli board. The benches in both the rooms are quite high (55 cm in Room B & 65 cm in Room A). The floor in Room A has vestiges of red paint and dark/black stones that may have been intentionally laid into the plaster surface of the room’s floor. These stones were river-rounded and are uncommon around the site. We took samples of both paint and stone.

Possible stone-robbing at Str. C-3, Phase IIa:

I use the same four criteria as I did in my discussion of Str. C-2 when considering the possibility of stone-robbing in Str. C-3. As in Str. C-2, the volume of rubble in the collapse seems to be enough to account for the missing walls. The amount of cut stone, however, is relatively small. This may be due to preservation issues rather than robbing, but it seems odd that the plaster would be so well preserved, yet the facing stones gone. The third criteria involves the number and position of in situ facing stones. Aside from the doorjambs, there is absolutely no evidence of facing stones from the exterior of the north wall of the structure above the level of the basal molding, not even a first course, yet the plaster on the basal molding liping up to where the stone had been is preserved very well. The same is true of the northern face of the substructure; plaster preservation is good but facing stones are gone, lacking even a basal course. The southern face of the substructure is preserved, perhaps because it is further away from Group A, where the stones would have been reused. The fourth observation concerns internal stratigraphy. As in Str. C-2, the collapse debris was very clean, directly overlying benches and floor plaster without the intervening layer of dirt that one might expect had the structure been abandoned for some time and allowed to collapse slowly. Furthermore, the courses of vault stones that collapsed from above the doorway sat on the bench surface and on top of as much as 60cm of rubble in front of the bench. This rubble seems hard to explain in terms of the natural course of structure collapse; vaults generally collapse earlier and lie lower in the collapse debris. It seems likely that the Maya removed facing stones of the bench before the collapse of the vault. So, as with Str. C-2, I believe the scarcity of faced stones might be attributed to ancient removal of building materials from Str. C-3.

Possible stone-working at Str. C-3, Phase IIb

Some large primary flakes and choppers made of chert were located between the humus and top of the collapse debris on the top and back side (south side) of the structure, in a stratigraphically similar position to those found on Str. C-2. Excavations on the back side of the building yielded the greatest quantity of lithic material, and the largest tools. These artifacts, like those on C-2, may relate to later quarrying activity or raiding of stone from the structures after their partial collapse.

Group C, Conclusions:

Once we determined that this area was not a ballcourt, the question became whether these structures were primarily residential, ritual, or administrative in use (to the extent that these functions can be entirely separated in ancient Maya culture of course), as well as how they fit into the general chronology of construction at the site as
a whole. The problem of determining the function of Maya range structures has been addressed by other scholars in the Maya area (e.g. Hendon 1989, 1991), as well as by Euan MacKie at Xunantunich in his interpretation of Str. A-15 (MacKie 1985). MacKie postulated that structures with corbelled roofs were generally residential, while those with impermanent roofs were used for ritual activities. We found no vault stones in Str. C-2, whether it was because it was never vaulted, or because the stones were salvaged for use in Group A. Str. C-3 clearly did have a corbel roof.

Julia Hendon (1989, 1991) has proposed more detailed criteria for distinguishing two functional categories: residential and ritual. She makes a strong argument for looking not just at architecture, but also at the surrounding activity areas and artifact patterning. Activities indicating residential function would include sleeping, food preparation, food consumption and serving, production (e.g. spinning and weaving), residential-level ritual activity, and storage. She further details the artifacts and features that might be associated with such activities. We found none of these things at Sts. C-2 or C-3, with the exception of large benches suitable for sleeping. Of course our excavation of off-platform areas where refuse deposits and other activity areas might be found was minimal. Ritual function, according to Hendon, is marked by the presence of small or nonexistent benches, caches or burials, and lack of associated middens. Again, because we conducted no non-architectural excavation, we do not know whether there is a midden associated with Str. C-2 or C-3.

However, Hendon discusses only two functional categories in her work, residential and ritual, with no reference to multi-functional structures or structures of administrative use. At Group C to date, we have found none of Hendon’s criteria which would indicate residential or ritual function, aside from the benches. One line of evidence that remains ambiguous is the three patolli boards that we found in these structures.

Excavators at Xunantunich have remarked on the number of patolli boards at the site. In 1959 MacKie encountered six “designs” during his excavation of Str. A-11, in the elite residential section in the north of Xunantunich. A photograph of Michael Stewart’s excavation of A-16 shows a patolli board in the back room (Schmidt 1974), and A. H. Anderson (1966) uncovered one on the west side of Str. A-6. Linda Neff (1995) found a rectangular board in Str. A-20 in the 1995 season as well (Neff 1995). These, in combination with the three found in Group C this year, make Xunantunich unusually rich in these ambiguous designs. All but one of these are clearly oriented with their four sides to the four cardinal directions; we only uncovered the corner of one design in Str. C-3, and it may be unfinished, so we could not predict its orientation with confidence.

The dating of such boards is problematic. There are also patolli boards depicted as late as the ethnohistoric period in various codices in central Mexico, and the Aztecs, at least, played some form of the game at the time of Spanish contact (Smith 1977). Because most archaeological examples are etched into the latest plastering of structures, they could have been put there at any time after this last plastering episode. Most of those found in the Maya region have been very roughly dated to the Terminal and Post-Classic periods (Smith 1977; see also Neff 1995 for a full discussion). Clearly there is no tight chronological control for most of the archaeological examples and
archaeologists have generally assumed that they post-date the primary occupation and use of the structures.

However, in the case of patolli boards at Xunantunich, we can date some of them firmly to the Late Classic, in contexts that clearly do not derive from post structure-abandonment activity. Five rectangular patolli boards are located in A-11, on the floors of Rooms 1, 2 and 3, and on that of the central passageway (MacKie 1985). The two that MacKie found in the central passage between Rooms 1 and 2 are etched into the primary floor, which underlies a second flooring in this area by 20 cm. MacKie dates this reflooring episode within his Benque Viejo Illb period, which is the Late Classic II. The other three designs occur on the latest plaster surfaces in the rooms. MacKie's excavations revealed that all of these rooms were sealed by roof collapse, also in the Late Classic II. There are complete Late Classic II storage and serving vessels in these areas, broken under the weight of the roof collapse. The three patolli boards are on these same surfaces, and MacKie explicitly dates these boards to his Phase 4 for this structure, which ends with its collapse at the end of the Late Classic (MacKie 1985:125). These boards were clearly incised during the primary use of Str. A-11. There is, then, precedent for believing the patolli designs in Group C may pre-date abandonment of the structures at the end of the Late Classic II, particularly if later stone-robbing damaged one on a bench in Str. C-2, and then caused the structures to collapse on top of the boards.

Patolli boards are always difficult for archaeologists to interpret. The designs seem to vary in form considerably, and not only regionally; the two patolli boards in Str. C-2 are very different. In most cases the lack of chronological control does not allow us to determine whether the variation is through time, across space, or both. Furthermore, while archaeologists have encountered patolli boards throughout the northern, central, and southern lowlands (Neff 1995; Smith 1977), it is not a given that the rules, though probably similar, were the same across time and space. Nor would there necessarily have been total parity of function. The problem is similar to that posed by the various types of ballcourts found throughout Mexico, the U.S. Southwest, and Central America. Determination of functional variation in various spatial and temporal contexts evades archaeologists. Functions that have been proposed for patolli boards range from games of chance to divination rituals, and it is not unlikely that elements of both these functions, the secular and the sacred, commingle in the “playing” of the “game”.

Recently, William and Anita de Laguna Haviland (1995) have reinterpreted graffiti at Tikal, with implications for both the dating and function of patolli boards. Such graffiti, they argue, shows parallels of form and style to designs that manifest in the hallucinations of people in trance states. So instead of interpreting such designs as the artistically backward scribblings of Post-Classic squatters, they argue that they may instead represent designs derived from ritual trances. While Haviland and Haviland do not discuss patolli boards, the linear patterns of the boards match the general patterns they describe for early stages of trance quite well. Even if they were not etched by people in a trance state, it is conceivable that their design was influenced by such visions. Furthermore, the Havilands point out that the graffiti in Tikal are more commonly found in residential than in ritual structures, that there are many carving episodes superimposed in some of these areas, and that the inhabitants carved them
there while they were still living in the buildings. Some of the designs were in early structures, sealed by later construction, and may date to before the Late Classic.

The *patolli* boards are far from unambiguous evidence, but they, coupled with the benches, suggest to me that Strs. C-2 and C-3 were residential or administrative. The aforementioned patio group (Strs. C-5, 6 and 7) looks like a residential group, and it is spatially associated with the range structures. If the range structures were administrative, perhaps the patio group housed the administrators. If residential, perhaps the group housed servants or retainers of the elite residents. More excavation, especially in potential activity and midden areas and in the associated patio group, is clearly needed to answer the question of function of Strs. C-2 and C-3. What is clear is that they were used during the Late Classic II period, after which they were abandoned, and perhaps robbed for stone to use in construction in Group A.

In his excavations of 1959, McKie (1985) noted piles of cut stone in Plaza AIII, the northern residential group, that could not be accounted for as building collapse. He postulated that the Xunantunich Maya salvaged this stone after the Late Classic II collapse of Str. A-11 and piled it up for later use in construction. Excavations in that plaza area in the 1996 season also exposed few facing stones beyond a first course (see Harrison, this volume). The latest construction at Xunantunich seems to be that around Plazas AI and AII, and a general dearth of in situ facing stones elsewhere has been noted informally by other excavators at Xunantunich (Julia Miller and Tino Penados 1996, personal communication). The Maya quarried the Group C area prior to the construction of Str. C-2, and quarrying and stone robbing in Group C probably continued after primary occupation ended, while construction continued at Group A.

The lithic tools found in both operations support this interpretation. While taxonomies for chipped stone based on manufacture and general morphology, apt for answering questions about production, trade, and craft specialization, are abundant (Hester and Schafer 1991), not many people seem to talk about the actual activities for which the Maya would have used stone tools, particularly bifaces, aside from saying these pieces are multifunctional (Potter 1991, cf. Lewenstein 1991). James Woods and Gene L. Titmus (1993) have demonstrated that "general utility" bifacial tools could have been used for quarrying and cutting limestone blocks, which, again, is interesting in light of the co-occurrence of large bifaces and quarrying activities at Group C and at quarries elsewhere at the site (Keller 1993). One of the two bifaces we found on Str. C-2 (241B), between the collapse and humus layer, is a long, thin biface of the type Woods and Titmus call a pick, which when hafted on a long shaft proved to be the most useful quarrying implement in their experimental work. Their study also estimated that quarrying new blocks from bedrock would take anywhere from 34 to 66 man hours per block, depending on the size and stage of the quarry (Woods and Titmus 1993). Reusing existing blocks from abandoned buildings would thus save considerable labor.

**Group A - Str. A-32:**

The goal of this operation was to reveal the morphology of Str. A-32, the range structure situated on a terrace part way up the Castillo (Str. A-6) [Fig.14]. Str. A-32 faces Plaza AI from the top of the Castillo's north staircase, and runs almost the entire length of Str. A-6. Clearly, then, to understand access to the Str. A-6, the dominant structure at the site, requires understanding Str. A-32. Judging from prior excavations still open at
the west end of the structure, it is two bays deep (though it is mapped as a single room with an opening to the east in Fig.14). Segments of the north wall of A-32, including that by the door we excavated, are still extant and exposed along the front of the Castillo. Though doorways exposed in this wall were not always clear, pacing showed their center points to be roughly 3.5 m. apart west of the central passage area (discussed below).

We first dug a short north-south trench into an exposed doorway, in the process entirely exposing the western doorjamb. We called this doorway Door A. The trench extended from the doorway south to expose the northern face of the medial wall of the building. We did not continue this trench across this wall into the next gallery to the south; instead we excavated an east-west running trench along the north face of the medial wall. This trench extended 6 m to the east and 2 m to the west. We exposed what little remained of the final floor of the gallery, and found no sign of a bench. Floor plaster was preserved best west of the doorway, where it was stained to a gray ashy color. However we found other, discontinuous patches of floor to the east that may or may not be contemporaneous with this floor (see below). And even the floor in the doorway was as much as 30 cm higher than the top of the stones forming the basal molding along the north edge of the building, suggesting that it might be a late modification to the structure.

Aside from the area west of the doorway, we found the interior plaster floor preserved only in small patches. There were in total four areas of discontinuous floor plaster; that in the doorway (Op. 247A); two patches in the gallery east of the doorway (Op. 247C); and one covering a large part of the 1 x 2 m excavation unit in the room west of the doorway (Op. 247F). The absolute elevations of the patch in the doorway and one along the medial wall in Op. 247C were 182.01 m and 182.02 m respectively, probably the same floor. The one further east in Op. 247C is much higher, at 182.10 m. The largest and best-preserved section, west of the doorway (Op. 247F), lies between the other two levels at 182.06 m. These elevation differences probably reflect episodes of reflooring. There was no remaining floor at all to the east, around the central passageway through the building that we found (Op. 247E - see below), but there may be plaster below the level at which we ended the season. The well-preserved plaster to the west of the doorway (Ops. 247B and F) was dark gray in color, and was overlain by a roughly 20 cm thick layer of dark, ashy soil, which was darkest just west of the doorway, along the medial wall. From there, the darkness of the ashy soil and stained floor decreased to the west. There was no charcoal visible in this dark soil, but we took samples for flotation.

In all 9 m of excavation inside the front bay of the structure, we found no north-south interior walls which would have divided this interior space into rooms. Instead it seems to be a single gallery with exterior doorways roughly every 3.5 meters in the north-facing wall that lack counterparts in the medial wall. We only excavated one of these doorways (Door A), but there are more visible along the exposed but unexcavated north face of the structure. Near the apparent midpoint of the structure, the collapsed edges of a larger doorway can be seen in the exterior wall, where in situ facing stones and the basal molding give way to more random collapse in the front of the building. We exposed part of a corresponding doorway in the medial wall (Op. 247E). These breaks probably constitute the remains of a central passage piercing at
least the first bay of the structure, if not passing completely through it. The break in the medial wall was later blocked with masonry cruder than that of the original construction [Fig.15].

The masonry of Str. A-32 was variable. The doorjamb that we exposed in Doorway A consists of two different types of masonry. The builders of this structure used large, cut limestone blocks to construct the exterior half of the doorjamb; however for the interior half of the doorjamb, as well as other interior masonry we exposed, they used much smaller, but fairly regularly cut limestone, averaging around 20 cm long x 5 cm thick x 10 cm wide. Larger stones were found in the collapse inside, which either fell from higher in the walls, or are exterior blocks that collapsed into the room. Although we found no formal vault stones in the 9 meters of interior space we ultimately cleared, the north wall was quite thick enough (ca. 80 cm) to have supported a vault.

Very few artifacts were found in this structure. Almost all of them were very small and eroded sherds we found in collapse, although there were also a few lithic artifacts. Nothing was on the floor where floor was intact.

A-32, Conclusions:
Previous excavators at Xunantunich, and on Str. A-6 in particular, have postulated that changes in masonry style mark temporal changes at the site (MacKie 1985; Schmidt 1974). Peter Schmidt (1974:7-8) noted that facings of "irregular but usually small, brick-sized blocks" are indicative of the latest building phase. Julie Sanchez (1993) also noted later wall additions built with smaller, more irregular stone in her excavations at Str. A-6. However, the Str. A-32 masonry complicates the picture of a simple temporal shift from large to small block masonry. At San Lorenzo, an outlying site of Xunantunich, Yaeger (1994) has found that substructure platforms sometimes incorporate large blocks on the patio side and smaller blocks on the rear side. Apparently, the architecture most visible to the public (assuming it was not plastered) was made to be more solid-looking. This idea holds true for Str. A-32, where the variation corresponds to external and internal masonry, not temporal change.

Any further conclusions at this point are mostly conjecture. We cannot at this time correlate this structure, or the level it sits on, with any of the other terraces around A-6, such as those investigated by Sanchez (1993), Robin (1994), Neff (1995), and Wilson (this volume). The tunneling program, led by Julia Miller (1995 and this volume), has shed light on numerous aspects of the Str. A-6 substructure, but not, as yet, on the part on which Str. A-32 sits. So we do not know when it was built, nor when the central passage through it was blocked.

However, it is clear that this structure, sitting as it does at the top of the central stairway up the front of the Castillo, would have controlled access to the front of this imposing structure from the main public plaza. It is intriguing that access through the central passageway, or at least through the medial wall of the two-bay structure, was blocked at some point in antiquity. Perhaps further excavation to the east, and into some of the fill of the substructure and blocked passageway, would give us some temporal framework.
There is probably a stairway climbing up to Str. A-6-2nd behind (south of) Str. A-32, but we have no excavation data to support this idea. It is unlikely that this putative stairway continued up to Str. A-6-1st, however. Excavators have discovered two stairways that lead to the rooms of Str. A-6-1st, climbing both the northwest and northeast corners (Sanchez 1993, Robin 1994). On a visit in June, Tom Church pointed out that both the visibility and impact of the frieze which surrounded Str. A-6-2nd, and which remained exposed on the north even after the construction of Str. A-6-1st, would have been enhanced for both those people in the plaza and for those climbing the upper stairs if there were no central stairway up to Str. A-6-1st, but only the access from the sides. Those in the plaza would not have their view of the north frieze distracted from or blocked by those climbing up, and those climbing up would be treated to an oblique view of both the north face of the frieze on their way. Furthermore, the access to the exposed front gallery of rooms in Str. A-6-2nd would have been maintained. So it is possible that if a central stair climbed up to Str. A-6-2nd, it was later blocked, along with the central passage through Str. A-32, and access to Str. A-6-1st was from the sides in order not to obscure the remaining panel of the frieze. The pressing unresolved question is, if a central stairway to Str. A-6-2nd exists, how access to Str. A-6-2nd and thence to Str. A-6-1st changed when the Maya at Xunantunich blocked the central passage of Str. A-32. Again, excavation giving us a better sense of the relative chronology of construction in this area is much needed.

While the foregoing is mostly speculation, the evidence of multiple refloorings, as well as the blocked passageway, suggest that this structure saw prolonged use at the site. Future excavation to determine construction sequences on the north side of the Castillo in general may well yield further information concerning changing access to the largest building on the site, and thus contribute to broader questions concerning the dynamics of architectural control of movement within the site core through time.

Acknowledgments:
I would like to thank those who worked so patiently with me, the "greenhorn" Maya archaeologist foisted upon them mid-season, including Ventura Cocom, Rogelio Chan, Manuel Tut, Andrés Chuc, and Joe Chan. I would also like to thank Julie Miller for her helpful advice in the field, and Richard Leventhal for advice and for giving me the opportunity to dig at Xunantunich. Also, many thanks to Lady Harrington for all her help with the drawings. Jason Yaeger, a captive audience, read and commented on umpteen drafts of this report, and Wendy Ashmore took the time to xerox and send numerous helpful articles to me in Belize. My thanks go to both of them as well.
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Patolli Design
Room A - West Bench

Figure 9
Figure 15
Excavations on the West Side of Plazas A-I and A-II

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with assistance from Minette Church
The purpose of most of the excavations described below was to fill in some of the gaps in our understanding of the architectural sequence of the central precinct of Xunantunich. Specifically, we wanted to chronicle the development of the monumental plazas as public ritual space and investigate the way in which these areas developed from a relatively open plan to a focused space with restricted access.

Previous seasons have investigated many of the buildings around Plazas A-I and A-II and established that these plazas changed through time from a single open space to increasingly restricted and focused plazas (Figure 1). Aside from preliminary investigations of Sts. A-17 and A-22 in 1994, the west side of these plazas had not been a focus of excavation. Identification of a second ball court in Group A, consisting of Sts. A-17 and A-22, added to the known ball court of Sts. A-18 and A-19 immediately west of Plaza A-I and indicated an undoubtedly crucial role the ball game must have for understanding the activities and meaning of this portion of the site. In the plan seen when visiting the site today both ball courts are located in prominent positions intimately associated with access to Plazas A-I and A-II. Ball Court 1 (Sts. A-18 and A-19) is located at the point where the western access to Plaza A-I enters the plaza from Str. A-21. Ball Court 2 (Sts. A-17 and A-22) is located in one of the two points of access between Plazas A-I and A-II. Investigations during the 1996 field season of these and adjacent buildings provide information about the role of the ball courts and control of access in activities of the site center from the beginning of the monumental plazas to the end of the period of monumental construction at Xunantunich. (Note: Sts. A-17 and A-22 were previously referred to as Ball Court 3 based on the interpretation of Sts. C-2 and C-3 as a ball court (Leventhal 1994). However, excavations described in this volume by Minette Church conclude the structures in Group C were not a ball court. Therefore, Sts. A-17 and A-22 are now known as Ball Court 2.)

Based on these observations, two areas were identified as most crucial for further developing the architectural chronology of the plaza and investigating the role of the ball courts in that development. First, Ball Court 2 was examined through excavations in several locations. The relationship between Str. A-1 and the newly identified Str. A-22 needed to be confirmed. Understanding of the relationship between Sts. A-17 and A-8 provided information on the chronology of construction of these and surrounding buildings. Additional excavations and mapping helped to confirm the role of Sts. A-8 and A-9 in forming the north and south boundaries of the ball court.

Second, the stratigraphic relationship of Sts. A-7 and A-18 needed to be determined to assess the sequence of construction of Ball Court 1 and the structures along the west side of Plaza A-I, and its relationship to the construction of the western entrance to the plaza from Str. A-21.

Focused excavations in these areas helped to clarify some of the questions, although they also raised other questions that could not be addressed this season. The present investigations were focused on the general process of defining Plazas A-I and A-II in the late stages of monumental construction at Xunantunich. Therefore, the earliest phases of construction are not known for every structure investigated. This problem is due, of course, to time and money constraints. Despite this drawback, the investigations were sufficient to delineate the late phases of construction and provide a
framework for interpretation of the sequence and processes involved.

**Ball Court 2**

1996 investigations of Strs. A-17 and A-22 included trenches located on the south side of each building and a trench on top of A-22 (Figures 3 and 4). These excavations investigated the latest phases of construction of these buildings. In some cases, such as Str. A-22, it appears there are no earlier phases present and in other cases, such as Str. A-8, there may be phases that were not identified by the current excavations.

The excavations defining the south end of Str. A-17 and its intersection with Str. A-8 included suboperations 141E through 141T. Str. A-22 was examined with suboperations 76DD through 76LL. The general sequence of architectural developments in this area was as follows:

- construction of Str. A-8, or extension to the north, with at least three terraces on the north face
- construction of Str. A-17 abutting the north face of A-8 (covering the bottom two terrace faces of A-8) and construction of Str. A-22 to form the ball court
- construction of Str. A-1 covering the eastern face and summit of A-22
- construction of a new eastern face of A-8 and possible modification of the stairway
- construction of a new southern face of A-9
- construction of the terrace at the southwest corner of A-1 extending west of the A-1 west face
- construction of a block filling the gap between A-17 and A-8

Details of the constructions will be discussed according to this sequence. However, it should be noted that several of these developments may have taken place simultaneously as a formalization of the ball court. At some point either before or after the refacing of A-8, Str. A-1 was built covering the east face of Str. A-22. The modifications of A-8 and A-9 may have preceded or succeeded the construction of A-1 by a number of years, or been part of a redesign of the ball court of which the construction of A-1 was a part.

**Structure A-8**

Str. A-8 is a long, narrow, and tall platform set on the west edge of Plaza A-1 between Str. A-7 and A-17. The west side of A-8, as is true of A-17 and possibly A-9 to the north, extends down the slope behind the building to a lower level than the base of the east face of the platform that faces the plaza. At first A-8 appeared to be a late addition to the plaza filling in the area between Str. A-7 and A-17, as part of the process of enclosing Plaza A-1. However, at least the latest extension of A-8 to the north was constructed prior to A-17. So, at least the northern end of A-8 was in place prior to the ball court. There is the possibility, however, that A-8 was extended to the south to connect with Str. A-7, after the construction of the ball court. Unfortunately, that connection has not yet been examined.

The north end of A-8 was constructed with at least three terraces and more may have extended down the slope behind (west of) the structure and, possibly, up onto the structure. The upper part of the structure on the north side where our excavations took
place is badly deteriorated, so identification of additional terracing above the area excavated was not attempted. This deterioration may, in part, be due to stone robbing of this back (northwestern) corner of the structure for use on more visible facades in the center. The east face appears to have had at least one less terrace than on the north face, due to the difference in elevation. Unfortunately, time constraints prevented exploration of this question in 1996.

However, A-8 did undergo modifications contemporary with or soon after the construction of the ball court. These modifications appear to have been part of an effort to formalize the ball court space and create an L-shaped playing area. They included the construction of a new eastern facing for the substructure of A-8 and possible modification of the A-8 stairway to correspond to a terrace added to Str. A-1. Modification of the south face of Str. A-9 may also be part of this building program. These details will be discussed after discussion of Str. A-17 and A-22.

Str. A-17

The western structure of the ball court was constructed up against the north face of A-8, overlapping the edge of Terrace 2 of A-8 by about 5 cm. This juxtaposition created a narrow walkway on the surface of A-8 Terrace 2 bounded by the face of A-8 Terrace 3 on the south and A-17 Terrace 2 on the north. The facing of A-17 is composed of small to medium roughly cut limestone blocks with almost no coursing in any of the faces exposed to date. A-8, on the other hand, seems to have been faced with large cut stone facing of fairly uniform size. Such variation has not yet been tied to chronology at Xunantunich.

Str. A-17 has a typical ball court profile that is slightly different than the profile of Str. A-22 (Figures 4 and 5). Although it was badly damaged by a large excavation in the center of the structure excavated early in the century, the shell of A-17 is basically intact. The earlier excavation prevents accurate estimation of the original structure height, but it seems the building was somewhat lower than Str. A-22. Excavations along the south face identified the bench profile and the connection of two terrace faces with the northeast corner and north face of A-8. Although this connection is clear from the excavations on the west side, a later addition to the east face of A-8 (see below) covered it up. In addition to the difference in total structure height, the top surface of A-17 Terrace 1 is about 25 cm lower than the corresponding terrace on the south face of A-22. Also, the base of A-17 Terrace 1 is approximately 10 to 15 cm above the base of A-22 Terrace 1.

A possible explanation for these dimensional differences between A-17 and A-22 was suggested by Julie Miller. They could indicate that A-17 and A-22 were not constructed together as a ball court and that one may have been modified from an earlier structure. As one test of this hypothesis, the south face of A-17 was examined at the intersection of the sloped playing surface and the bench. This seemed to be a logical place for a structure to be modified to form a ball court structure (adding a bench to an existing structure). If the bench had been added, a seam might be discernible in the face. Although an excavation was placed at this location (Op. 141T) and the face exposed, no seam was apparent. Preservation of the facing at this location was poor and could have prevented identification of a seam. The information available to date does not support the hypothesis of A-17 being an earlier structure. But this idea should
be considered with further excavations.

**Str. A-22**

Apparent coincident with the construction of A-17 was the construction of A-22. The two structures are assumed to have been constructed at one time since they form two sides of a ball court. However, as noted above, one may have been modified from an earlier structure. In any event, Str. A-22 functioned as the east structure of Ball Court 2 prior to the construction of Str. A-1. Therefore, for a period of time, Ball Court 2 was located on the western side of the enormous public space that existed before the construction of A-1 broke it into two plazas (Plaza A-I and A-II).

A-22 was at least 3.80 meters tall, based on elevations at the base of Terrace 1 on the south face and the preserved surface buried under A-1 Terrace 2 (Figure 5). Similar calculations for A-17 result in an elevation of 3.4 meters for that building, without attempting to account for the loss of structure height from the large excavation in the center of the building. So, the two structures do not appear to be greatly different in height.

Fortunately, the eastern face of A-22 was preserved under Str. A-1. Excavation of a large trench through the top surface of A-1 Terrace 1 and the face of Terrace 2 (Subops. 76HH and II) exposed part of the surface of A-22 and the top edge of the eastern face of A-22 (Figure 5). The mezcla surface of A-1 Terrace 1 and the basal course of Terrace 2 facing was exposed in the 1994 excavations of A-22 and interpreted as the top surface of A-22 and the intersection with A-1. However, the 1996 excavations corrected the interpretation with the unit cutting through the mezcla surface and into the fill of A-22. Although we did not find an intact surface of A-22 in this location, it became clear that the west side of the structure had been cut down to make way for the construction of A-1 Terrace 1. The surface of A-1 Terrace 1 appears to have been slightly sloped to the west and may have been made to merge with the surface of A-22 preserved outside of the new construction.

The fill of A-1 over A-22 was quite poorly consolidated (as elsewhere in A-1) and prevented extensive exposure of the top of A-22. However, the eastern edge of A-22 was encountered in the very edge of the unit slightly south of the center of the east face of the structure. No stairway was found and the edge proved to be the top of a terrace face at least 40 cm high (Figure 5). It is conjectured to be a similarly stepped terrace as seen on the west side of Str. A-17. The preserved portion of the top of A-22 suggests that the structure had a small platform at the summit with terrace space on both the east and west sides. There is no evidence of access to the top of the structure aside from the playing alley. Stairways may be buried under A-1, perhaps at the eastern corners of the structure, but access after the construction of A-1 would have been altered.

Aside from the well preserved surface, the south face of A-22 exhibits some interesting traces of burning, probably from placement of censers at specific locations at the base of the structure and on Terrace 1. Figure 4 indicates the location of circular burned areas on the plaster, one on the plaza floor, a second directly above on Terrace 1, and additional traces of burning were found on the vertical face of Terrace 2 above the burned area on the surface of Terrace 1. In addition, several fragments of censers
were found on the plaza floor adjacent to the south face of A-22. These pieces include the handle from a ladle censer and several fragments of the flanges from cylindrical censers. One of the flange fragments was of an unusually hard paste with well preserved blue and white paint.

Str. A-9

After definition of the I-shape to the south end of Ball Court 2, Suboperations 235A and 235B were placed at the south face of Str. A-9 in order to assess the possibility that the structure had served as a northern end for the ball court. A-9 appears to predate the ball court since it is not centered on the ball court axis. But since it is approximately equidistant from the north end of A-17 and A-22 as the A-8 stairway and A-1 terrace are from the south end of the ball court, it seemed likely to have been incorporated into the ball court design. Since the terrace on A-1 and the refacing of A-8 were later additions, it also seemed likely that any incorporation of the south face of A-9 into the ball court space would also be late.

The excavations appear to confirm this interpretation, although precise dating of the sequence is not possible with the small sample available. Op 235A encountered the plaza floor on the south side of A-9 and followed it into the structure with Op 235B. Much of the collapse debris at the base of A-9 consisted of small chert cobbles in a very loose talus. These cobbles appear to have been in the fill of A-9 and when the facing was removed or deteriorated they flowed out with the weathering of the soft limey matrix in which they were packed. Almost no facing was encountered in the collapse debris. However, a basal course of facing with plaza plaster lipping up to it was encountered in 235B.

