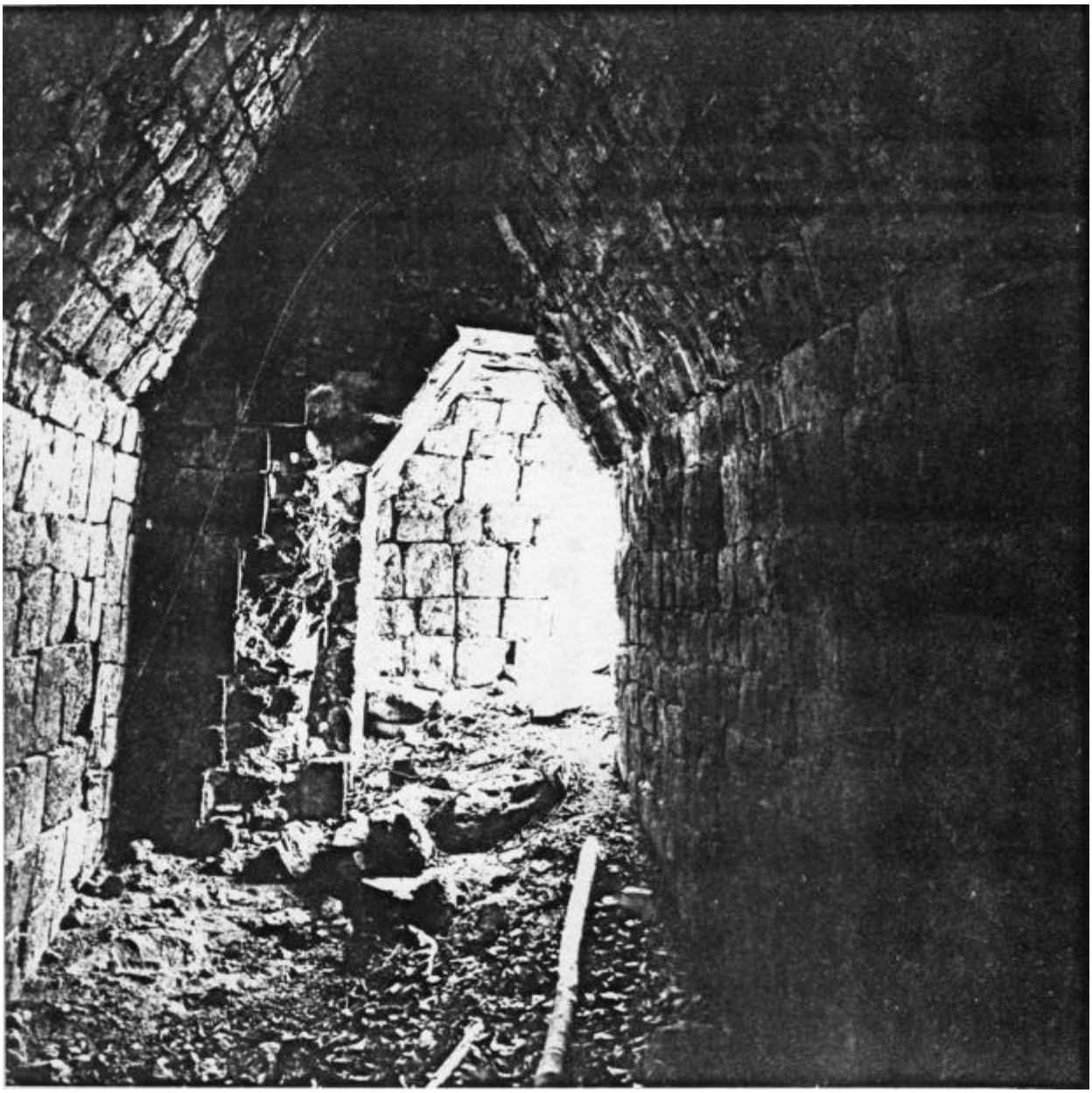
FIRST SEASON PHOTOGRAPHY AND ANALYSIS OF STANDING ARCHITECTURE



at

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CAMPECHE, MEXICO

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INTRODUCTION

This report describes the initiation of a research program at the Maya ruins of Santa Rosa Xtampak, Campeche, Mexico during spring of 1989. This report should be read in conjunction with *Wood that has Lasted One Thousand Years: Lintels and Vault Beams in Maya Temples and Palaces, the Example of the Main Palace, Santa Rosa Xtampak* and *with An Introduction of Chenes, Puuc and Rio Bec Palaces: The Example of Three Palaces at Santa Rosa Xtampak,* both by Hellmuth. These two non-technical reports form together with the present pages, in effect, a three-volume set on the contributions of the Foundation for Latin American Anthropological Research to the archaeology of Campeche. A shorter technical report by Eldon Leiter is also available, *An Inventory of the Lintels of the Main Palace at Santa Rosa Xtampak*. This research was undertaken through the Universidad Autonoma del Sudeste, Centro de Investigaciones Historicas y Sociales, through director Dr. William Folan, through permission for mapping and photography by Arquitecto Sergio Palacios Castro, INAH, Centro Regional Campeche. The Main Palace at Xtampak is on the verge of total collapse and it was deemed advisable immediately to initiate a feasibility study of how best to conserve this important monument of ancient Maya architecture. Photography, to document the current situation, is an important beginning.

FORMAT

In this initial report I have followed to some degree the order of headings as employed by H.E.D. Pollock's Chenes report, as this 1970 Carnegie Institution of Washington/Peabody Museum Harvard report is the standard one on Xtampak owing to the fact that the Master's thesis of Stamps is not only unpublished but essentially unobtainable even in large university libraries. The new standard is Andrews' thorough monograph, *Architectural Survey: Santa Rosa Xtampak*, unpublished but made available by the author to both Folan and to Hellmuth/F.L.A.A.R., a courtesy we much appreciate.

ETYMOLOGY: THE NAME OF THE RUINS

Frederick Catherwood's drawings clearly carry the single name "Labphak." (Stephens 1843, II: PI. XIX, Fig. 8, PI. XX). Nowhere does John Stephens create a multiple site name appending "Santa Rosa" to "Labphak."

"Lab" is a standard Yucatec Maya adjective for "old," but specifically in the sense of "old and collapsing" (Cordemex 1980: 429). "Lab-" is best known from the tourist site of the nearby Puuc region, *Lab na*, "old house."

Yet by the time of Teobert Maler's visit in 1891, only 50 years later, the local farmers gave Maler the name "Tampak" to the Main Palace. By the time of Pollock's visit in 1936 the entire site

was known as Xtampak. Actually Maler identifies the overall ruin by the name of Xlabpak and distinguishes it from the other ruins of the same generic name by labeling his map of the palace as Xlabpak de Santa Rosa. A similar case is the name of the site of EI Tajin: actually "Tajin" was originally the name of the main temple alone, but has grown with common usage to mean the entire site, indeed now an entire civilization. Since all modern Maya maps, as well as all recent published references to the site near the old hacienda Santa Rosa, unanimously specify the site name as Santa Rosa Xtampak it seems fruitless to attempt to return to the original native designation of Xlabpak.

Theoretically the name could be spelled out as "Ix Tampak" but in most Yucatec names written in modern times the initial letter "I" has long disappeared from the spelling. "Ix" is a generic feminine prefix, the female counterpart to "Ah" the. standard masculine prefix in Maya. Pollock (1970: 46) is the first to systematically create the combined name of Santa Rosa Xtampak, since Xtampak alone is the name of other ruins in the peninsula.

"Tam" means "deep," as in a deep wound; the word can also mean "profound" (Cordemex 1980: 767). Roys estimated that Maler's translation of the site name Xtampak was supposed to mean "in front of the wall, " or ", " wall in sight", but the site would need to be spelled *tan pak* for that meaning. So, either Maler mistranslated the native concept, or else the Indians actually

intended to name the place “deep wall”. Fortunately, it makes no difference today.

Since none of the other ruins labeled Xtampak are well known, and as it is too long to write out the entire name Santa Rosa Xtampak every sentence, the ruins are best abbreviated simply as Xtampak, and occasionally as Santa Rosa. Both words will be considered fully synonymous.

PREVIOUS STUDIES OF XTAMPAK

The American diplomat and explorer John L. Stephens spent three days at Xtampak with English illustrator Frederick Catherwood in 1842. Austrian archaeological explorer Teobert Maler spent likewise only two and a half working days in 1891 (Maler 1902). Maler was an efficient workaholic, and even in that short a time he alone--in the sense of having no other trained person with him--nonetheless drew plans of all three complex floors of the Main Palace, explored other parts of the site, but understandably did not have enough time to actually map other parts of the site. Maler's drawings were the basis of all subsequent published mention of Xtampak (Seler 1916: Abb.56; Spinden 1913; Morley 1946: Fig.35, a; Pollock 1965: Fig. 23a; 1970; and even were the basis for the maps of Stamps, G. Andrews and Gendrop of the 1970's and '80's. Portions of Andrews' drawings reveal this heritage, although a majority of his drawings are based on his own measurements and his own interpretation (Andrews personal

communication). Most of the original photographs of Maler have been found in Germany (those that were not at the Peabody Museum, Harvard University). Many of Maler's photographs on Puuc and Chenes ruins are in press by the Akademische Druck- u. Verlagsanstalt, ADEVA, Graz, with text in English, Spanish, and German (Springhorn in press).

In 1936 one of the practically annual Carnegie Institution of Washington expeditions reached Xtampak. In 1949 another Carnegie expedition returned to Santa Rosa. Karl Ruppert prepared drawings of some of the buildings on that visit. During that visit the site was mapped by Lawrence Roys. One would need to return to the original diaries to ascertain whether a transit was used or just a compass. The map was good field work for that era, but definitely needs to be redone to include all the house mounds and to orient accurately the major structures, as well as to be sure to ascertain the actual constructional limits of the site, see if any causeways lead off to other sites and clarify whether any fortification walls ring the city. An important result of the 1949 visit was George Brainerd's recognition of Middle and Late Preclassic sherds. This discovery means that Xtampak was settled at least from 400 B.C. His full report was never published as he died subsequently.

Possibly on account of such early ceramics the New World Archaeological Foundation became interested and in 1968 began a "Campeche Project" under the leadership of Ray Matheny. Test pits

were instituted that year at Xtampak, Xcalumkin, and Dzibilnocac. The magnificence of Santa Rosa made an impact on the NWAF team and thereafter Stamps began his project in January 1969 finishing in April that same year (DeBloois 1970: 8). Stamps and DeBloois are both to be commended for their immediate written reports, an M.A. thesis for Stamps; a graduate student report for DeBloois. If this valuable work had been published at that time, probably Xtampak would have long ago been smothered by a typical archaeological project, which if done in the same manner as at other sites, would have wreaked as much damage as provided help to the delicate ruins. Nelson's monograph on Dzibilnocac was fully published (1973) and in fact that site was recently subjected to excavation (Carresco 1984).

So have looters visited Xtampak, and only one capstone remains. Fortunately, the site is at last guarded--typically once everything worth carting away was long ago stolen. Enough visitors have made dated references to the condition of the Main Palace that it should be possible to reconstruct approximately when different capstones and sculptures were looted. Karl Herbert Mayer has been able to track down the present location of much of the art that was taken from Xtampak.