In this unit we encountered to stages in the facing of Str. A-9 (Figure 6). The south face of A-9 originally had an outset near the center of the side. The east end of this outset was cleared in 235B with plaster lipping up to it. After this construction a modification was made consisting of an added facing in front (south) of the inset portion east of the outset face to create one uniform straight facing on the south side of A-9. It seems likely that this modification was made as part of the refining of the ball court to the south, creating a northern end for an I-shaped endzone.

Chronological information on these architectural modifications has not been adequately collected. Preliminary sorts of ceramics in the field collected from these small excavations provide a Late Classic IIa date for the first phase of Str. A-9 while samples from Strs. A-8, A-17, and A-22 are predominantly general Late Classic II with some Late and Middle Preclassic included. The ceramic samples do not appear to be adequate for detailed chronological assignment of the small scale architectural features and modifications excavated around Ball Court 2.

The series of modifications to Ball Court 2 appear to have been a response to the changed role of this ball court in the ritual life of Xunantunich after the construction of A-1. Prior to the construction of Str. A-1, Strs. A-17 and A-22 were on the edge of a large open plaza. With the construction of A-1 an important dynamic was set up in the access points between Plazas A-I and A-II. The access on the east side was marked by the low “Motmot” wall, that may have had a step down into Plaza A-I and a small stela house constructed around the stela at the base of Str. A-2. On the western side of A-1
was the ball court that created a different sort of boundary between Plazas A-I and A-II, a boundary of ritual space (Jamison and Wolff 1994).

The stelae and the tall "Sacred Mountains" on the east side of A-1 with their associations with ancestors (Vogt 1968) is contrasted with the ball court and the associations with the Underworld on the west side of A-1 (Schele and Freidel 1991). It is this dichotomy that appears to have been refined over time through clearer definition of the spaces on either side of A-1. The late constructions associated with the ball court are part of this trend.

**Ball Court 1 (Thomas R. Jamison and Minette Church)**

Excavations to examine the architectural sequence surrounding Ball Court 1 were also undertaken during the 1996 season (Figure 7). The goal of these excavations was to determine the sequence of construction of the ball court and the adjacent Str. A-7. Compared with Ball Court 2 and Str. A-1, where A-1 was constructed over part of the ball court, the A-7 / Ball Court 1 location seemed as if it might be the same situation with a later building serving to restrict access through being constructed at an access point. However, the excavations completed during 1996 did not conclusively define the sequence and one further investigation must be conducted to finalize an interpretation of the sequence.

Initial units (Subops 234 A-D) were excavated to examine the intersection of Structures A-7 and A-18 (the eastern half of Ball Court 1) and exposed a set of stairs providing access to the south side of the structure. Two units (234E and F) examined an upper terrace on the south face of A-18 and five units cleared the lower terrace of A-18 to the west end of the set of stairs.

Three units (234B, C, and D) identified the west face of the basal terrace of Str. A-7. The terrace was faced with large cut blocks that appear to have been laid in ashlar courses, although the face has deteriorated except for the basal two or three courses.

At the north end of 234D, five steps were found that abut the face of Str. A-7 and run up towards the north onto Str. A-18, the eastern structure of Ball Court 1. The steps were clearly constructed after the A-7 terrace and appear to provide access to the top or south side of A-18. Excavations to the west identified the western edge of the steps and the terrace face of A-18. The steps seem to run approximately half the length of the south face of A-18.

Two other units (234E and F) were excavated north of the stairs in an effort to locate the top of the steps and their intersection with A-7 and the A-18 terrace. These units did not locate this intersection. However, they did expose a construction wall for a terrace face above the A-18 face found below. The facing for this second terrace may have been encountered in the south end of Subop 234F, but the poor preservation did not allow for a certain identification.

Finally, Subops 234G-K were excavated west of the stairway to locate the south terrace face of A-18 and the western edge of the stairway. These goals were accomplished, but the major goal of defining the sequence of construction did not advance. It is unclear if the stairway was constructed as one with the terrace face or if it
abuts the terrace. Although this information would not help to determine the relationship of A-18 to A-7 it would provide a clue to that relationship.

Part of the terrace face, at the boundary between Subops 234G and 234I, may have been a niche for an incensario. This idea is suggested based on a variation in the terrace face and the presence of censer burning marks in similar positions on the south end of Str. A-22 in Ball Court 2. Excavation of Subops 234G and 234I encountered a gap in the terrace face of Str. A-18 about 55 cm wide (east to west) and at least 20 cm in depth (north to south). On both the east and west sides of this gap the facing stones of the terrace are cut and form faced sides to the gap. The west side appears to have been plastered.

The poor preservation of the terrace face leaves this interpretation open to debate, but possibly valid. The stones may have been cut and plastered for use in another location before their reuse in the ball court terrace and stones could have fallen out of the face to form the gap. However, the location of this feature is nearly identical to the burning marks on Str. A-22 that are without doubt censer placements. Therefore, the interpretation is possible, even if the stones were reused from elsewhere to construct the niche. Unfortunately, no burning was noted for this area and a conclusive interpretation can not be advanced at this point.

**Strs. A-18 / A-7 Sequence of Construction**

Plaza plaster flooring was found lipping up to Str. A-7 but running under Str. A-18. Combined with the fact that the steps abut A-7, the plaster evidence suggests A-18 was built after A-7. However, the evidence does not provide conclusive proof of the suggested sequence. First, none of the excavations exposed the connection between the A-18 terrace face and A-7. The steps abutting A-7 provide the appearance of A-7 being prior to A-18. But, it is possible that A-7 could have been built over A-18 and the steps added to provide access that might have been covered by A-7. Second, the plaza floor is poorly preserved in this area and the remains that lip up to A-7 may not be the same plastering event as the plaster that runs under A-18. Elsewhere in the plaza, two floors have been identified, the later of which lips up to most buildings and the earlier runs under. However, with the poor preservation, it is difficult to identify the plaster in these excavations as one or the other floor.

Therefore, the lack of examination of the intersection of the Str. A-7 and Str. A-18 terraces makes a positive conclusion impossible at this time. These excavations provide some information that can be used in a preliminary interpretation, but the information is not quite complete enough to confirm the architectural sequence. A relatively small excavation at the intersection of the A-18 terrace and A-7, behind the A-18 stairs, would provide the conclusive answer to the A-7/A-18 sequence.

**Excavations between A-21 and Group B**

Another issue pursued during the 1996 season was the question of access between Group B and Group A. It seems that the symmetry suggested in the overall site plan with the two sacbes running out of Plaza A-I may be enhanced if the route from A-21 to Group B could be considered structurally similar to the route from the Sacbe I elbow to Group D. The problem, of course, is that there is little in the way of structural remains apparent between A-21 and Group B to identify as a sacbe.
connecting the two. However, much of the intervening area has been identified as a quarry (Keller 1993) and, therefore, any connecting sacbe could have been destroyed during the quarrying. One linear structure that runs along the top (east) of the quarried area could be remains of a sacbe parapet that once connected A-21 and Group B.

The sociopolitical implications of such a scenario are huge. If there was such a connection, it would make Groups D and B structural equivalents, presumably both architecturally and socially. But with a quarry in the middle of Group B's connection with the center, that would be a clear "slap in the face" of the residents of Group B. I would assume that both the residents of Group D and the royal family would be involved in such a political statement, but with the apparent strength and independence of Group D (Braswell 1994), perhaps the royal family would not need to be involved.

Testing this hypothesis was one of the secondary goals of the 1996 season. The linear structure along the east side of the quarry was examined in three places as Subops. 230A-E (Figure 8). Subops 230A, B, and C cleared portions of the west side of the linear structure in an effort to examine the formality of the architecture and look for a prepared surface on the west side that might be a sacbe surface. The architectural preservation in all three of these units was poor. A general alignment for the structure was estimated in each case, but the exact location of the structure face could only be estimated. Furthermore, the bedrock west of the structure, on which the structure rests, varied greatly in elevation between units and within units (Figure 9). It slopes down to the west away from the structure and at each location where it was examined it varied in elevation from 10 to 20 cm. Between units, bedrock elevation varies from north to south with an average elevation of 173.39M in 230A to 172.95M in 230B to 173.05M in 230C. Thus, a prepared surface that would be expected of a sacbe is not suggested by the excavations on what was hypothesized to be the sacbe.

Excavation of Subops 230D and 230E, however, examined the linear structure itself and the bedrock surface on the eastern side of the structure (Figure 9). Subop 230D cleared the surface of the construction and found it to be composed primarily of microcrystalline limestone cobbles, as opposed to the cut limestone that appears to have been used as facing. Subop 230E cleared the eastern side of the structure. In this location the structure facing is badly deteriorated, as on the west. However, the bedrock has a much different appearance than the western examples. In this location it appears to have been cut and leveled to form the base of the structure face and to create a level surface east of the structure. Thus, the eastern side of the structure seems to be the focus of surface preparation for activities taking place to the east.

The conclusion of this investigation is that the linear structure was constructed and functioned in relation to events in the open area to the east, between the linear structure and Ball Court 1 (Figure 2). The profile of the structure indicates it was probably one rectangular platform about 70 cm high with no terraces. The width of the structure is estimated at approximately 4 meters. This location has been suggested by Keller to be a possible market area (Keller, personal communication, October 1995). The few artifacts found in Subop 230E were primarily lithic materials with few ceramics present. This contrast in frequency may suggest a location for lithic reduction within a market context. Further investigations are necessary to elaborate on this suggestion.
Acknowledgments

The work described above was carried out with by four very capable friends from the village of San Jose Succotz. Jose Chan, Rojelio Chan, Ventura Cocom, and Manuel Guerra all applied their excellent archaeological techniques to the work. In addition, their companionship made the sometimes tedious work enjoyable. Florentin Penados, the project foreman, was always ready to solve problems or crack a joke. Julie Miller, was an excellent Field Director, always ready to solve problems and very well organized, as well as an excellent source of advise on architectural excavation. Minette Church had the dubious honor of continuing excavations started by the author. Her excellent recording and excavation techniques clearly enhanced the results. Project Directors Richard Leventhal and Wendy Ashmore were and are, as always, very supportive and good friends. All of the staff and crew of the Xunantunich Archaeological Project are the best of friends and colleagues. The Belize Department of Archaeology, in particular Acting Commissioner Brian Woodeye, was always helpful and supportive. Thank you all.
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Figure List

1. Map of Xunantunich.
2. Map of the Site Core with Operations located.
3. Plan view of Ball Court 2 Excavations.
4. Plan view of Ball Court 2 Architecture compared with Malerization.
5. Ball Court 2 Profile, compiled from excavations.
6. Plan view of two phases of Str. A-9 south face.
7. Plan view of Ball Court 1 Excavations.
8. Plan View of Excavations of linear structure west of Ball Court 1.
9. Profile of linear structure.
The Ruler's Residential Plaza at Xunantunich
1996 Excavations

Ellie Harrison
Introduction

The ruler's residential plaza, labeled by archaeologists as Plaza A3, is located in the north end of the site center of Xunantunich. This royal plaza is circumscribed by four structures (A-10, A-11, A-12, and A-13) with Plaza A2 positioned directly south (Figures 1 and 2). Plaza A3 consists of a large basal platform built by the Maya which drops off fairly steeply on the north side of the plaza, also contributed by a natural outcropping, further elevating the space and emphasizing it's grandiose function as the primary elite residential space. The four aforementioned structures are perched on top of this large platform, outlining the plaza and effectively blocking off much of the view from the outside. To enter the plaza at this latest phase of construction (which includes today), one would presumably climb a central staircase on the south side of Str. A-13, walk through the building's central room, and then descend a few steps onto the floor of the plaza. Upon entering the space, one is compelled to gaze at the central structure dead ahead. This large, central building, labeled as Structure A-11, is presumed to be the presiding ruler's place of residence within this secluded plaza. Sitting within these top rooms of Str. A-11, one can clearly envision the power the ruler received from this high and central, governing position, flanked on either side by the large, long and narrow residential structures of A-10 and A-12. From this enthroned spot, the ruler of Xunantunich could conduct his assigned duties, as well as literally oversee all the activities taking place within the bustling civic center, namely within the highest court of Plaza A3; not to mention, intimidate the approaching individual.

One would assume Plaza A3 was restricted to the hierarchy of the Xunantunich community, but the building of Str. A-13 to the south would further delineate these elitist confines (further discussion of Str. A-13 will follow). The development of architectural space, as does artifactual material, acts as an interpretive catalyst for the archaeologist. These developments are important for defining not only societal activity, but also political and economical changes, small and large, that took place within an occupational period of time. Understanding the relative constructional sequence of a site can reveal much about the overall growth, as well as the decline of a community. These important constructional metamorphoses allow the archaeologist to interpret a now dead society as a once flourishing, active, working group of people who all held a place in society. However, our beginning of excavation exposes their end as a civilization. As a result, the archaeologist is continually forced to confront not only the question of progression in the Maya world, but also the digression of power and ultimate collapse, namely within the Maya center of Xunantunich. Our excavations of this elite residential space searches for clues in the archaeological record to explain this apparent rise and fall of the ruling elite at Xunantunich.

Questions Posed

The ruling elite residence begins as a more open, public space and then is modified to a more private, exclusive arena. Was this transition due to social upheaval? To emphasize the exclusivity of the reining elite? Or perhaps designating a shift in the functionality of the space?

A Brief History of Prior Excavation in Plaza A3

Before beginning any kind of excavation in a designated area it is critical to have some understanding of the prior excavation and background concerning the data
recovered within that chosen region of exploration. The site core of Xunantunich has been investigated by archaeologists since the beginning of this century. Thomas Gann performed one of the first preliminary recovery operations in the 1920's concerning Plaza A3. Gann investigated two low mounds that are evident on the surface of the humus layer of Plaza A3's floor. He excavated one of two low mounds, located in the northwest and southeast corners of the plaza, and found they consisted of piles of limestone debris, possibly the result of a later clean-up project taking place within antiquity or perhaps as late as a couple of centuries ago (Gann 1925). However, Gann claimed that he could not clearly identify the underlying plaza floor because it was too deteriorated, thus he felt little could be deduced from these mysterious mounds.

In the 1960's, Euan W. Mackie directed the first major reconnaissance efforts involving Plaza A3. His 1960 publication outlines his excavation procedures, analysis of finds, and hypotheses concerning Plaza A3, mainly focusing on Str. A-11. MacKie also followed up Gann's investigation, opening up a couple more units of excavation on the aforementioned northwest mound. He concluded that these piles of masonry rubble actually lay directly on top of the plaza floor, indicating they were gathered there during the Late Classic period. MacKie utilized this information, combined with his excavations of Str. A-11, to support his theory of a natural disaster striking the site core of Xunantunich during the latter portion of the Late Classic period. This controversial hypothesis is stressed throughout his description of excavation for Str. A-11, arguing the collapse of the structure was abrupt, rather than a slow deterioration, possibly caused by an earthquake. Unfortunately his concerted efforts to prove his theory resulted in a less intensive description of the structure and its artifactual remains (namely the ceramic groups represented) and more emphasis on the placement of ceramic vessels on the floors of the rooms in Str. A-11 and how they may have fallen there during such an event. However, there is some discussion on the structural design and construction phases of Str. A-11, as well as a brief overview of the type-variety of the vessels found in the rooms of Str. A-11.

MacKie argues that there are significant structural similarities between Str. A-11 and Str. A-6 on the main pyramidal structure of Xunantunich (El Castillo). Both appear to have two primary construction phases, with the latest stage holding parallel chambers "with lateral benches at one or both ends of the rooms and a step up into the rear one—which can only be reached through a front door" (MacKie 1960:44). Like Str. A-6, A-11 contains a low-raised floor which is evident in Room 1. Also, fragments of carved stucco were found in MacKie's excavation of Str. A-11, as well as during our excavation on the east side of the building, possibly indicating a similar, smaller version of the stucco frieze that lines the east and west sides of an earlier construction phase of the Castillo. MacKie makes numerous architectural comparisons between the two buildings and concludes that there may be functional similarities as well. MacKie suspects that this structure and the three surrounding buildings in Plaza A3 housed the ruling elite family of Xunantunich where household, as well as civic duties, were perhaps carried out. He does not rule out the idea of ritual activity taking place within these confines, but leans more towards the Castillo as the functioning ceremonial hub.

The dating of the ceramic material recovered from the floors of the upper rooms of Str. A-11 ends primarily in the late Classic ceramic phase of Benque Viejo IIIb (Fig. 3). Diagnostics such as polychrome vases (Vinaceous Tawny polychrome), Red ware
open bowls, Red ware tripod vessels and other storage jars (Red ware, plain and Black styles) were found resting on the surface of the floors of the rooms (MacKie 1960:35,37). Thus, it can be deduced that this was the ceramic equipment being used by the elites prior to the abandonment of Str. A-11. Such types are detailed in the ceramic table #1, entitled "Thompson's Benque Viejo III Diagnostic Types", which are defined by type, temper and date, outlined by LeCount in her 1994 report (LeCount 1994:184). LeCount's report also offers an equally comprehensive and useful table defining Terminal Classic diagnostic types (LeCount 1994:185) which were apparently nonexistent in MacKie's assemblage for Str. A-11.

It was in the 1980's that the Belize government performed an extensive clearing operation, mostly contained to the east side of Str. A-13 in Plaza A3, exposing a number of the exterior walls and interior rooms. Unfortunately these exposed areas were left to the elements for many years which has caused significant deterioration. To add insult to injury, the structure was later partially reconstructed and poorly consolidated with a non-reversible cement mixture. As a result, today we can not trust the remaining information for blocks have been moved or added to "re-create" what archaeologists then thought the building may have looked like.

It was not until 1992 that test pitting was begun by the Xunantunich Archaeological Project (XAP) team, led by Dr. Richard M. Leventhal of the University of California, Los Angeles. This combined survey and test pitting operation placed a number of 1x1m test pits within Plaza A3 (McGovern 1992 and Yaeger 1992). These units helped us to identify at least two plaza floors in the southwest corner of the plaza, as well as a portion of the south side of Str. A-10, which proved quite helpful to our 1996 investigations of the plaza. Although all of this previous investigation was not pivotal to our work in Plaza A3, and in some cases has been somewhat detrimental to the plaza, it remains a stepping stone for us to build upon now and in the future.

Objectives for the 1996 Excavations of Plaza A3

The excavations in Plaza A3 during the 1996 field season held four major objectives:
1) To gain a better understanding of the exterior architectural elements within Plaza A3 (ie. Structures A-10, A-11, A-12 and A-13) and their earlier counterparts.
2) To identify the relative relationships of the various construction sequences associated with the plaza floor(s) and their respective architectural correspondents.
3) To confirm the relative dating of these construction phases and their possible correlation to social, political and economic changes taking place within the Maya community.
4) More specifically, to investigate possible architectural additions that further isolated ruling elite persons, and attempt to answer where, how and why were these new architectural elements added to Plaza A3.

As stated more briefly above, a major portion of my focus for the 1996 field season (the first half of a two year project) was to investigate and create a better understanding of the latest phase of existing exterior architecture within Plaza A3 and, in addition, identify any architectural elements added to this latest phase as an attempt to further close off and control access into plaza A3. We aimed to place excavation units in key areas of the plaza, where a portion of the plaza floor could be uncovered along
with the associated building. Also, it was important for us to have a clearer understanding of how these buildings related with one another. Therefore, the optimal areas chosen for investigation were primarily the four corners of the plaza, where all of these elements interfaced. Here, it was theorized that the plaza underwent a series of construction phases, namely the subsequent building of platform plugs wedged between each building, working to further isolate the plaza from the outside world and physically seal off and control the entrance into the plaza. The search for these hypothetical platform plugs between each of the four structures became a major part of the overall focus for our work during the 1996 field season.

The constructional evolution within the elite confines of Plaza A3 has remained somewhat of a mystery. Previous excavation within Plaza A3 has focused mostly on Str. A-11 (MacKie 1960). Little is known about the construction phases of Structures A-10, A-12, and A-13. We are most interested in understanding when Str. A-13 was constructed for it is theorized that this was a later addition, ordered by the elite as part of a final attempt to close off the elite confines to the public (in addition to the platform plugs mentioned in the previous paragraph) (Leventhal, personal communication, 1996). Dr. Richard Leventhal, the primary investigator for the site of Xunantunich, proposes that the building of Str. A-13 may reflect a desperate fight by the elites to secure the hierarchy of Xunantunich during a time of severe upheaval at the period of transition from Late to Terminal Classic occupation. By the Terminal Classic period "construction activity has decreased as the power and control of the ruling family is under question during this period of political, social and economic chaos throughout the lowlands" (Leventhal 1995:3-4). Clearly, if this is the case, Str. A-13 may be a crucial constructional episode reflecting this disturbance that demands our attention. Therefore, a portion of the 1996 field season was devoted to this objective as well.

Excavation Methods and Organization for the 1996 Field Season

Excavations were carried out in Plaza A3 with four workmen divided equally into two groups. Each group contained one excavator and one ayudante (or helper) who was mostly in charge of screening the unearthed dirt for artifacts. Excavations were divided up into four Operations (Operations 8, 16, 236 and 240) based on their geographical location within the plaza. Each operation was sub-divided into smaller units of controlled excavation, defined as sub-operations. The size of a sub-operation was usually 1x2m. large and dug in arbitrary levels of 20cm. increments, unless the stratigraphy dictated otherwise.

Each group simultaneously began excavating two different operations (Op.8 and 16) in and around the Southwestern corner of Plaza A3 on February the 6th, 1996, revealing portions of the surrounding structures and a platform plug constructed between Structures A-13 and A-10. The third operation (Op.236 A,B,D and F) was started on the 22nd of March, 1996. A part of this operation was centered around the mid-section of Str. A-10 on the eastern side. The goal for this area was to identify and define a central staircase leading up to the rooms of Str. A-10. In addition, Operation 236 (C,E,G,H-Q) also focused on the northwest corner of Plaza A3 in search of another similar type of platform plug. The fourth operation was carried out in the northeast corner of Plaza A3. Operation 240(A-P) sustained the search for an additional platform plug, thought to exist between Structures A-11 and A-12. Unfortunately, time did not allow for the southeastern corner of the plaza to be excavated. However, the area has
been somewhat disturbed by earlier excavations in the 1980's, led by the Belizian
government. Perhaps it will be more clearly defined in the following 1997 field season.
Details of the above excavations are to follow.

The soil and stratigraphy remained fairly regular and consistent throughout our
excavations of the plaza, only diverging as a result of disturbance (ie. backdirt and
extraneous humus build-up) imposed by earlier excavation. The soil ranged from loose
to compact silt and the matrix contained varying levels of plaster and sascab debris.
Stratigraphy reflected a gradual build-up (contrary to MacKie's 1960's postulations of an
abrupt collapse) of collapse debris stemming from the surrounding buildings.
Inclusions in the matrix were much smaller and lighter in density, especially the cut
facing stones, than would be expected from such extensive collapse. This may indicate
the pilfering of stone during antiquity, prior to the ultimate collapse of Xunantunich (to
be discussed in more detail later in this report).

Operation 8C-L

Overview of Excavation

Group 1 began digging Operation 8, the majority of which is located on the
north side of Structure A-13 on the west side of the building's central axis. Op.8
uncovered portions of the latest basal platform (platform 1) and north wall of Str. A-13,
along with an earlier basal platform (platform 2) construction. Excavations followed
out the edge of the later basal platform to where it cornered with the platform plug
which connected to the southeast corner of Str. A-10.

Op.8, consisting of 10 suboperations (C-L), unveiled what appears to be at least
two distinct construction phases for Str. A-13, with possibly a third. Op.8C-G consisted
of clearing down collapse debris which sloped off of the north side of Str. A-13, with the
subsequent exposure of two existing plaza floors. As one would expect, the floors were
increasingly well preserved as we neared the structure and certain units held better
preserved portions of architecture than others. Artifact density was extremely low and
very few diagnostics were retrieved from this area. Preliminary analysis suggests that
the majority of the ceramic sherds recovered from this area date to the Late Classic
period, however, there were a few scattered Terminal Classic sherds, perhaps indicating
that occupation in the plaza continued up until the final collapse of Xunantunich.

Latest phase of Construction for Str. A-13

The latest plaza floor (floor 2) lips to the edge of the basal platform 1 that
presumably runs the length of the north side of Str. A-13. Op.8I and J displayed a better
preserved example of Str. A-13's basal platform 1. The basal platform is approximately
64 cm. high and protrudes at an abrupt, vertical (almost 90 degree) angle from plaza
floor 2. The stucco surface covers the basal platform which, in turn, lips to a low
substructure supporting the north wall of Str. A-13. Op.8H uncovered a portion of this
wall. Unfortunately, all that remains of the wall is the inner, deteriorating construction
fill with very little facing material intact. However, upon careful observation and feel of
the matrix change within the southern profile of Op.8H, one is able to discern the
change between the construction fill of the wall and the collapse to the east, indicating a
door jam. Stucco remains hold the impressions of the facing stones which once retained
this disintegrating construction fill. This stucco surface, holding the stone impressions,
curves up and over the substructure and forms a step into the door jam, running
underneath the collapsed debris. There is also one lone corner stone demarcating the west side of this once prominent doorjamb. Fig. 4 shows the architecture that has been described above; a section of the latest basal platform floor lipping to the eroded substructure and wall of Str. A-13, along with the highly deteriorated door jam on the north side of the building.

**Southwest corner of Plaza A3**

Op.8J, J and K worked together to define where Str. A-13’s basal platform 1 corners and meets the platform plug addition. The platform plug was constructed over the western end of basal platform 1, which is assumed to have extended the full length of Str. A-13’s north side. The evidence for this construction sequence lies in Op.8J where Str. A-13’s platform and the newer plug construction are joined to form the southwest corner of Plaza A3. Additional stucco mortar was applied down the seams of this junction, thus creating a smoother transition at this interface between the old and the new architecture. The height of the platform plug was built and still remains roughly equivalent to the level of basal platform 1 running along the north side of Str. A-13, enhancing the conformity between the two merging platforms. There is one distinct stylistic difference between the old and new constructions. The facing of Str. A-13’s basal platform 1 is aligned with extreme verticality while the facade of the newer platform plug lies at more of an angle. The sloped facing of the platform plug appears to have been built that way to correspond with the slanted facade of Str. A-10, which was found on both the south and east sides of the building. An important architectural element unveiled by these excavations was the entrance of an extensive drain system running east-west through the interior of the platform plug (to be discussed in more detail in the overview of excavations for Operation 16).

**Southeast Corner of Str. A-10**

Although the preservation of the southeast corner of Str. A-10 is minimal, there is one crucial in situ facing stone evident on the south side of Str. A-10, that has been protected all these years by the later platform plug construction. This single stone, combined with the position of the platform plug, indicates where the southeast corner of Str. A-10 would have been. This important stone also helps us to determine the relative construction sequence, signaling that Str. A-10 predates the building of the platform plug. Unexpectedly, the latest plaza floor runs underneath this remaining cut stone and the construction fill of Str. A-10. This evidence could suggest that Str. A-10 post-dates not only the latest plaza floor, but also Str. A-13! However, this small exposed portion of Str. A-10 may only be a minute addition and, in actuality, the primary core of Str. A-10 could predate this latest plaza floor. Only excavation further into the center of the Str. A-10 will confirm the true sequence of construction. One thing remains certain, the platform plug is clearly a later construction phase added between Structures A-13 and A-10, literally sealing off the southwest corner of the plaza, in effect, creating a sunken plaza within Plaza A3, making the drain a necessary constructional element.

**Plaza Floor 2 and the "second lip"**

An interesting element of floor 2 is what was fondly referred to as the mysterious "second lip". This subtle stucco ridge was found running steadily east-west about 10cm. prior to the emergence of Str. A-13’s basal platform 1 and appeared to lip to nothing. This anomalous lip was consistently evident on floor 2, two meters to the
west, in suboperations I and J of Operation 8, never diverting from it's same east-west path, still about 10cm. in front of the platform. This "second lip" may be evidence of an intermediate construction phase for Str. A-13. Although the stucco ridge does not appear to correlate directly with the latest phase of construction, this floating line of plaster seems to have lipped to something definitively relating to Str. A-13 at one time or another.

One theory is that this stucco ridge was part of an earlier phase of construction for Str. A-13 which was later ripped out. However, it would seem odd fitting with typical Maya construction standards that it was never modified to conform with the latest existing architecture. It is feasible that some additional, possibly perishable, wooden step was added to the front (north side) of the later basal platform, but there was no conclusive evidence for this found in the archaeological record. Another possibility is that valuable cut stones were removed from this particular area during antiquity and reused elsewhere; a phenomenon that has been noted throughout much of the site (Jamison 1992 and Keller 1995 reports). A more in depth discussion providing evidence of stone removal will be discussed later in this report.

Earlier Construction for Str. A-13

Interestingly, the stucco ridge lined up quite well with the outside edge of a line of large, rough stones found only a few centimeters below floor 2 and the second lip, directly associated with the earlier plaza floor 1. This line of rough, cut stones may be part of the earlier basal platform (platform 2) found about 18cm. below basal platform 1. However, that remains difficult to determine because the Maya had ripped out all but one course of this earlier rough stone construction, as well as cut off the edge of the earlier basal platform 2, in order to build the latest basal platform 1. The information that could be gathered from the remains of this earlier basal platform 2 construction is as follows. Platform 2 contains an extremely hard, flat plaster surface overlying a well packed construction fill. This finely constructed platform undoubtedly runs underneath the substructure of Str. A-13. This poses an intriguing question concerning what the earlier stage of Str. A-13 looked like. Was there only this simple, low lying platform structure present? Or was there some sort of masonry or perishable structure built on top of this earlier basal platform, prior to the latest visible phase of Str. A-13? Further excavation into the center of Str. A-13 may provide reconstructional insight into this earlier construction sequence. Excavations of Op.8L on the south side of Str. A-13 attempted a search for the outer dimensions of this early platform construction. An account of this excavation is outlined below.

South Side of Str. A-13

Sub-operation L was the final unit opened for Op.8 in 1996. The 1x1m. unit was positioned on the south side of Str. A-13. The purpose of excavation, as mentioned in the previous paragraph, sought the dimensions of the earlier platform 2 construction phase found running underneath the basal platform 1 in Op.8H on the north side of Str. A-13. As stated, one of our main objectives asked for a clearer understanding of the constructional episodes for Str. A-13. Hence, the shift to the south side was fostered by this unconfirmed constructional sequence for Str. A-13, namely the questionable status of the earlier basal platform 2 construction.
Op.8L uncovered three highly deteriorated terrace floors built on top of an extensive dry fill construction made up of large, soft, pink limestone boulders. Not one floor definitively correlated with the platform 2 found to the north. Perhaps the edge of the earlier platform lies further to the north under the buildings substructure. Excavations inside the rooms of Str. A-13 would be the next logical step, but time did not allow us to follow through with this plan during the 1996 season. As the information gathered was inconclusive, further investigation is planned for the 1997 field season in order to elaborate on this critical construction phase for Str. A-13.

Construction Sequences of Str. A-13

Thus, we can only speculate that there may have been three major episodes of construction. Fig. 5 displays the cross section of the following construction phases for Str. A-13. The first contained the line of roughly cut stones, possibly part of basal platform 2, which clearly connected to the earlier plaza floor 1. The second stage of construction, which is less certain, involved the extensive construction of floor 2, built about 10cm. over top of floor 1, that possibly maintained correspondence with the original basal platform 2; this indicated by the "second lip". The third major phase of construction was performed later on during the Late Classic period. In this final stage, Floor 2 remained in use, but a portion of basal platform 2 was ripped out, the plaza was extended back 10cm., basal platform 1 was constructed over top and lastly, but perhaps most importantly, the bulk of Str. A-13 and it's 18 rooms were built at this time.

Operation 16J-U
Overview of Excavation

During this time, Group 2 began work on Operation 16, slightly west of Group 1, near the northwest corner of Str. A-13 and continued on to define the surface of the platform plug and it's relationship between Structures A-13 and A-10. Both groups intersected at the junction of the southwest corner of Plaza A3, where the plaza floor met with the platform plug and the two aforementioned structures, formulating a fairly substantial picture of the southwest corner's latest construction phase.

Group 2 began work on Operation 16 which consisted of thirteen suboperations (J-U). Our main objectives for this area of excavation included the confirmation of a platform plug construction and its relationship between Structures A-13 and A-10. Op.16 identified 2 major episodes of construction, and most likely more exist, but they went unexcavated during the 1996 field season. Op.16 uncovered an area of the platform plug and the adjoining structures (A-13 and A-10) that was slightly less than 4x6 meters square.

Northwest Corner of Str. A-13

Excavation started with Op.16J, located at the northwest corner of Str. A-13. It became evident that the matrix of this 2m.(N-S)x1m.(E-W) unit was disturbed at one point during a previous excavation, assumed by the Belizian government in the 1980's. There contained a loose consistency of backfill and or wash off from the west side of Str. A-13. At the base of Op.16J, we exposed a fairly well-preserved stucco surface that clearly lipped to the one course of stones that constituted the remains for the west wall of Str. A-13. The stucco lipped clearly to the west wall of Str. A-13 and wrapped around the northwest corner stone of the building. Four more 1m.x2m. size units (Op.16J, K, L and P), all of which were previously undisturbed, contributed to the exposure of a
sizable portion of the well preserved stucco floor found in Op.16J. It appeared quite obvious, just from looking at the slope of overgrowth and collapse, that a platform plug existed between Structures A-13 and A-10. However, the well preserved area of floor found considerably higher than the plaza surface within Op.16 confirmed the platforms existence. The absolute elevation of the platform plug floor taken from Op.16T and U is calculated at 174.186m. versus the plaza surface at 173.505m. The difference between the plaza floor and the platform plug remains incredibly consistent at 68cm.

Our second objective for Op.16 was met through the excavation of Op.16M, N, O, Q, R, S, T and U. All of these units helped to form a better understanding of the relationship and construction of the platform plug with respect to the two adjacent buildings (Str.A-13 and A-10). Op.16M and U provided information concerning the construction of the north side of Str.A-13 (the western end), and its connection with the platform plug. Sub-op. U gave us the best preserved example of the north side of Str. A-13 (Fig. 6). The 2m. (N-S)x1m. (E-W) unit displayed a beautifully preserved section of the north wall (nearly a meter tall at the highest point) and a portion of the second to last door jam of Str.A-13 from the west side. The stucco surface was in such a pristine state, covering all of the floor, wall and doorway, that one could barely discern the transition from old to new construction. The platform plug adjoins the north side of Str. A-13 at the same level as the basal platform 1. Both platforms offered access way to the line of doors on the north side of Str. A-13, the central room allowing one to circulate to the south side of the building. The substructure provides a low step (less than 30cm. high) into the rooms, also acting as the floor for all eighteen of the rooms.

**South Side of Str. A-10**

Op.16N, O, Q, S and T defined the connection between the south end of Str. A-10 and the platform plug. These units exposed a total of 6 meters of Str. A-10's outer most south side terrace wall. Only one course of plaster faced stones remained at this level, with the stucco surface of the platform plug smoothly lipping to this facing. The excavation of Op.16R revealed a portion of Str. A-10 that extended below the platform plug, originally connecting with the latest plaza floor running underneath the platform addition. The facing stones of Str.A-10 are angled, confirming this exterior architectural element that is consistent with the front (east side) of the building, as well as the facing of the platform plug addition on the east side.

**Drain Feature**

Op.16R was defined as a separate feature, described initially as a distinct cluster of cobbles found on the surface of the platform plug, overlying sub-op's K, L, N and Q. The cobbles forming the cluster ranged in size from 10-30cm. and were tightly packed with a semi-compact silty soil. The formation of the stone cluster seemed fairly amorphous in shape and did not appear functionally associated with either Str. A-13 or Str. A-10. However, it lay adjacent to edge of Str. A-10's south terrace wall, clearly postdating the wall and platform plug construction.

The stones were removed fairly easily and revealed a rough, jagged cut in the stucco surface that followed the shape of the outer perimeter of the cluster. The floor appears to have been resurfaced, capping the interior of the cut. Less than 5cm. below the cap, the matrix became increasingly compact and filled with tightly packed, gravel-
sized stones which could be described as a ballast-like fill, but with less consistency. The next 20cm. contained a fairly compact clayey silt matrix with a high density of small to medium size stones mixed with a hard, plastery mortar material. Large capping stones were revealed under this construction fill layer. The unit was expanded about 20cm. to the south to expose the entirety of the largest of the three partially exposed capping stones. When two of these stones were removed it became clear that we had found an extensive drain system running east-west under the platform plug. At this stage, we are under the impression that this feature marks the remains of a peculiar repair job, perhaps made to the drainage system. The cluster of stones marking the feature is one question that remains unanswered. Why, if it was a repair, would it be marked discretely with stones?

At the time of excavation, the drain channel had silted up considerably, but there still remained about 5cm. of empty space just under the large capping stones that covered the drain. Plaza floor 2 acted as the base for the drain channel. The depth of the drain was measured approximately 30cm. from floor to ceiling. The walls of the drain consisted of long, flat stones fitted with mortar creating a straight, well sealed channel running east-west within the platform plug. Fig. 7 shows a plan view and profile of the drain after the excavation of the drain. As noted, the entrance of the drain was discovered in Op.8J (Fig. 8), which had partially collapsed. The capping stones had fallen into the channel, but it is fairly certain, at one time the well engineered system actively functioned as a water drain for Plaza A3, especially crucial during the heavy rains, channeling out the water and other refuse that had accumulated. The tip of a broken bi-face was found in Op.16R, lodged in the silted up debris of the drain. Perhaps this is an example of refuse deposited in the plaza which was ultimately washed into the middle of the drain where it was later found by our team. In any event, the excavation of Op.16R revealed important information about the advanced level of forethought and engineering that the Maya retained, even in these latest construction phases occurring in Plaza A3, during the Late Classic period.

Operation 236 (A-Q)
Overview of Excavation
Operation 236 broke down into two major areas of excavation. Group 1 began the first section of Op.236 on the east side of Str. A-10, in search of the building’s central staircase. The second area of excavation focused on the northwest corner of the plaza. Group 2 looked here for another similar type of platform plug construction, thought to exist between Structures A-10 and A-11. Units of excavation for the northwest corner were placed where the beginning of the rise in the ground was apparent between the two buildings. Other units branched off east and west from this central north-south trench, exposing portions of the terraces for the two buildings on either side. Three 1x2m. units were placed further north around the northwest corner of Str. A-12 in order to investigate not only the building’s construction, but also the northern edge of the plaza surface. Overall, a relatively large area of plaza floor was defined throughout the excavation of the northwest corner. Like the southwest corner, there was an extremely low density of artifactual material present with very few diagnostics available.

Central Staircase of Str. A-10
As mentioned, the first part of Op. 236 focused on the central east side of Str. A-10. Group 1 opened up a total of 4 sub-operations (A, B, D and F) which unveiled an outset staircase, found extending further out into the plaza than was initially suspected. The cut facing stones of the steps exhibited the same slanted style facade as found on the south terrace wall of Str. A-10, also seen on the platform plug. A total of 3 steps were exposed, all displaying this same stylistic quality, apparently a somewhat unique element for stairway construction in the Maya lowlands. The first step was 20cm. high and the following 2 were substantially larger, at approx. 35cm. high.

A 1x1m. unit, exposed an area of the plaza floor directly in front of these stairs, revealing at least two localized resurfacing events, the latest of which lipped to the first step. These small patches of resurfaced floor may indicate that these outset stairs were part of a later construction phase for Str.A-10. A 1x2m. unit, located further up the slope of the mound, indicated that the preservation of the higher portions of the staircase were in a poorly preserved state. Therefore, at this stage, group 1 moved on to the northeast corner of the plaza and, meanwhile, group 2 continued Op.236 in the northwest corner of the plaza, investigating the elusive signs of another platform plug.

Northwest Corner of Plaza A3

Group 2 focused a little less than half of the season on this northwest corner. There, they opened up thirteen 1x2m. units exposing a significant portion (an area of about 9m. in total) of the latest plaza floor, along with the floors connection to the east side of Str. A-10 and the west side of Str. A-11. There was a build up of collapse and overgrowth between the two buildings in the northwest corner that sloped down toward the plaza floor level. A similar type of rise preceded the emergence of the platform plug in the southwest corner, thus we suspected another such platform stood in this corner as well. A total of six units combined to form a trench 9 meters (north-south) x 1 meter (east-west), averaging 1.75 meters in depth. The long trench cut through an extensive accumulation of collapse debris and residual backdirt from MacKie’s 1960’s excavations of Str. A-11. This laborious effort of dirt removal led to one very important conclusion, that no such platform plug exists between the two buildings under this large mound of dirt. Instead, we found that the latest plaza floor ran between the two buildings and lipped to both, beautifully preserved by the large amount of debris that lay over top. At the end of this 9 meter trench our excavations turned to the west where we, quite unexpectedly, hit the east side of a terrace wall for Str. A-10, extending much further to the north than was anticipated. Looking at the contour of the north end of Str. A-10, it is not clear whether this extension to the north held rooms or acted as a simple platform space on the north side of Str. A-10. Observing just the slope of the mound, one would argue for the latter position. However, as we have clearly demonstrated in our fruitless search for the non-existent platform plug in the northwest corner of the plaza, an attempt at deciphering what lies underneath these covered mounds can often be deceiving. Future excavation can only answer this question definitively.

Northeast Corner of Str. A-10

Only two meters were exposed on the northeast end of Str. A-10 and, unfortunately, we did not reach the absolute northeast corner of the building by the end of the season. A single course of facing stones remained intact on this eastern side of Str. A-10, therefore only a limited assessment can be made about the architectural
design of this facade. Judging from these remaining facing stones and the construction fill behind them, the terrace wall appears to lie at an angle, conforming with the other exposed sections of Str. A-10's terrace wall previously discussed. The most interesting fact attained through this excavation was simply the length of this building. Prior to this excavation, all site maps indicated that Str. A-10 ended earlier to the south and that a platform connected Str. A-10 to Str. A-11. Our excavations have proved otherwise.

Platform Extensions
Although our excavations of the northwest corner of the plaza have somewhat altered this preconceived design layout of Plaza A3, the old questions still persist. If a platform extends off the north end of Str. A-10, what purpose did it serve? Was it constructed in order to block out these once open (possibly public) areas, further promoting the exclusivity of the elites, adding possible protection to their wavering social, political and economic status? Certainly it would be difficult for anyone to access the plaza from the north side of Str. A-11 due to the steep incline and lack of a staircase. Therefore, a platform extension protruding from the north end of this east side structure and extending to the northern edge of the plaza would be a sufficient blockade, making a connection to Str. A-11 unnecessary.

Northwest Corner of Str. A-11 and the North Edge of the Plaza
For further clarity, we opened up three 1x2m. units to expose the most northern end of the plaza around the southwest corner of Str. A-11. The drop to the north is quite steep and erosion has attributed to the decay of the north edge of the plaza floor, as well as the north side of Str. A-11. With what remains, there is no indication of any wall or other construction demarcating or effectively blocking off this remaining area of the plaza, perhaps because there was no need to do so. Also, there are the partial remains of a rear staircase on the west side of Str. A-11 leading to Room 5, providing another reason for keeping this access way between Structures A-10 and A-11 open. However, it remains inconclusive whether these stairs were accessed from the plaza floor level in the northwest corner, or from a higher terrace level.

West side of Str. A-11
Two meters of the west terrace wall of Str. A-11 were exposed during our excavation of the northwest corner of the plaza. As mentioned, the large accumulation of debris made excavation in this area a tremendous effort and a fairly time consuming activity. In addition, the preservation of these terrace walls was minimal and offered little information concerning the architectural design of the building, and even less artifactual material. Digging approximately two meters down, considerable construction fill was defined with only a single course of faced stones remaining at the bottom. The plaza floor clearly lipped to these facing stones, but once again, no significant artifact density or interesting, diagnostic finds were recovered from the surface of the floor, nor from all the debris that lay over top.

Operation 240 (A-P)
Overview of Excavation
While Group 2 worked in the northwest corner of the plaza, Group 1 had shifted over to the northeast corner of Plaza A3 and opened up Operation 240(A-P). Our main goal, much like the northwest and southwest corners, set out to expose a platform plug positioned between Structures A-11 and A-12. Units of excavation were positioned
around the supposed northwest corner of Str. A-12 and along the east wall of Str. A-11. Portions of the latest plaza floor were uncovered in association with these two buildings. Consistent with the rest of our excavations of the plaza, very few artifacts were retrieved from the northwest corner. However, there was a thin layer of ceramic and a small bit of lithic refuse found a few centimeters above the latest plaza floor. This shallow concentration of debris, possibly the remains of a trash deposit, was apparently accumulated after a layer of humus had covered the plaza floor, indicating a decline in maintenance, perhaps occurring right before the plaza fell into total disuse. Preliminary analysis dates the ceramic to the Late Classic period, with no Terminal debris yet identified.

**Northeast Corner of Plaza A3**

The same type of accentuated rise from the plaza appeared in northeast corner between Structures A-11 and A-12 that held a fairly level accumulation of collapse debris. This accumulation, however, did not represent a platform plug between the two structures, but rather a platform that extended off the north end of Str. A-12. After intensive excavation of the northeast corner of Plaza A3, we arrived at an equally similar conclusion; that no such platform connected the two buildings. Much like the north end of Str. A-10, Str. A-12 stretched, with incredible preservation, much farther to the north than was initially thought. Unfortunately the end of the season came all too soon, not allowing us to uncover the north ends of either Str. A-12 or Str. A-10. It seems likely that these two buildings stretch to the northern edge of the Plaza, but that went undetermined for the 1996 field season. It should also be noted that excavations did not determine whether these platform extensions were later additions, or actually part of the original construction design. Determining a later construction phase would support the hypothesis that Plaza A3 underwent extensive modification, at a later point in time, that perhaps coincided and furthermore represented the waning power of the elite society at Xunantunich, living in this plaza. Excavations did, however, reveal quite a bit about the exterior architectural elements for Str. A-12 due to superb preservation.

**Central staircase of Str. A-12**

The northern edge of Str. A-12’s outset central staircase was unexpectedly discovered in Op.240, surprisingly close to the northeast corner of Plaza A3. The exposure of this northern stairside considerably altered our perception of the western facade of Str. A-12, allowing us to visualize a uniquely long stairfront, extending almost the length of building. These low-lying stairs, the first step approx. 20cm. high and 40cm. deep, most likely led to a terrace walkway that provided access into the stately rooms belonging to the elite residents. The 1997 field season plans to investigate the interior of these and other rooms surrounding Plaza A3.

**Northwest corner of Structure A-12**

Although we did not determine the exact position of Str. A-10’s northwest corner, we learned a great deal about the exterior architecture for this end of the building. The north end of the stairway connected to a well preserved terrace wall that measured 140cm. at its highest preserved point. We followed this wall north about 2.85m. to where it formed an inset-like corner that turned to the west for about 65cm. and then cornered back again in a northerly direction. From here, we exposed nearly 3m. of this extended west side terrace wall which, as I mentioned in the previous paragraph, clearly continues to the north, beyond our units of excavation, perhaps to
the furthest edge of the plaza. The preservation of the wall became more poorly preserved as we moved northward. However, the remains of this terrace facade clearly show construction at an angle, mimicking the slanted facing found on Str. A-10.

Comparisons between Structures A-10 and A-12

There are obvious similarities between these two buildings that have been noted throughout this excavation report. The two most prominent design elements that strikingly resemble one another include the slanted terrace facade and the elongated north-south dimension. Excavations clearly indicate these shared characteristics and, undoubtedly, more exist. Both central staircases are outset constructions attached to terraces that lead to the rooms above. Further excavation of Str. A-10’s central staircase may reveal the same elongated design, stretching across the majority of buildings front side, facing the plaza floor space. Furthermore, excavation suggests both structures carry a possible platform surface on their north ends, which would effectively secure a single entrance into the plaza from the central doorway of Str. A-13. These two range structures line the east and west side of the plaza and appear relatively equal in length from north to south. The evidence, thus far, indicates a parallel in the construction for these two buildings, possibly with the intent of creating a balanced, mirrored or twin building image, alluding to a contemporaneous construction phase.

Natural Disturbance in the Plaza Floor

Operation 240 offered another interesting feature; a natural tree disturbance in the plaza floor that uprooted a significant portion of the floor and its ballast. The section of plaster remained amazingly intact, rising up at a fairly abrupt angle, marking the direction of the tree fall. Due to this rather continuous, virtually unbroken slope of plaster, it did not become apparent, until most of this natural feature was exposed, that we were witnessing the fine remains of a tree fall episode. This incredible display of root disturbance offered an excellent example of how nature can so keenly alter the archaeological record we depend so heavily upon.

Conclusions and Interpretations Regarding the Ruling Elite of Plaza A3 and the Overall Site of Xunantunich

The most substantial archaeological evidence uncovered within Plaza A3 during the 1996 season, which our interpretations rely heavily on, is the architectural remains. A fairly significant architectural modification is evident within the plaza. The later construction of the southwest platform plug reinforces our initial theory; that the access to the plaza was increasingly restricted during the latter portion of the Late Classic period. Confirmation of additional platform construction on the north ends of Structures A-10 and A-12 would further substantiate this conscious effort, put forth by the elites, to further isolate their royal confines from the public. Other excavation throughout the site core of Xunantunich support this effort to close off previously accessible public space, along with an overall reduction of active ceremonial space (discussed in more detail below).

It is important to note that the lack of artifactual information in Plaza A3 does not hinder, but may actually aide in our interpretation of the plaza’s history. Because there were so few artifacts recovered from Plaza A3, especially on the plaza floor, it would seem this area was continuously cleaned and maintained and perhaps never fell into total disuse during ancient occupation. Taken further, it could be argued that the
relatively pristine state of the plaza floor may indicate this area continued to act as an elite residential space right up until the final collapse of Xunantunich. However, ceramic evidence from MacKie's excavations in Plaza A3 (1960) on Str. A-11 and the preliminary artifact analysis gathered from our work during the 1996 field season appear to support a primarily Late Classic occupation in Plaza A3, with a slightly less intense Terminal Classic occupation, meanwhile seemingly flourishing in Group D. There is a relatively infrequent appearance of Terminal Classic ware (Benque Viejo IV) compared to the amount of Late Classic ceramic (Benque Viejo III) found in Plaza A3. A broader comparison within the site of Xunantunich suggests that a relatively higher density of Terminal Classic material is found in the so-called secondary elite residential space of Group D (Braswell 1992, 1993, 1994) versus the primary elite group in Plaza A3. Perhaps further testing will prove that there was a shift of some degree in the social, political, and economic power, which took place within the elite communities of Xunantunich between Plaza A3 and Group D. Further investigation and ceramic analysis of Plaza A3 is imperative before coming to any solid conclusions on this issue.

Our excavations have hopefully shed further light on this somewhat unknown, yet extremely important, area and populace of Xunantunich. Beyond understanding how this plaza functioned on its own, interpreting how this powerful group of structures and its royal inhabitants related with the remaining polity of Xunantunich is of utmost concern. The following presents an overview of previous work at Xunantunich which touches upon this relatively unknown interrelationship and provides supportive evidence for the changes taking place within Plaza A3, also going on throughout the site core.

Information gathered by Braswell during her investigations of Group D (1992, 1993, and 1994) confirm a Terminal Classic growth and prosperity for this high status group of people. Excavations of the structures in Group D, carried out in 1992, "revealed an assemblage of elite household ceramics" (Braswell 1992:58), identified as Benque Viejo IV ceramics (Thompson 1940) which indicates a principle Terminal Classic occupation. Excavations of a chultun found in the confines of Group D revealed a total of three burials. Ceramics found associated with these burials dictates that at least the latest, if not all, of the three human interments came out of the Terminal Classic occupation. Grave goods of turtle shell and the extensive tomb-like construction clearly indicates the elite status of these individuals. It is important to note, however, that Braswell makes a distinction between the "corporate non-royal" elite in Group D versus the "royal" elite presiding in Plaza A3 (Braswell 1994). In my opinion, it seems this distinction, especially during the Terminal Classic period, needs further clarification, hopefully with the help of more excavation in Plaza A3.

This emphasis on the elite in Group D and the indication of a possible shift in ceremonial focus for the site of Xunantunich by the Terminal Classic period is supported not only by Braswell's investigations (1992, 1993 and 1994), but also through the work of Jamison (1992), Jamison and Wolff (1994), and Keller (1994 and 1995). Their excavations and interpretations purport not only a revamping and reduction of the site core at the end of the Late Classic and beginning of the Terminal Classic, but also the removal and reuse of cut stone throughout certain areas of the site, perhaps physically indicating severe social, political and economic transformation at the city center of Xunantunich during this time.
The general theory in progress, which seems to remain consistent throughout much of the site core at Xunantunich, proposes that cut stones were being removed from certain areas of the site and possibly being reused in new and/or remodeled areas of focus in the site center. One prime example supporting this hypothesis is Str. A-1. A portion of this structure was excavated in the 1992 field season by Thomas Jamison who detected a constructional variation between the north and south sides of Str. A-1. Jamison identified the south side as a much more complicated face versus the north (Jamison 1992). According to Jamison’s excavation report, additions were constructed solely on the south side of Str. A-1 with the apparent neglect to the north side. One predominant theory argues that Str. A-1, primarily constructed in the Terminal Classic, served as a physical tool for reducing the active use of Plaza A2 and perhaps even Plaza A3, effectively centering the focus of ceremonial activity for the site core to Plaza A1. Richard M. Leventhal concurs that this later site center modification project quite literally removed stones from the north side of Str. A-1 and reused them elsewhere, perhaps even to reface the now focal south side of Str. A-1 (1996 personal communication). In addition, a wall was found running between the east side of Str. A-1 and the west side of Str. A-3 (Jamison and Wolff 1994), placing a stronger emphasis on ceremonial activity in Plaza A1 and making access from the north end of the site increasingly difficult. This evidence supports the several ongoing theories for a transitory Late to Terminal Classic remodeling occurring throughout Xunantunich, including our area of excavation in Plaza A3.

Although relatively few Terminal Classic sherds are reported from Plaza A3 and this northern vicinity, we cannot rule out the continuation of royal elite occupation in this area during this time. Excavations in the newly discovered patio group, east of Str. A-12, revealed a fairly large concentration of refuse dating primarily to the Late Classic II period, yet there was a smaller density of Terminal Classic sherds found in the uppermost levels (Jamison and Wolff 1994). It is theorized that this area "may have functioned as a food preparation area for the royal family as well as for events in Plaza A2 to the south, to which it is open" (Jamison and Wolff 1994:39-40). If this is the case, one could argue this area may have served the royal elite, presumably living in Plaza A3, during both the Late Classic and Terminal Classic periods. However, LeCount’s ceramic analysis of this area supports a reduction of site use, even in this localized food production area, that restricted food service activities during the Terminal Classic period to "the single southern mound closest to Plaza A2 with only scattered trash found across the rear platforms to the north" (1994:173), which were only actively used during the LCII period.
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Fig. 1 Map of the site core of Xunantunich
Fig. 2 The ruler residential Plaza A3 and the surrounding structures (A-10, A-11, A-12, and A-13). Note the platforms found on the north ends of Structures A-10 and A-12, as well as in the southwest corner of Plaza A3, during the 1996 season.
NORTH PLATFORM

A-11 and surface of Plaza 'B'

PHASES
5 A few sherds ABANDONED on surface of Plaza 'B'
4 TWO HEAPS ON PLAZA A-11 COLLAPSED
3 A BANDONED QUARRIES IN PADRE FALL OF REST OF VAULT - BURIAL 1
2 PEASANT SQUATTERS ABANDONED
1 IN TRENCH OF STRUCTURE A-15
BURIAL 2

COLLAPSE OF MASONRY STRUCTURES - PROBABLE EARTH TREMOR - ABRupt SOCIAL CHANGE - END OF CLASSIC CULTURE

4c pottery on floor
4b fill in room 5 ERECTION OF WALLS & VAULT FOR RM 5
ALSO NEW STEPS IN FRONT OF A-1/11

CHANGE IN VENEER MASONRY STYLE FROM BLOCK-FACED (STYLE) I TO SMALL STONE-FACED (STYLE II)

4a BLOCKING OF CENTRAL PASSAGE, RAISING room benches of floors, BUILDING OF EXTENSION OF SUBSTRUCTURE FOR ROOM 5

3 a vault & substructure CONSTRUCTION OF A-1/11
3b plinth
2 OCCUPATION OF A-1/11
1 vault & substructure CONSTRUCTION OF A-1/11

TABLE OF STRUCTURAL PHASES AND RELATION TO CERAMIC SEQUENCE

HUT MOUND

STRUCTURE A-15

PHASES
4 FALL OF REST OF VAULT - BURIAL 1
3 PEASANT SQUATTERS ABANDONED
2 IN TRENCH OF SUBSTRUCTURE
1 BURIAL 2

PRIMARY MAP

BURIAL 2

ADDITION TO BENCHES IN ROOMS 1 & 3

ADDITION TO BENCH IN ROOM 2

RUBBISH PIT

CONSTRUCTION OF AN ADJACENT STRUCTURE C

CONSTRUCTION OF BURIAL 3

Fig. 3: Integrated table of site sequences at Xunantunich.

(Extracted from MacKie 1960:91)
FIG. 4 - NORTH WALL OF STR. A-13, PLAZA III, XUNANTUNICH, OP. 8H

OP. 8H SOUTH WALL SECTION
PLAZA III, XUNANTUNICH

ELEVATION OF LINE LEVEL:
1 = 153 CM (BELOW DAT. 352)

KEY:
= HUMUS
= COLLAPSE DEBRIS
= CONSTRUCTION FILL OF WALL
= PLASTER FACED SUBSTRUCTURE
= PLASTER FLOOR OF BASAL PLATFORM

FACING STONE IMPRESSIONS

PLASTER FACED SUBSTRUCTURE

DOORWAY

BASAL PLATFORM - STR. A-13

SCALE 1:10 CM.

E.T.H. 1996
FIG. 6 - NORTH WALL AND DOOR JAM OF STR. A-13
FLOOR 1 (PLATFORM PLUG) LIPPING TO STRUCTURE

ELEVATION OF LINE LEVEL:
1 = 63 cm. (below dat. 000)

KEY:
□□□ = HUMUS
□□□ = COLLAPSE DEBRIS
□□□ = POST-OCUPATION BURNING
□□□ = CONSTRUCTION FILL IN STR. A-13 WALL
□□□ = PLASTER FACED WALL AND SUBSTRUCTURE
□□□□□ = FLOOR 1 (PLATFORM PLUG)
□□□□□ = FLOOR 1 LIPPING TO STR. A-13

SCALE 1:10 CM.

OP. 16 U - SOUTH WALL SECTION
PLAZA III CANANTUNICH
E.J.H. 1996
ELEVATIONS BELOW DATUM 773:
1 277
2 207
3 244
4 277
5 242
6 241

KEY:

= CONSTRUCTION FILL OF STR. A-10
= PLASTERED FACING STONES
= FLOOR LIPPING TO STR. A-13

SCALE 1:10 CH.
E.J.H. 1996
1996 Xunantunich Ceramic Research

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“Ceramics, properly and carefully unearthed, can tell the archaeologist, through analytical study of it, about large segments of man’s past ways of life. ...[A]s a cultural anthropologist in the most modern sense he can probe ancient artifacts, the broken pottery of yesterday, until these sherds relinquish information about the lives and thinking processes of the people who made them” (Gifford 1976:3).

Gifford may be a bit optimistic. However, the similarities and variations found within the ceramic assemblage from the Xunantunich polity will be used to articulate how and why ceramic styles are maintained over time, how these styles function as symbols, and how they can be seen as possible indicators to aid in understanding social aggregation and integration. The Xunantunich polity flourished during the Late and Terminal Classic periods (ca. AD 650-1000) (Leventhal 1995). This was a time of political and economic integration, interspersed with social and political upheavals within the Maya lowlands (Ashmore and Leventhal 1993; Ball and Tschek 1991). With these changes, new cultural ideas were introduced into the local arenas (Gifford 1976; LeCount 1996; Thompson 1940). I expect to see these influences within the ceramic assemblage. The work reported on here is ongoing and is scheduled for one more field season; therefore, the greater part of this report deals with theory and hypothesis.

This current ceramic project involves examining material from the Middle Preclassic through the Terminal Classic, with a focus on the Late and Terminal Classic. Data will come from the sites of Xunantunich, San Lorenzo, Chaa Creek, Actuncan, as well as a number of smaller sites from TA1. The ceramic material for this season’s detailed analysis came from the Xunantunich site core, San Lorenzo and sites from TA1 (See Robin, this volume). A list of the operations and suboperations analyzed to date is provided in Appendix A. These data will go through a preliminary analysis in order to obtain any preliminary patterning and the recording procedures will be evaluated and refined for the following field season. It may be found, however, that the typologies utilized to collect the data are those that have been developed for chronology building and defining assemblages. The issue remains whether it is viable to collect the data in the same ways and ask different questions, or whether there needs to be a reworking of the typologies. This issue will be addressed before any more data is collected. The objectives, nonetheless, for the 1997 field season include the collection of materials from ongoing excavations at the site core and Chaa Creek, as well as previously excavated ceramics from Actuncan (McGovern 1992; 1993; 1994).