Both Karl Herbert Mayer (1982, 1986) and independently Martina Fettweis (1980's) have visited Xtampak to study the painted capstones. The 1986 group consisted of George and Geraldine Andrews, Victor Rivera, Juan Antonio Siller, Alejandro Villalobos

Figure 1

Figure 1. Main Palace, west side near the south end, inner room, 26, with a rare cord holder in the lower end wall. Santa Rosa Xtampak. Although the wooden lintel is still preserved the vault mass has separated from the rest of the soffit and is just waiting to collapse. Hasselblad ELX, 50mm Zeiss lens, Metz 60 CT 4 set at automatic TTL. **449951-5.**

(architectural historians associated with Gendrop, UNAM), Hanns Prem and Ursula Dyckerhoff in addition to Mayer. Prior to then, though, most of the art of the palace had already disappeared.

In the 1970's and 1980's Xtampak was also visited by architectural historians Paul Gendrop (Gendrop 1983; 1987) and his UNAM students Juan Antonio Siller C., and Alejandro Villalobos P., and by George Andrews and his wife Geraldine (Andrews 1987, 1988).

I first went to Xtampak during these same years, as lecturer for study groups. In those days access was physically and mentally taxing, requiring hiking through milpas under the burning sun. There was no way to spend more than a few hours (exhausted) at the site, because one had to allow daylight to hike back through the rocky maize fields and then endure the truck ride through the brambles and mud holes back to Hopelchen's sole spartan hotel. It goes without saying that if any of the earlier visitors were at Xtampak in 1989, with the ease of a road, with the convenience of camping within 1 km of the site, and with a cook, not to mention the helpful INAH guardians who had neatly cleared paths, could they too have made the discoveries that we did on our five-day reconnaissance in April 1989. I should say at the beginning that all of us who are working at Xtampak have the highest regard for the amount of labor and sweat expended by· the earliest scientists who studied at the ruins.

within the last seven years an all-weather road was finally finished all the way to Xtampak. One can stay in the comfort of first-class hotels in Uxmal and get in and out of Xtampak in a day, with a picnic at the site. In late August 1988 a F.L.A.A.R. travel group (Hellmuth, Leiter, LaFontaine, de Leon) visited Xtampak comfortably. This was one day before we were caught in the devastation of Hurricane Gilbert which hit us in Tekax and followed us as we retreated to Merida where the full force clobbered the city and tore apart much of the Grand Hotel where we had sought refuge.

When Eldon Leiter and I went to Tabasqueño in August 1988 we were told by the INAH guard of the Hochob area that Lorraine Williams had recently initiated an intensive study of all the Chenes area ruins, but Xtampak's dragon-mouth entrances were not in her initial article (1987).

INITIATION OF THE XTAMPAK PHOTOGRAPHY

The background of how and why this research project was initiated is provided in a separate proposal with discussion. Basically, both Folan and Hellmuth noticed that the lintels of Xtampak were cracking. The entire main stairway and the left Rio Bec tower were also just about to collapse. Xtampak's Main Palace needed immediate attention. Andrews, Mayer, and Prem were likewise concerned about the worsening condition of the still monumental palace (Prem 1987). Mayer mentioned this fact to me several times

in Graz so I went to the site in the aforementioned August 1988 visit (my third time by then) with a specific written INAH Campeche photography permission to get views for two upcoming seminars I was to teach on Maya architecture. The urgency of Xtampak was quite clear. Equally self-evident was the scientific importance of this unique Maya city.

Santa Rosa has long been recognized as an ideal locus to test models of diffusion (Puuc, Chenes, Rio Bee, Peten) and to test Folan's model of the site as a regional capital. But the ruins were too far to reach and there were to many other hundred Maya ruins that also needed attention. But now a road goes directly to the ruins.

Xtampak is a perfect academic choice on any number of grounds. It was also perfect timing, since Folan's seven-year project at Calakmul had finished their 30 sq km map. It would have been a waste to disband such a highly trained crew. The day after they finished Calakmul they took a one-week rest break--then headed for Xtampak. They had cleared key sight lines by the time Hellmuth and Leiter arrived in April and at last made it possible to get from one sector of the site to another. In essence the entire staff for Xtampak has years of experience at Calakmul as well as elsewhere. Xtampak also benefits from the overall infrastructure of Folan's Centro de Investigaciones Historical y Sociales, of the Universidad Autonoma del Sudeste. This center is fully equipped to handle research and is only about 3 hours from

Xtampak. Thus Xtampak is one of the few on-going field programs that has a full time, all year office to back it up.

GOALS OF THE MARCH-JUNE FIELD SEASON

It is appropriate and traditional to have a reconnaissance before beginning field work. Hellmuth and Leiter had already visited Xtampak in this manner (August 1988 to photograph for the former's two upcoming courses on Maya architecture, at Rollins College and at the University of Graz; this was before the actual present project was born). Hellmuth also had familiarity from two even earlier visits. Folan and Morales visited Xtampak in early 1989, returning with outspoken enthusiasm for the possibilities ("it surpassed all expectations"), especially since Folan noticed that the largest pyramid group at Xtampak was a Uaxactun Group E-like arrangement. Xtampak is not in Ruppert's long list of Maya sites where he recognized Uaxactun Group E-like arrangements (1940). Although it was Ruppert who mapped Xtampak that was nine years after his Uaxactun Group E article. In any event, Rio Bec was the northernmost site to be listed (at that time, 1940) as having a Solstice-Equinox Observatory Group, as I now call the complex, since most readers have no idea what "Group E" could possibly mean. Thus Xtampak is now one of the more northern sites to have a Solstice-Equinox Observatory Complex. I welcome comments from readers or colleagues who know of other Chenes, or even Puuc, examples of a Solstice-Equinox Complex, or who have seen earlier in print, mention of this feature at Xtampak, since

the site map has been available since 1970. The latest map that I know of (Aveni and Hartung 1989) still presents Oxpemul and Rio Bec as being the northernmost on record. An example of this complex should be searched for at Dzibilnocac, the nearest rival to Santa Rosa Xtampak in specialized and elite construction.

This presence of a Peten arrangement is another item of evidence for the international cosmopolitan relationships of 8th century central Campeche. It will be important to ascertain whether the Xtampak complex is a Rio Bec variant, or whether it is derived more directly from the Peten layout, such as at Calakmul near the Campeche-Peten border. Archaeologist Abel Morales worked at the Calakmul complex and is interested in the same complex at Xtampak. The three pyramids which form the end of this grouping at Xtampak are the largest pyramids at Xtampak, actually towering higher than the 3-story palace. Such a size echoes the importance this astronomical-astrological complex had at Xtampak, and how important it was for the rulers of Xtampak to show off these specific cult ideals. The fact that Xtampak has such a complex, whereas other Chenes sites do not (though we do not yet know in the case of Dzibilnocac since it is not well enough mapped), is all the more reason to support Folan's model of Xtampak as a, indeed the, regional capital.

THE SITE OF SANTA ROSA XTAMPAK

WATER SUPPLY

Stamps and DeBloois found many more chultuns than the 15 on the Carnegie map. Indeed, DeBloois's field work was specifically a review of the chultuns at Xtampak. The current map of Folan's team will easily increase the number. All the ones I have seen myself so far are of the Yucatec type, giant water storage cisterns 3 to 4 or more meters deep, and not at all the smaller Peten style "dry" chultuns. I have not yet had time to visit the abandoned Santa Rosa plantation structures to see what water situation they had. There is in fact one Aguada less than 1 km from the INAH parking lot, so its total distance from the ruins can hardly be more than 2 km. Thus, this must be other than the Xtucil Aguada mentioned by Pollock (1970: 46).

The current population in the entire Xtampak area consists of two INAH guards and one impoverished ejido family. The total lack of water is the reason given for the population of about 1 person per sq km. The ancient Maya must have developed a sophisticated plaza/courtyard rain runoff storage system with countless chultuns to have maintained their large populations during the Classic period--or the climate could have been slightly wetter (a consideration Folan has continuously under investigation).

LOCATION

Xtampak is 20 miles east of the main highway, a 2 hour drive south of Uxmal. The turnoff from the main highway between Bolonchen and Hopelchen is between kilometer marker 79 and 80 (6 miles from Bolonchen, 15 miles from Hopelchen). Once on the turnoff (a good, all weather gravel road) at 5 miles fork right, at 14 miles stay left, one mile further from the crest of the hill you can see Xtampak (or at least the hill on which it rises) along the distant horizon), at around 18 miles be sure to stop at the guard hut of the INAH site guards (on the right, part stone house); at 19 miles take hard right at T-fork in road; one mile further is the INAH parking lot. This route is different from that listed in most descriptions of access based on the routes of the 1970's. The new 1980's road follows a different and more direct route, thus visitors should not heed instructions in most of the guidebooks which are based on the old route.

From the parking lot there is only one trail uphill, about a 10-minute climb, perhaps half a mile. You end up directly behind the Main Palace. Since none of the trails are marked it would help to have one of the INAH guards with you. Do not attempt to climb the front stairway of the Main Palace or it will collapse on you.

The location of Xtampak on all maps is an educated guess as no one has done an actual astronomical fix, a scientific lapse which needs to be corrected in an upcoming season and thereafter reported upon.

TOPOGRAPHY

Pollock honestly admits he took no notes on the topography. In fact the ruins are clustered on an extensive hill area, surrounded by flat farmland at least on the approach side (the road goes only up to the front of the site). The buildings are covered by mature trees, but nothing large, since Stephens cut most down in the 1840's, then Maler felled even more in 1891. Those they left were cleared by milperos who seem to have farmed some of the site area itself, at least sectors of the ruins have tangled dense undergrowth typical of second growth of a milpa abandoned for at least a decade. We welcome botanists (and zoologists) who would like to prepare studies of the flora and fauna of the region.

The climb from the parking lot to the palace area is at least a 30 m rise over about half a mile. And the parking lot itself is already on a plateau over that of the main vaguely savanna-like farming area where the INAH guards live, 2 km back on the main highway in. Actually this site hill zone is high enough to be seen from the approaching highway about 3 miles straight line distance away.

SIZE

The Carnegie map published by Pollock includes about 600 m east-west by 400 m north-south. Folan's goal is to map a 9 sq km area,

though most of this will be house mounds. How much of this ideal goal is actually mapped will depend on whether funds are made available, and how long the provisional permission for the mapping study will continue. Whether vaulted groups would be found in such a surrounding area as is the case at Calakmul, Tikal, Yaxha, etc. will only be known when the mapping is further advanced.

All too often every newly worked site turns out to be the "the largest Maya site." Thus site XYZ is claimed to be "larger than Orlando" and "larger than Washington, D.C." For years Dzibilchaltun was unofficially labeled as "larger than Tikal." So far the only Maya site which has been physically measured and surveyed as having a larger area and more mounds than Tikal is that of Calakmul, with a 30 sq km area mapped. Not even EI Mirador covers that much square mileage.