Field Work
This year, the ceramic research at Xunantunich advanced along two lines of inquiry: First, the excavated ceramic material from the 1995 field season, as well as some of the material from the 1996, field season was integrated into the established regional chronology. Second, a detailed cataloging of the ceramic material was undertaken in order to examine issues involving ceramic tradition within the Xunantunich polity. First, for the quick sort of the ceramics to establish chronologies, we used the previously established procedures (LeCount 1992) and did a majority of the primary contexts as well as any lots needed by the excavators. A large percentage of the 1995 ceramic lots were completed, and are considered done in terms of the project. Less ceramic material which was excavated in 1996 was finished; however, this material will be completed during the 1997 field season.
The excavations where I worked most closely with the excavators in order to use the ceramics as chronology markers were the two projects on structure A-6. In connection with the project investigating the construction of A-6, El Castillo, by tunneling into the southern and northern sides, the construction fill was evaluated for chronological markers (see Miller, this volume). Ceramics were also used to indicate the date of terminal occupation for the excavations on the south side of A-6 (see Wilson, this volume). There, the excavation project was looking for temporal indicators of when access to the southern side of the site was terminated.

The second line of inquiry involved implementing a detailed ceramic analysis. This analysis utilizes a coding system developed to focus on attributes delineating several variables. The variables deal with form, secondary form, paste and temper, and surface treatments including slips, paints and design elements (see Appendix B). The analysis of ceramic assemblages principally focus on physical properties and surface treatment of vessels. Specifically, the research reported on here attempts to amplify what the Xunantunich internal ceramic sequence means in terms of behavior, both at the household and political economy level. Additionally, similarities and variations within the ceramic sequences will be used to articulate the horizontal and vertical linkages that exist between groups aggregated within an area. Concepts derived from Max Weber, Clifford Geertz, Terence Ranger, and Pierre Bourdieu will be utilized to model and interpret the patterns in the ceramic record. The results of the proposed research will contribute to the understanding of how social relations among and within groups in complex societies are best derived from the archaeological record.

Theoretical Concepts

The ceramic research at Xunantunich focuses on how and why ceramic styles are maintained over time. Additionally, this research will attempt to model how these styles function as symbols and as possible markers for understanding social aggregation (Beaudry 1987; D.Z. Chase 1986; Houston et al 1993; Wobst 1977). For example, the distribution of special forms and special surface treatments of ceramics may relate to vertical and horizontal linkages (i.e. gift giving or ancestor worship) between groups inhabiting a given area (LeCount 1996; Leventhal et al 1987; McAnany 1995).

In general, studies of ceramic analysis tend to focus on chronological constructions, the identification of social, economic, and political boundaries, and distinctions within sites or between broader regions (Adams 1971; Andrews 1990; Gifford 1976; Sabloff 1973; Smith 1955). In the Belize Valley, ceramic studies can be characterized as either micro or macro analyses. The tendency to conduct research at either of these polar positions means that several aspects of social relations that affect each other are ignored (Iannone 1993; Gifford 1976; LeCount 1995, 1996; Thompson 1940). For example, macro analysis of regional ceramic assemblages, such as between Barton Ramie and the Peten region are useful for interpreting exchange of luxury commodities or political alliances between the regions, or for defining temporal sequences (Ball and Taschek 1991; Chase 1985; Gifford 1976; Leventhal et al. 1993). This type of analysis, however, reveals very little about the internal dynamics of pottery production, distribution, and consumption at the local level within these given regions (Bali 1993; Coggins 1975; Costin and Hagstrum 1995; LeCount 1995).
In contrast, micro analysis of household production and consumption activities may shed some light on the domestic economy, wealth status, access to resources, gender relations, kinship ties and ancestor worship, but does not reveal the impetus behind these vertical and horizontal linkages, or more succinctly, the rationale for continuity or change in the ceramic traditions (Graham 1987; Holley 1983, 1986; Lucero 1994). It is necessary then, to combine elements of both micro and macro analyses (Giddens 1979; Weber 1978). This combination allows for the demonstration of how the social, political, and economic organization of local traditions are affected when integration via conquest, or domination through political economy, or ideological and hegemonic control are attempted (Giddens 1979; Henderson and Sabloff 1993; Hobsbawmd and Ranger 1983; Yaeger and LeCount 1995). More significant, and central to this research, are how traditions are reinvented in the face of a changing environment by incorporating elements of both old and new ideas and values (Bourdieu 1984; Chase and Chase 1992; Geertz 1973; Reina and Hill 1978; Rice 1987).

This ceramic research addresses issues of continuity and change within the Xunantunich polity. Several researchers at Xunantunich have documented a temporal sequence that extends from the Middle Preclassic through the Early Classic to the Terminal Classic (see Xunantunich Archaeological Project Field Reports, R. Leventhal ed. 1992; 1993; 1994; 1995). Additionally, it has been posited that Xunantunich became the primary center in the Belize Valley towards the end of the Late Classic (Ashmore and Leventhal 1993; Leventhal 1995). It is still being debated whether the massive construction at the site core was engineered by "intrusive elements" from the site of Naranjo seeking to exert more control or whether these developments were of local origin (Connell 1994; Leventhal et al 1993; McGovern 1993; Yaeger and LeCount 1995). Regardless of the outcome of this debate, the theoretical framework being utilized here is capable of incorporating both positions. The concepts being explored here seek to model ceramic continuity and to account for any variation that occurs.

Max Weber, in Economy and Society (1978), attempted to bridge micro/macro analysis; he provides the first synthetic formulation between micro and macro dimensions (Giddens 1971). He theorizes that within a social group there is a collective order and that certain empirical uniformities can be observed. These uniformities are created by numerous actors simultaneously repeating courses of action. However, this is not to say that the individual is insignificant, in fact Weber believed that individual action is necessary for the reproduction of society's ideational complexes. These orders or actions are also structures that are not reducible to contingent acts. Hence, Weber thought that individual interaction yields typical or uniform activity.

Following upon the premise that over time we can extrapolate a series of "uniformities of action," I posit that these represent traditional modes of activity. In the ceramic record they are represented by a strong continuity of styles and form through time. Within the Xunantunich region there were several autonomous groups sharing the region, which comprised an aggregation of villages or communities (Ashmore et al. 1994; Ashmore et al. 1994; Braswell 1994; Connell 1994; Keller 1994; McGovern 1992; Yaeger 1995). For several reasons such as similar environment, shared experiences, similar mode of subsistence, etc., these groups develop similarities in cultural forms. I suggest that within the production of ceramic vessels several attributes will be similar and
maintained through time. These ceramic vessels should also reflect significant
differences and I suggest that these variations probably distinguish local groups from
each other (see LeCount 1996).

The model posited above has to account for changes in the ceramic traditions.
For example, during the Late Classic, it has been documented that new cultural ceramic
forms such as the Palmar Ceramic Group from the Peten region were introduced into
the Xunantunich local arena and that there was a significant shift in the production,
consumption, and distribution of the vessels resulting in major variations in the ceramic
record. LeCount (1992; 1993; 1994) has documented that the Belize Red Group is
comparable to the Tepeu 2 and 3 styles and forms at Uaxactun. Various unslipped
domestic jars resemble Tikal vessels with similar shapes and rim styles. These groups
are similar in vessel shape and decorative technique to pan-lowland Maya types.
Despite this Gifford (1976) identified a strong regional ceramic tradition exemplified by
ash temper ware such as British Honduras and Vinaceous Tawny ware that exhibit
distinctive composition and surface coloration (Ford and Glick 1987).

How are the patterns that are observed in the ceramic record to be explained?
Marxist theoretical perspective would explain this shift by positing that autonomous
individuals acquiesce to society because they are forced to do so by coercive social
control (Tucker 1978). This approach is typical of Maya studies in ceramics, however, I
believe it to be erroneous. Reference to the micro level then becomes irrelevant and
the continuities in the local ceramic tradition are ignored. Weber's analysis shows that
the social environment relies upon its' reproduction via a socialized individual's action;
hence, there is not a passive acceptance of these foreign elements and forms by local
producers. It begs the question, however, what type of ceramic forms will emerge
from this interaction. Several ethnographic studies conducted on societies which
combine old and new cultural elements have demonstrated that there is an active
negotiation of ideas and values. Two such studies are used to model the ceramic data at
Xunantunich.

In an innovative study The Invention Of Tradition, Hobsbawnd and Ranger
(1983) demonstrated that as new forms or ideas were introduced into African tribal
groups by Europeans, they were not accepted in their totality. The subsequent
development of these societies exhibited a combination of old and new elements, with
heterogeneity of forms being predominant. The likely scenario that would result if we
were dealing with ceramics would be the same. Ceramic assemblages would likely be
heterogeneous as various groups accepted the new forms but combined different
traditional elements. A recombination of forms and types is not the only element that
would appear in the ceramic record. Traditional elements and those representing the
social organization at a given period would also be manifested.

To account for the maintenance of traditional elements, both at the elite and non-
elite level, it is necessary to utilize concepts derived from Clifford Geertz and Pierre
Bourdieu. First, Geertz (1963), in Old Societies and New States, attempts to characterize
the quest for modernity in Asia and Africa. His central point is that while primordial
sentiments often hinder or change the direction that planners for modernity develop,
there is an active negotiation of concepts. The affinities that exist within groups flow
from social interaction, and the attempt to impose other sentiments creates problems.
Similarly, in dealing with the imposition of a political economy based on tribute, taxation, etc. by Naranjo on the local groups at Xunantunich (Leventhal 1995), one has to take into account the existing social relations. In essence, there will likely be elements of a local tradition underlying any new form. In several cases, however, it will be manifested by the reinvention of existing cultural forms as described by Hobsbawnd and Ranger (1983).

At the elite level, where alliances become important and prestige is critical, a different scenario occurs (Chase and Chase 1992; Marcus 1983). The local elites require the new cultural forms to differentiate themselves from their local traditions, and hence, there may be a homogenous cluster of forms. I posit, however that since internal ranking would be necessary to differentiate among the elites themselves, a form of "cultural capital" is also needed. Bourdieu (1977, 1984) notes that the value of any cultural capital comes from long-standing tradition (like a coat of arms). This is exhibited in the ceramic record by special serving vessels (with restricted distribution) for ritual and ancestor worship (See LeCount 1996).

Given the historical development and demise of the Xunantunich polity, I posit that ceramic assemblages will demonstrate a continuity of traditional forms from the Middle Preclassic to the Terminal Classic. Whenever there is an introduction of new forms these will be reorganized and reproduced by combining old and new elements that will mirror the existing social relations. Leventhal (1995) has noted that towards the end of the Terminal Classic at Xunantunich there is a retrenchment and a move towards the site core. I argue that the ceramics for most groups within this polity at this time will demonstrate significantly higher concentrations of local pottery traditions as people seek to anchor themselves to their long-standing traditions. Quantitatively the ceramics at Xunantunich should exhibit a higher degree of local forms during any period than any recombinant forms. Additionally, heterogeneity of forms and types will also be a significant factor because of a loosely integrated settlement pattern in the region (Ashmore et al 1994) combined with a higher concentration of homogenous forms in the Late Classic, as authority becomes centralized (LeCount 1996).

This ceramic research ultimately builds on the ceramic sequences established for the region by XAP scholars. The application of several concepts borrowed from scholars in the anthropological field to model the similarities and variations that may occur in the archaeological record represents a significant departure from the current ceramic study conducted by Lisa LeCount. LeCount has worked on establishing the ceramic sequence and chronological constructions for the region. The emphasis of her work is in the determination of different distributions of pottery styles and forms found within the full economic and social range of households at Xunantunich in order to interpret elements of social status and ranking between sites during the Late Classic and Terminal Classic periods (LeCount 1996). My focus lies on the continuity of ceramic traditions within a given region. Changes and differences between each lot of artifactual material at these sites is to be expected. However, rather than assuming that these automatically represent chronological differences or new ceramic identities, this study posits that any heterogeneity/homogeneity of forms can be explained by emphasis on tradition, continuity and by utilizing Weber's concept of "the reproduction of the social environment via the socialized individua" (Weber 1978:29).
Conclusion
This ceramic project is part of a larger effort by scholars to understand the aggregation and integration of communities in the Xunantunich region. It builds on the previous research conducted by LeCount (1996), Connell (1994), Keller (1995), McGovern (1994), Robin (this volume), Yaeger (1995) and other researchers within this polity as well as contributing to a growing body of archaeological data from the Upper Belize valley. This ceramic analyses is intended to provide a temporal and spatial view into the internal structure of this ancient Maya society. The utilization of the archaeological record in a precise and scientific manner yields substantial data from which we can elucidate the processes of societal interaction. This kind of research into the social dynamics is not only applicable to the Maya but to complex societies throughout prehistory and history.
Acknowledgments

I would like to thank the members of the Xunantunich Archaeological Project for their support, advice, and friendship. Special thanks goes to the lab associates, Marta Mai, Emma Chan, and Bertha Chan, for their tireless hours. Funding for this research was granted from the UCLA Department of Anthropology and the ULCA Friends of Archaeology.
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Appendix A: Provenience of 1996 Ceramic Data

List of operations and suboperations collected for detailed ceramic analysis during the 1996 field season. All screened lots with occupation (aside from collapse debris), midden or refuse cultural contexts are included.

<table>
<thead>
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<th>Op</th>
<th>Subop/Operations</th>
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<tr>
<td>76</td>
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<tr>
<td>116</td>
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<tr>
<td>117</td>
<td>G,I,L</td>
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<tr>
<td>118</td>
<td>C</td>
</tr>
<tr>
<td>123</td>
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<td>141</td>
<td>I,J</td>
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<tr>
<td>147</td>
<td>E,F,I,J</td>
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<tr>
<td>157</td>
<td>B,D,R,X,Y,AA,UU</td>
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<tr>
<td>172</td>
<td>J</td>
</tr>
<tr>
<td>210</td>
<td>A</td>
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<tr>
<td>211</td>
<td>L,M</td>
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<tr>
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<tr>
<td>243</td>
<td>CC</td>
</tr>
<tr>
<td>244</td>
<td>C,D,F</td>
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Appendix B: Ceramic Catalogue

CERAMIC ANALYSIS
Aimee M. Preziosi
May 1996

Date recorded
Documented: P/D (photographed/drawn)
Operation
Suboperation
Lot
Additional provenience information
Culture Context Code

A. Temper and Paste:
   0. Unknown
   1. Ash
   2. Calcite tempers (Non-ash)
   3. Calcite tempers mixed with sand
   4. Mars Orange (Orange, fine, and hard)
   5. Coarse sand, micaceous material, brown paste
   6. White (opaque) calcite, homogenous

B. 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 diameter)
      12. Dish (Height between 1/3 and 1/5 diameter)
      13. Bowl without constriction (height no more than equal but no less than 1/3 diameter)
      14. Bowl with constriction
      15. Vase (Unrestricted or simple restricted)
      16. Thin walled open form (either a bowl or vase)
      17. Cauldron
      18. Canteen
   20. Closed Form (Jar, tecomate, etc.)
      21. Jar-restricted (less than or equal to 13cm diameter)
      22. Jar-unrestricted (greater than 13cm diameter)
      23. Tecomates
      24. Neckless ollas
   30. Specialty Forms
      31. Comals
      32. Incensarios
      33. Drum
      34. Incensario grate

107
35. Chocolate pot
36. Ear spool
37. Grater bowl/dish
38. Whistle
39. Mold

40. Lids
41. Flat
42. Truncated-conical
43. Scutate
44. Conical
45. Basin
46. Round
47. Incensario lid with handle
48. Possible incensario lid

50. Miniature
51. Plate
52. Dish
53. Bowl
54. Vase
55. Jar
56. Effigy
57. Miniature Censor

60. Figurines
61. Anthropomorph
62. Unknown Modeled Body Part

70. Worked sherds
71. Pendant (with hole)
72. Sherd with prefired hole
73. Modified round disc
74. Spindle whorl (w/hoie)
75. Bead
76. Worked edge (tool)
77. Modeled spindle whorl with prefire incised decoration
78. Ornament

C. Flanges, ridges and angles:
00. Absent
01. Flange (do not know location on body)
02. Medial flange
03. Basal flange
04. Z-angle
05. Basal angle
06. Basal ridge (lateral ridge)
07. Lip flange
08. Interior offset
09. Combination basal ridge and interior offset
10. Combination basal angle and interior offset

108
D. Vessel Curvature:
   0. Unknown or not measured
   1. Flared
   2. Outcurved
   3. Hemispherical/Silhouette
   4. Vertical
   5. Rounded/Slightly incurved
   6. Inflared
   7. Closed
   8. Barrel shaped/tecomate
   9. True hemispherical

E. Rim Detail:
   0. Unknown or not measured
   1. Direct
   2. Exterior thickened
   3. Interior thickened
   4. Small exterior fold
   5. Small interior fold
   6. Horizontal everted-90 degree angle
   7. Outflared everted-obtuse angle
   8. acute angle
   9. large exterior fold

F. Lip Detail:
   0. Unknown or absent
   1. Rounded
   2. Pointed
   3. Squared
   4. Beveled-out
   5. Beveled-in
   6. Grooved
   7. Thick-notched
   8. Scalloped-notched
   9. Crenellated-notched

G. Spouts:
   0. Absent
   1. Unknown
   2. Supported
   3. Unsupported
   4. Open
   5. Tubular, support unknown
   6. Nubbin
   7. Effigy

H. Handles:
   0. Absent
   1. Unknown
   2. Strap (Vertical or Horizontal)
   3. Rounded
   4. Conical nubbin w/ groove (not perforated)
5. Nubbin with perforation
6. Incensario ladle handle
7. Modeled
8. Nubbin w/out perforation
9. Basket

I. Foot Form:
   00. Absent
   01. Join (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 (Cylinder)
29.  Effigy

J. Base:
   0. None
   1. Unknown
   2. Flat
   3. Round
   4. Incurved
   5. Truncated-conical
   6. Flat with thickened basal angle
   7. Vase base only
   8. Countersunk circle

EXTERIOR SURFACE
K. Surface Finish:
   0. Eroded
   1. Matte
   2. Polished with low luster
   3. Polished with “velvety” high luster
   4. Polished waxy
   5. Peten Gloss
L. Base Slip Color:
  0. Eroded
  1. No slip (paste color)
  2. Black
  3. Orange to Red
  4. Light Orange
  5. Brown
  6. White or Cream
  7. Smudged (black/grey)
  8. Sierra Red (brown to red with black mottling)
  9. Gray

M. Secondary Slip Color:
  0. None
  1. Black
  2. Red
  3. Smudged
  4. Light Orange
  5. Yellow
  6. Orange

N. Primary Paint Color:
  0. Not Present
  1. Red
  2. Black
  3. White or Cream
  4. Blue
  5. Orange

O. Secondary Paint Color:
  0. Not Present
  1. Red
  2. Black
  3. Orange
  4. Blue

P. Tertiary Paint Color:
  0. Not Present
  1. Red
  2. Black
  3. Orange
  4. Blue
  5. Brown
  6. Yellow

Q. Decoration:
  00. Absent
  01. Unknown
  10. Carving
  11. Plano-relief (low relief)-Cutting out clay as background for a design

111
12. Molded-carving--Deeply cut with design embellished by incising or modeling
13. Gouge-incising--cutting/gouging out areas to create pattern

20. Incising
21. Shallow, sharp, prefired
22. groove, prefired
23. Scratching, postfired
24. Deep, sharp, prefired
25. Post fired incising/impressing
26. Internal groove
27. Oblique incising

30. Impressing
31. Punctating
32. Notching
33. Stamping
34. Perforating
35. Patterned impressing
36. Cane stamping
37. Thumb nail impressing--crescent shape

40. Painting
41. Positive
42. Negative
43. Post fire

50. Decorative Appliqué
51. Spikes
52. Thin raised line(s)
53. Winged Face hand modeled
54. Ridge with notching
55. Ridge with incising
56. Ridge with incising and notching
57. Fillet
58. Impressed fillet
59. Impressed fillet smeared

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
84. Stucco
90. Depression

R. Secondary Technique:
(Same code as above)

S. Stylistic Element:
   00. Absent
   01. Indeterminable
   10. Single element
   11. Linear
   12.
   13. Curvilinear
   14. Zigzag
   15. Closed form
   16. Circular
   17. Rectangular
   18. Square
   19. Triangular
   20. Simple repetitive
   21. Linear
   22. Curvalinear
   23. Checker-board
   24.
   25. Closed form
   26. Circular
   27. Rectangular
   28. Square
   29. Triangular
   30. Abstract/geometric
   31. Linear
   32. Linear and closed form combination
   33. Curvalinear combination
   34. Zig-zag and closed form combination
   35.
   38. Complex abstract with linear pattern
   40. Representative
   41. Toad
   42. Serpent
   43.
   49. Human
   50. Pseudo-glyph
   60. Composite glyph and geometric
   70. Scenes, "Codex style"
   80. Complex representative
90. Bands and Representative

| T. Location of stylistic element, motif (or slip when elements are not present) |
|-------------------|-------------------|-------------------|
| 00. None | 11. Handle | 03+04(05) |
| 01. Body Indeterminate | 12. Spout | 04+05+06 |
| 99. Unknown | 13. Feet | 30. Slip on 03 only |
| | 14. Base | |
| | 15. Angle, ridge, or flange |

**INTERIOR SURFACE**
(same codes as for exterior surface)

**U-DD**

**Type-Variety Code:**

**NEW TOWN CERAMIC COMPLEX**

**Ware Unspecified**

<table>
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<tr>
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<tbody>
<tr>
<td>0100</td>
<td>Augustine Ceramic Group</td>
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<td>0110</td>
<td>Augustine Red:Augustine Variety</td>
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<tr>
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<td>0300</td>
<td>Daylight Ceramic Group</td>
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<td>Daylight Orange:Darknight Variety</td>
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<tr>
<td>0330</td>
<td>White Creek Incised:White Creek Variety</td>
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<td>Amberhead Black-on-orange:Amberhead Variety</td>
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**Chaple Unslipped Ware**

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**Uaxactun Unslipped Ware**

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<td>More Force Ceramic Group</td>
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<td>More Force Unslipped:More Force Variety</td>
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<td>0520</td>
<td>More Force Unslipped:Variety Unspecified-yellow</td>
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<td>More Force Unslipped:Variety Unsp.-Red filmed</td>
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**Calabash Unslipped Ware**

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<td>Rio Juan Ceramic Group</td>
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<tr>
<td>0620</td>
<td>Rio Juan Unslipped:Rio Juan Variety</td>
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</table>
SPANISH LOOKOUT CERAMIC COMPLEX

Pine Ridge Carbonate Ware

1000 Dolphin Head Ceramic Group
1010 Dolphin Head Red:Dolphin Head variety
1020 Silver Creek Impressed
1100 Garbutt Creek Ceramic Group
1110 Garbutt Creek Red:Garbutt Creek Variety
1120 Garbutt Creek Red:Variety Unsp. (Brown-interior)
1130 Garbutt Creek Red:Paslow Variety
1140 Rubber Camp Brown:Rubber Camp Variety
1200 Vaca Falls Ceramic Group
1210 Vaca Falls Red:Vaca Falls Variety
1220 Kaway Impressed:Kaway Variety
1230 Kaway Impressed:Caller Creek Variety
1240 Duck Run Incised:Duck Run Variety
1250 Roaring Creek Red:Roaring Creek Variety
1300 Mount Maloney Ceramic Group
1310 Mount Maloney Black:Mount Maloney Variety
1400 Yalbac Ceramic Group
1410 Yalbac Smudged-brown:Yalbac Variety

British Honduras Volcanic Ash Ware

1500 Belize Ceramic Group
1510 Belize Red:Belize Variety
1511 Belize Red: Incised Variety
1520 Platon Punctated-incised:Platon Variety
1530 McRae Impressed:McRae Variety
1540 Gallinero Fluted:Gallinero Variety
1550 Martins Incised:Martin Variety
1560 Puhui-zibal Composite:Puhui-zibal Variety
1570 Montego Polychrome:Montego Variety

Vinaceous Tawny Ware

1600 Chunhuitz Ceramic Group
1610 Chunhuitz Orange:Variety Unspecified
1620 Xunantunich Black-on-orange:Variety Unspecified
1630 Benque Viejo Polychrome:Variety Unspecified

Uaxactun Unslipped Ware

1700 Tu-Tu Camp Group
1710 Tu-Tu Camp Striated:TuTu Camp Variety
1720 Tu-Tu Camp Striated:Tzimin Variety
1730 Tu-Tu Camp Striated:Variety Unspecified-Applied
1740 Tu-Tu Camp Striated:Variety Unspecified-Beaverdam

Cayo Ceramic Group

1800 Cayo Unslipped Variety
1810 Cayo Unslipped:Cayo Variety
1820 Cayo Unslipped:Variety Unsp. (Buff-Applied)
1830 Cayo Unslipped:Variety Unsp. (Red-Applied)
1840 Cayo Unslipped:Variety Unsp. (Red slipped)
1850 Alexanders Unslipped:Alexanders Variety
1860 Alexanders Unslipped:Croja Variety
1870 Alexanders Unslipped:Beaverdam Variety

Peten Gloss Ware
2000 Meditation Ceramic Group
2010 Meditation Black:Meditation Variety
2100 Achote Ceramic Group
2110 Achote Black:Variety Unspecified
2120 Cubeta Incised:Variety Unspecified
2200 Palmar Ceramic Group
2210 Palmar Orange-polychrome:Variety Unspecified
2220 Zacatel Cream-polychrome:Variety Unspecified
2230 Paixban Buff-polychrome:Variety Unspecified
2240 Yuhactal Black-on-red:Variety Unspecified
2250 Tunic Red-on-orange:Tunic Variety
2300 Danta Ceramic Group
2310 Joyac Cream-polychrome:Variety Unspecified
2400 Asote Ceramic Group
2410 Torres Incised:Variety Unspecified
2500 Tialipa Ceramic Group
2510 Tialipa Brown:Variety Unspecified
2520 Canoa Incised:Varieties Unspecified
2530 Calabaso Gouged-Incised:Varieties Unspecified
2600 Nanzal Ceramic Group
2610 Corozal Incised:Varieties Unspecified

2700 Yaha Creek
2710 Yaha Creek Cream:Yaha Creek Variety

TIGER RUN CERAMIC COMPLEX

Pine Ridge Carbonate Ware
3000 Mountain Pine Ceramic Group
3010 Mountain Pine Red:Mountain Pine Variety
3020 Guana Creek Impressed:Guana Creek Variety
3030 Mountain Pine Red:Old Jim Variety
3040 San Pedro Impressed:San Pedro Variety
3050 Rosario Incised:Rosario Variety
3060 Mount Pleasant Red:Mount Pleasant Variety
3070 Pascua Impressed:Pascua Variety
3100 Saturday Creek Ceramic Group
3110 Saturday Creek Polychrome:Saturday Creek Variety
3120 Saturday Creek Polychrome:Variety D
3130 Saturday Creek Polychrome:Variety F

Peten Gloss Ware
3200 Tasital Ceramic Group
3210 Gloria Impressed:Variety Unspecified
3300 Molino Ceramic Group
3310 Molino Black:Variety Unspecified
3400 Teakettle Bank Ceramic Group
3410 Teakettle Bank Black:Variety Unspecified
3420 Teakettle Bank Black:Teakettle Bank Variety
3430 Mangrove Brown-black:Mangrove Variety
3440 Limon Black-cream:Limon Variety
3500 Saxche Ceramic Group
3510 Saxche Orange-polychrome:Variety Unspecified
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<td>3540</td>
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**HERMITAGE CERAMIC COMPLEX**

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Uaxactun Unslipped Ware
6400  Monkey Falls Ceramic Group
6410  Monkey Falls Striated:Variety Unspecified
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6450  Monkey Falls Striated:Variety Orange

Tumbac Unslipped Ware
6500  Chan Pond Ceramic Group
6510  Chan Pond Unslipped:Variety Unspecified
6520  Chan Pond Unslipped:Chan Pond Variety
6530  Negroman Punctated-incised:Negroman Variety

MOUNT HOPE CERAMIC COMPLEX

Paso Caballo Waxy Ware
6900  Quacco Creek Ceramic Group
6910  Quacco Creek Red:Quacco Creek Variety
7000  San Felipe Ceramic Group
7010  San Felipe Brown:San Felipe Variety
7020  San Antonio Golden-brown:San Antonio Variety
7030  San Antonio Golden-brown:Variety Orange-interior
7100  Sarteneja Ceramic Group
7110  Savannah Bank Usulutan:Savannah Bank Variety
7120  Sarteneja Usulutan:Variety Unspecified
7200  Escobal Ceramic Group
7210  Escobal Red-on-buff:Variety Unspecified

Gale Creek Red Ware
7300  Vaquero Creek Ceramic Group
7310  Vaquero Creek Red:Vaquero Creek Variety
7320  Vaquero Creek Red:Variety Thin-walled
7330  Bullet Tree Red-brown:Bullet Tree Variety

Uaxactun Unslipped Ware
7400  Stumped Creek Ceramic Group
7410  Stumped Creek Striated:Varieties Unspecified
7420  Stumped Creek Striated:Stumped Creek Variety
7500  Old River Ceramic Group
7510  Old River Unslipped:Variety Unspecified
7520  Old River Unslipped:Old River Variety

BARTON CREEK CERAMIC COMPLEX

Paso Caballo Waxy Ware
7900  Sierra Ceramic Group
7910  Sierra Red:Varieties Unspecified
7920  Sierra Red:Orange-paste Variety
7921  Sierra Red:Black-paste Variety
7930  Sierra Red:Buff-paste Variety
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**JENNY CREEK CERAMIC COMPLEX**

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XAP 1996 - Preziosi

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8950  Chacchinic Red-on-orange-brown; Chacchinic Variety
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8970  Palma Daub; Palma Variety
9000  Sayab Ceramic Group
9010  Sayab Daub-striated; Sayab Variety
9020  Sayab Daub-striated; Hulse Variety
9030  Cooma Striated; Cooma Variety

Mars Orange Ware
9100  Savana Ceramic Group
9110  Savana Orange; Variety unspecified
9120  Savana Orange; Rejolla Variety
9130  Savana Orange; Savana Variety
9140  Reforma Incised; Variety Unspecified
9150  Reforma Incised; Mucnal Variety
9160  Reforma Incised; Reforma Variety

Flores Waxy Ware
9200  Joventud Ceramic Group
9210  Sampopero Red; Variety Unspecified
9220  Sampopero Red; Sampopero Variety
9230  Joventud Red; Variety Unspecified
9240  Black Rock Red; Black Rock Variety
9250  Pinola Creek Incised; Variety Unspecified
9260  Pinola Creek Incised; Pinola Creek Variety
9300  Pital Ceramic Group
9310  Pital Cream; Variety Unspecified
9320  Paso Danto Incised; Varieties Unspecified
9400  Chunhinta Ceramic Group
9410  Chunhinta Black; Variety Unspecified
9420  Deprecio Incised; Deprecio Variety

SEIBAL TYPE VARIETY

Uaxactun Ware
9500  Cambio Ceramic Group
9510  Pedregal Modeled; Appliqued Head Variety
9520  Miseria Appliqued; Variety Unspecified
9530  Miseria Appliqued; Hollow Handle Variety

Peten Gloss Ware
9700  Tinaja Red Ceramic Group
9710  Tinaja Red; Variety Unspecified
9720  Subin Red; Variety Unspecified
9730  Pantano Impressed; Pantano Variety
9740  Pantano Impressed; Stamped Variety
9750  Chaquiste Impressed; Variety Unspecified

Fine Orange Ware
9900  Altar Ceramic Group
9910  Pabellon Modeled-carved; Pabellon Variety
9920  Islas Gouged-incised; Islas Variety
9930  Cedro Gadooned; Cedro Variety

121
Frequency
Catalog Number: A#
The 1996 Excavations at San Lorenzo

Jason Yaeger
University of Pennsylvania

with
Laura P. Villamil
University of Michigan
Introduction

The 1996 season marked the fifth and final season of research by Sabrina M. Chase (1992, 1993) and myself (1992, 1994, 1995, 1996) at San Lorenzo, a small rural community located 1.5 km northeast of the Xunantunich site center (Figure 1). The site overlooks the rich Mopán river floodplain from a series of alluvial terraces on the opposite bank of the river from Xunantunich. Survey directed by myself (Yaeger 1992) and Jon C. VandenBosch (1992, 1993) has mapped over 80ha of the San Lorenzo ranch and the adjacent Xix/Biddle property. This work demonstrated the existence of four small settlement clusters that I have suggested represent distinct social units, probably organized along kinship lines (Yaeger 1995b; Yaeger and LeCount 1995; see Figure 2). Chase’s and my research has focused on one of these hamlets, referred to here simply as San Lorenzo (distinguished by a solid boundary in Figure 2 and shown in more detail in Figure 3). Chase also tested one group in an adjoining community and I supervised excavation of a local administrative node that lies outside any of the settlement clusters. In addition, VandenBosch spent parts of two seasons investigating a set of enigmatic, linear cobble features located in the northwestern part of the survey area (Figure 2). It should be pointed out that the discovery of new groups each season has led to slight changes in the boundaries and composition of these clusters. The San Lorenzo community defined here encompasses all groups within 100m of each other, including the first three groups in the string of residences at the southeast corner of the cluster. In past analyses, these have been considered outside the community’s boundaries.