Whether Xtampak is the largest site in the Chenes area remains to be tested, since Dzibilnocac is also a large ruin. Considering the size of Xtampak's Main Palace, especially the size of its Solstice-Equinox Observatory Group, and the many stelae therein, it is tempting to propose Xtampak as a regional capital, which is Folan's model. It seems that Xtampak is the largest site in the Chenes area until the Rio Bec area 120 Km. to the south. Dzibilnocac is the only rival to Xtampak in the Chenes area itself. But

there is more to a site than its gross size. In terms of quality over quantity, Xtampak's masterful stone cutting and overall superb masonry certainly ranks it as the cultural if not probably also the political capital of its region. In fact, it may turn out that quality of masonry is a trait of importance to Chenes area sites in general, as Pollock's photo of Dzibiltun shows exquisite stonework (1970: Fig. 26). One of the most succinct comments on Xtampak is by Mayer, who has visited Santa Rosa twice:

"...Xtampak... is a large and important center with a wealth of relatively well preserved and standing architectural remains; furthermore, it contains the largest number of hieroglyphic inscriptions in the whole Chenes area." (1987:1).

PAINTED CAPSTONES

The painted capstones of Xtampak are best covered by Karl Herbert Mayer (1983; 1984a). Pollock provides a review of what was known earlier (1970: Fig. 74 a and b). Fettweis evidently studied the capstones but nothing is known of any resulting publication. Only one complete painted capstone is still in place, in the Southeast Quadrangle; the looters evidently recognized it was too eroded to make it worth stealing. There is at least ·one painted medial molding stone still in situ.

CHENES FEATURES

CHENES comes from the local Yucatec Maya word for well. Most of the towns of this region have the word "chenes" in their name and have wells as their sole water supply--such as Bolonchen (Nine Wells), Hopelchen, etc. All the ancient architecture of this region features monster mask facades, rooms wherein the vault spring exists only on the side walls and not also on the end wall, and certain other esoteric features described in the technical literature on these styles, namely an article by Pollock (1970) and a book by Gendrop (1983). Potter was the first to remind Mayanists that:

> "The most characteristic or spectacular trait of a style is perhaps too often used as the complete definition of that style. Although it may be perfectly correct to state, for example, that ornamental towers are "Virtually a hallmark of the Rio Bec style" (Pollock 1970:81), this should not be taken as definitive of the style any more than the presence of "well known dragon-mouth entrances" (ibid.) should be the sole determinant of the Chenes style. Maya architectural styles are best and most accurately defined not only by the selection and composition of specific symbols and formal elements, but by generalized criteria that define the distinctive ways in which everything was done. Lateral ornamental towers and dragon-mouth entrances remain important, but are joined by the numerous other criteria required for complete stylistic definition." (Potter 1977:1).

All Mayanists have now long recognized that in fact monster mask facades occur also in southern Campeche, in Rio Bec territory, far from the Chenes towns. And, Rio Bec false towers are known far outside the geographical Rio Bec zone, at Hochob, Dzibilnocac, and Xtampak, all within the Chenes area. Not enough of the

Rio Bec ruins have been adequately recorded to allow a valid statement on whether the architecture there can be considered as a common style with that of the Chenes area. Virtually no Rio Bec site has been fully mapped; few have been carefully drawn (a notable exception are the professional quality drawings of Abel Morales of a part of Xpuhil)--the important multi-story buildings of Manos Rojas (also known as Km. 132) are barely even illustrated in the literature.

Chenes and Rio Bec share some traits, interacted with one another, yet I go against the momentary current which has popularly created a common style name for both together. Since all the sites involved are in the State of Campeche, I find the designation "Central Yucatan" alone misleading, even though I am well aware that the peninsula and not the modern political division is intended. Potter's model did serve the purpose to bring attention to the Rio Bec towers in the Chenes region and the Chenes facades in the Rio Bec region. More detailed architectural drawings and less theorizing might cast more light on the actual situation in 8th century Campeche.

Karl Herbert Mayer observes that many Rio Bec style sites await to be discovered, since of the three regional styles, the Rio Bec is the least well explored. Even some of the sites published by the Carnegie expedition have not yet been re-located by modern

archaeologists. Thus, might it not be premature to merge Rio Bec and Chenes together when a complete corpus of Rio Bec is not even at hand?

Puuc features as well can be documented at Chenes ruins, and vice versa. Nonetheless, the three style names, Puuc, Chenes, and Rio Bec do serve useful purposes when kept in the proper perspective of their original use, namely, geographical.

A feature of Tabasqueno in the central Chenes region as well as Chicanná in the Rio Bec-Chenes area are the stacks of long-¬snouted god masks, the so-called Chac masks. In the Chenes such stacks occur most typically up and down the entire corner of the temples and palaces. In Puuc architecture such masks tend to be widely spaced horizontally, and mostly in the upper zone. None of the standing buildings at Xtampak exhibit any of the exuberance of facade mosaic monster faces except the two Chenes doorway buildings, the central tower of the Main Palace and the Building with Serpent Mouth Facade. There are no Chenes-like stacks of masks yet found on any Xtampak building. The masks on the Cuartel are not Chac and in any event are not in stacks on the corners.

Pollock (1970: 81), Andrews (1987) and Gendrop (1983: 125-127; Fig.156,d-f) each list a Chenes trait that is exhibited at Xtampak as the three-part arrangement of long one-story build-

ings, such as the Cuartel Tigre Triste has a comparable arrangement (Gendrop et al. 1985).

A further Chenes trait at Xtampak is that the rooms have a protruding vault spring only on the long sides of the rooms; the end walls are smooth from top to bottom with no spring, and indeed in effect there are no end vaults. The end wall is roughly flat the entire distance from floor to capstone. In Peten architecture the end of the rooms are often vaulted, with leaning vaults rather than mere walls from floor to ceiling.

Chenes Features other than Dragon Facades

The aspects of the architecture that really characterize Chenes architecture are small details, the type that a one would not normally notice. A feature of Xtampak that appears to be typically geographical Chenes are the vertical moldings at the corners of the upper zones. Hochob Structure 2 (Seler 1916; Pollock 1970: Fig. 9), Nohcacab (ibid.: Fig. 42), and both the Main Palace and Cuartel of Xtampak share this feature. Possibly one reason why Chenes architecture continues to be defined by the monster facades is that they dominate the few published architectural drawings. No Chenes site has been published as thoroughly as Uaxactun or even Palenque.

The reader should realize that not a single Maya site in the geographical Chenes region has been adequately or professionally excavated. In such an adequate excavation all cultural material must have been salvaged, recorded in situ, numbered, cataloged, and published. Professionally excavated means a project in which the entire area which was subsequently destroyed in excavation was photographed beforehand at least to minimal scientific standards. Minimal scientific standards of photography include: use of a tripod, use of slow, fine grain film, and use of something better than a point-and-shoot camera. 35mm is not, and never should have been, acceptable for quality archaeological research. The contact sheets are too small to be of functional utility; the enlargements are too fuzzy. Only if a lens comparable in quality to a Zeiss, Leica, or Nikon and only then if used on a tripod and developed in a fine grain manner would 35mm be acceptable. with the ready availability of twin lens Rolli cameras, 120 film size should be the minimum allowed. Indeed it would be a useful mandate simply to demand that adequate cameras be used. A team which is not properly equipped should not be allowed to destroy a Maya site simply in order to rebuild it to impress the governor or state tourist department.

Professionally excavated also means that all collapsed debris was photographed both before and during excavation, and that the col-lapse was drawn in situ. It is only from the analysis of the col-

lapsed stone that one can reasonably expect to reconstruct what the original temple looked like. A laudatory example of Mexican field work in this vein is that by Arqueologo Ruben Maldonado C. in the ballcourt at Uxmal (1981).

Professionally excavated also means that every structure which is excavated needs cross section drawings to record the architectural detail. Furthermore, such drawings need to be published.

The Carnegie Institution of Washington's field recording and publishing technique was the best yet employed in the Maya area. Same with that of 90% of the excavations at Tikal, both by the University of Pennsylvania and that of Larios and Orrego subsequently. Unfortunately, the Tikal work has never been published with the degree· of urgency as that of the Carnegie or of the New World Archaeological Foundation. Andrews, Gendrop, and UNAM architectural historians have initiated publishing details of Chenes architecture, but none of them have been involved in the recording of architecture that was under excavation. The result is an incomplete knowledge of which features in the Chenes region are native, and which are Rio Bec. Andrews has begun to sort out the question of which features in the Chenes area are Puuc, but without stratigraphic data there is a limit to the results.

RIO BEC

RIO BEC is the name of a dry creek in south-central Campeche. The Escarcega-Chetumal highway bisects the Rio Bec homeland, with Xpuhil as a landmark of Rio Bec style and content. The actual larger sites of Rio Bec are to the south. Whereas both Chenes and Puuc have been the subject of independent monographs, there has been no monograph specifically on the nature of the architecture of the Rio Bec region. Rio Bec and Chenes are now considered to be almost a single style, namely Rio Bec-Chenes, though Gendrop is fully aware of the differences between the northern manifestations (such as at Hochob, Xtampak, etc.) and the conservative features in the Rio Bec area itself, at Hormiguero, Rio Bec, etc. A full-scale study of the geographical region of Rio Bec is needed, since the towers of the geographical Chenes region are usually topped by square temples, often with usable interior space, often functional doorways, and even functional stairs (Hochob, for example). It is primarily in the Rio Bec, Hormiguero, and Xpuhil region that the towers are purely facades, solely false temples.

Thus I tend to be conservative in pointing out the usefulness of maintaining the three distinct names, Puuc, Chenes, Rio Bec, as designators for geographical areas. It is nonetheless important to read Potter, as he was the first to really formulate the realization of the geographical and cultural overlap of all these

styles. Since that book, though, both Andrews and Gendrop have made considerable advances, and Hohmann has revealed how incomplete the originally published drawings of Becan Structure IV are. His book is best read in conjunction with his over dozen articles in *Cuadernos de Arquitectura Mesoamericana* which continued up to his unfortunate demise from bone cancer in 1987.

One of the few attempts to define the architecture of Rio Bec is by Stamps (1970: 85). With data available from recent INAH excavations at Xpuhil, Hormiguero, and Rio Bec itself, it should be possible to revise that--a task which should be reserved until the Rio Bec towers at Xtampak can be carefully excavated, as some of the pertinent details are covered from view by collapse of the upper portions of the palace. Andrews has prepared a treatise on Rio Bec towers which is the best available discussion of this feature, but as it is unpublished I do not yet have a copy available.

PUUC FEATURES

PUUC architecture is that style which occurs in the Puuc hills and adjacent regions, with considerable influence outside Uxmal, Labna, Sayil, and Kabah, the type sites. Pollock's decades of research in Yucatan and Campeche for the Carnegie Institution of Washington revealed that in fact temples and palaces of the same

general style occurred also in northern and western Campeche. Pollock's 600-page monograph (1980) is the bible of Puuc styles. I would add Chichen Itza to his coverage, as portions of that site are a regional variant of Puuc. Even T'Hó, the ancient Maya city obliterated in the construction of Merida, was to some degree a Puuc city as evidenced in the stones remaining in the churches. One should also consider adding Mayapan as a neo-Puuc style, probably through Post Classic builders dismantling Puuc buildings of the pre-Mayapan habitation of that site. Actually Xtampak should also be added to any monograph on the Puuc style and content, as there are plenty of buildings at Santa Rosa which are built in that northern manner.

Only a single Puuc building has ever enjoyed the full-scale treatment that one deserves, namely the Palace of the Governors at Uxmal, subject of a Ph.D. dissertation by Jeff Kowalski (published later, in 1987). Gendrop has worked several field seasons throughout the Puuc region, but in the past decade the most advances in Puuc architecture have come from the annual field labors of George Andrews and his wife Geraldine. They have photographed and measured seemingly all the major Puuc sites. In short, despite the monumental nature of Pollock's Puuc, such a book today needs to be amended and certainly the summary section illustrated. The attempt to be content with elementary photography has fortunately been replaced by Andrews with a

scientifically accurate standard, in many cases at least 4x5 inch view camera. It should be embarrassing to recognize that no modern scholar has as good photographs as Teobert Maler of the 1890's. Andrew's come the closest, though they have usually been ruined by the cheap quality of bond paper which soaks up the printer's ink, as well as the generally uncaring printing typical of various publishers. The monumental architectural achievements of the Yucatec and Campeche Maya certainly deserve a photographic and printing labor equal to the quality of the architecture and the original photography itself.

Only when everything at Xtampak is carefully photographed and drawn, and then only when enough is known of neighboring Chenes sites to get a statistically valid view of what Chenes area architecture actually is, can a full comparison be made with that of Puuc. Puuc style and content has already been treated by Pollock; his work on Chenes, however, is only 10% of the geographical and intensity coverage of his work on Puuc. Rio Bec is even less known than Chenes, with no single monograph covering all standing Rio Bec ruins adequately (aside from the tower aspect, in the aforementioned unpublished manuscript of Andrews). Even as recently as 1987 it was possible for Hasso Hohmann to record an entire major Rio Bec twin tower edifice, Rio Bec N, that was nowhere else pictured, not even on a snapshot, much less in an architectural drawing.

“Puuc vaulting, almost without exception, carries an offset on all sides of the room." (Pollock 1970: 81). At least two quadrangles at Xtampak have rooms of this type, though there are no Puuc end wall springs in the Main Palace. It is worth noting that one set of two adjacent rooms (in the Southwest Building) that has Puuc end wall springs also has a rolling style Puuc vault and even giant stones for the jamb surface--just as sites throughout the Puuc area. Stone lintels in the same room demonstrate further the Puuc manner. These rooms are totally different in every way, shape, and form from those of the Main Palace.

Overall it is not merely that the Main Palace of Xtampak has a few stylistic manners found also at Puuc sites, but rather that within the overall site certain structures are essentially Chenes, the palace Rio Bec-Chenes, and others are fairly close to actual Puuc edifices. Does that mean that certain styles fit better the use needs of the particular structures, and/or that buildings of one century were Chenes, another century mixed Rio Bec-Chenes, another generation Puuc? Is the difference of architecture temporal or functional? And are the architects at Xtampak copying something they have seen or heard of elsewhere, or are foreign architects coming into Xtampak? Perhaps the Puuc attributes will be found to be constructed of locally shaped (presumably Chenes style) stones. It could well be that the

masons were accustomed to work in one style, yet attempting to create the style of another region. Each of these models will be tested and the results documented with drawings and photographs. All previous analyses of Chenes or Puuc have been area-wide. Not previously has enough time and energy (and funds) been available to follow through with a detailed analysis focusing on a single site.

Under-stair Vaults: a Puuc Trait

Pollock noted that Structure 6 of Dzibilnocac (a Rio Bec influenced Chenes site) had "an under-stair vault, presumably beneath a stairway rising to second floor level .... The under-¬stair vault is a common feature in Puuc architecture." (1970: 30). Comparable stairways with a definite half vault evidently exist at Dzehkabtun (ibid.: 41) though with no doorway into the first floor under the stairway. So far no under-stair vaults have been found at Xtampak but that may be because the Main Palace was erected all at once so it did not need secondary steps. All the other two-story buildings at Xtampak are collapsed. only excavation of their front stairways would reveal whether under-stair vaults once existed. Since Xtampak has other Puuc features, such a stairway construction would not be out of place.

Portal Vaults

Pollock, mentions at the Chenes ruins of Dzehkabtun, 8 km from Hopelchen, "a complex of buildings forming a quadrangle with a large interior court. The main approach is through a portal vault in the north range." (1970: 40). The west side of the Southeast Quadrangle, based on the plan of Xtampak, would seem to require a portal arch to span the space between the two wings--if the sketch map is accurate. It is precisely because of such uncertainties that the sketch map must be redone, with a surveying theodolite, and no longer left sketchy. A regional Maya capital should be properly mapped.

Puuc Style Door Jamb Stones

The main palace at Dzehkabtun employs Puuc style stones to form the door jambs (Pollock 1970: 41). "Puuc style door jamb stones" mean that the stones are large enough to deck the entire width of the doorway, although not necessarily always the entire height also. A Puuc jamb stone is one of the largest stones in the building, comparable to the lintel itself or the corner medial molding or corner cornice stone. Monolithic Puuc jamb stones are common at all traditional Puuc sites.

The same Dzehkabtun rooms have Puuc springs at the end of the room, as well as a half vault underneath the stairway. This

nearby "Chenes" site obviously needs to be further studied to understand the comparable situation of Puuc influence at Xtampak.

Domed Vault Profile

Every time that I show non-Mayanists photographs of the vault of the Southwest Building at Xtampak they immediately interpret the remains as of a normal European vault, almost a barrel vault. only when the capstone is pointed out is the viewer surprised. The Temple with Roof Comb of Dzehkabtun in the Chenes area has such a Puuc-like domed vault profile, and the same room has springs at the end wall. This constant presence of Puuc features in a supposedly Chenes area

DATING

All known stelae, all style-datable painted capstones, as well as all exposed standing architecture at Xtampak are Late Classic, the local equivalent to Tepeu 2 at Peten sites far to the south. In as much as Preclassic sherds have been identified at Xtampak it should be expected eventually to find Preclassic architecture. In the Southeast Quadrangle a crude attempt at grave robbing torn out the end wall and exposed the perfectly preserved wall of an earlier building. It also appears to have been Late Classic, but at least reveals that (as typical of all Maya sites) earlier

constructions--well preserved--may be expected throughout Xtampak.

What is lacking is relative dating among the Puuc, Chenes, and Rio Bec features. Considering how much original wood is still in place within various buildings it is unimaginative that earlier projects with an interest in Santa Rosa have not solicited a permit to undertake something as simple as radiocarbon tests. However much as we must fudge such dates, it would. be nice to have somewhere to start.

WHAT F.L.A.A.R. CAN CONTRIBUTE

The immediate contribution is in the realm of technology. Since F.L.A.A.R. is only two decades old, and as virtually all our "old" field equipment was stolen in New Haven apartment after my appointment at Yale University, we are re-equipped with the latest model cameras. Thus, somewhat like Japanese industry being the most modern since all old factories were destroyed in World War II, we are not burdened down by field equipment which dates back to a previous era.

Modern flash equipment is the first contribution. There is hardly a single interior photograph of any inner Maya room that is not illuminated by accidental sun light. Those portions of the room

which are dark stay dark in the publication. Those inner rooms that are always dark simply remain unphotographed. But the power of the largest Metz units (the most powerful flash that is reasonably portable) enables every room at Xtampak to be photographed. No such photographs appear in any of the three 1970's-'80's field reports on Xtampak.

Wide angle lenses make an immediate difference. Hasso Hohmann told me about a unique Nikon lens that took an image of everything that was in front of the lens--with virtually no distortion. For a year or so I ignored this comment since I had a Hasselblad Superwide C, which was supposed to do just what Hohmann said the Nikon lens would. But in fact, the Superwide C did distort, and its angle of view was simply not enough to get in the entire end zone of the Chichen Itza ballcourt, so I took a gamble and ordered the 15mm Nikon lens (not realizing at the time that Leica made an identical lens). It turned out that the Nikon 15mm did in fact do everything which Hohmann had mentioned. The distortion was entirely in straight angles--there was never curvilinear distortion of the fisheye effect. In fact, there was less distortion than a 21mm lens--yet far more was included in the picture. with the 15mm lens it was possible to take the first meaningful photographs of the interior stairway of Santa Rosa. Aside from the two 15mm Nikon lenses in Graz, no others are employed in the entire Maya area. There is also a special wide

angle Linhof camera, not simply a lens on their regular camera but a completely separate fixed-lens camera using 120 film (long format), somewhat the idea of the Hasselblad Superwide C but offering a slightly longer negative. At $6,300 for the Linhof camera I have not yet had the possibility to tryout its capabilities due to a lack of $6,300. I do not know whether it is a non-distorting lens such as the Nikon 15mm, or simply a minimal-distorting lens such as the Superwide C.

When it becomes possible to have a portable electric generator at Xtampak we will be able to take even better photographs, since fixed studio lamps can illuminate rooms and their vaults more evenly and more predictably than even the best flash. Also, flash on TTL cords can go only a few feet from the camera, but lamps from a generator are totally independent of the camera position. Thus overall, merely with lighting and lens alone it is possible to record features of Santa Rosa which were not possible on earlier field excursions.

Another feature that F.L.A.A.R. can contribute is time, the time to spend long enough, and return often enough as required, so that everything at the entire site is thoroughly photographed. Other than Stamps' ten weeks, all previous work at Xtampak has been carried out under the duress of visiting, of having to be somewhere else the next day, or often the necessity of driving

back a long distance to be in a hotel. A tent in the parking lot and a kitchen down the road made it possible to put in 11 hours of photography a day.

Even a simple transit will enable the Folan mapping team to produce a more accurate map. I do not know if the Carnegie map was made with the aid of a transit or just with a Brunton compass, but there was not likely any realistic means in 1936 or 1949 in the few days set aside for this site to connect the widely separated portions of the site with one another. Thus outlaying quadrangles are skewed in relation to the site core. A major goal of the Folan-Morales mapping will to add all the house mounds of the surrounding area.

And a final contribution will be to redraw the standing architecture so it is not all pictured as neat 90-degree corners and straight walls. The northeast room of the Main Palace is anything but rectangular. And the perspective reconstructions will be more accurate.

More than solely making the map more complete and more accurate, we would like to introduce Computer Aided Design and work out a means to make a total station (electronic computer aided surveying instruments) function in the Maya field situation. These two

features are considered further in a separate proposal discussion.

It should be pointed out that so far all of these field techniques are means of obtaining maximal cultural information without needing to move a single stone. No excavation whatsoever is needed during the initial stages. Transits and cameras can salvage a tremendous amount of data even without pick and shovel. And when it does come to shovel work at some future time, let us hope it is brush and camera, and in fact not the pick and shovel removal techniques so typical in projects intending to resurrect the past glory for appreciative governors and gawking tourists.

A long-range goal is to implement recording devices that can catalog collapsed buildings, stone by stone. The technology is present in other fields, but has never been gathered together in a system applied to Mesoamerican archaeology.

WHY THIS PROJECT?