In 1996, I planned to conduct extensive excavations in one large single mound, one small three-structure patio group, and SL-13, a larger two-patio group that I had hypothesized to be a local administrative node. I had also planned to place 1x2m test units in all of the previously untested structures at San Lorenzo. Due to time constraints, we were not able to excavate the isolated mound, but we did complete the rest of our goals. We also placed test excavations in a quarry area where the San Lorenzo inhabitants extracted chert cobbles from an ancient alluvial deposit and carried out some reduction and material selection, judging from the lithic material in the associated debitage mounds. Four experienced, two-man excavation crews from San José Succotz and Benque Viejo del Carmen did most of the actual excavation and the bulk of the field drawings; I supervised excavations and did kept most of the photographic and written field records. In May, Laura P. Villamil of the University of Michigan, joined our crew, supervising the excavation of SL-13, Strs 5, 6, and 7.

The research at San Lorenzo is part of the Xunantunich settlement study, providing in depth household and settlement cluster data to complement survey data (Ashmore 1993; also Ashmore et al. 1994; Neff et al. 1995). I have presented the goals of the San Lorenzo research in detail previously (Yaeger 1994, 1995a, 1995b), but I will briefly summarize them again. The San Lorenzo investigations are designed to understand the ancient internal organization of a small rural community, its relationship to larger social and political entities such as the Xunantunich regional polity, and the transformations that these underwent in the Late Classic and Terminal Classic periods. In its analytical scale, the project is situated between pure household-level archaeology and larger-scale settlement or regional studies (see de Montmollin 1988; Hayden and Cannon 1982). Methodologically and theoretically, it shares many concerns with both settlement studies and household archaeology, especially the latter.
Our sampling strategy revolves around a four-type morphological typology of the mound groups at San Lorenzo (Figure 4). By the end of 1996, we had completed clearing excavations in a total of six groups: one Type IIA single mound (SL-31); one Type IIB group consisting of two associated mounds without a shared formal patio (SL-34); three Type IA patio groups, including a two-structure group (SL-24), a small three-structure group (SL-28), and a large three-structure group (SL-22); and one Type IB group composed of two adjoining patio areas (SL-13). The clearing excavations generally exposed between 25% and 50% of the platform area and adjacent non-platform areas. In larger groups (SL-22 and SL-13), this percentage was somewhat lower. The areal excavations had four primary goals: 1) to clear in situ refuse and use-related deposits pertaining to the final occupation phase; 2) to clear the final architecture of each group; 3) to selectively probe into earlier architectural phases; and 4) to test stratified refuse deposits. These procedures have yielded information about the social composition of groups, intra-group activity areas, differential use of structures and non-structure space, and date of founding and length of occupation of each group. These data are crucial for understanding the organization of the households that comprised the San Lorenzo community, and therefore for evaluating models of community organization and development. To complement the extensive excavations, we also implemented a testing program. We placed a 1x2m unit in almost every structure at San Lorenzo that we did not excavate more extensively. The resulting data allow us to examine whether the interpretations that we draw from our detailed excavations can be more generally applied to the entire community.

The main goal of this report is to describe the basic empirical findings of the 1996 season. At the end of each section and again in the conclusion, I offer the reader a few preliminary interpretations of the data. However, more definitive statements must await the completion of on-going artifact analysis. Laura Villamil made an invaluable contribution to this year’s research, supervising excavations in the South Platform of SL-13 in May and analyzing much of the ceramic assemblage from that area. She wrote the sections of this report that describe that work.

The Testing Program (Op 225)

In 1993, Sabrina Chase (1993) tested a small sample of the San Lorenzo groups (Op 95), and we tested several others in 1994 while looking for groups with Terminal Classic occupation (Ops 136 and 139; see Yaeger 1994). This year, we expanded upon these earlier efforts, testing almost every structure that had not been extensively cleared in the San Lorenzo settlement cluster. We did not test one group of two associated mounds (SL-14) that lay south beyond the edge of the San Lorenzo cattle pasture and two isolated mounds (SL-36, SL-37) that lay in the grounds of the Nabitunich Hotel area.

We placed a 1x2m test unit adjacent to each structure, testing every structure in multi-structure groups, since we had found that different buildings at group SL-22 had different functions. There were three goals for these test excavations:

1) To reconstruct the population history of the community by identifying the length of occupation at each structure, as reflected in the associated refuse materials;
2) To examine the activities associated with each structure, and to explore differences between domestic groups that correspond with the morphological typology that informed the excavation sampling strategy at San Lorenzo; and 3) To examine differences in building material and style in different domestic groups, again looking for differences that correspond with the morphological classes defined previously.

To successfully achieve these goals, we needed to obtain fairly large quantities of primary materials from deposits with some stratigraphic depth. Generalizing from depositional patterns we had observed during extensive excavations at San Lorenzo, we placed 1x2m test units on the off-patio side of structures in patio groups, areas where we had found long-term medium-density accumulations of refuse, probably swept from structure platforms and re-deposited from patio surfaces during periodic cleaning. In testing structures not associated with patio groups, we generally chose the side of the structure that was downslope, where the structure wall would protect the sherds from washing away. We placed the units so as to expose the facing of the structure platform, also. In two cases where we did not at first find the edge of the structure, we excavated secondary 1x1m units to find them. In a third case, we did not find the edge of the platform, but the material recovered during excavation allows us to reconstruct it with a high degree of confidence. The groups that we tested and the relevant sub-ops are listed in Appendix A.

The testing program showed that there is a great deal of variability in terms of architecture at San Lorenzo, with some platforms made of river cobbles, some of large cut limestone blocks, and a few combining both. Many structures have broad frontal terraces, and a few have small side terraces. The bulk of the occupation seems to have been in the Late Classic II period (LCII) period, but there are enough Late Preclassic (LPC) sherds in the uphill groups to suggest that there was a relatively strong LPC occupation in that area, if not specifically at those groups (N.B. The ceramic sequence I use derives from Lisa J. LeCount’s work [1993, 1994, 1995], which in turn builds upon Gifford 1976 and Thompson 1940). LPC materials are much rarer in the western groups of the community. A more detailed presentation and discussion of the data from the testing program will be forthcoming.

SL-28: A Small Patio Group (Op 229)

In previous years, we had cleared large portions of two Type IA patio groups, SL-22 and SL-24. SL-22 is a patio group with four structures, and it is one of the larger groups at San Lorenzo. SL-24 is a patio group with two structures. In order to more fully sample the variability inherent in the morphological type, we decided to excavate a patio group with more than two structures, but in which the structures were not very large. We chose SL-28, despite the fact that it differed from the other groups we had excavated extensively in the lack of Terminal Classic occupation. The group’s small size and its proximity to the quarry area and debitage mounds motivated our decision.

SL-28 consists of three structures arranged around a patio (Figures 5 and 6). The patio level corresponds with ground level on the eastern side of the group. However, the sloping ground surface required the ancient builders to make a basal platform to create the level patio surface, and the western edge of this platform rises 1.5m from ground level in two terraces. The structures around the patio are fairly small. The
northern Str 1 is rectangular, roughly 10 x 4.3m wide and 25cm high. The tallest structure is Str 2, on the east, which is squarer in plan, ca. 5.5 x 8m and 75cm high. Str 3 measures ca. 8.5 x 5m and is 45cm high, although its exact dimensions are difficult to calculate because of a big cedar tree that is growing on its northeast corner.

Excavations at SL-28 cleared a total of 126m², concentrating on exposing the final architecture and uncovering primary deposits in the patio area and behind structures. I had certain expectations about what we would find at SL-28 given its surface morphology, but the actual excavation data contradicted several of these, surprising us in three ways: 1) The architecture was cobble-construction, not limestone block like every other patio group we had cleared; 2) there were more architectural phases than anticipated; and 3) the groups had wide, rear terraces which are rare elsewhere in San Lorenzo. I will discuss each structure in turn.

SL-28, Str 1

Although the architecture of Str 1 is quite poorly preserved, we were able to identify three phases of building construction (see Figure 7). Underlying these is the fill layer that was placed to form the initial patio surface, which in turn sits on sterile clay, the top of which contains a lot of charcoal, possibly from initial clearing of the land or from construction-related activities. Like most groups at San Lorenzo, there is no buried A Horizon underlying the first architecture at the site. Gair Tourtellot (1995) has found this to be true at La Milpa, as well, and he suggests that either erosion was so severe that the topsoil had eroded, or the value of the topsoil was appreciated and it was removed for use elsewhere. It could also be possible that organic material of the buried A Horizon leached out over the centuries.

The first identifiable surface at Str 1 sits on some 50cm of patio fill. It consists of a somewhat compact clay surface with gray limestone or plaster flecks, through which very few rocks protrude, suggesting that it was a real break in the patio fill. Although there is no evidence of ballast or plastering, it is possible that this was an exterior surface at the level of the top of the patio. On top of this surface we found a thin mezcla or sascab flooring in Op 229L. At its southern, patio-facing side, this floor is 5cm thick, getting thicker to the north as the patio fill slopes down somewhat, and bounded on its northern side by a line of flat-faced cobbles. The gray-flecked clay surface mentioned above does not continue under the mezcla surface, but the break in the fill continues northward to the top of the rear terrace wall, suggesting that the patio and the rear terrace of Str 1 were constructed at the same time, and that the first version of Str 1 was then built on top of the patio surface. Although they are completely slumped, the collapse pattern suggests that subsequent building phases utilized the same northern facing as the first version of Str 1, simply adding courses to the cobble facing. Because we only exposed a north-south strip of this early version of Str 1, we can be confident that its width was some 2.50m, but its length is unknown.

The second construction phase of Str 1 consisted of a fill episode of some 15cm of clay, cobbles, and lithic material capped by a plaster floor. As mentioned, the rear, northern face of this platform was formed by adding medium-sized cobbles onto the earlier platform face; these were found in the collapse. The southern, patio-side face of the structure lies 1m south of the edge of the earlier mezcla surface. Dukunu Wall forms this facing, and it consists of small limestone blocks. It joins the eastern facing,
formed of hard limestone cobbles that probably came from the adjacent quarry. This platform measures 4.3m north-south, and its east-west extent is at least 5.2m.

The third and final construction episode at Str 1 consisted of another thin fill episode of 15cm of clay, cobbles, and lithic materials. The surface of this fill has a higher density of small pebbles and lithic flakes which are probably the ballast of an eroded plaster surface. The northern edge of the platform was apparently formed by adding cobbles to the facing used by the previous two building episodes. A slumped line of cobbles that is the best candidate for the eastern edge of the platform lies 1.6m farther east than the eastern face of the penultimate structure. And the southern, patio-side face consists of a course of hard cobbles set on top of the penultimate platform. These cobbles were set 45cm in from Dukunu Wall, extending east beyond the edge of Dukunu Wall such that the southern edge of the earlier platform formed an outset step for the final platform. The superstructure that sat atop this final platform was apparently wattle-and-daub, given the presence of fired daub around the structure.

It seems likely that the construction of the second phase of Str 1 corresponded with a second patio fill episode as well. A cut through the patio surface and fill along the southern face of Str 1 suggests that there were two patio fill episodes, although the preservation on both is quite poor. The earliest is indicated by a line of pebbles and ballast-sized rocks 10cm or so above the sterile clay sub-soil. The second, final patio floor is even more fragmentary, indicated only by slight changes in the rock density and size and by the basal courses of the penultimate and final phases of Str 1, which sit 15cm above the earlier floor. This stratigraphy mirrors the two distinct levels of activity areas identified along the northern edge of Str 2. There we found two sherd scatters indicative of activity areas, separated by some 35cms of soil and rock. Furthermore, these two sherd scatters sit at the same elevations as the basal courses of two platform construction episodes of Str 2. Taken together, these data strongly suggests two distinct phases of patio construction. The gray-flecked surface and mezcla surface that form the first construction episode of Str 1 are probably associated with the first patio level, since no break was found in the patio fill that underlies this small platform.

In contrast to the poor preservation of the building platform, the rear terrace facing north of Str 1 is intact to a height of three courses. The facing is made of large, unfaced and roughly faced cobbles that create a terrace to a height of 45cm. As noted above, this terrace face probably also formed the northern edge of the first construction episode of the basal platform upon which the SL-28 structures rest. North of this terrace we found a refuse deposit like those often found off the rear edges of structures: a moderately dense concentration artifacts, generally small in size, that probably represent not a midden per se, but rather the gradual accumulation of refuse through time. The final version of the Str 1 platform sat ca 60cm above the terrace surface, and it is not clear if there was direct access between the two areas.

**SL-28, Str 2**

We exposed more of Str 2 than any other building in SL-28, clearing over 50% of the structure and adjacent areas. The architecture proved to be only slightly better preserved than that of Str 1, and we did find some artifactual evidence for activity areas. I will discuss both in temporal order. The sequence combines the exposed platform
faces and a series of plaster floors revealed in a centrally placed 1x2m test unit (Op 229P).

The earliest platform in the Str 2 sequence was quite large compared to the first versions of Strs 1 or 3. It was formed by placing some 60cm of clay-and-cobble fill on top of a clayey subsoil rich in charcoal flecks. The dimensions of the platform are unknown, since we only exposed the back of the cobble facing of the west side of the substructure. It did not cover as large an area as the subsequent building, however. The platform was capped with a nicely finished, thick plaster floor which had been blackened by burning in some spots. The floor had a cut in it, 1.8m long (east-west) by at least 40cm wide. At first, we thought that this feature was a burial cut, and we excavated it quite carefully. However, we found nothing but fill, and the nature of the fill in the cut did not differ visibly from that sealed by the intact floor. However, the fact that the profile for the overlying fill slumps down into this cut, as does the floor that caps the next fill episode, suggests that there was a void below this cut that collapsed, or that it was refilled with looser matrix that settled after the next building episode was placed. The exact nature of this deposit remains unknown.

The second construction episode consisted of a 20cm fill layer placed directly above the previous floor. This second platform was capped by a fairly well preserved floor which was replastered once. The floor slumped down in the southern part of the unit above the cut in the earlier floor, and it was also cut by two corozo palm root scars. The size of this second platform is better known than that of the previous construction. The floor exposed in 229P sits at roughly the same level as the top of Hominy Wall, the easternmost rear terrace of the final version of Str 2. Hominy Wall, then, formed the eastern edge of the second phase of Str 2. Hominy consists of one course of large and medium-sized hard limestone cobbles and chert cobbles. Hominy Wall puzzled us for several weeks, because its northern end lacks a corner. Instead, the exterior activity surface associated with the final use of Str 2 seems to slope up to the terrace surface formed by Hominy Wall. However, deeper excavation through this final surface revealed a distinct patch of yellowish matrix with small cobbles that looked like fill but lacked facing stones. The edge of this fill corresponded well with Hominy Wall. Exploration further west along this same fill break revealed Sub-Pozol Wall, a cobble facing similar in construction to Hominy Wall that would have joined it to form the northeast corner of the structure. This structure is also associated with the early activity surface mentioned above when discussing Str 1. We identified an exterior activity area by sherd scatters at the base of Sub-Pozol Wall in Ops 229X and 229AA. However, we did not find small rocks or pebbles that would suggest that this surface was ever plastered.

At the start of the third construction phase, the northeast corner of the platform (parts of Hominy Wall and Sub-Pozol Wall) was dismantled. Pozol Wall was placed roughly on top of Sub-Pozol, at the level of the new exterior surface, forming the northern edge of the structure. The eastern face of the new structure platform was formed by Tortilla Wall, which met Pozol Wall at the northeast corner of the structure, inset 1.2m from Hominy. The western edge of this new platform sat some 50cm beyond the edge of the previous construction. Although it was badly slumped, we recovered evidence for an inset stairway that provided access from the patio up to the top of the platform, probably in two steps. This version of Str 2 would have measured
5.5 x ca. 8m, with Hominy forming a 1.2m wide rear terrace which could have been roofed over to provide a sheltered outdoor work area. This rear terrace sloped down on its northern side to meld into the exterior activity surface, with no architectural break between the two areas.

The top of the substructure was further modified by the placement of two one-course facings (Masa and Nixtamal Walls) that formed a low platform ca. 3m wide by at least 3m long that left a space 1.8m wide along the east and north sides of the structure. These low "step benches" are not uncommon at San Lorenzo, although they tend to sit along the back side of the substructure platforms (see SL-34, Str 1 [Yaeger 1995] and SL-28, Str 3, below). It probably demarcated some portion of the interior space of the building. It is possible, of course, that it formed the entire interior space of the structure, and that the surrounding areas formed a porch or veranda area roofed with perishable materials. However, if this were so, the actual house space would be quite narrow.

Associated with this final construction episode, we found light but discrete refuse scatters in two loci. One was on the rear terrace of the structure next to Tortilla Wall. The other was off the northern edge and northeast corner of the structure, on the second activity surface, overlying the sherd scatter noted above.

SL-28, Str 3

Although Str 3 is the smallest platform in SL-28, it has the most extensive rear terraces, the first one 1.4m wide and the second, lower one 3.6m wide. It is also the structure we understand least in this group, due to its poor preservation and time constraints that limited our platform probe to a 50cm x 50cm square. Nevertheless, we can identify three main architectural phases in the development of Str 3. Below them all, though, is a plastered surface that probably corresponds with the first patio level in the group.

The earliest construction that we found in our probe of Str 3 is a plastered surface with evidence of burning. This floor is associated with an east-facing one-course line of large cobbles, named Xpaxha' Wall, that sits on clay sub-soil and is presumably the first construction at this locus. Xpaxha' stops short of the northern edge of our probe, either turning east toward Str 2 or having been dismantled in antiquity. However, it does extend at least 2.5m to the south, where we found it peeking through the surface of the rear terrace of Str 3. It might have extended all the way to the edge of the rear terrace, forming a corner with Cornchips Wall, the terrace's southern edge. We found traces of ballast on the top of the terrace at the same elevation as the floor sitting on Xpaxha', supporting this scenario. I suggest, that Xpaxha' actually forms the edge of the first patio fill episode, and that the rear terrace of Str 3 (formed by Cornchips Wall) is part of the original basal platform construction, analogous to the rear terrace of Str 1 (Beernuts Wall), discussed above. The floor surface identified in 229D as the top of this platform is at the same elevation as that floor on Xpaxha'.

The first construction we can identify above Xpaxha' is a 25cm thick fill episode, capped by a plastered floor. As with the floor associated with Xpaxha', we found this second floor in our probe of the platform as well as south beyond the edge of the final platform. As with the earlier floor, it too runs south to form a rear terrace for Str 3.
This terrace apparently sat some 20cm above the lower terrace, although we could not exactly determine its height because its small cobble facing was badly slumped. The northward extent of this floor is unclear, since the Maya later cut through it for unknown reasons. We do know, though, that it must have been a platform surface, and not the surface of the later patio, because it sits too high. It is also unclear if how it relates temporally to the second patio construction episode.

The next construction episode is only poorly understood. It consists of a 1.20m wide platform placed on top of the platform just discussed. It’s southern facing, Bollo Wall, sits 1.4m in from the edge of the second terrace; its northern, presumably interior side rises in two one-course steps, the first forming a 40cm wide step, bench, or work surface, and the second forming a 80cm wide balk that is the right size to be a wall stub to brace a wall of a perishable superstructure. This would presumably be the rear, southern wall of the building, and its northern extent remains unknown.

The final construction episode used Bollo Wall again, placing one more course of stones on it and filling in the area to the north to a height of some 30cm above the previous floor level. The resulting platform would have had a width of some 4.2m and a height above the patio surface of 50cm, probably requiring a step. However, the entire northern, patio side of this platform was slumped away, and we could identify neither a facing, nor a stairway. As on a few other structures at San Lorenzo, a “step bench” faced with one course of small faced pieces of limestone probably demarcated some interior space, 2m wide by at least 2m long. The final layout of Str 3, then, was a low, broad platform probably supporting a perishable superstructure. As in Strs 1 and 2, a wide (1.4m) rear terrace extended off the back of the structure and was probably covered with a perishable roof, if not with walls. Below this, however, there was an even broader, lower terrace level, 3.6m wide. A set of closely-spaced, parallel cobble lines set into the surface of the lower terrace suggests that at one time in its use life, it too supported a perishable superstructure. Although we lack direct connections, the surface indications and the style of architecture suggest that the edge of the Str 3 lower terrace constituted part of the edge of the basal platform, eventually joining the Beernuts Wall, the edge of the Str 1 rear terrace.

**SL-28. Patio Edges**

We placed one unit (Op 229CC) to examine the upper terrace face of the western side of the patio. This terrace edge runs between the western edges of Strs 1 and 3, forming a step up into the patio surface from a broad, lower terrace area. Although badly slumped, this 25cm high facing seems to have been made of large, roughly-shaped pieces of limestone. It seems likely that the original basal platform that elevated the patio surface was formed by the facings that later formed the rear terraces for Strs 1 and 3, and the lower terrace facing of the western side of the patio. The second patio fill episode would not have extended out to the westernmost extent of this previous platform, but only to the facing excavated in 229CC. Although we have no direct stratigraphic connections to indicate this link, the height of this facing matches roughly the thickness of the second patio fill episode found in Op 229D.

**SL-28. Summary**

I had certain expectations for what we would find SL-28, given the model of community development and internal organization that guides my research. However,
SL-28 presented several surprises. First, it is the only three- or four-structure patio group lacking solid Terminal Classic occupation. Second, its unusual rear terraces are uncommon at San Lorenzo, and are not this developed in any other group. Perhaps they have to do with the spatial proximity of the group to the quarry areas, although SL-24 is as close and lacks rear terraces. Finally, although the patio group clearly underwent a fair degree of development, with three or more construction phases in each of the three structures, the architecture lacks limestone facings like I had hypothesized for higher-status, developmentally mature patio groups (Yaeger 1995a). This suggests that, perhaps not surprisingly, the ancient social reality was more complicated than my model.

Although we found no refuse in the patio area, we did excavate several sherd scatters indicating activity areas. More detailed analysis of these materials and the refuse accumulations on and behind the rear terraces should provide us with a more detailed understanding of this group and its place in the San Lorenzo community.

The Quarry (Op 248)

In 1992, Dr. William Woods and his colleagues observed that many of the alluvial terraces in and around San Lorenzo had been modified by the ancient Maya (Woods et al. 1993). Our excavations in SL-24 in 1995 revealed that group sits on an alluvial deposit of chert cobbles that lie on or just above the limestone bedrock. This deposit is apparently extensive, with quarried exposures of up to 2m tall. The exposed face of this stratum runs along the west edge of the San Lorenzo community, and only one group in the community, SL-28, sits west of it. At several points along its exposure, the ancient Maya quarried the stratum, leaving noticeable scallops in the hillside. Associated with these scallops are three rather amorphous mounds that consist almost entirely of chert cobbles and flakes. Sabrina Chase tested one of these in 1993 (Op 95J), finding an extremely high density of lithic material. This year, we placed another 1x2 (Op 248A) in the largest of the three debitage piles in order to examine the nature of lithic reduction going on at the quarry site and to try to date the quarrying activities. We placed two units (Ops 248B & 248C) within the scalloped quarry area itself to define its edges and find any in situ materials relating to quarrying activities (Figure 8).

Within the quarry itself, we found relatively few ceramics, and the few diagnostic sherds dated to the Late Classic II period. This excludes the small fragments of Mars Orange Ware that consistently form a small percentage of most ceramic collections at San Lorenzo, attesting to either a fairly intense or a fairly long use-life of this area in the Middle Preclassic period. There were also relatively few lithic artifacts or debitage in the quarry area, suggesting that relatively little reduction happened at the quarry itself. These activities apparently happened nearby, perhaps next to the large debitage mound.

Lithic raw materials and debitage constituted the great bulk of the debitage mound. Especially common were primary flakes and large tested cobbles, although we also found secondary and tertiary flakes, and biface preforms as well. We also found more ceramics than in the quarry. Although most date to the Late Classic period, including both the IIa and IIb facets, we did find a few diagnostic sherds from earlier periods, including the Late Classic I, Protoclassic, and Late Preclassic periods. The assemblage in the quarry area is dominated by Cayo Group jars and Mount
Maloney Black bowls, but includes a surprising variety of types and forms including many Belize Red ashware dishes and bowls and two pieces of Benque Viejo Polychrome. This diversity, coupled with the presence of obsidian and many chert unifacial scrapers with usewear suggests that many activities were involved in the cobble extraction process. Some of these might have gone on under a semi-permanent shelter, hinted at by pieces of daub in the debitage pile. Although we have not conducted any systematic comparisons, the material in the debitage mound bears a striking resemblance to the fill of most Late Classic building platforms in San Lorenzo, and it seems likely that when the ancient San Lorenzoños built new platforms, they favored this accumulated debitage and residential middens above more distant river cobbles or limestone or the topsoil which probably supported kitchen gardens. This would also account for those scalloped quarry areas that lack associated debitage piles.

More detailed examination of the lithic analysis is required. However, preliminary analysis of the data from the San Lorenzo quarry suggest that the local population found the quarries to be a handy source of chert cobbles, although these were of extremely variable quality. Because of this, they tested cobbles, discarding those of poor quality and conducting some reduction on those of acceptable quality. The exact nature of this reduction requires further study. However, a cursory examination of household lithic assemblages suggests that many flake cores and tool preforms were roughed out at the quarry and taken back to households for finishing. If this proves to be the case, lithic production at San Lorenzo differs greatly from the intense, vertically integrated system documented by VandenBosch at Site T/A1-2, only a few kilometers away. In contrast to crafts people in specialized production systems geared toward exchange, the San Lorenzoños apparently used their quarries only for domestic, subsistence-level lithic production.

SL-13: A Local Administrative Center (Op 243)

The morphology of SL-13 makes it unique in the San Lorenzo settlement area: it is the only group with two, connected patios (Type IB). It is also one of the larger groups in the area in terms of both mound height and construction volume. SL-13 is spatially not part of the San Lorenzo settlement cluster, since it lies between San Lorenzo and a string of patio groups that sit on the eastern levee of a relic channel of the Mopán River. Its unusual size and layout, and its location between settlement clusters suggested to me that it was some kind of local administrative center, whether of local origin or imposed by the rules of Xunantunich. This center might have been placed here to assure Xunantunich's control of the rich floodplain soils, which the ancient Maya probably cultivated extensively (see Mazzarelli 1976; Muhs, Kautz and MacKinnon 1985). Because of this, I decided to excavate there this season, although I knew that the sheer size of the group would prohibit clearing a large sample of it (see Figures 9 and 10).

The North Patio:

We cleared strips across the four structures that surround the group's North Patio (Strs 1, 2, 3, and 6), and exposed the patio's southwest and southeast corners and the junction between Sts 1 and 2 in the patio's northeast corner. We excavated through the patio surface through its fill in only one unit (Op 243A) and found only one patio floor. This floor lips up to the earliest constructions (the first phase of Str 3, the original north facing of Str 6 and the South Platform, the earliest identified phase of Str
2), and upon which later constructions sit (Catfish Plug; Bluefin Wall). The limited data we have suggest that the initial construction of the North Patio was accomplished by filling in a level surface with a thin lens of cobble fill, placing structures on the south, west, east, and probably north sides, and plastering the interior patio surface. It is possible, but unlikely, that there are earlier versions of Strs 1, 2, 3, or 6 that pre-date the formal surfacing of the patio. Any earlier structures in the area of the North Patio are more likely to be Preclassic structures associated with Str 7, not direct precursors to the later patio group. Unlike any domestic patio excavated in San Lorenzo, the North Patio of SL-13 has no break or opening between structures that would have permitted easy access. This restricted access apparently relates to the specialized function of the structures that surrounded it, as discussed below.

SL-13, Str 1

The northern edge of the North Patio of SL-13 is formed by Str 1, a 16m long platform, ca. 2m tall on its north side. This substructure joins the platforms that demarcate the eastern and western edges of the patio, Strs 2 and 3. Str 1 is a large and complicated building, and our limited clearing and even more limited probing of the structure provides an incomplete view of its layout and construction history. Figure 11 shows a section of our axial strip.

The earliest version of Str 1 that we have identified is a tall substructural platform. Swordfish Wall formed the structure's southern face, and Snapper Wall probably formed the structure's northern face, although we have no direct evidence of this. We exposed Swordfish Wall in Op 243Y, where it sits on the plastered surface of a frontal terrace of unknown width that probably merged with the frontal terrace of Str 2 (Catfish-A Wall), as discussed below. Our axial strip across Str 1 revealed a line of nice limestone blocks that probably represent one of the steps of an outset stairway that ran from the frontal terrace to the top of Swordfish Wall, providing access to the top of the platform from the patio. We have inferred that Snapper Wall forms the northern side of this version of Str 1 because of its similarity in construction style to Swordfish Wall and the similar collapse/occupation/collapse stratigraphic sequence found associated with each facing (see below), coupled with the fact that the two together would form a 5m wide platform, and anything narrower seems unlikely, although not impossible.