Whenever a new book on "Maya civilization" appears in print it seems that the Maya consist principally of Palenque, Copan, Tikal, and Chichen Itza. Several entire multi-thousand square mile segments of the Maya realms are simply forgotten--the

southern Puuc, Chenes, and Rio Bec areas. The same was true with my own education, both in school and what I had available to read. What little was written on Campeche and Yucatan seemed isolated, requiring specialized knowledge of these areas. Monographs on Puuc and Chenes and the occasional articles on Rio Bec did not tie these areas into the Maya mainstream, which treated the Rio Bec and Chenes as curiosities--if at all.

To improve my own education and to assist interested individuals in the same self-education process, for 1986 I organized an informal reconnaissance of the off-the-beaten-track Puuc area. I was horrified to see first-hand how much modern destruction was taking place at the Maya ruins, not so much grave robbing but total dismantling of the ancient buildings in order to get cheap stones for modern buildings. One Maya palace was being taken apart in order to build a school.

This form of total obliteration of Maya buildings by the local population is not normally included in the tirades against collectors. The fact that local populations are daily involved in the systematic obliteration of entire buildings (not only digging trenches in them, but taking down the whole edifice) is neatly overlooked. Often local officials (school officials, alcaldes) had to be either approving this robbing of stone, or at least by their inactivity permitting the act.

With a new road to Xtampak would it also be a target? Road crews themselves are major destroyers of Maya sites, since ruins make convenient road fill. Thus Xtampak needed to be photographed thoroughly before even more of it disappeared. As I was interested in a site with standing architecture so that CAD and Total station surveying technology could be introduced, Xtampak was the ideal selection. The failing (and falling) wooden lintels at Xtampak made the choice even easier. At the same time that the palace was rescued it could be systematically analyzed and based on the knowledge thereby gained, carefully and professionally preserved.

The academic reasons for selecting Xtampak are self-evident--the Puuc, Chenes-Rio Bec, even Peten (Solstice-Equinox Observatory Complex) made the site a natural choice for an architectural historian. My personal interests were mainly technological (photographic and computer) and architectural and it was a perfect combination that Abel Morales had an interest in the Uaxactun Group E-like area at Xtampak and that William Folan saw the potential for Xtampak as a model for a regional center.

THE MAIN PALACE

Aside from Edzna, Chacmultun, Labna and Sayil, the Main Palace of Xtampak is one of the best-preserved multi-story palaces in the peninsula. The assemblage known as Edifice 5 at Chacmultun could be considered a four-story palace (E. Thompson 1904). Halal had what may have been a five-story palace (Pollock 1970: 547) but it is all largely in ruin. Edzna's five-story palace-temple-pyramid is a unique configuration, and although outside the main Puuc area still retains many Puuc traits (Andrews 1984). Virtually all other Puuc palaces are only one or two stories. For the Chenes area, no multi-story palaces of the Becan or Puuc kind are yet known. If Dzibilnocac indeed lacks a multi-story palace complex (as opposed to merely smaller two-story ranges) than that sets Dzibilnocac apart; otherwise this is a huge city that must have represented considerable competition for Xtampak. Dzibilnocac has served as a stone quarry for the modern town, so it is hard to know what the ancient city really looked like. No multi-story assemblage is known (the towered structure is not of the complexity that we are comparing) but no one has looked for one either.

The palace type as erected at Xtampak per se appears to be an unexpected local adaptation of a Puuc or eastern Rio Bec

concept--clearly originally a Peten trait, but the Xtampak arrangement is an adaptation of a Puuc or Rio Bec concept, not a Peten style palace. But none of the Labna, Sayil, or other Puuc palaces has a Chenes portal or a triple Rio Bec tower set. And, neither of the other triple Rio Bec towered palaces (Xpuhil and Dzibilnocac) are three-storied or rectangular in arrangement.

> "In virtually every respect, the three-story palace is a unique building and it has no counterpart anywhere in the Chenes region. (Andrews 1987:74).

Gendrop has suggested Becan Structure IV as an inspiration for the Xtampak palace, though it is not known which building is actually earlier. Becan Structure X is another rare three-story Rio Bec palace. No other Chenes or Rio Bec site has a three storied palace unless the largely collapsed edifice of Manos Rojas is triple-leveled. Such multi-story edifices are typical only of Peten to the far south and Puuc to the immediate north. It should not be acceptable to create models when we wallow in ignorance about the very areas about which we create the models. At least Potter visited most of the sites about which he spoke, as have Pollock, Gendrop, and Andrews--to the degree that they could. Several sites visited by Maler or the Carnegie have not been photographed (or at least not published) since those initial famous visits.

Kabah Strs. 1A1, 2A1, 2C6, 2C2 and 2C3 are all palaces which face two directions (ibid.: Fig. 282, 322, 338, 339). The latter has 35 rooms in the two floors. Even then, most Puuc palaces seem to be uni-directional, facing more in one primary direction. Although the Xtampak palace clearly faces east, and although the west side is demonstrably the "back" nonetheless the local Maya even left space for a plaza at the "rear." One comparable beginning of a four-directional palace is structure 4B2 of Sayil, two storied (Pollock 1970: Figs. 257, 258). Pollock indicates he could find no stairway to the second floor (ibid: p. 124). Could an interior stairway be buried under collapse? From his plan that does not appear likely. Few if any full-story interior stairways are reported for the Puuc outside of the unique labyrinth of Oxkintok. It is essential to learn more about the Rio Bec palace of Manos Rojas, as it also has a formal interior stairway, though no drawings of the architecture exist. And its intriguing inner stairway does not appear in a single published photograph, not even those of Potter (1977) probably due to lack of flash and the specific super-wide-angle lens which is the only one that can take a view in such a narrow space.

THE PRESERVED WOODEN LINTELS

More wooden lintels are preserved in the single palace of Xtampak than in any other entire Maya city outside of Tikal. At least two

Figure 2

Figure 2. Two planks have already given way; the fragile remainder is sagging. This condition has already occasioned collapse of the vault. Wooden lintels over interior entrance into Room 14 or 17, west side, first floor, Santa Rosa Xtampak. Since the TTL meter reads in the center, it reads the far back wall, thus overexposing everything in the foreground.

original vault beams are also preserved. Most of the other buildings at Xtampak have either stone lintels (in the Puuc style) or their wooden lintels are long ago chewed apart by termite and jungle rot. This degree of preservation has inspired me to prepare an entire report, *Wood that has lasted one thousand Years: Lintels and Vault Beams in Maya Temples and Palaces.* In addition, the reader should consult Leiter's *An Inventory of the Lintels of the Main Palace of Santa Rosa Xtampak.*

The lintels still in place can provisionally be divided into four conditions: 1, cracked and bending; 2, shrunken, bending slightly but still upholding the wall; 3, shrunk yet still strong; 4, in perfect condition albeit naturally shrunk. It took a minimum of two wide lintels to span each doorway; sometimes three or more beams were used.

Folan has already declared salvaging the creaking lintels as the first order of business in rescuing the palace from collapse. Even in their dangerous condition, the wooden lintels, preserved from the 8th-9th century, are the feature of Xtampak most commented upon by visitors and those who see the color slides of the interior rooms. One front room has its lintels in such remarkable condition that you can almost see the Maya carpenter placing them over the doorway. All the more remarkable is the fact that the Xtampak lintels are the thinnest of any Maya building, less than

half the thickness of lintels at Tikal. Such thin lintels are evidently a Chenes/Rio Bec trait, since most Puuc lintels are of stone. Although the preservation of wood in such an environment for over 1000 years of tropical humidity verges on the impossible no one has yet dedicated themselves to a thorough analysis of the lintels of Xtampak, or Maya wooden lintels in general. I find this millennium old wood the second most fascinating aspect of the palace after its remarkably well-preserved stairways.

The most notable feature of the lintels is the degree to which the wood has shrunken, virtually shriveled. That is why so much white space shows through in the photographs. On one set of lintels, in between the normal wide, flat beams was a single narrow pole, the impression of which in the mortar is clear as can be (the pole itself is long ago rotted).

Gendrop and his colleagues Victor Rivera, Juan Antonio Siller, and Alejandro Villalobos, all of UNAM, were the first to announce the interesting constructional detail which totally escaped all earlier visitors to Xtampak, namely the reinforcements several centimeters over the actual lintels. Are these reinforcements responsible for the remarkable durability of the lintels--especially considering that the Xtampak lintels are among the thinnest in the Maya area?

> "Nos parece interesante volver a mencionar un elemento que reportamos el año anterior en Payan (Cuadernos 5:44) y que pudimos observar nuevamente en Dzibiltun y Santa Rosa Xtampak. Este elemento, que hemos dado en llamar "refuerzos superiores de dintel" (o simplemente "refuerzos de dintel") consiste en dos o más morillos descortezados que se colocan por encima del dintel (que conforman vigas de madera de escaso peralte). Embebidos en el interior de la mampostería que se coloca sobre el dintel, estos morillos no solo salvan el claro que cubre dicho dintel, sino que se extienden paralelamente en ambos extremos unos 50 centímetros cada uno; aumentando con ello en área resistente.
>
> La explicación para esta peculiar forma de refuerzo puede residir en la necesidad intuitiva que tenían los constructores, al darse cuenta de la escasa resistencia de sus poco peraltadas vigas, de añadir elementos estructurales susceptibles de aliviar en parte la carga que era transmitida al dintel. Pues si bien podía ser difícil, en un momento dado, disponer de madera de mayor escuadría para las vigas del dintel, los morillos de refuerzo siempre eran fáciles de con seguir de mayor longitud y de unos escasos 10 centímetros de diámetro. Cabe invocar también la necesidad de hacer el trabajo con cierta premura, así como la posible existencia de una mane de obra poco especializada.
>
> Colocados en uno o dos planos horizontales y en forma simétrica con respecto al dintel~ estos refuerzos han dejado evidencias muy claras de los lugares que ocupaban dentro de la mampostería y que, al fallar algunas de las vigas del dintel y venirse abajo una parte de aquella mampostería, quedaron señalados por un hueco que, a manera de molde, conservo su huella exacta. El hecho de que no se hayan conservado dichos morillos al quedar descubiertos parece implicar que se trataba de una madera de menor durabilidad que la del dintel (pero que, al quedar ahogada en mampostería, debía tardar mucho en descomponerse).11 (Gendrop et al. 1987:55-56).

Folan's concern about shoring up the lintels implies that fresh, strong lintels must be cut. Actually, chicozapote trees are so common that merely from windfall could the entire Xtampak lintel replacements be cut. Storms rage through this part of Campeche and uproot thousands of trees. Just on a one-day drive into

Calakmul in April we found enough lintels could be made from this one storm's results. This is especially true for Xtampak since their lintels use so little wood. The thinness results from using the edges of the trunk and in some cases perhaps even portions of large branches. The lintels of Xtampak should be carefully inspected with an eye to ascertaining whether in fact all are from the edge of a tree. That means that the heart of the tree, the actual square beams, were used elsewhere. Is this because the core was too costly to use as beams, or is it because the outer edge had more sap and thus was more resistant to rot?

Eldon Leiter initiated measurement of all doorways to ascertain how many are totally missing (1989), how many are sagging and need to be replaced, the measurements of all for statistical purposes as well as for making replacements, and photography of each lintel area, both frontally to show cracks/collapse/present condition, and from underneath to capture all available information. Despite the many visits by other scholars the lintels have never been adequately analyzed. Gendrop and his colleagues did, though, certainly make an interesting discovery of the above-lintel reinforcements. There are so many lintels that this work will need to be continued.

The situation with the lintels typifies the overall situation with Xtampak--lots of other capable scholars have undertaken field work--but it was in the nature of visits, short visits. Our own 1989 season was itself equal to that of Stephens and Maler combined, not as long as Andrew's total, but in 1989 our week did not require any clearing, since the INAH guards and Folan surveying crew had neatly landscaped the forest so that it was possible to get around without tripping over fallen trees. Stamps comments how he found the Southeast Quadrangle only on the last day of his long stay; same with us, in fact none of my previous visits even reached that far. But today the Southeast Quadrangle is but a 10-minute stroll from the Main Palace.

With a 15mm super-wide-angle lens it is possible to get photographs of any entire set of lintel beams from underneath, all together in a single view. An essentially black lintel against a totally white plaster background is basically impossible to photograph. The plaster is immediately over-exposed; the lintels remain underexposed. Perhaps for these reasons not a single photograph of an entire lintel set has been published, and only an incidental view of the front of a lintel where sunlight shines on them (Stamps 1970: Fig. 26b). Color film actually renders the scene better. The ideal manner would be to have an electric generator so that all the light can be aimed directly at the beams rather than at the plaster. Flash is hard to aim and

tends to splash everywhere. With a generator it will be possible to illuminate the lintels adequately.

Leiter will take the 35mm color slides which are used for making available to scholars and for lectures. Hellmuth (and others being considered for later) will use Hasselblad cameras for black-and--white coverage. 35mm will never be used for black-and-white except when the 110-degree angle of view of the super-wide angle Nikon lens is needed. The only other site that had such coverage on its lintels was the Tikal Project and that solely for the carved lintels of the great temples.

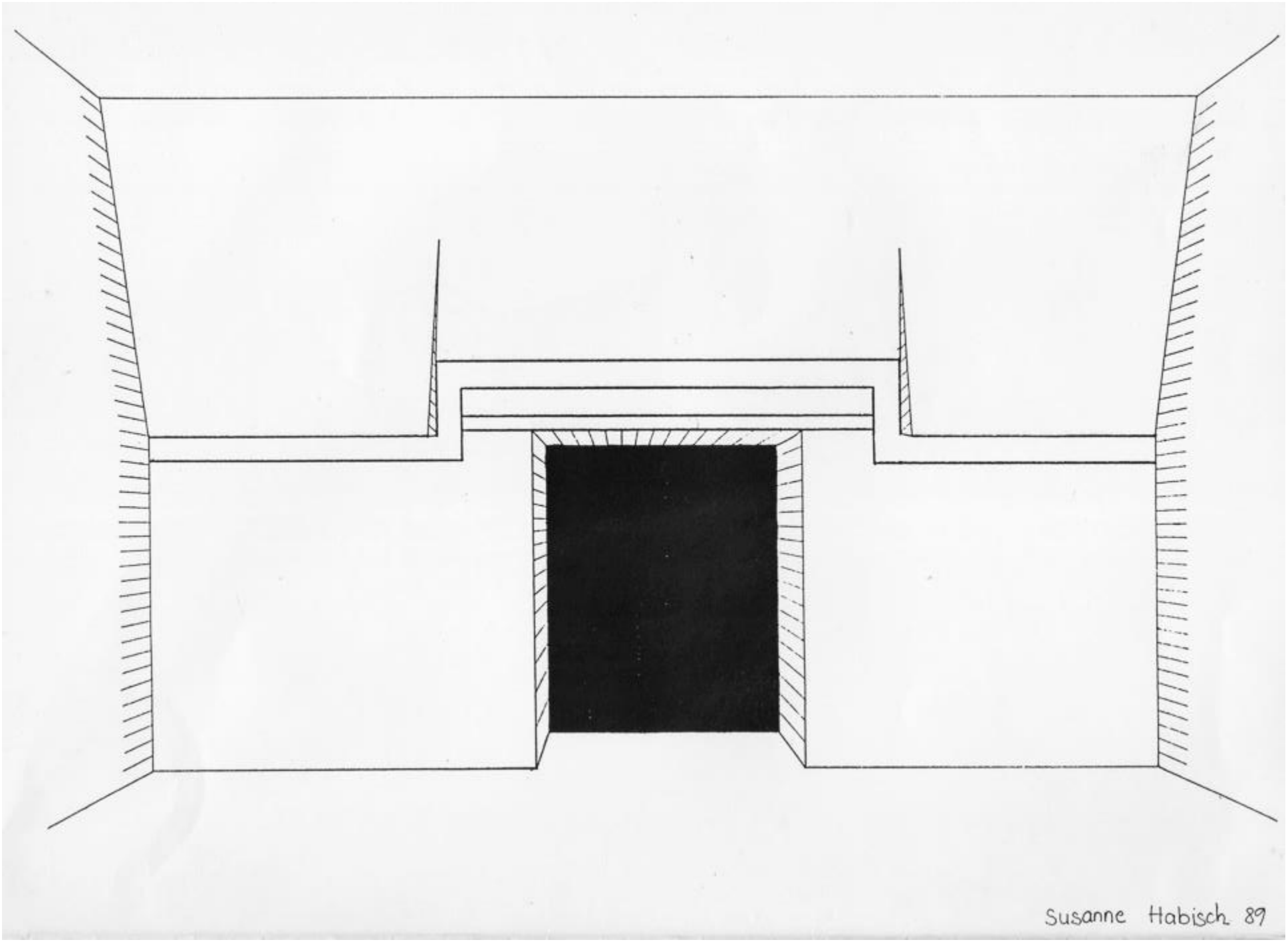
All the local workmen identified the lintels as of chico zapote *(Achras zapota)*. We have no identification on the two or so remaining vault beams; presumably they are also zapote. At Tikal and El Zotz the surviving beams tend to be of zapote in temples and logwood, palo de Campeche *(Haematoxylum campechianum)* for palaces, though this is not an absolutely fixed rule. In Quintana Roo and possibly elsewhere in the peninsula at least two, possibly three, other kinds of tree were used (Hellmuth 1989b), which is why I would prefer to have a botanist make an absolute identification for Xtampak. It would also be a fruitful analysis to ascertain why the wood at Xtampak is so better preserved than elsewhere. Is it because the outer part of the tree has more sap and thus lasted longer? Is it because there was less seepage in

this palace because of the upper stories or because the palace was simply better constructed? Or did the above-lintel supports really work the wonder?

The lintels of Tikal's five great temples are about 21 cm thick, 23 cm wide (varying between 16 to 39 cm). Their greater thickness was necessary due to the much wider doorways in the great temples, half again as wide as the multiple doorways of the Xtampak palace. It would be worthwhile to see if a mathematical relationship can be worked out of how thick a beam had to be to span any given distance.

RECESSED ZONES OVER CERTAIN DOORWAYS

Four rooms, 20 and 23, 16 and 25, at Xtampak, have carefully formed recessed space over the central doorway, stepping up from the lintel and then blending into the vault soffit. The only drawing of the palace that comes close to adequately illustrates this decoration is that of Stamps, as it is three-dimensional and in perspective. Two-dimensional drawings are necessary in scientific reports but should be complimented by a such a perspective view. Unfortunately, Stamps was not an architect and the drawing is imprecise on one course with its turn around the vault, as well as incorrect in the depth of the door jamb. Despite all the time, energy, and money dedicated to Xtampak by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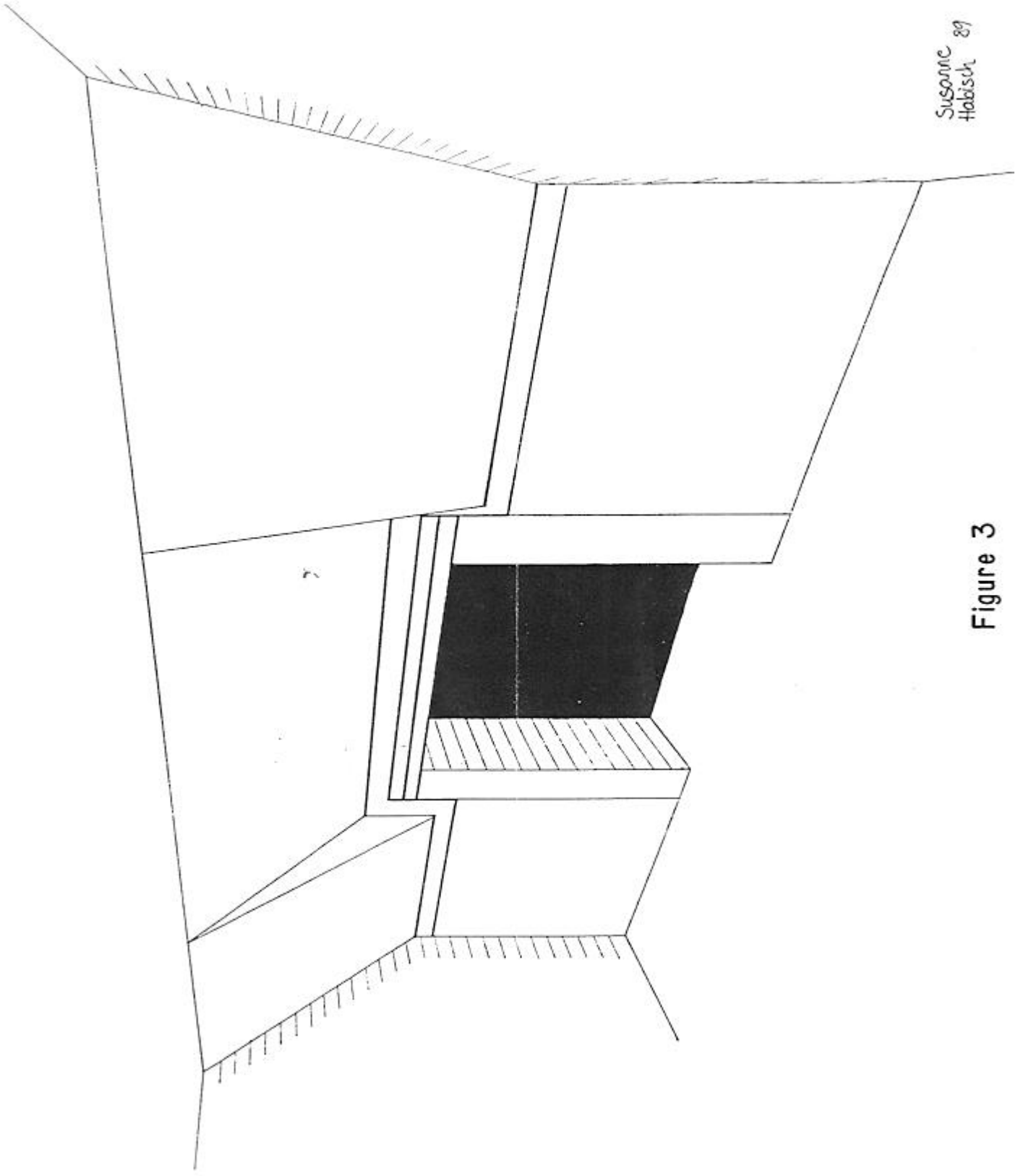

Figure 3. Three-dimensional line drawings of the supra-lintel recessed soffit show the details more realistically than any elevation or profile, which are hard for non-architects to understand. Rooms 6 and 8, Main Palace, drawn by Susanne Habisch from 35mm slides taken with a 28mm lens. Santa Rosa Xtampak.