In most cases, I would refer to this northern side of Str 1 as the "back side" of the platform, since it is the side away from the patio and it lacks any evidence of access from the ground. However, we found Paella Floor, a thick plaster surface that extended out 3.6m from a low, 80cm terrace or apron at the base of Snapper Wall. This is the only instance at San Lorenzo where we've found a plaster floor on the non-patio side of a structure, and the possible uses and significance of this surface are discussed in more detail below.

Cutting through Paella, we encountered a 25cm thick layer of cobble fill on top of clay sub-soil, and placed in the clay sub-soil a burial (243U/15-B1). The individual buried under Paella was a child, aged 3 +/- 1 years judging from the dental development. Bone preservation was quite good and we floated the surrounding matrix to recover all bone fragments; we even recovered the right malleus and right incus, auditory ossicles that are rarely recovered archaeologically. Despite this, we found almost no post-cranial skeletal remains, except a few pieces of broken, round
sided bones that could be long-bone shafts, although they could also be mandibular fragments. The lack of postcrania remains suggests that most of the child’s body was buried elsewhere. There was a very high incidence of dental caries on the deciduous teeth and the skull showed evidence of porotic hyperostosis, a sponginess of the cranial vault caused by poor nutrition. Two large river cobbles were evidently placed above the skull, and their weight crushed the cranium into a flat bone scatter, although the location of the teeth demonstrates that the cranium and mandible were articulated upon burial, with the top of the cranium pointing south and the face upward. We found no grave goods.

On the very top of this platform, Jack-A Wall formed a low, one-course platform that might have held a perishable superstructure. Alternatively, Jack-A could be a later addition to the platform’s summit. All of the exposed architectural elements that we can correlate with this early phase of Str 1 are built of large, nicely faced limestone blocks, not unlike those used for the earliest construction of Str 3 (e.g., Sea Cucumber Wall), and for some of the early facings on Str 2 (e.g., Bass Wall). It is also interesting that many of these facings (Swordfish and Jack-A Walls) and the associated floors are gray from burning. Although we cannot directly connect it stratigraphically, we found similar burning along Oyster Wall, which forms the southern side of Str 6, and at the corner between Strs 2 and 6, on Abalone and Bluegill Walls.

Sometime following this burning, Str 1 suffered a partial collapse. On the northern side of Str 1, a dark layer of matrix with a few blocks with burnt facings sat atop Paella Floor. To judge from the stone in this collapse lens, only the top course or two fell off the platform, although it is of course possible that many stones were removed for re-use elsewhere. Regardless, this collapse apparently spelled the end of the formal use of this northern plastered surface, since the collapse was never cleaned off. A sherd scatter on top of this debris probably represents incidental refuse, perhaps tossed from Str 1. This deposit is sealed by the final collapse of Str 1.

On the southern, patio-side of the structure, in Op 243Y, we found a sherd scatter on the floor of the frontal terrace mentioned above, covered in darker matrix and limestone blocks that look like structure collapse. This collapse was left where it fell on the frontal terrace, sitting atop a light scatter of sherds that date to the LCII and TC periods. However, this area was not abandoned, but rather the collapse was simply covered by the fill of the next construction episode, which raised Str 1’s frontal terrace 60cm. Although we cannot link them directly, the facing of this new terrace probably also forms a riser of a new four-step stairway built over the outset stairway of the previous phase. Swordfish Wall apparently forms the 4th riser for both stairway phases. It is interesting to note that the fill for this new terrace was mostly sascab, like many of the latest fill episodes in SL-22. This contrasts with the clay-and-cobble fill of the earlier version of Str 1, of all of Str 3, and of most Late Classic II fills at San Lorenzo.

Two more modifications to the southern side of Str 1 followed, although they are difficult to relate to one another. The 3rd step of the stairway was extended eastward along the top of the frontal terrace for an unknown distance, making it broader, like the step that used Swordfish Wall. At the patio level, Bluefin Wall was placed some 1.6m in front of the second riser, forming a terrace that presumably covered up the first riser of the later stairway, although we never found the first step’s face. Bluefin is built of
roughly shaped limestone blocks and looks like Terminal Classic architecture found in other groups, such as SL-22. Although we have no ceramic date for its construction, its late position in the group’s construction history is demonstrated by the fact it sits on top of the only plastered patio surface, which in turn lips up to Strs 2, 3, and 6.

The building that sat atop this evolving platform is difficult to reconstruct due to slumping, especially of the northern side. As mentioned above, Jack-A Wall formed a low platform that sat atop the earliest identified platform. A plaster surface found at the same level as the top of Jack-A suggests that the platform was surfaced. Later, this platform was modified by placing small limestone blocks (Jack-B) directly on top of Jack-A, placing a thin layer of fill atop the earlier platform surface, and then placing an interior facing opposite Jack-B to form a low wall stub, less than 50cm high. Similar stubs were placed down the center of the platform and along its north side. These stubs partitioned the platform into two narrow rows of galleries, each ca. 1.2m wide. The southern gallery, at least, was broken into rooms. We only exposed the front wall, the central spine wall, and one of the cross-walls on the southern side. Surface indications suggest that a doorway pierced the southern wall at its center point. The spine wall ended, leaving the easternmost room open and connecting the northern and southern sets of rooms. The wall of the northern gallery is slumped away, although we did find a collapsed line of small blocks (Sardine Wall) similar in construction quality to Jack-B are probably its remnants.

The final construction episode that we can identify is the filling in of the rooms atop Str 1 with large river cobbles in an earthy matrix. This very distinct fill type seems to sit on 5 to 10cms of darker earth and collapse, suggesting the possibility of a hiatus in use between construction episodes. Interestingly, this big cobbled construction style characterizes the latest construction at several structures in SL-13 including an addition to the front of Str 1 that probably raised the steps up so that the new platform surface was accessible; the facing of Str 4; Catfish-B Wall, which raised the level of the frontal terrace of Str 2 such that it would have been a 45cm step from the new platform surface down to the plaster floor of the patio, if that plaster surface was indeed still exposed; and Perch and Sucker Walls, which together form the final one-course superstructure platform atop Str 2.

Given the evidence present above, it seems likely that Str 1 was not a residential structure, but was perhaps ritual instead. Several lines of evidence set Str 1 apart from the domestic residences of San Lorenzo and lend support to the idea of its non-residential function. First, the dedicatory burial of a child’s skeleton is unique in the San Lorenzo investigations. The burial of just the skull without the postcranium suggests that this was not a normal interment. Second, the plastered exterior surface north of Str 1 is unlike anything else excavated at San Lorenzo. This space could have been a gathering point for people, perhaps to witness rites or ceremonies going on atop Str 1 (prior to the erection of the wall stubs), or perhaps certain more public ceremonies were held on this plaster surface, with the tall and imposing north facing of Str 1 serving as a back-drop for the event. Third, the final architectural layout of Str 1 is quite narrow (1.2m), unlike any domestic rooms excavated at San Lorenzo. Unfortunately, no artifacts were found to suggest what was going on in Str 1’s superstructure, but artifacts in front of the structure on the Str 2 platform surface are largely ritual in nature (see below).
SL-13, Str 2

Str 2 closes the North Patio's east side, the side that faces the San Lorenzo settlement cluster on the adjacent hillside. Although Str 2, at least in its latest form, runs the entire distance between Strs 1 and 6, it does not block access to the patio, but rather channels it over the low platform. Clearing a centerline trench and areas around the northeast and southeast corners of the patio revealed at least three phases of construction on Str 2 (see Figure 12). However, we did not do much probing of the structure, and it is possible although unlikely that earlier platform phases lie buried in the platform.

The earliest identifiable version of Str 2 is a low platform with a frontal terrace on the western, patio side. The western face of this platform is a low facing of small limestone blocks (Catfish-A Wall), some 35cm high. The patio floor lips up to Catfish-A, suggesting that it occupies a fairly early position in the construction sequence of the North Patio. The second facing is Bass Wall, which steps up to the top of the platform. I do not believe that we ever exposed the east face of this structure, which probably lies somewhere within Op 243C. To the east of this structure is a 40 to 50cm thick deposit of refuse, moderately dense, that probably represents the gradual accumulation of garbage and soil, like the stratum behind Str 6. A somewhat denser scatter of pebbles within this refuse suggests a possible exterior activity surface. The refuse is predominately LCII with some TC near the top. If the ground surface of the original version of Str 2 was the base of this refuse, a three-step stairway would have been required to reach the top of Str 2 from the east, if indeed there was access there. An alternative entry, yet to be examined via excavation, would be through a corridor between Strs 2 and 6 that was later blocked by Bluegill Wall. I prefer this scenario, although the evidence in support of it is weak. First, Bluegill sits atop the first version of Str 1 in Ops 243H and 243B, but rests on the patio surface in Op 243X, in the patio's southeast corner. Second, the gradual accumulation of refuse behind Str 2 found in Op 243G, discussed below, should not be expected in areas where people frequently passed. For example, there are no similar refuse deposits on the west side of Str 3 in front of the stairs there, or on the north side of Str 1 above the plastered exterior surface. More excavation, however, is needed to confirm this scenario.

We have evidence for several modifications on both the east and west sides of Str 2, but these cannot be easily linked because of limited probing. I will discuss the east side first, then the west. The first modification that we can find on the eastern side of Str 1 consists of two medium-sized limestone block steps (Walleye and Sturgeon Walls). The base of the first step sits some 15cm above the pebble surface in Op 243G mentioned above, and its face is burned. It is not clear if this burning happened in situ, or if the block was scavenged from collapse of Str 1. The top of the steps lies at about the level of the top of Bass Wall, suggesting that it was appended to the east side of the first platform phase, perhaps coeval with the placement of Bluegill Wall along its west side. If Bluegill did in fact block the only access into the patio from the east side, steps up to the top of Str 2 would have been needed. However, the accumulation of refuse did continue here, and when it reached roughly the top of the first step (Walleye), Salmon Wall was built some 10cm east of Walleye using small limestone blocks. Salmon would have risen to at least the top of Str 2's earlier surface (i.e., the top of Bass Wall), if not higher. It is very badly slumped, however. The continued refuse
accumulation in front of the steps formed by Walleye and Sturgeon Walls is difficult to explain in terms of access to Str 2 and thence to the patio, unless access was still routed to the southern part of the platform. The final construction phase we can identify on the top of the platform is a one-course, cobble platform (Sucker and Perch Walls) that runs from the south edge of Ops 243D and 243C all the way to Str 1, given surface indications. Again, a gap was left between this low platform and the north edge of Str 6, possibly for ease of access to the patio.

On the western, patio side of Str 2, we can identify three modifications later than the original platform. The first of these was the placement of an outset terrace against Bass Wall and atop the frontal terrace of Str 2. Made of small limestone blocks and exposed on its north and west sides (Sunfish and Bluegill Walls), the purpose of this terrace is unknown. Its top is level with that of Bass Wall, and thus it does not really form a step. Bluegill, its west face, runs all the way to Str 6, resting on the patio surface at its southern end, as noted above.

Subsequent to the construction of Bluegill, there was a burning episode in the southeast corner of the plaza that left the lower facing stones of Bluegill and Abalone Walls gray. This corner is also marked by a thin deposit of compact clay and artifacts, probably refuse that accumulated in the box or niche formed by Abalone, Bluegill, and the original platform's south facing. This refuse was later covered by the southward extension of Str 2's front terrace (Catfish-A) all the way to Abalone Wall, Str 6's northern face. Its facing (Catfish Plug) consists of roughly shaped irregular limestone blocks and cobbles. The fill consists mostly of cobbles, with one rich lens of artifacts that is probably redeposited refuse like that found in Ops 243F and 243H. It is tempting to say that Catfish Plug was placed because the construction of the Perch/Sucker platform atop Str 2 routed access to the southern end of the platform, requiring a step from the top of Bluegill down to the patio surface. However, we cannot be sure of the stratigraphic relationship between Perch and Sucker Walls and any of the modifications to either the east or west side of Str 2, and indeed, their architectural style hints that they might be later in time.

In the third modification, the builders placed a facing of rough cobbles and limestone rocks (Catfish-B) directly on top of Catfish-A, and filled it with rubble and a lot of earth. This fill episode raised the frontal terrace of Str 2 to within 5 or 10cm of the top of Bass Wall. The stratigraphic relationship between Catfish-B and Catfish Plug is difficult to determine from our excavations. However, the architectural composition of the facings and the fill behind them suggest that Catfish Plug is earlier. It is interesting that in Op 243F, the fill behind Catfish-B is earthen in the southern parts of the unit, but becomes predominately small limestone blocks and rubble at the unit's northern edge. I suspect that these blocks and rubble are collapse from Str 1's frontal terrace that sat in front of Swordfish (mentioned above), which was later incorporated into the fill behind Catfish-B, possibly without any leveling of the collapse.

Although analysis is still underway, the artifact assemblage of Str 2 has an unusual number of incensario fragments. Most were decorated with human faces, not modeled as in many Classic period incensarios, but rather with cut-out eyes and mouths and appliqué noses. The tops of these incensarios were perforated with fingersized holes, probably for the passage of air, and most showed strong evidence of
burning, not inside the cylindrical barrel, but on top. Associated with these incensarios, we found large numbers of lid fragments and solid clay cones, possibly ladles or feet or props for placing offering bowls on top of the incensarios (Leventhal and LeCount, pers. comm. 1996). This unusual ceramic assemblage is complemented by other items suggesting ritual activities, including two human effigy whistles, a bone flute, many shell tinkler ornaments, and a few carved shell ornaments. Str 2 also has the most Terminal Classic sherds of all of SL-13. Although not as abundant as the LCII materials, TC diagnostic forms include TC Mt. Maloney bowl fragments and Pie Crust jars. Given this assemblage, it is odd that no Miseria Appliqué incensario fragments were found, since it is generally accepted that these replace the Late Classic human effigy cylindrical incensarios in the Terminal Classic period (LeCount 1994). Miseria Appliqué sherds have been found in Group D, on Str A-1, and at SL-22, so they were not unknown to the Terminal Classic occupants of San Lorenzo. Their absence here suggests either that SL-13 ceased to function as a ritual center in the Terminal Classic, or that human effigy incensarios continued to be used for certain ritual activities and Miseria Appliqué censers for others. I suspect that the former is the case, although more detailed analysis of the Str 2 ceramics is needed for evidence.

SL-13, Str 3

Str 3 forms the North Patio’s west side. The top of the final version of this substructure is roughly level with the top of the South Platform, and it seems to continue south to form parts of the western edge of the South Platform, although it is difficult to be certain without excavation. Str 3 is the most poorly known structure framing the North Patio, because we only excavated a single, 1m wide strip roughly across its central axis (see Figure 13).

We identified two main phases of construction at Str 3. The first was a platform rising 1m above the patio surface, made of silty-clay and cobble fill, fairly rich in artifacts. In our centrally-placed 1x2m probe, this fill continued 10cm below the patio level without a break, suggesting that the building was either built prior to or, more likely, in conjunction with, the patio surface. The ceramic material in the fill points to a construction date in the LCII period, probably on the early side given the large numbers of LCIIa Mt. Maloney bowl fragments. Our narrow exposure of the surface of the first phase of Str 3 suggests that it had three steps providing access from the patio on the east. The lowest of these was a 1m wide outset step formed by Eel Wall. It was set against the platform’s 90cm wide frontal terrace formed by Sea Cucumber which also created the second step. The facing of the third step was not intact, but its location was indicated by a break in the fill and an end to the remains of the surface of the 2nd step. It would have given access to a 2.8m wide platform surface. It appears that there was also access up the west side of the structure. Several individual large blocks and slumped groups of blocks hint that there was a stairway with limestone facing that led up to a 2m wide plastered surface, that runs to in a 60cm high terrace or bench (Caviar Wall) to the top of the platform. If Caviar Wall formed a bench on the summit of Str 3, the bench faced west, away from the patio but toward Xunantunich as well as toward the settlement cluster that sits on the relic levee, mentioned above.

The subsequent construction episode modified this plan very little. The top of the platform was raised 30cms or so, filling in the west-facing bench as well. The western stairs were remodeled using small limestone blocks, with six steps being
required to reach the new 1.9m high platform surface. On the east, the small-block Lobster Wall was placed inset 10cms from Sea Cucumber, and another inset step was added to the top of the stairway. On the summit of this new platform, a low step-bench faced eastward toward the patio, suggesting a change in orientation of the structure. No brace walls were found on the platform, suggesting it held a fairly minimal superstructure.

Although we did not expose the corner between Strs 1 and 3, we did excavate the junction of Str 3 and South Platform (Ops 243AA and 243CC). Surface indications suggest that uppermost terrace of Str 6 ends before reaching this point, but Str 6 continues west, forming the south edge of the North Patio. In the southwest corner, at least, it consists of two terraces. The lowest terrace is 60cm high and 30cm wide (Turtle Wall), the second rises at least 50cm more (Crayfish and Crawdad Walls). Str 3’s earliest version abuts the northwest corner of the Str 6. Sea Cucumber Wall stops very near the corner, and one continuous plaster surface (Chowder Floor) covered the frontal terrace of Str 3 and the lower terrace of the Str 6, and presumably this surface extended some distance to the west as well, although how far is unknown. During the second building episode of Str 3, a 40cm wide gap was left between the top terrace of the Str 6 and the east face of Str 3, possibly a drain for parts of the southern platform where the addition to Str 3 would have blocked water flow. This gap was later filled in and faced over.

We found a number of large storage jars (Alexanders Unslipped:Alexanders) and bowls (Mt. Maloney Black:Mt. Maloney) in the southwest corner of the patio, smashed underneath the collapse from the facings of the Str 6 and Str 3. Most of the sherds date to the LCII period, although we found a few fragments with TC modes. The size of the sherds and the low number of vessels represented suggests to me that they represent several vessels that sat intact in this corner when the structures collapsed. The diagnostic modes of these vessels make them roughly coeval with those found buried under the collapse in front of Str 1, suggesting that the two collapse episodes happened at roughly the same time. As on the north side of Str 1, the collapse debris in this corner was never picked up, and it is overlain by a veneer of refuse which dates to the TC period with a few LCII diagnostics.

Much like Str 1, Str 3 has traits that are unique to our excavations in and around San Lorenzo, again suggesting a non-residential function. First are the stairways on two sides, one facing Xunantunich and the other leading down into the patio. Second, in its final version, the stairway was inset so that the upper platform surface of Str 3 would form a kind of stage directly overlooking the patio. The lack of wall stubs and scarcity of daub suggest that there might have been little or no superstructure on the platform.

SL-13, Str 6: The Partition (Laura P. Villamil)

Str 6 is a 17m long platform, 4.5m wide at its base, that constitutes the entire south side of the North Patio, abutting Str 3 and running to the east edge of Str 2. In its final form, it was capped by a narrow platform only 2m wide that sits 1.70m above the North Patio surface (Figure 14). A series of steps connect the patio and the platform. They vary in width from 25 cm (Langosta) to 80 cm (Cangrejo, Abalone, Caracol), and their height is constant at about 30 cm. Given these fairly constant dimensions, it seems
safe to infer one missing step between Abalone and Caracol. The lower two steps of this stairway are outset from the northern edge of Str 6. The width of this outset stairway cannot be determined from our excavations, although we can confirm its absence at the two corners of the patio. Interestingly, we found a stairway block at the level of the top of the second riser breaks the stairway into east and west halves (formed by Clam Wall). Although its width is unknown, the surface indications suggest that it is wide in comparison to the steps on either side of it. Above the stairway block, the riser of the third step coincides with the structure's north facing wall (Abalone Wall) which runs the entire length of the structure, from Op 243X to 243CC (where it is called Turtle Wall). Excavation of Op 243MM determined that Abalone Wall does not continue down below the top of the second step, suggesting that the outset steps were part of a single construction episode. As noted above, this initial version of Str 6 probably corresponds with the initial patio construction.

The southern facing of Str 6 is formed by Oyster Wall, which joins with Marisco Wall to form the structure's southeast corner in Op 243NN. A change in the stone used for construction in these facings suggests that Oyster and Marisco originally formed a low platform that was later raised. Both Oyster and Marisco Walls are built with large and carefully faced limestone blocks from their base up to about 50-60 cm. At this level, we see a change to much thinner and smaller, and not as carefully cut, limestone blocks. In 243NN, the top few courses of the lower, large-block facing are burnt, while the smaller block construction is not, again supporting the idea that there were at least two construction phases to Str 6. The lower platform was probably bounded on the north side by Abalone Wall or by the inferred terrace facing above Abalone. The second upper platform was formed by raising Marisco and Oyster Wall and placing Caracol Wall on the older platform, forming a 2m wide platform. There was no evidence found for a formal floor surface on this platform, but it might have been completely deteriorated. We also found no evidence for a masonry superstructure, suggesting that the platform was either open on the top, or that it supported a perishable superstructure. We did find some daub chunks in most lots associated with this structure, but we have very little other evidence to support this latter interpretation.

Ops 243FF and 243GG revealed an east-facing alignment of small faced limestone blocks (Conch Wall) that suggests that the second phase of Str 6 was actually two distinct construction episodes. The first began at Conch Wall and ran west, probably to a surface break 8m away. This small 8x2m platform was later extended east at a level some 10cm lower, probably all the way to Marisco Wall.

We did not excavate through the patio floor on the north side of Str 6. However, the floor lips up to the stairs and to Abalone Wall, suggesting that the first identified version of Str 6 corresponds with the initial construction of the North Patio (as discussed above). On its southern side, we found no formal surface associated with the base of the structure, and it appears that it was placed directly on a natural deposit of alluvial clay that forms the base of the South Platform. The height of Oyster Wall, even in its initial construction, was such that one could not step directly from Str 6 to the South Platform. Thus, Str 6 seems to form a partition between the North Patio and the South Platform.

The South Platform (Laura P. Villamil)
The South Platform is a low amorphous rise, highest on its southeast corner. Two smaller platforms, Strs 4 and 5, sit along its east and south sides. We extended the strip across Str 6 southward to explore the South Platform and determine how much of it was cultural in origin. We placed another strip up onto Str 4 and cleared a few more units around the northeast corner of the South Platform to expose more of Str 6 and Str 7. A round Middle Preclassic platform found first in Op 243HH. A single stratigraphic sequence characterizes all of the South Platform that we have tested (see Figure 15). The platform seems to be mostly natural, consisting of a chert cobble knob cemented with precipitated calcium carbonate and capped by a dark buried A Horizon. Above this, we found a veneer of Middle Preclassic occupation, discussed below with Str 7. Above this is a nearly sterile clay lens of variable thickness, that probably is the result of natural alluvial deposition. Subsequent to the deposition of this fill, there are two apparent loci of activity, a poorly understood LPC/EC occupation on the south platform itself and the later construction of Str 6.

On the southern edge of our excavations in Ops 243P, 243EE, and 243HH, we found what looks like collapsed platform fill of medium and large cobbles with many LPC and EC diagnostics, although we never found any intact architecture. Unfortunately, we could not explore the intriguing possibility of early occupation further. Most of the South Platform lies on another parcel of land, and we did not approach the landowner about excavating there because of our limited time. Further north, Str 6 also sits on the alluvial clay deposit, and a thick layer of moderately dense refuse (ave. 50cm) sits atop the clay running south to the earlier collapse mentioned above. The activity surface behind Str 6 was probably the gradually rising surface of this refuse deposit. The relationship between the collapse and the refuse suggests that the architecture to the south was gradually falling apart while the refuse layer was accumulating, suggesting that the South Platform was not being used very intensively in the Late Classic period. Above both the refuse and the earlier collapse is a remarkably thick, clayey humus layer some 40cm thick with almost no cultural material or other inclusions. This could be another alluvial deposit, perhaps flood sediments trapped against Str 6, although no similarly thick deposit was found in the lower North Patio. Str 4 seems to sit above the early collapse layers, and collapse from Str 4 lies above the refuse, suggesting it postdates or is coeval with Str 6.

In the refuse deposit of Str 6 we found the burial of an adult female (Op 243LL within Ops 243II and 243JJ). The body lay on its stomach, oriented with the head to the south and face to the east. The arms were placed in front of the body with both wrists close to the left hip and the legs were crossed at the ankles. Such a position suggests that the body may have been either bound or bundled in some way. Both her upper and lower teeth were modified. The maxillary incisors and canines were filled down, except for the central halves of the central incisors, forming a Tau-shape. The burial was located 50 cm south of Oyster Wall, directly on top of the lower alluvial clay alluvial deposit. It is likely that she was placed in a very shallow pit, but we found no evidence of intrusion. Two rows of large limestone slabs covered the body, but there was no further elaboration of the burial space. Nor were any artifacts found associated with the body, making dating problematic.

Access to the South Platform is a matter of great interest. As noted above, we found no evidence of steps between Str 6 and the South Platform. The top of the South
Platform looks to be at roughly the same level as the top of Str 3, although this needs to be confirmed through excavation. At the time of construction of Str 6, the northeast corner of the platform was open, permitting access from the area near Str 2. However, this was later closed by a wall made up of two rows of river cobbles with a SW-NE orientation (Scallop wall), running along the east edge of Str 6. These cobbles probably served as foundation braces for a screen wall made of perishable materials that closed off access to the South Platform. Scallop Wall sits some 5cm above the base of Str 6 within the refuse accumulation, and thus it postdates the construction of Str 6. However, there is no surface or stratigraphic break associated with the perishable wall. Despite this, its construction might signal some change in use of the area, perhaps related to the burial mentioned above.

SL-13, Str 4

Structure 4 is a ca. 13m x 9m mound located southeast of Str 6 and seems to form the east edge of the South Platform. A cluster of unusually large and irregular cobbles are visible on the ground surface. We thought initially that these were the remains of a core facing or the collapse from a structure located farther south. The excavation of Op 243BB did little to clarify the dimensions or the architecture of Str 4, unfortunately. The large cobbles are aligned east-west to form a very crude platform facing (Oston Wall) that sits on top of a very badly preserved floor surface. The facing was probably two or three courses high, and its fill was mostly earthen with a few small cobbles and fewer artifacts than usual. In this respect, it is similar to the final construction atop Str 1, mentioned above. A rough line of small limestone blocks to the north suggests the possibility of a frontal terrace, although the evidence is not very good.

The stratigraphy in Op 243EE, a unit located directly to north of Op 243BB, shows that Str 4 was built on top of lenses of collapse material, mixed in terms of both their dates and construction materials. As noted above, the source of this collapse remains unclear, this stratigraphic sequence suggests that Str 4 is late in the sequence of contraction of SL-13 as a whole.

SL-13, Str 5

This structure is a low platform, ca. 4 x 4.5m and 50cm high, located on the southern edge of the South Platform. We know very little about it, since we have not excavated it at all. The surface indications suggest that it is associated with a low terrace facing running north to Str 6, roughly to the surface break associated with the end of the uppermost platform of Str 6 mentioned above.

Antecedents: SL-13, Str 7, A Middle Preclassic Round Platform (Laura P. Villamil)

Located north of Str 4 and east of Str 6, Str 7 was found during the excavation of Ops 243EE and 243HH. Str 7 is a low (average 15 cm high) circular platform that sits on a sterile deposit of alluvial cobbles and travertine. Its facing consists of small, roughly faced limestone blocks capped with a marl surface 5-7 cm thick. Surrounding the platform on its southeast perimeter is a curved wall, one rock wide but several courses tall (up to 55 cm in height). Although it rests upon the same sterile deposit as the platform, the presence of a gap of 5-10 cm between the platform and the wall suggests they represent different constructions. The diameter of the structure is roughly 3.8 m, and we have exposed less than 20% of its. Excavation through the marl surface recovered only Jenny Creek complex ceramics, identified by Terry Powis (pers. comm.
1996) as dating to the late Middle Preclassic (600-300 BC). The strata directly above the marl surface of Str 7 are also dominated by very large sherds of the Jenny Creek Complex, especially Savannah Orange types.

We placed Op 243NN one meter to the north of 243HH with the intention of revealing more of Str 7, but we apparently just missed its edge. Instead we found a marl surface, similar to the surface of Str 7 but thicker and some 10 cm below the platform's surface. At the southern edge of Op 243NN, the surface dips down about 7 cm, a feature for which we have no explanation. Although we do not have a direct stratigraphic correlation between these surfaces, it appears that the surface in Op 243NN might be an exterior surface associated with Str 7, like a plaza floor. As similar surface was found at roughly the same elevation several meters to the west in Op 243P. In both cases, the surface had been covered by a sterile clay deposit.

As noted above, the base of the South Platform is a slight cobble rise that protrudes out of the alluvial clays of the floodplain. On the same floodplain some 500 m north of SL-13, VandenBosch (1992) found a Late Preclassic living surface buried beneath over a meter of alluvial accumulation. This suggests that the cobble rise under the South Platform was more substantial in the Middle and Late Preclassic periods before alluviation raised the floodplain level. It also suggests that there may be significant Preclassic occupation buried below the alluvium all around SL-13, and that SL-13 is one of the few Preclassic occupation loci on the floodplain that is easily accessible today.

**SL-13 Summary**

Occupation at SL-13 goes back to the late Middle Preclassic, when the ancient Maya built several marl surfaces on a knob of cobbles protruding from the Mopán floodplain. At least one of these platforms was circular in plan. Occupation continued in the Late Preclassic, Early Classic, and Late Classic periods on the southern end of the knob, although we have no intact architecture from this period. At some point, probably early in the Late Classic II period, an enclosed patio group was built on the north edge of the knob, quite likely in one single construction episode which was modified only slightly by later construction episodes. The layout and architecture of this North Patio suggest that it was not a residential area, and the artifacts, including an engraved conch shell pendant (Figure 16) indicate that the group served ritual and perhaps administrative functions. The construction of the North Patio coincides with the rising power of the Xunantunich elite (Leventhal et al 1995), and I think it is likely that the Xunantunich rulers built the group to serve as a center of administration for San Lorenzo and the surrounding settlement clusters. The structures conceivably served as a venue for periodic rituals, for the collection of tribute, and the resolution of local disputes that brought regional elites and local residents together.

Toward the end of the Late Classic II period, several structures showed evidence of burning and collapse, not unlike SL-22 and some structures at Chaa Creek (Connell 1995) and Xunantunich (MacKie 1961, 1985). This collapse did not lead to the abandonment of SL-13, however. Some structures apparently lapsed into disuse, but the ancient inhabitants rebuilt and modified others. In the Terminal Classic, occupation in SL-13 continues, but the latest construction and the Terminal Classic artifact
assemblages suggest that the group may have lost its ritual function, given the lack of incensarios dating to the TC.

The relationship between the earlier occupations and the Late Classic II administrative-ritual center is difficult to know, especially given the lack of exposure of the earlier phases. It is possible that the area was a continuous locus of local ritual activity for centuries, one that was then co-opted by the regional elite. It is also possible that there were multiple, unrelated occupations of this high point on the rich floodplain. More work is clearly needed to be able to definitively answer this question.