Figure 4, a. Front of Room 6 showing stepped recessed area over the lintel.

a

Figure 4, b. Front of Room 8 showing the same situation as in Room 6, with double spring along the wall changing into stepped recessed panel over the lintel. Santa Rosa Xtampak.

b

Figure 4

Figure 5

Figure 5. Tzikin Tzakan, Peten, Guatemala, Main Palace, close up of stepped recessed decoration over the doorway. These may be the only close up photographs taken which records this detail for future study.

Figure 6

Figure 6. Tzikin Tzakan, two thirds of the length of this room (there is one more doorway out of view to the right). This is the longest single room yet recorded for the Peten, and possibly the longest single undivided Maya palace room outside of Palenque. According to reports this entire palace collapsed in a single moment due to excessive weight of water which soaked into the vault mass. I do not know whether this is the inner room (in which case the outer room fell long ago) or whether this is a single range structure, which I would find unlikely for such a long edifice.

early visitors, none of them produced accurately measured drawings--everything available, including from the Carnegie Institution expedition--are idealized sketches. Andrews states (1989, personal communication) that he used a tape measure but I doubt it was possible to draw all the room profiles from a plumb bob line and line level as is required to be scientifically accurate to the standards set at Uaxactun, Tikal, and Chichen Itza, the most carefully measured ruins so far recorded. Measurements this accurate cannot reasonably be expected from a visit or an expedition. Only a "sedentary" project has the infrastructure and time to dedicate that much effort--but in our opinion Santa Rosa deserves that concentration.

Pollock mentions comparable over-doorway insets at the Chenes site of Dzibiltun (1970: 24, Fig. 26). Potter adds a reference to "variable vault spring level" as a "scattered characteristic throughout central Yucatan. It occurs at Str. VIII, Becan; Str. I, Xpuhil, Group II, Str. IV, Rio Bec, Group V; Str. I, Culucbalom; and the Palace, Santa Rosa Xtampak. It also occurs in the Palace, Dzibiltun, a structure thought to be in the Puuc architectural style." (1977: 83), though in fact Dzibiltun is in the Chenes geographical area. All the other sites which Potter mentions are in the Rio Bec geographical as well as cultural area. If this may be considered a Rio Bec trait, it should be

added to the recessed wall panels and the towers, also Rio Bec traits at Xtampak.

I would add a reference to the palace of Tzikin Tzakan, a little-known Maya site 1 km north off the highway between Flores and Melchor de Mencos, about 12-20 miles from the Peten-Belize border. This Tzikin Tzakan (the site has several variant spellings) had the longest single undivided room of any Maya site yet known. Unfortunately, the entire palace collapsed totally in the exceptionally rainy season of about 1980-82, the same period that so much rain damage occurred at Tikal. The two or three photographs in the F.L.A.A.R. archive are the only ones known in an open archive to record this rare architectural decoration at Tzikin Tzakan (Hellmuth **480286-6-Negs.1-9).** The double spring and stepped frame at Tzikin Tzakan creates one of the most interesting such supra-lintel vault insets yet found in the entire Maya area. Comparable examples should be sought at Tikal and Nakum.

Fortunately, two of the four Xtampak doors that have the inset supra-lintel areas are among the best-preserved areas of the first story--since they are inner rooms they were not exposed to weather until the outer rooms collapsed, which probably took several centuries. Of the two the one on the left is especially well preserved, indeed the lintels here are the best preserved of the entire site, having shrunk the least and still retain a rusty

red color. Since this decoration is inside, one wonders how anyone could have seen or noticed it since the room would have been rather dark except when sun happened to shine inside. Here is another benefit of using CAD; with CAD it should be possible to test sunshine and shadows.

On both sides of the doorway and inset area that entire wall length has a double spring. Both spring courses turn upward but then separate; the top spring forms the top of the entire inset area over three full courses away from the lower spring line. This lower spring line continues across the entire lintel, but is separated from the lintel by a distinct course of small stones. The "spring course" is formed of a different sized stone, completely flat, rather than specialized angled stones. Overall, the masons went to particular effort to produce particular stones for an unusual decoration. It is unknown why they went to so much effort inside the building.

The fact that the two widely separated rooms which each have an identical decoration are in effect mirror images of one another is one of several indications which document that the entire palace was designed--and constructed--as a complete unit. The end rooms on the first floor on each end of the building also have another type of decoration but which is identical on each end of the building. The palaces at Labna and Sayil are nowhere so

bilaterally organized. until all Chacmultun is better mapped it will be difficult to ascertain how much of "Edifice 5" should be considered a unitary building, and how much simply miscellaneous buildings which happen to be near one another stepped up a naturally hill.

CORD HOLDERS

Virtually every room in Xtampak's various building complexes have cord holders alongside the door. A few of the lower story palace rooms even have cord holders on the end walls. Hohmann is one of the few architectural historians who has seriously attempted to ascertain actually what was held by these holders and the cords that went through them. Such analysis can be continued taking into account the differing placement of cord holders at sites such as Xtampak.

Every cord holder at Xtampak deserves to be photographed, drawn in three dimensions; then an analysis should be undertaken to ascertain if there is a difference among Puuc form and placement, Chenes form and placement, and Rio Bec area form and placement. Do temples have different arrangements than palaces?

MASONRY

The impact of all Classic period architecture of the Yucatan peninsula depends on the facing masonry. The stonework of both Chenes, Puuc, and Rio Bec is of a higher quality than that of Peten related sites. The geological quality of the limestone may itself be a factor, as that of the Peten (such as at Nakum) is soft, friable, and erodes quickly. The masonry of Xtampak varies from building to building but is generally of outstanding quality, especially in the palace.

Masonry serves a useful part in the long-range goal of recognizing the regional flow of influences north and south across Xtampak. Boot-shaped vault stones are a trademark of Puuc vaults, as much as barrel-like vaults. But if a (Puuc) barrel vault is made of Chenes-like stones that means that the influence is one of style, not substance. But if the masons at Santa Rosa are producing stones that are pure Puuc in size and snape as well as in placement manner Xtampak may have been part of the Puuc realm, not just a Chenes site influenced by Puuc diffusion. This possibility--namely, that Xtampak was once part of the Puuc realm--has not been in the list of models. It has always been presumed it was first and foremost a Chenes site which received Puuc influence at times, influence from Rio Bec at other times. Initially, it is necessary to decide what defines Chenes area masonry, what defines Rio Bec area, and what defines specifically native Xtampak stonework, keeping in mind that masonry style

changes over the centuries. Puuc masonry is already well known from publications of Pollock, Andrews, and Gendrop. Architecture as an artifact will be just as useful in answering the final questions of the role of Xtampak in ancient times as pottery.

PROJECTING TENONS

Every meter or so along the entire preserved upper zone are two informal rows of projecting stones. At virtually every corner of the building are comparable sets of two stones, one directly on top of the medial molding, the other directly above in the middle of the top cornice. The palace of the Puuc ruins of Ichpich has a very similar set of top and bottom stones (Maler 1902: Abb. 3). Ichpich is included by Pollock in his book on Puuc architecture (1980: 558; Maler 1902: 199-202) (though Santa Rosa is not). No illustrations whatsoever are provided by the Carnegie Institution/Peabody Museum publication; it is not until Gendrop's single view that the site was illustrated again (1984:3). The corner of the upper zone of Structure 1 has the projecting tenons; such corner projections are a special case of upper zone tenons that typify Xtampak--and Ichpich. The same Ichpich building has a vertical corner molding (op cit.) similar to that of Xtampak's Main Palace. Clearly Ichpich needs to be completely photographed in close-up detail. And style analysis needs to determine whether

the corner molding with corner tenon is a Chenes trait, a Puuc trait, or a universal Campeche feature.

It would be easy to cite any number of other protruding sets of stones in Yucatan and Campeche (Pechal in the Rio Bee area (Gendrop 1983: Fig. 75, d) for example). In Chiapas such sets of stones supported stucco statues. Indeed on the upper zone and roof comb of the Mirador at Labna comparable sets of stones certainly supported stucco statues (a complete ballplayer scene). The general conclusion of all investigators of Xtampak is that also here there were originally statues. But here not a single remain of any such statue is to be seen. It will be necessary to use a ladder to climb up and investigate every last one of them to double check. A similar set of protruding stones sticks out of the upper zone of the Cuartel (Pollock 1970: Fig. 79). Since the projecting stones of Chenes area towers (at Chanchen, Pollock 1970: Fig. 46) were almost certainly to support statuary, I join the other writers in concluding the Xtampak stones were for statues. They would certainly have added a rather different note to the architectural appearance, which is otherwise rather lineal and severe.

Scores of sites in Campeche and Yucatan have such tenons; a small sample of these are Chicanna (Chenes-Rio Bee area) Str. II,

Hochob (Rio Bec-Chenes area) tower of Str. 6; Xcacabcutz, Str. 1 (Andrews 1985: Fig. 51 and 52).

The most impressive set of tenons is on Structure 5, the tower of Hochob, a Rio Bec-related structure though in the middle of Chenes territory. They are so closely placed that they make the building upper zone look like a sawfish bill.

RECESSED PANELS ON THE LOWER ZONE

The lower zone is that part of the building under the medial molding. In effect this is the front facade where the doors are. On the inside of the room this is the wall below the vault spring. The upper zone is the medial molding to the cornice; on the inside approximately from the spring to the capstone, that is, the vault area.

All along the back side of the third floor as well as on the end of the first floor are recessed panels on the lower zone of the Main Palace. This is increasingly considered a basic trait of Rio Bec architecture as it is found on Rio Bec buildings of Becan and Rio Bec Band N, among elsewhere, though in the actual Rio Bec area the recessed panels have a checkerboard pattern. Andrews has recently reported a building at Kohunlich which has several Rio Bec features, including, recessed panels (1987: 24). Although

Kohunlich is best known for its Peten-Belize style Early Classic stucco masks in fact there are several Rio Bec towers in pure Rio Bec style.

RECESSED PANELS ON THE UPPER ZONE

There are five recessed panels on the back of the third floor, properly shown in Stamps. Coincidentally two were inadvertently shaded as though they were doors on the Andrews drawing (1987: Fig.47, b). By mistake all versions, including that of the Andrews recently issued but not actually published monograph omits the panel on the end of the third floor as well as the panel of the side of the second floor. This omission results from at least portions of each drawing being derived from that of Stamps, who forgot them in the beginning. The latest version of Andrews drawings does, though, make considerable changes in detail over that of his own 1987 issue. Drawings that are finished at home, 9,000 miles from the actual building, are bound to have such omissions.

Andrews has already correctly pointed out that these panels are not entirely pseudo-doors, since they have no lintels (as do the fully pseudo doors of Rio Bec area towers). They are not deep enough to be niches and have no tenon stones that would suggest sculpture were displayed there. Instead, their size, shape, and

positioning in the walls evokes the image of a shallow door--even without a lintel.