Conclusion

Although the close of the 1996 excavation season marked the end of my dissertation fieldwork, my research has far from exhausted the rich archaeological potential of the Rancho San Lorenzo settlement area. The nature of the relationships between the different settlement clusters is an open question that merits deeper study. More extensive clearing of SL-13 would clarify the group’s role as a local administrative center and its occupation history. These questions, however, must be left for future investigations. If and when they explored these issues, I hope the five years of research at San Lorenzo by myself and many others will provide them with a detailed picture of the San Lorenzo settlement cluster and a strong empirical foundation from which to begin.
Acknowledgments

I credit the success of the 1996 excavations largely to the generous help, hard work, and good advice of many different people. As in previous years, Mr. Rudy Juan and his family at the San Lorenzo ranch have shown a genuine interest in my research, and I thank them for their permission to work there and their patience at the inconveniences our work has occasionally caused them. I would also like to thank the Department of Archaeology, under Acting Commissioner Brian Woodeye and Commissioner John Morris, for all of their assistance. The Department was my host institution while I was a Fulbright Scholar, and the friendship and support of the Department staff made my stay much more productive and much more enjoyable.

The 1996 excavation crew consisted of Johnny Camal, Enrique Chi, Carlos Cocom, Wilfredo Escalante, Abel Godoy, Marcos Godoy, Miguel Medina, Gabriel Meneses and Jaime Puc, from San José Succotz and Benque Viejo del Carmen. Without their excavation and drawing skills, we could not have achieved half of what we did this year. Thanks also to Víctor García who came to San Lorenzo to help us out for a few weeks. The months of lab work in Succotz was truly a pleasure, thanks in part to the friendly atmosphere there. We especially want to thank Florentín and Genoveva Penados and Luis and Esther Godoy for their friendship.

Of the XAP crew, three people deserve special thanks. Laura Villamil spent the hottest month of the season supervising excavations in the South Platform of SL-13, and analyzed the ceramic data from that group in June and July. Minette Church conducted a detailed analysis of the lithic assemblages from those groups that we have excavated extensively at San Lorenzo over the past five years, including the quarry area. Florentín Penados analyzed the ground stone, daub, shell, obsidian, and slate found at San Lorenzo since 1992. It’s been my pleasure to collaborate with these three skilled archaeologists, and I thank them for sharing their talents and enthusiasm. Laura and I both benefited greatly from ceramic advice given by Lisa LeCount, Aimee Preziosi, and Terry Powis. Noel Thomas catalogued the obsidian artifacts from San Lorenzo. The help of Jennifer Braswell and Jon VandenBosch added greatly to the success of the lithic analysis. Finally, thanks to all the XAP crew for sharing their ideas and friendship, especially Cynthia Robin and project directors Richard Leventhal and Wendy Ashmore.

Two funding agencies provided the moneys needed to carry out the 1996 fieldwork. A Dissertation Improvement Grant from the National Science Foundation paid for the labor and equipment needed for the four-month excavation season. A Fulbright / IIE fellowship paid my living expenses during the excavation season and the following seven months of artifact analysis.
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Appendix A: Excavations at San Lorenzo, with 1992 and Current Nomenclature

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<thead>
<tr>
<th>Current</th>
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Notes:
* group is not in the San Lorenzo settlement cluster defined here
# Historic site
## Non-cultural feature
Figure 1: The Xunantunich Settlement Region
Figure 2: Rancho San Lorenzo Settlement Area
Dotted Lines Follow 50m Radii around Residential Groups
Figure 4: The Four Morphological Types at San Lorenzo
San Lorenzo: SL 28
Op 229 units
(Op 229G is Surface Collection)

- Materized Rectification
- 1993 Excavations
- 1996 Excavations

Figure 5: SL-28 Showing Excavation Units
Figure 6: SL-28 Showing Excavated Architecture
Figure 8: SL-28 and Quarry Area Showing Excavation Units
Figure 9: SL-13 Showing Excavation Units
Figure 10: SL-13 Showing Later Phases of Architecture
Figure 14: SL-13, Str 6: West Section of Axial Strip (Ops 243FF, DD, and GG)
Figure 15: East Section of Op 243P, Showing Stratigraphy of South Platform

Figure 16: Conch Shell Pendant from Op 243
Drawing by LPV; Inking by LPV
Xunantunich Rural Settlement Project - 1996

Cynthia Robin
University of Pennsylvania
Introduction

How are households and communities organized both internally and externally as part of regional settlement systems? What do trends in household and community development reveal about social organization during the apogee and demise of a complex society?

Archaeological research is founded on the proposition that spatial patterns can be the results of patterned behaviors, activities, and understandings of members of a society. Observable patterning provides information on how societies and individuals are organized (Clarke 1977). As units of a past society are definable by what they do and where they do it, these units leave behind archaeologically visible spatial signatures. It is this social structuring of space which provides individuals and groups the means to learn key social structures as they move through a necessarily structured landscape (Bourdieu 1973, 1977; Giddens 1984, 1985).

In answering certain questions, the disembodied materials and spaces which constitute the archaeological record appear limited in comparison with the ethnographer's behavioral and experiential data. In part, this limitation is due to the restricted range of spaces (and related behaviors and experiences) which many archaeological studies examine. When Mayanists look archaeologically for the social units, household and community, they traditionally examine a single facet of these units, mounds and aggregates of mounds. This focus neglects the vast majority of economic, social and ritual activities which, in a tropical environment, are conducted in the areas around mounds (e.g. Hayden and Canon 1983; Webster and Goolin 1988; Goolin 1994; Killion ed 1992; Killion et al. 1989; Smyth and Dore 1992; Rogers and Smith (eds) 1995; Smyth, Dore and Dunning 1995). Regardless of climate, perimetric and integrative features, such as boundaries and paths, are integral to group integration and identity (Vogt 1976; Farriss 1984; Hanks 1990; Stone 1994). Such features leave behind little in terms of surface visible remains, excepting those which are massive and monumental in nature (e.g. Keller 1994, 1995; Folan, Marcus and Miller 1995). Spaces within which interaction takes place need not be constructed additively, through the addition of foreign materials to a natural spaces. They simply may be constructed through the repetitive use of space. These less obtrusive manifestations of space use do leave behind material and physical correlates which can be recovered through the investigation of what archaeologists often call vacant space (DeBoer and Lathrap 1979; Wilk and Schiffer 1979; Cavagn, Hirth and Linton 1988; Dunning 1989; Killion ed 1992; Stone 1994; Smyth, Dore and Dunning 1995).

A two year project is planned to explain the social principles underlying small rural household and community emergence and contraction in the Xunantunich hinterland through the Late and Terminal Classic. The 1996 Field Season discussed in this report is the first year/pilot study of this project. Survey data from the Xunantunich hinterland (surface morphology, spatial patterning and surface collected ceramics) is used to purpose a model of rural households and community development. The project tests this model combining large-scale mound-based and vacant space excavations. The survey data was collected by the Xunantunich Settlement Survey (XSS), a two-year NSF project directed by Dr Wendy Ashmore. The model upon which the present research rests is summarized below. Greater detail on XSS can be found in previous Xunantunich Archaeological Project (XAP) reports (Yaeger and Ashmore 1993;
Yaeger and Connell 1993; Ashmore 1994, 1995; Ashmore et al. 1994; Ehret et al. 1995; Neff et al. 1995; Robin 1995). In addition my research draws upon the settlement test pitting programs conducted in 1995 by Ehret (1995) and VandenBosch (pers. comm.).

Model

A simple visual assessment of XSS maps shows that rural households and communities expand and contract in the hinterlands of Xunantunich, during the Late (LC, ca. A.D. 600-830) and Terminal (TC, ca. A.D. 830-1000) Classic (Ehret et al. 1995; Robin 1995). Unlike the centralized, highly structured settlement at many Classic Maya centers, 70% of Xunantunich region settlement, at its population maximum in the Late Classic II (LCII, ca. A.D. 700-830), is composed of dispersed clusters of isolated and informally arranged mounds. In the TC occupation in the Xunantunich hinterland drops from 91% to 17% of known sites (Robin 1995; Robin in Neff et al. 1995). Here, sites are defined as isolated mounds or spatially discrete groups of mounds (Ehret in Ashmore et al. 1994). This rural population expansion and contraction in the Xunantunich hinterland parallels, based on ceramic chronologies, the period of main construction efforts and constriction in the civic core of Xunantunich (e.g. Leventhal 1993, 1994, 1995; Braswell 1993, 1994; Chase 1993; Jamison and Wolf 1994; Keller 1994; Robin 1994; Braswell, Yaeger and Keller 1994; Yaeger and LeCount 1995).

Ethnographic (e.g. Lucy 1990, 1992; Hanks 1990; Vogt 1969, 1976; Redfield 1941; Redfield and Villa Rojas 1934) and ethnohistoric (e.g., Marcus 1993, 1983; Farriss 1984; Roys 1957) studies have illustrated that the growth of families is an integrative stimulus in Maya household and community development. Concomitantly, social, ritual, political and economic structure articulates with individuals, kin and non-kin related, within the domestic domain. Haviland (1982, 1988) and Tourtellot (1988) have demonstrated that a model of developmental growth is partly accountable for ancient Maya social and residential organization. I propose a similar model to explain the evolution of settlement in the Xunantunich hinterland. While far from invariant, cyclical family growth provides a framework within which we can begin to re-situate ancient individuals into an otherwise vacant settlement landscape. A developmental perspective allows us to clarify the obvious; settings change through time in relation to the goals and strategies of the individuals inhabiting them.

I interpret isolated mounds as the visible remains of nuclear family house lots and groups of mounds as extended family compounds. As an initial test of this proposition, I examined relative length of occupation of sites in the Xunantunich hinterland. Formally arranged patio and platform groups have extended chronologies, while single isolated mounds and informal groups of fewer than four mounds (usually two) have short chronologies (Robin in Neff et al. 1995:150-152), and are largely restricted to the LCII. This observation fits with Tourtellot's second test of domestic growth - units occupied longer should have more dwellings, and those occupied for a shorter period should have fewer dwellings (1988:104). Taking the LCII landscape as a whole, those 70% of sites which consist of isolated or informally grouped mounds are interpreted as developmentally young. This observation runs counter to Tourtellot's third test of domestic growth - in a fully developed domestic cycle new units should be in the minority of total units (Tourtellot 1988:106). The Xunantunich pattern therefore suggests a truncation of the developmental growth cycle or changes in preferred residence-group composition, from extended to other family forms (see also Rice 1988; compare Tourtellot's [1988:118] comments on Dzibilchaltun). A fully developed
extended family residence pattern (i.e., patio and platform groups) is quite common in the Maya lowlands (ibid., Haviland 1988; Willey 1981; Sanders 1981), though not exclusively, e.g. northern sites such as Dzibilchaltun or Mayapan (Tourtellot 1988:118).

Extending a model of developmental growth to the community level, communities grow through the addition of new families (Yaeger 1995; Robin 1995). Pre-existing communities, mature communities, grow through the addition of younger nuclear families within and around existing extended families. New communities, emergent communities, are formed when nuclear families move beyond mature community spaces. I interpret clusters of isolated mounds and informally arranged mounds as emergent communities and more morphologically complex clusters as mature communities. Mature communities are often located along alluvial flood plains of major rivers, because these are prime locations for settlement due to generally higher agricultural potential (e.g., Ford and Fedick 1992; Muhs et al 1985; Yaeger 1994, 1995). Emergent communities are situated beside intermittent streams and associated with waterholes, locations which would be the next move for expanding rural populations. Additionally, waterholes can hold ritual and symbolic meaning for a group, as focal landmarks integrating communities and representing the ancestral founding of a place (e.g., Vogt 1969, 1976).

Emergent communities comprise the majority of the LCII landscape but show a greater contraction of settlement in the Terminal Classic than do mature communities (compare with San Lornezo; Yaeger 1994, 1995). Again invoking the developmental model, I hypothesize that individuals most likely to move beyond their communities, in an agriculturally based society, are those of less wealth and lower status, and presumably with fewer rights and ties to land. Here wealth is defined as economic accumulations and status is defined as power derived from deep genealogical privileges (McAnany 1993, 1995). Those moving into previously uninhabited areas, may be moving onto land not controlled by local heads of mature communities. With fewer historically accumulated rights and resources, members of emergent communities were less able to survive in the 9th and 10th centuries.

Methods
The research area consists of a 400-meter wide survey transect, T/A1, Transect/Archaeological No. 1 (Figure 1) which extends 8 km southeast of the civic center of Xunantunich, and cuts through two local centers, Chan (Figure 2) and Dos Chombitos (Figure 3). Here centers refer to spatially distinct aggregates of residential communities visibly integrated by monumental public architectural places (Ehret in Ashmore et.al. 1994). Rural household and community development is examined in this region through detailed excavation of one rural community, the Chan Noohol community (Figure 4), and testing two similar rural communities, the Chan Lak’in community (Figure 5) and Dos Chombitos Cik’in community (Figure 6). These are representative of the types of rural settlement that emerged in the Late Classic period.

Excavation methodology consists of a three Phase research design for the Chan Noohol community and a two Phase research design for the Chan Lak’in and Dos Chombitos Cik’in communities.

Intensive Excavations at Chan Noohol
The Chan Noohol community consists of six household level isolated
mound sites located on a plateau along an intermittent stream. A small waterhole and
chultun are found at the northeastern most site, T/A1-071 (Transect/Archaeological
No. 1 - Site No. 071; Figure 4). Numerous agricultural terraces are noted within the
area defined as Chan Noohol.

Phase I investigations in this area consist of systematic sampling by post hole
tests at 4-meter intervals covering 70% of all terrain (Figure 8). A 20-sq.-meter block
around each mound is completely sampled. This size was chosen based on calculations
from survey of ethnographically documented examples, as an approximation of the
extent of a house lot (Robin in prep). Beyond the 20-sq.-meter block, transects
consisting of three parallel lines of 4-meter distant post holes connect each mound to
other visible natural and cultural features. Nine attributes are recorded for each post
hole test (1) distance to bedrock or other impenetrable surface, (2) soil type, (3) soil
texture, (4) quantity of stone over 5 cm, (5) quantity of stone in sidewall, (6) quantity of
recovered artifacts, (7) weight of recovered artifacts, (8) quantity by artifact type, and
(9) weight by artifact type. The spatial distribution of each attribute is plotted using
SURFER and CADD software in relation to visible natural and cultural features.

Frequency and spatial distribution of attributes are used to propose
hypotheses of space use which are then tested in Phases II and III. For example,
attributes 4 and 5 (stone quantities) are used to suggest the presence of fill of surface-
invisible structures. Attributes 6, 7, 8 and 9 (artifact quantities and weights) are used
to suggest activity areas, refuse areas and cleared areas. Attributes 1, 2 and 3 (soil
depth, type and texture) in conjunction with other attributes are used to suggest
possible garden areas.

Additionally, soil samples are collected from each post hole from three
locations (1) below the root zone, (2) 10 cm above bedrock, and (3) from the center of
the post hole. Ring chromatography will be conducted in 1997 to determine relative
phosphorus content of soils, providing an independent chemical measure of
anthropogenic soil modification (Killion et al 1989; Manzanilla and Barba 1990; Ball and
"vacant" spaces and constructed spaces (e.g., agricultural terraces, refuse deposits)
provides an additional line of evidence to suggest the function of "vacant" spaces.

The Phase I methodology is adapted from similar work by Braswell at Group
D (1994).

The 4-meter post hole interval was selected based on a number of criteria
including sufficiency in defining activities and spaces, and time constraints. This
interval, of course, leaves the possibility that features smaller than 3 meters by 3 meters
will be missed and that the edges of features can only be approximated to 4 meters.
To rectify this situation Phase II investigations consist of the following two tests of the
Phase I program. One, where artifact densities are high, additional post holes are
placed every two meters to refine the extent of such densities. Two, where artifact
densities are low, a 50 cm by a variable length excavation strip test is placed to confirm
low densities.

Phase III consists of intensive areal excavation of encountered surface and
subsurface structures, features, activity and refuse areas. Areal excavation of 50% (two opposing quadrants) of all visible and hidden structures is undertaken. A 1X2 or 2X2 excavation is placed in all refuse and activity areas identified in Phase I and II. All excavations are extended to bedrock to determine construction sequence and locate additional buried features.

**Test Excavations at Chan Lak'ìn and Dos Chombitos Cik'ìn**

The Chan Lak'ìn community consists of two household level sites located on a hill top. The sites are located roughly equidistant, to the north and south, from a small waterhole. Agricultural terraces are noted on the hilltop (Figure 5). The Dos Chombitos Cik'ìn community consists of two household level sites also located on a hill top. The two sites comprise two mounds each. Mounds, M1 and M2, of the western most site, T/A1-152, are located equidistant, to the east and west, from a small waterhole. Three chultuns and one sascabera1 are associated with the sites on the hilltop. No agricultural terraces are noted on the hilltop. Terraces are located on the northwest slope of the hill, and substantial cross-channel terracing is found along a deep arroyo at southern base of hill (Figure 6).

Phase I investigations in these areas consist of a modified post hole testing program of four radial transects, extending from each visible mound and connecting natural and cultural features. Phase II, consists of 1x2 meter test excavations placed in two locations, (1) in de facto refuse adjacent to visible mound, and (2) in refuse surrounding the house lot.

The detailed research at the Chan Noohol community provides a case study to assess social organization at households across one community. The testing program will allow the acquisition of comparable information on spatial relations, artifact and ecofact assemblages, soil profiles, and occupation histories to assess social organization between communities.

**96 Field Research**

In 1996 the testing program at the Dos Chombitos Cik’ìn community was completed. The intensive program at Chan Noohol was completed at a single site, T/A1-071, and begun at two additional sites, T/A1-072 and 068.

All excavation and survey terms used in this report are as defined by XAP and XSS. I define an additional term, NM, non-mound, to designate non-mound structures. NMs are enumerated within each site, in keeping with the XSS procedure of enumerating features within designated sites (Neff and VandenBosch in Ashmore et.al. 1994:258-9).

Excavation operation numbers, e.g. Op 224, refer to the largest unit of space designated by the excavator as a relevant unit of investigation. The size of an operation may expand or contract as the analytical unity of the potentially excavated spaces is assessed. I define an operation in two ways. (1) Within the intensively excavated Chan Noohol community, an operation is equivalent to a single site, as defined by XSS, and its associated terraces and vacant terrain (e.g. Op 224 is equivalent to site T/A1-071 and associated terraces and vacant terrain). (2) For the testing at Chan Lak’ìn and Dos Chombitos Cik’ìn, an operation is equivalent to the entire community, all constituent sites, terraces and vacant terrain (e.g. Op 244 is equivalent to the Dos Chombitos Cik’ìn
community as defined by sites T/A1-152 and T/A1-153, associated terraces and vacant terrain).

With the operation, excavation suboperations and lots are defined according to XAP definitions. Suboperations are discrete excavation units (e.g. Op 224B, a 2 meter by 2 meter unit). Lots are natural or artificial levels within the suboperation (e.g. Op 224B/1, the humus level in Op 224B). All post hole tests, which form a salient unit of investigation, are assigned to a single suboperation (e.g. all Phase I post hole tests in Op 224 are Op 224A). Each individual post hole test is assigned a lot number (e.g. Op 224A has 187 individual post hole tests, Op 224A/1-187).

**Intensive Excavations at Chan Noohol**

**Operation 224, T/A1-071**

Site T/A1-071 is the northeastern most of six sites in the Chan Noohol community clustered within a topographic plateau along a currently intermittent stream (Figure 4). The local center of Chan lies 340 meters to the northeast. Site TA/1-071 (Figure 9) was defined based on surface morphology as two mounds (M1 and M2), lying equidistant, to the north and southeast, from a small waterhole (R1). Linear feature (W1) lies 2.6 meters south of M2. A chultun, C1 is located 10.7 meters west of M1. TS21 (Terrace set No. 21), consisting of three linear features (Gifford in Ashmore et.al. 1994; Neff 1995) lies 14.8 meters west of the westernmost mapped edge of W1. TA/1-071, TS21 and associated vacant terrain were investigated in 1996 as Op 224.

Excavations revealed that TA/1-071 consists of a single mound (M1). M2 was determined to the southeast corner of W1. What was mapped as W1 is the southern edge of a modified bedrock outcrop extending and sloping to the east, south and west of M1. Investigations additionally located two non-mound platforms, NM1 and 2 (compare Figure 9, survey map and Figure 10, excavation map).

Phase I: 224A, Phase I post hole tests, included 187 individual tests. The area tested comprises a 20-meter-square block around M1, and 12-meter-wide transects running east, south, southwest and west 2. The eastern transect extends 20 meters into vacant terrain. The southern transect extends to the Chan Noohol arroyo. The southwestern transect extends across TS21 and to the arroyo. The western transect extends to half way to T/A1-069 (Figure 11).

Artifact distributions from post hole tests were mapped on SURFER to provide a guide to further excavations. Three distribution maps were generated, (1) ceramic (Figure 12), (2) lithic (Figure 13), and (3) total artifact (Figure 14, 15). No other artifact types were encountered. Jute shells were recorded and collected, though no distribution maps are yet made.

Though there are differences, the three distribution maps show roughly the similar distributions. The distribution of ceramics (Figure 12) was much more restricted than that of lithics (Figure 13; and see Braswell 1994 for similar findings). Ceramic densities of 2 to 3 sherds are found adjacent to known structures, hidden structures, the waterhole and chultun. The remainder of the surface of the modified bedrock outcrop upon which these features are constructed is clear of ceramics. Densities of 2 to 144 are found 10 to 24 meters distant from M1 along its northwest to south sides, just exterior to the modified bedrock outcrop. Only the southwest exterior of the modified bedrock
outcrop is clear of artifacts. In this area TS21 and the Chan Noohol arroyo are found. The highest ceramic density, with peak of 144 sherds per post hole, is located in an 8 meter N-S by 4 meter E-W area 14 meters east of M1 and 6 meters east of the eastern edge of the modified bedrock outcrop (Figure 12).

Lithics (Figure 13) are more widely distributed than ceramics, almost every post hole test contained at least one flake. This suggests that retouching tools while partaking in daily activities may be prevalent, and as flakes are dropped they are not re-collected. Alternative, small flakes may be more widely distributed if they have a greater post-depositional travel rate than larger heavier sherds. The same areas emphasized by high ceramic counts are also emphasized by high lithic counts.

Total artifact densities provide a similar picture (Figures 14 and 15). Within a 15- to 20-meter radius of M1 the terrain is relatively clear of artifacts except in the immediate vicinity of visible and invisible structures, chultun and waterhole. At 15- to 20-meters, artifact densities increase, decreasing after another 5- to 15-meters. Localized moderate and high artifact densities along this perimeter, are suggested in Phase I and confirmed in Phase II and III, to be localized refuse deposits. As refuse is likely to accumulate where behavior is minimal (Schiffer 1972: 162), I suggest that the refuse rich perimeter around M1 represents the edge of the active area of this house lot.

Higher rock densities per post hole test, in sidewalks, and intuitively observable on the surface were located in the areas between M1 and C1, M1 and R1, and in the SW corner of the modified bedrock outcrop. The area between M1, C1 and R1 is also associated with low artifact densities, the SW area is artifact free.

Bedrock profiles from post hole tests largely correlate with surface topography. Hard limestone subsurface, was usually the sterile material encountered. The exception was in the southeast quadrant of the area tested. Here natural sascab overlies the hard limestone subsurface. As well there is a greater quantity of soil build up over sterile material. Thus surface topography is less a mirror of subsurface topography than in other areas tested.

The following propositions associated with "vacant spaces" were made based on Phase I results and tested in Phase II and III. (1) The builders of T/A1-071 made use of a natural bedrock outcrop to serve as the base of their house compound. Phase II and III excavations were placed along the edges of this outcrop to investigate potential cultural modifications. Cultural modification are more suspect in the southeast corner where the first encountered submaterial is sascab, and surface topography diverges from subsurface topography. (2) Based on stone quantity and artifacts densities, hidden structures may be found in the areas between M1, C1 and R1. Phase III investigations associated with the investigation of M1 were extended into these areas. (3) Based on stone quantity alone, hidden structures may be found in the area southwest of M1. Phase II, 50 cm strip excavations, also investigating the edges of the bedrock outcrop were extended across this area. (4) Localized high artifact densities are locations of intentional refuse deposits. Additional Phase II post hole tests refined location of highest artifact densities, and Phase III excavations investigated those areas. In addition Phase III investigations targeted all surface features, mounds, terraces, chultun and waterhole.

158
Phase II: Four suboperations (224P, U, V, and Y) are defined in Phase II (Figure 16). 224P and U consist of four post holes each. 224P and U were placed to define the areas of highest artifact concentration around 224A/1 and 34, respectively. Based on this delineation, Phase III excavation suboperations 224Q and W were begun (discussed below).

224V and Y consist of a 6 meter N-S by 50 cm E-W and a 50 cm N-S by 6 meter E-W excavation units, respectively (Figure 16). These excavations are placed extending over the west and south sides of the bedrock outcrop. 224V extends over the southern edge which was designated as W1 in survey. The purpose of these excavations are to examine both the bedrock outcrop/W1 and the artifact clear/higher rock density southwest corner of the bedrock outcrop. Excavations confirmed the artifact scarcity noted in post hole tests. A thin deposits of humus and silty soil overlay an eroding hard limestone bedrock. Higher stone noted in this area corresponds with haphazard pieces of eroded limestone flaked off from bedrock surface, not any structural remains. Minimal modification to bedrock in the form of placing small to medium sized limestone rubble to smooth the undulating bedrock surface is apparent. Phase III suboperations 224B and F (Figure 16), located in the southeast corner of the bedrock outcrop, reveal more intensive cultural modification of the outcrop. Here, bedrock dips, sharply diverging from surface topography. Fill consisting of lenses of sascab, soil, and stone are placed south and east of the bedrock slope, retained by irregular unfaced soft limestone blocks. The southeast corner of the bedrock outcrop is modified to expand the surface area of the outcrop. Combined, Phase II investigations 224V and Y and Phase III investigations 224B and F revel that the bedrock outcrop is a largely natural feature, culturally modified in various ways along its perimeter.

Phase III: Twenty-Eight additional suboperations were defined for Phase III of Op. 224 (Figure 16). These can be divided into five programs. (1) 224C, E, G, L, N, O, T, X, AA-GG define mound and non-mound structures, M1, NM1, and NM2. (2) 224M, R, and S define waterhole, R1. (3) 224Q and W define refuse areas. (4) 224D excavates chultun C1. (5) 224Z investigates TS21. (6) 224B and F investigate the southeast corner of bedrock outcrop, designated M2 and W1 on survey (previously discussed).

(1) Excavation of structures, M1, NM1 and NM2:
M1 was mapped as a simple subrectangular, 4.5 meter N-S by 4.5 meter E-W mound with a maximum height of 0.3 meters. The northeast and southwest quadrants of M1 were excavated. Excavations revealed that M1 is a two phase composite bi-level substructure with an axial stair along its south face. The stair consists of two steps. No evidence of a masonry or bajareque superstructure was encountered. If this is not due to preservation, this suggests that the superstructure was completed of pole and thatch. The bi-level substructure is rectangular, 4.5 meters N-S by 5.5 meters E-W, with axial stair extending 2.0 meters to the south. The tread of the upper step is 1.1 meters long and the tread of the basal step is 0.9 meters long. The substructure rises to a maximum height of 1.0 meters above bedrock at base of axial stair.

Construction of M1 began with the clearing of bedrock, as M1 directly overlies bedrock. A large percent of the core of M1 is a natural bedrock rise. The lower level of the substructure was constructed by four facings bounding a fill consisting of small and medium sized cobbles, hard limestone rocks, artifacts and soil. The west,
north and east facing of the lower level was constructed of a single course of variably-sized cobbles and flat eroded limestone bedrock fragments. Only the south facing of M1 was constructed of cut medium sized hard limestone blocks. A single course was excavated in situ. An additional course lay collapsed to the south. The axial stair abuts the south face of M1. It is also faced with cut small to medium sized hard limestone blocks. The south facing of M1 and that of the axial stair abut, indicating that stair and lower level of substructure were part of a single construction phase. The core of the axial stair is almost entirely bedrock. Possibly, the stair was shaped by the subtractive cutting of bedrock rise.

The upper level of the bi-level substructure was greatly disturbed by tree roots. This upper level is evidenced by intermittent linear arrangements of small cobbles, probable facings, located at the base of a slope break in the fall/fill pattern of M1. There is no clear differentiation between the fills of the upper and lower levels of the bi-level substructure. As bedrock is completely covered by the lower level of the bi-level substructure, the lower level would have comprised a completed substructure, suggesting that the upper level was constructed as a second phase.

As the south side of M1 is the only face with cut blocks, is the location of an axial stair, and is associated with the lowest artifact density. I suggest that this is the front of M1. M1 would face waterhole, R1, and the stream running through the Chan Noohol community. Artifacts associated with de facto refuse around and fill of M1 date to the Late Classic and consists of ceramics, lithics, quartz, and slate. Ground stone and shell, though not directly associated with M1 substructure are found in other associated features. No faunal remains other than shell were encountered. This range of artifacts and shell, combined with the range of vessel forms and types represented in the assemblage, including Mt. Maloney bowls and Cayo Unslipped jars, typical of domestic assemblages (LeCount 1992, 1993; Yaeger 1994) suggest a primary domestic function for M1.

NM1 is located south of M1. NM1 is a subrectangular substructure, measuring roughly, 4.3 meters N-S by 4.2 meters E-W. It rises 35 cm above bedrock at its highest point. Only the east side of NM1 is faced with small to large hard limestone blocks. The fill of NM1 consists of cobbles, very few artifacts and little soil. No other sides of NM1 are faced as the fill simply abuts natural bedrock rises to the north, south, and west. The platform is constructed largely to fill a depression in bedrock. Below and to the east of its east facing, bedrock has been cut. This depressed cut combined with the elevated mass of the substructure creates a channel through which water could run off into the waterhole, R1, to the south. Thus NM1 may have served dual functions, providing an elevated surface and channeling water.

Few artifacts, consisting of undiagnostic ceramics, lithics and shell, are found in de facto refuse alongside or in fill of NM1. Further functional designation can not be made from this in-field assessment. Though it is clear that NM1 is differentiated from M1 and other mounds excavated this season in three ways. (1) Its fill largely lacks artifacts and soil. (2) Its shape is non-rectilinear. (3) It does not have facings on all sides.

NM2 is located west and abutting the west facing of the lower level of M1. NM2 is a subrectangular substructure, measuring roughly, 2.5 meters N-S by 2.0 meters E-W. It rises 35 cm above bedrock at its highest point. It is constructed similarly to
NM1, though is completely unfaced. NM2 provides a small slightly elevated surface west and abutting M1.

(2) Investigation of waterhole, R1:
Waterhole, R1, consists of a subcircular concave depression measuring 9 meters N-S by 8 meters E-W. A 2 meter N-S by 1 meter E-W suboperation, 224M, was placed in the center of R1 (Figure 16). No artifacts were encountered throughout excavation of upper 80 cm undifferentiated loose soil. The basal 25 cm consisted of three lenses, two lightly loose silty loams, and a final lens of small gravel located only in the center of the waterhole. Basal lenses contained artifacts and faunal including ceramics, lithics, shell and ground stone. No additive lining was encountered in the interior center of waterhole.

Suboperations 224R and S were placed along the southeast edge waterhole (Figure 16), where a channel-like concavity is observed on the surface running southwest from the upper edge of the waterhole, in the direction of terraces, TS21. Excavations revealed no cultural modification, lining or facing within this concavity. The surface of undulating bedrock was irregular and soft, as if disturbed/churned up in some way. Complex stratigraphy of loose soils containing few haphazard rubble and cobbles, sascab and eroding soft bedrock, is stratified over an undulating bedrock surface.

(3) Refuse areas:
Suboperation 224Q (2m N-S by 1m E-W) was placed in the center of the densest artifact concentration to the east of M1 (144 artifacts per post hole test; Figure 16). Below humus lies a single lens of compact sherds surrounded by a clayey soil matrix. Sherds lie in matrix vertical, horizontal and at angles. Concave jar fragments lie unbroken. Sherds are large but their surface is eroded. The condition and positioning of sherds indicates an uncovered, untrampled deposit. Though the deposit is largely ceramic, lithics, shell, and slate are also encountered. Ceramics are largely LCII and LCIib, some LCI and LCIa are mixed in the deposit though not stratigraphically differentiated from later material. Both reconstructable vessels and vessel fragments are encountered. A range of forms and types are represented including Mt. Maloney bowls and Cayo Unslipped jars. The deposit is interpreted a primary domestic refuse.

Suboperation 224W (1 meter N-S by 1 meter E-W) is placed in the center of moderately dense artifact concentration to the northeast of M1 (42 artifacts per post hole; Figure 16). Stratified soil deposit containing small highly eroded sherds are interpreted as secondary or tertiary refuse.

(4) Double mouthed chultun, C1: Suboperation 224D consists of the excavation of chultun C1. Suboperation size follows the dimensions of the chultun.

On survey C1 was described as a single mouthed chultun because segments of a chultun mouth were visible within a single N-S ovoid depression. In 1996 a second smaller circular depression was noted to the east of this larger depression. No bedrock was visible on the surface in this depression. Excavations showed these two depressions to be the west and east entrances to a double mouthed chultun.

The western chamber of C1 has two lobes. The northern lobe is smaller and
shallower than the southern lobe. The eastern chamber consists of a single small shallow lobe. Northern lobe of western chamber and single lobe of eastern chamber are connected by small tunnel running upwards from the northeast upper side wall of the northern lobe of the western chamber to the southwest basal sidewall of the single lobe of the eastern chamber. A west facing, consisting of cut hard limestone blocks, seals the eastern chamber from the western. This intentional blockage of the eastern chamber may be contemporary with the construction and/or use of the chultun, or constructed later during the filling in of the chultun. Comparison of artifacts from both chambers should clarify this sequence. Excavations in western chamber cleared overburden to reveal a lens of sascab and a single large flat limestone slab (75 cm by 40 cm) in northern lobe. This slab is interpreted as a collapsed capstone. Coeval with this deposit, irregular limestone fragments covered the southern lobe of the western chamber. These are interpreted as collapsed roof material. This evidence leads me to suggest that the northern lobe was the location of the original western entrance to the chultun. The large ovoid opening which today exposes both the northern and southern lobes of the western chamber, is elongated due to the collapse of part of the roof of the southern lobe.

Both collapsed capstone and roof material seal lower in-situ chultun refuse/fill. Chultun fill consists of compact soils and dense large well preserved sherds, lithics, ground stone, slate, shell and obsidian. Groups of sherds lying on a single surface represented complete or nearly complete broken vessels. As well, sherds which may be from the same vessel, or just form similar types of vessels, are found throughout the various strata within chultun. Ceramics are mostly LCII, though LCI vessels are found, stratified below LCII material, at the base of southern lobe of western chamber. Chultun deposits are interpreted as primary, though there are notable differences between this deposit and exterior primary refuse deposits like 224Q. There is a much greater soil accumulation around chultun sherds than seen in 224Q. The primary vessel forms encountered in the chultun are bowls and dishes. Though Pine Ridge Carbonate bowls such as Mt. Maloney (LCII) and Mountain Pine Red (LCI) are found, ash-tempered Belize Reds, including a Platon Punctated-Incised: Platon Variety (LCII) and Benque Viejo Polychrome (LCII; the only example of a polychrome encountered in Op 224) are also found. It appears that the majority of the sherds from chultun represent reconstructable vessels. Ellie Harrison facilitated this preliminary post-excavation ceramic assessment. Five chultun vessels are drawn by Harrison (Figure 17).

(5) Terraces, TS21:

Suboperation 224Z (2m N-S by 1m E-W) was placed along the southwest facing of the middle terrace of TS21. Below humus lay a matrix consisting of large fragments of limestone and little soil directly overlying down sloping bedrock. No cultural modification of this natural bedrock terrace was observed. Soil phosphorous examination, to be conducted in 1997, may provide further evidence for the agricultural use of this terrace. Ted Neff’s more extensive excavations of terracing in 1997, will also provide greater information on the range and variation in the forms and cultural modifications associated with terracing.

Operation 233, T/A1-072

Site T/A1-072 is the southeastern most of six sites in the Chan Noohol community clustered within a topographic plateau along a currently intermittent
stream (Figure 4). The local center of Chan lies 346 meters to the northeast. There are
two descriptions of TA/1-072 recorded in the survey database. The T/A1-072 site form
records one mound, M1, and a linear feature, W1. There are three individual additive
feature forms for T/A1-071, one each for M1 and W1 and a third for a second mound,
M2. Survey based CADD map depicts one mound and one linear feature (Figure 18).
1996 fieldwork concurs with the description of T/A1-072 as one mound and one linear
feature. Excavations confirmed that M1 is the remains of a substructure. Excavations of
W1 will be conducted in 1997.

TS19, two linear features, is located 30 meters east of M1. TS20, three linear
features is located 34 meters southeast of M1 (Gifford in Ashmore 1994; Neff 1995).
Additional low terraces were noted to the northwest of T/A1-072 towards the arroyo.
These were discussed and confirmed with Neff.

Phase I: 233E, Phase I post hole tests, included 185 individual tests. The area
tested consists of a 20-meter-square block around M1, and 12-meter-wide transects
running north, south, east, west. The southern and eastern transects extended 20
meters into vacant terrain. The western transect extended 20 meters and crossed
terraces newly recorded this year. The northern transect extended 24 meters to the
arroyo and to meet the southern transect of 224A (Figure 11).

Artifact distributions from post hole tests were mapped on in-field sketches
(not included) to provide a guide to further excavations. In general, artifact densities
were low, with 15 being the highest number of artifacts in a post hole test. Low artifact
densities were encountered to the south, west and east adjacent to M1, 12 meters to
the north of M1, and along newly discovered low terracing 32 meters to the west of
M1. These concentrations remain to be tested in Phase II and Phase III programs in
1997. As well additional Phase I post hole test will be extended across TS19 and TS20,
and will be placed at least 4 meters beyond the perimeter of the area already testing to
confirm continuity of the overall low artifact distribution. Low artifact densities
throughout may be due to the ephemeral, single phase, occupation of the site. The only
work at T/A1-072 beyond Phase I, done in 1996, was the excavation of structure M1.

Phase III: M1 was mapped as a simple rectangular 3.5 meters N-S by 2.0
meters E-W mound with a maximum height of 0.3 meters. The northeast and
southwest quadrants of M1 were excavated. Excavations revealed that M1 is a single
phase simple rectangular substructure, 3.7 meters N-S by 4.7 meters E-W. An L-shaped
bench is located along the east and south sides of the substructure. The southern bench
measures 2.0 meters N-S, and the eastern bench measures 1.5 meters E-W. The
substructure rises to a maximum height of 65 cm, including bench, above bedrock. No
evidence of a masonry or bajareque superstructure was encountered. If this is not due
to preservation, this suggests that the superstructure was completely of pole and
thatch.

Construction of M1 began with the clearing of bedrock, as M1 directly
overlies bedrock. A large percentage of the core of M1 is a bedrock rise. Bedrock
slopes downwards to the west below M1. The simple substructure is constructed by
four facings bounding a fill consisting of small cobbles, some soft white limestone
fragments, artifacts, and soil. The west, south and east facing was constructed by large
and medium cobbles. The east and south facing consisted of one to two courses of
cobblestones, in areas with two courses either both remain in-situ, or the upper course is collapsed. The west facing consisted of two or three courses, one of which was found in-situ. Only the north side of M1 is faced with medium sized cut soft white limestone blocks, a few such facing stones are in-situ above a basal row of cobbles, though most lie collapsed to the north.

An L-shaped bench is constructed on top of the low substructure. It is constructed by two interior facings containing fill consisting of small cobbles, artifacts and earth. Located along the east and south sides of the substructure, the exterior facings of the bench are the same as the east and south facings of the substructure. The north and west interior bench facings consist of one to two in-situ courses of cut soft white limestone blocks. Though the western interior facing of the east bench did not extend in-situ up to the northern face of the substructure, the amount of collapsed white limestone facings recovered in this area, suggests that the east bench originally ran the length of the substructure. The highly collapsed nature of the western side of M1 makes it difficult to discern if the southern bench originally ran the length of the substructure. Interior facings of the southern and eastern bench abut, indicating that the full L-shape was completed simultaneously. While the bench fill is differentiated from the lower substructure fill as fill stones are generally smaller, it is clear that bench and substructure were constructed in one construction phase as the single course of large cobbles which comprises the east facing of the platform is also the east facing of the bench.

The northern cut limestone facing, orientation of the bench, and lower density of de facto refuse to the north of M1, suggest that this is the front of M1. M1 would face towards the intermittent stream which runs through the Chan Noohol community. Artifacts encountered in fill and de facto refuse date to the Late Classic and consist of ceramics, lithics, shell and ground stone, suggesting a primary domestic function for M1.

Operation 245, T/A1-068
Site T/A1-068 is the northeastern most of six sites in the Chan Noohol community clustered within a topographic plateau along a currently intermittent stream (Figure 4). The local center of Chan lies 310 meters to the northeast. Site T/A1-068 (Figure 19) was defined based on surface morphology as one mound, M1, surmounted on one platform, F1. Only the west and east facings of F1 are definable as the north and south sides of this platform abut upsloping topography. Excavations corroborate and refine this description. TS32, consisting of three linear features lies 25 meters east of the southeast corner of F1 (Gifford in Ashmore 1994; Neff 1995). Additional terraces were noted south of T/A1-068 towards the arroyo and north of both T/A1-068 and 069. These were discussed and confirmed with Neff.

Phase I: 245A, Phase I post hole tests, included 176 individual tests. The area tested comprises a 20-meter-square block around M1, and 12-meter-wide transects running north, west and south. Each transect extended 20 meters (Figure 20). No eastern transect was conducted because of the close proximity of T/A1-069. This area will be covered in 1997 in the operation defined for T/A1-069.

Artifact distributions from post hole tests were mapped on in-field sketches (not included) to provide a guide for further excavations. Artifact densities ranged
from none to 25 artifacts per post hole test. Clusters of artifacts densities were widely dispersed across the entire area tested. Densities may not always indicate activities/refuse areas as the F1 platform, though largely a bedrock outcrop, is constructed in places with fill consisting of stone, artifacts and soil (discussed below). Further Phase II and Phase III work in 1997 is needed to sort out the meaning of artifact densities encountered across the surface of F1. The clearest area beyond F1 is towards the arroyo.

As artifact densities were getting progressively higher towards the edges of the 245A post hole testing grid, 245T, an additional 35 Phase I post hole tests, were placed four meters beyond the north, west and south edges of the 245A grid (Figure 20). 245T did produce decreasing artifact densities.

Phase II: Four moderate density post holes 245A/89,99,113, and 138, potential refuse areas exterior to F1, were tested by Phase II post hole suboperations 245V,W,X, and Y to prepare for the location of Phase III excavations in 1997. Phase III: Two Phase III programs were undertaken. (1) 245D investigated F1. (2) 245B,C,E,F,H,I,J,K,L,M,N,O,P,Q,R,S investigated M1.

(1) Investigations of F1

F1 was mapped as a simple rectangular 15 meter by 15 meter platform with a maximum height of 0.3 meters. The rough cobbles of the west and south facing of F1 were largely visible on the surface. The east and north edges of F1 are not definable on the surface as they abut upsloping topography.

Suboperation 245D (3 meter N-S by 1 meter E-W) is located along the southern facing of F1. Excavations revealed that the core of F1 is largely composed of a bedrock outcrop. The southern platform facing consists of a two to three layers of rough cobble, rubble and river worn stone directly overlying bedrock slope. Few artifacts are found in facing. Rough facing stones are stacked in a disorganized fashion against bedrock. Larger stone is exterior to progressively smaller stone. Facing retains bedrock as well as a circa 10 cm fill layer covering the upper surface of the bedrock outcrop. This fill consists of small stones, artifacts and soil. F1 rises 80 cm above bedrock at base of facing in 245D.

(2) Investigations of M1

M1 was mapped as a composite rectangular 7 meter N-S by 3 meter E-W mound with a maximum height of 0.4 meters. M1 is heavily disturbed by large tree roots. Excavations begun in 1996 revealed a complex, highly disturbed sequence of fills and facings, possibly representing four construction phases. As further excavations are needed in 1997 to sort out this complex stratigraphy, no further comments will be made in this report.

Test Excavations at Dos Chombitos Cik'in
Operation 244, T/A1-152 and T/A1-153

Site T/A1-152 is the western most of two sites in the Dos Chombitos Cik'in community situated on a hilltop (Figure 6). To the west, down a very steep slope is an arroyo which runs into the Macal. The local center of Dos Chombitos lies 629 meters to the southeast. Site T/A1-152 (Figure 21) is defined based on surface morphology as two mounds, M1 and M2, lying equidistant, to the east and west, of a small waterhole, R1. A chultun, C1 is located 31 meters downslope and to the south of M1. This chultun
is re-interpreted as a sascabera, subtractive feature formed through the excavation of sascab. Two additional chultuns were recorded in 1996. C2, visible on the surface, is located just east of M1 (this chultun was also recorded by VandenBosch in 1995, pers. comm.). C3, encountered in excavations, is located just west of M2.

TS135, three linear features, is located 54 meters downslope and to the north of M2. TS110, nine cross channel terraces, is located along the arroyo downslope and to the south of T/A1-152, 104 meters south of M2 (Gifford in Ashmore 1994; Neff 1995).

Site T/A1-153 is the easternmost of two sites in the Dos Chombitos Cik’in community (Figure 6). Dos Chombitos lies 550 meters to the southeast. Site T/A1-153 (Figure 21) was defined based on surface morphology as two mounds, M1 and M2, lying equidistant, to the east and west, of a chultun, C1. M1 sits upon a platform, F1.

As excavations of structures is not part of the research design at the two tested communities of Dos Chombitos Cik’in and Chan Lak’in, mounds in these areas are cleared and surface collections are made. I re-map each structure paying close attention to surface distributions of artifacts and stone visible upon full clearing. I also bring to this re-mapping knowledge gained of the relationship between surface and subsurface features from excavations at the Chan Noohol community. Figure 22 illustrates the re-mapping of structures in Dos Chombitos Cik’in, and adds the two new chultuns recorded at T/A1-152.

Phase I: 244A, Phase I post hole tests, included 83 individual tests. The area tested comprises single transects which connect all surface visible structures to each other and other cultural features including chultuns, waterholes and sascaberas. 20-meter-long transects also radiate axial from each structure, extending to the edge or over the edge of the hilltop (Figure 22).

Artifact distributions from post hole test were mapped on in-field sketches (not included) to provide a guide to further excavations. Artifact densities ranged from none to 171 per post hole test. Low artifact densities were encountered directly adjacent to known structures. Usually one side of the structure was clear of artifacts. T/A 1-153 M1 is clear on its south side, and M2 clear on its north and west sides. T/A1-152 M1 is clear on the west, and M2 is clear on the north.

The area between T/A1-153 M1 and M2 is clear. No dense artifact areas were found associated with the terrain surrounding either structure. Chultun, C1, located between these two structures, was filled with refuse (discussed below). There is a consistent low artifact density between T/A1-153 and T/A1-152. The area between T/A1-152 M1 and M2 is relatively clear except for a moderate density of artifacts equidistant between the two structures. A moderate artifact density west of T/A1-152 M1 upon excavation revealed a chultun, T/A1-152 C3. An area of dense artifacts (68 artifacts per post hole test) 16 meters east of T/A1-152 M2, was investigated as a potential primary refuse area. Another area of dense artifacts (170 artifacts per post hole test) 8 meters south of T/A1-152 M1, was investigated as a potential primary refuse area.

244B, included 13 additional Phase I post hole tests. These were placed in three areas; (1) artifact dense areas, to define extent of density, (2) artifact clear areas, to
confirm that artifact scarcity was not the figment of a single test, (3) to test a number of depressions and undulations suspected to be subtractive features. Tests in depressions and undulations revealed no additional cultural features.

Phase II: Four programs were undertaken in Phase III. (1) A 2 meter by 1 meter unit was placed in de facto refuse adjacent to each visible structure. Where practical the unit was placed so that a section of the structure facing would also be uncovered. (2) A 50 cm by 50 cm unit was placed in the center of T/A1-152 waterhole, R1, to investigate stratigraphy and collect soil, botanical and pollen samples. (3) All potential primary refuse areas encountered in the Phase I post hole testing program were investigated. (4) Two chultuns T/A1-153 C1 and T/A1-152 C3 were investigated.

(1) Investigation of Structures:

Suboperation 244G, is located along the northern edge of the lower terrace of M1, T/A1-153. Excavations encountered the eroded fill of the this substructure, no facing stones were found.

Suboperation 244H, is located along the south edge of M2, T/A1-153. Excavations encountered the south cobble running south of the substructure facing, suggesting the location of an exterior awning or separate structure constructed directly on bedrock.

Suboperation 244I, is located north and adjacent to M2, T/A1-152. The unit was placed in structure collapse.

Suboperation 244F, is located west and adjacent to M1, T/A1-152. The unit was placed in structure collapse. De facto refuse, collapse material, and structure surface collections yield Late Classic material.

(2) Waterhole, R1, T/A1-152:

Suboperation 244N (50 cm by 50 cm) was placed in the center of waterhole, R1. Undifferentiated loose silty soils were excavated to bedrock. Few artifacts and some macro botanical remains were encountered. No lining was see at base of excavation above bedrock. The small size of this excavation was chosen for the purpose of speed, as the primary objective of this unit was to collect soil, botanical and pollen samples. Unit size was too small once excavation extended beyond 60 cm. Profile visibility was compromised. Such a small suboperation is not practical.

(3) Investigation of high artifact density areas:

Post hole 244A/75 located a high artifact density area (68 artifacts per post hole test) 16 meters south of M2, T/A1-152. Post holes 244B/11-14 further defined this artifact dense area. Suboperation 244F investigated the densest concentration. Directly on the surface, intermixed with humus was a lens of densely packed artifacts, soil and stone. Dense artifact lens overlies bedrock. Sherds lie in matrix vertical, horizontal and at angles. Concave jar fragments lie unbroken. Sherds are large but their surface is eroded. The condition and positioning of sherds indicates an uncovered, untrampled deposit. Though the deposit is largely ceramic, lithics, shell, slate, obsidian and ground stone are found. Ceramics are Late Classic. The deposit is interpreted as primary domestic refuse.
Post hole 244A/46 located a high artifact density area (170 artifacts per post hole) 8 meters south of M1, T/A1-152. Post holes 244B/4-5 further defined this artifact dense area. Suboperation 244D investigated the densest concentration. Artifact dense lens begins 20 to 30 cm below the surface and extends to a depth of another 70 cm to bedrock. Sherds lie in matrix vertical, horizontal and at angles. Sherds range in size and surfaces are eroded. The condition and positioning of sherds indicates an uncovered, untrampled deposit. Though the deposit is primarily ceramic and jute shells, lithics, slate, greenstone, obsidian, ground stone, other shell, and animal bone (probably deer bone, final assessment is pending Wendy Gidden's analysis) are found. The deposit is interpreted as primary domestic refuse. Terri Powis examined the ceramics from the refuse deposit. The ceramic assemblage dates to the early Middle Formative (650/600-350 BC). It is restricted to Jocote Orange-brown and Reforma Incised types. The more common Savana Orange type is notably absent. Powis also identified a number of new/unique varieties of Reforma Incised types. This earlier refuse deposit is different from similar uncovered refuse deposits dating to the Late Classic period (e.g. 244E and 224Q) in 5 ways. (1) There is an equal number of jute shells and ceramics in deposit. (2) Animal bone, unknown in Late Classic deposits is encountered. (3) Refuse deposit begins at a significant depth below the modern surface. (4) Refuse lens is deep. The deepest Late Classic surface refuse deposit is ca. 30 cm. (5) Refuse deposit is located less than 10 meters distant from the nearest structure. Though in this case M1, T/A1-152, postdates the refuse deposit based on surface collection ceramics, and excavated collapse material.

(4) Chultuns, T/A1-153, C1 and T/A1-152, C3:
Suboperation 244C consists of the excavation of chultun, C1, between M1 and 2, T/A1-153. Suboperation size follows the dimensions of the chultun.

C1 is a single mouthed chultun. Its bulbous chamber has two lobes. The eastern lobe is larger and deeper than the western lobe. The chultun entrance is completely intact and open to the air. The chultun is completely vacant down to a basal layer of very large Cayo Unslipped jar rims on top of and imbedded within a matrix of mixed scascal and soils. This is covered by leaves and recent surface material. C1 was first encountered on survey in 1994, and then by John VandenBosch in 1995. At both of these times the large jar rims were noted in the chultun, and it was suspected that the deposit was disturbed as it lay completely visible from the surface. Discussions with the land owner, Mr. Can, indicate that the chultun has been in its present condition since the property was owned by the Mr. Can and his father before him. In that time no material had been removed from the chultun. Still not much weight should be placed on the exact positioning of the artifacts in the chultun, as it would have been relatively easy for a passerby to enter the chultun and dislodge an artifact from its original position.

Artifacts from C1 included ceramics, lithics, shell, quartz, and one human tooth. The human tooth may be an indication of disturbance of this chultun, i.e. to seek a human burial. Though, no other human bones are found, as would be likely after the disturbing of a human burial.

The ceramics from C1 largely consist of the complete rims of five Cayo ceramic group jars (Figure 24). These date to LCII and LCIIIb. Part of a single Mt. Maloney (not drawn) and a large decorated body sherd of a Uaxactun Unslipped ware
vessel (Figure 24) were also found. A few other body sherds were also recovered. They are likely to be body sherds from one or all of the five Cayo ceramic group jars. Not nearly enough body sherds were recovered to make even a single complete jar.

Suboperation 244F, west and adjacent to M1, T/A1-152, was placed in this location due to a moderate artifact density located by post hole 244A/50 (27 artifacts per post hole). Below humus, collapsed facing and fill of M1 was encountered. This was stratified above a lens of soil and de facto refuse directly overlying bedrock. Cut into bedrock, the mouth of a chultun, C3, was found. The south section of 244F bisected the circular chultun mouth. Three 20 cm lots were excavated into chultun fill to sample its contents. Excavations of chultun were then closed due to time constraints. Aimee Preziosi examined the ceramics from the chultun, which produced mixed dates, including Preclassic. Chronologically this chultun may be associated with refuse deposit 244D to the south and not the structure, M1, immediately to its east. Further artifact analysis is needed to sort out this chronology.

Conclusion

This current report is a summary of work in progress at the Chan Noohol and Dos Chombitos Cik'in communities. The 1996 research is the first year/pilot study of a two year long dissertation research investigates three emergent communities in the Xunantunich hinterland. The goal of the 1996 season was to test and refine a methodology which would combine vacant terrain investigation with traditional mound based studies.

The descriptions, maps and figures presented herein are those that were produced during the field season. With the exception of ceramic analysis facilitated by Ellie Harrison and Terry Powis, no post-excavation analysis is yet conducted. Beyond traditional types of artifact analysis, botanical, pollen and soil research will be undertaken in 1997.

Due to the preliminary nature of the research and analysis I have tried to limit this report to description, with little emphasis on interpretation. I would like to conclude with the following basic observations related to two issues, (1) the relationship of survey and excavation data, and (2) the nature of unobtrusive single and informally arranged mounds.

(1) The relationship of survey and excavation data

The XSS survey is extremely accurate in locating sites and terraces. Even with the more comprehensive clearing and reconnaissance of select areas in 1996, no new site was located, though some new terrace sets were. Within a given site, excavations realize added complexity and numbers of specific features which make up the site. Features are usually mapped smaller and lower than excavations find them to be. The simple rectangular shape of many surveyed mounds, may represent only the upper level of a composite structure. Additional low structures, either low platforms, or surface structures evidenced by post holes, add to the surface invisible complexity of sites. The degree to which these small end cultural features make use of existing natural topography in their construction is more obvious after excavations of such features.

XSS surface collection (Ehret in Ashmore 1994; Robin in Neff 1995) and test
pit (Ehret 1995) dating of structures is largely consistent. More intensive excavations in 1996 corroborate these results. In terms of dating, what intensive excavations adds, particular those with a vacant terrain focus, is the ability to date small structures, through the excavation of associated refuse deposits, where surface and test pit ceramics adjacent to those structures revealed no diagnostic material. Where surface collection and test pit results yield no information, or insecure information on chronology, 1996 investigations indicate a restricted Late Classic date for single and double mound sites. This is consistent with the assertion of a proliferation of clusters of isolated and informally arranged mounds in the Late Classic, made based on surface collection dating of 51% of sites (Robin 1995; Robin in Neff et.al. 1995).

(2) The nature of unobtrusive single and informally arranged mounds

Single and informally arranged mounds are only unobtrusive when compared to their larger neighbors. Artifacts and associated features suggest a primary domestic function for mounds excavated in 1996. Based on data from three mounds in the Chan Noohol community, size, in terms of both plan and height, is related to the number of construction phases. These domestic remains are part of complex networks of activities and interactions which involved the individuals living in these spaces. Though I make no attempt here to interpret the patterns of space use, I hope to have shown that charting artifact distributions across vacant terrain makes a broad understanding of landscape use a viable domain of study. Vacant terrain research has located hidden structures, locating refuse area, clear areas, suggested boundaries for domestic space, suggested possible non-terraced fields. These vacant terrain patterns will be enhanced by future post-extraction artifact analysis, botanical, pollen and soil research.
Acknowledgments: The 1996 field season was funded by a Fulbright IIE grant. The Department of Archaeology, under Acting Archaeological Commissioner Brian Woodye facilitated my Fulbright tenure. I would like to thank the project directors Richard Leventhal and Wendy Ashmore for their continual advice and support. The field work would not have been possible without the hard work of excavators Ismael Chan, Bernabe Camal, Jose Lopez, Nasario Puc Jr., Rudy Chuc, and Rafael Perez.

Ellie Harrison, Terri Powis, and Aimee Preziosi provided assistance in ceramic analysis. Ellie is responsible for all ceramic illustration in this report. I would not have gotten my summer research and teaching program set up in Belize City were it not for her. Jason Yaeger, Jennifer Braswell, Jon VandenBosch, Jennifer Ehret, Ted Neff, Julia Miller, and Laura Villamil provided advice in methods and interpretations. I can't imagine having to handle either vacant terrains or small mounds for the first time, alone, without the prior experiences of Jennifer Braswell and Jason Yaeger to guide me. And to all the rest of you, thanks!
Notes

1 Two chultuns were recorded in this area on survey. One of these is now identified as a sascabera, subtractive feature formed through the excavation of sascab. Two additional chultuns were encountered in 1996. See further discussion below.

2 The area north of T/A1-071 was not investigated by a post hole transect due to modern disturbance caused by the construction of a sascab road.
Figure 1: Area of Research
Transect Archaeological No. 1 (T/Al)

KEY:
- Mound
- Cluster of mound groups consisting of isolated and informally grouped mounds
- Modern Community of Su'cutz

X33 1996
CR
0 1000 2000

Horizontal lines indicate boundaries of spatially discrete centers determined by nearest neighbor analysis (see VandenBosch in Ashmore et al 1994 and Robin 1995)

1) Xunantunich Civic Center
2) Chan Secondary Center (Figure 2)
3) Chan Noohol community (Figure 4)
4) Chan Lak'ín community (Figure 5)
5) Dos Chambitos Ch'ink'ín community (Figure 6)
6) Dos Chambitos Secondary Center (Figure 3)
Figure 8: Area of Chan Naohol community covered by Phase 1 post hole tests

KEY:
- Mound
- Terrace
• Chultun
○ Waterhole
Figure 9: T/Al-071 based on settlement survey data

Figure 10: T/Al-071 based on preliminary results of 1996 excavations

KEY:
- Chirpa
- Terrace
- Waterhole
- Mound
- Linear Feature
- Natural Bedrock Outcrop
- Culturally modified in SE corner

XSS 1996 CR

Modern Road

N

20

0

1

2
Figure 11: Phase I post hole tests at T/Al-071 (224A) and T/Al-072 (233E) completed in 1996.

**KEY:**
- Mound
- Terrace
- Chultun
- Waterhole

Limit of Phase I post hole tests
Figure 15: Preliminary results of Phase I research at site T/Al-071. Chan Noohol community

XSS 1996 CR

KEY:
- Chuka
- Terrace
- Waterhole
- Surface Visible Structure
- Surface Invisible Structures
- Natural Bedrock Outcrop, culturally modified in SE corner

Artifact Densities:
- Sparse: 0-5
- Low: 5-15
- Moderate: 15-35
- Heavy: 35-145

NOTE: Features in this figure are represented based on 1996 Phase II and III research data.
Figure 17: Select vessels from chultun (C1) T/Al-071 (43% actual)  
Drawn by E. Harrison
Figure 18: T/Al-072 based on settlement survey data

Figure 19: T/Al-068 and T/Al-069 based on settlement survey data

KEY:
- Mound (M)
- Linear Feature (W)
- Terrace (Ts X)
- Platform (Fi)
Figure 2: Dos Chambitos Cikin
T/AH-152 and 153
based on survey data

KEY:
- Mound
- Chultun
- Terrace
- Waterhole

T/AH-152
150

T/AH-153
D M

Arroyo
Figure 24: Select vessels from chultun (Cl) T/Al-153 (43% actual) Drawn by E. Harrison
Figure 24: Select vessels from chultun (C1) T/Al-153 (43% actual)  
Drawn by E. Harrison