Aside from the fluting and the details of the basal molding on the left pilaster on this south end elevation which need to be added also, it should be noted that there is even a panel on the upper zone of the second floor, easternmost unit. If the upper zone recessed panel is real, and not a mirage, that would change the overall appearance of the elevation views by breaking up the horizontal tendency.

I would welcome comments from readers for comparative examples of recessed panels elsewhere in Maya architecture. In the meantime, I propose that the Xtampak panels are related to the panels of Rio Bec ruins, from Becan or Rio Bec B itself, only in the Rio Bec area such panels have inset cross or checkerboard decorations. A clue might come from the palace(s) of Manos Rojas, to see if the walls there had recessed panels. Unfortunately, most of its outer walls are collapsed.

DECORATIONS ON INSIDE WALL

At each end of the palace are several areas of decorated stone. These have been drawn by Stephens and Catherwood and photographed by Maler and Pollock (1970:54-55). All these carved panels were

actually inside a room, on a back wall. They are only visible now because the room in front has collapsed. Such wall decorations would be expected outside, visible to every passer-by. The only other room that I can immediately think of with such decoration under an overhanging vault would be that of Labna's main palace. Surely other examples would be known by Yucatan and Campeche specialists, but certainly nothing like this is widely known for Peten style architecture. Should these inner Xtampak panels be compared with the wall panels of Piedras Negras and EI Cayo (misattributed as lintels in the literature they were never set over doors but were set against inner walls).

Karl Herbert Mayer has over the years been able to track down the locations of these various panels which were partially stolen from Xtampak by looters decades ago.

THE PILASTERS AND COLUMNS

The middle of the north and south end on both the first and second floor has been reconstructed on paper as built with square pillars to create doorways into Rooms 16/25, 21/22, 32/37, 34/36 and 40/44--each being bilaterally symmetrical room pairs (one room identical to the corresponding room on the other side of the palace). Andrew's north elevation shows pillars on the second floor, piers (wall sections) on the first floor; Stamps suggests

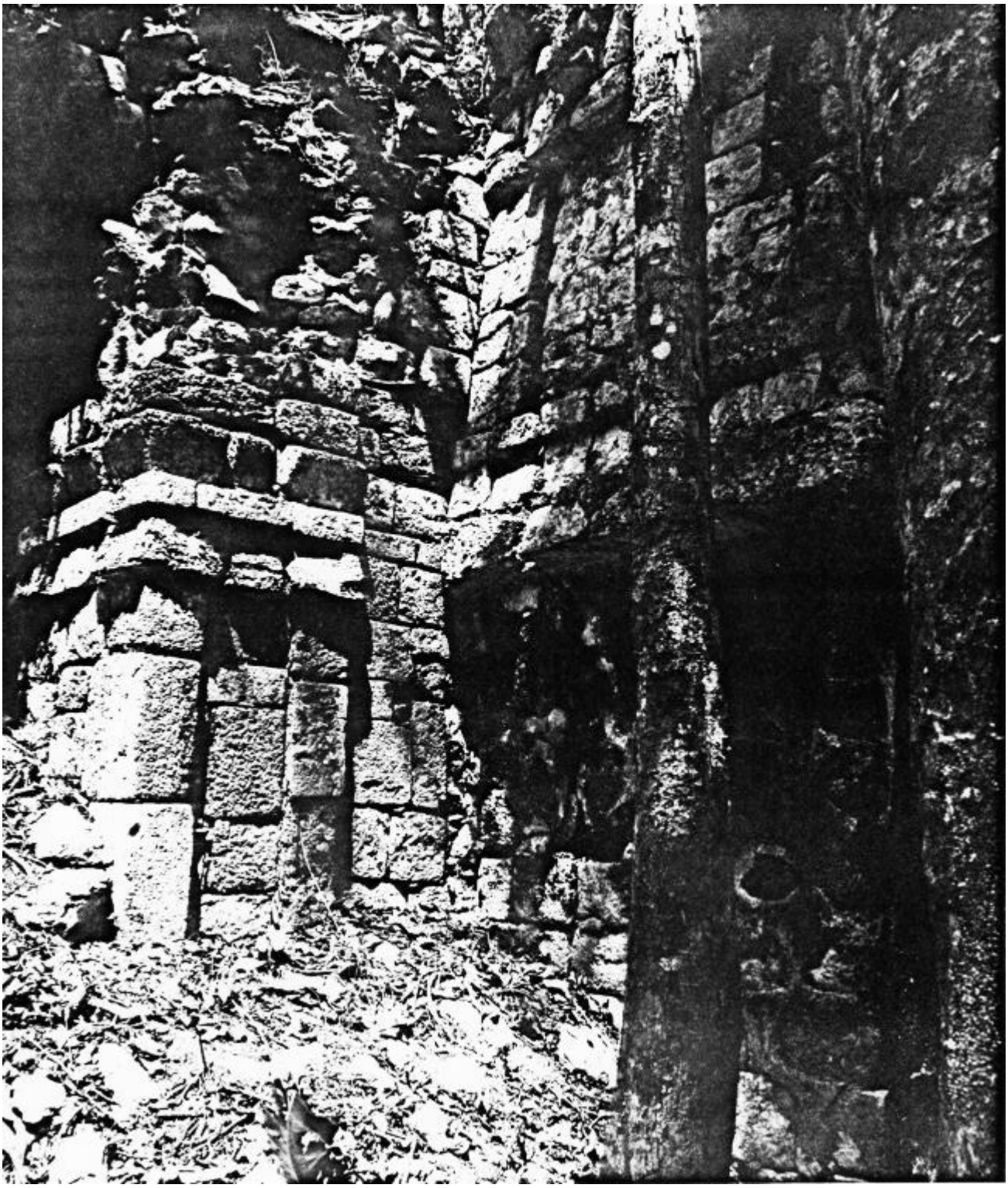

Figure 7

Figure 7. Pilasters are the rule on the Main Palace. The vertical flutes are always and only on the front. The pilasters of Rooms 1 and 9 had an angled geometric bound motif as capital; those of the second story had horizontal bands. **449951-11.**

columns also for the first floor and exceptionally wide doors, possibly to allow seeing inside to the unusual wall decoration on the inside wall. Wall sections might be more in keeping with the rest of the palace style than columns--when you form an image based on the better-preserved back, where wall sections are the norm. On the second floor, though, there is less space for wall sections and actually most of the palace (except for the back first and third floors) probably had pillars and pilasters. No round columns are expected, since that is too Puuc, and the Main Palace is everything by Puuc. An occasional detail may be shared with Puuc buildings, but the palace itself is not Puuc as we now know of that northern architecture, not even Early Puuc. To see the difference, just look at the Southwest Building, which may be early or Proto-Puuc (Andrews 1988).

This is all entirely imaginary as these are precisely the sections of the palace which are totally collapsed. Comparable portions of other Chenes Rio Bee palaces are likewise not preserved.

Stamps points out that if normal Puuc columns had been present the drums would be visible in the collapse somewhere on the north or south ends of the building. Since none are - he concluded that the jambs were of normal wall stone, indistinguishable in the collapse from any other wall. Other than details about the northwest and southwest corner steps and second floor

NW and SW corner platforms, there are no other features of the entire Main Palace which are as uncertain as the north and south elevation details. Finding out what these areas looked like is a major goal of eventual excavation. In fact special care will be needed in recording the precise position of every fallen stone on the middle of both the north and south ends in order to ascertain what the door sections there looked like.

One feature of the end elevations that can be improved immediately is that of the central rectangular "flute" in the flanking pilasters. Andrews evidently took the plain pilasters from the plain ones of Stamps, though otherwise Andrews thoroughly improves on the work of Stamps. Stamps did an outstanding job considering the primitive conditions of the 1960's, but it took the eye of an experienced architect to note the omissions (the vertical moldings in the upper zone at the corners, the steps up to the end towers, the steps alongside the main front stairway on the second level, and the four back stairways, and occasional errors).

Andrews also added the entire basal zone, in effect the building platform, of the second floor, as seen in the end elevation. Omitted, though, is the rectangular flute on the protruding base of the left pilaster. The right pilaster undoubtedly had the same detail but it is buried by collapse. The left corner was almost

impossible to photograph, or even approach. It required a tall ladder, which the local workman made in 30 minutes with 20 nails, two poles, and steps instantly created with a single machete blow. Even in ancient times access to the second-floor end rooms must have been precarious.

While on the subject of what is missing in current drawings, once both ends of the palace are excavated, I suspect this will reveal a patio or supplementary platform, especially at the north end.

THE ENIGMATIC BACK CORNER PLATFORMS

On each of the back corners there is a fair amount of flat space formed by the roof of the first floor. Since the second floor is set far back, there is space especially at the corners. But precisely on these corners the floor area is by no means flat; instead, there is a pile of collapsed stone, and it did not fall from either the second floor or the third floor either. scrutiny of both corners revealed that these stones on the second level are the remains of an enigmatic platform.

The southeast corner is best preserved so here it is possible to ascertain that this feature came up relatively close to the edge of the building, at which point there was definitely a stairway 3.17 m wide down the back, and I propose possibly a matching·

stairway 3.50 wide down the adjacent south end. Under this model the platform would have been the goal for the two stairways (so far there is no evidence of any corresponding platform at the top of the other two back stairways, though along that area collapse of both the first story as well as fallen rubble from the second floor has obscured evidence).

The northeast corner has fallen away but the remaining floor area on the second level has the definite remains of a low wall which has fallen over.

Each platform was almost certainly solid, at least over 1.60 cm high, and more than 2 m on a side.

If there was ever anything like this at Hochob, Dzibilnocac, Xpuhil, or Rio Bec B it disappeared in the rush to remove all the rubble in order to get at solid standing walls. These two platforms would have been the first victims of the Main Palace if the building had been subjected to comparable "preservation."

THE INTERIOR STAIRWAYS

Whereas the majestic impact of the Main Palace is what has given Xtampak its fame, it is in fact the interior constructional and engineering details that interest me most. The palace is indeed

an aesthetic masterpiece, but more, it is a major achievement over inherent problems of engineering. It is the challenge of producing drawings of the stairway that can be understandable to an average reader that drives me to record the palace so meticulously, in addition to the natural human and archaeological emotions of recognizing the need to record the building both before it collapses or before its details are obscured by reconstruction.

There is not another three-story palace yet recognized in the entire Maya area which was constructed in a single unit. It is the two interior stairways that proves this point even before excavation puts it to the test. Tikal palaces tend to be usually only two floors actually on top of one another. The "Five Story Palace" of Tikal's Central Acropolis is actually two sets of palaces, 50-50 and 50-52. The exterior stairway alongside 50-52 suggests that at least one of the three stories is a secondary addition.

The only still preserved interior stairway in all Tikal that rises up to an integral second floor is in Str. 5D-46, an Early Classic building. The impressive interior stairway of Uaxactun's Str. A-XVIII is also Early Classic. Tikal's Str. 5D-54 has the beginnings of what look like an interior stair (Hellmuth **449951-¬2B-Neg.34)**, but that end of the building has collapsed, rendering

further details forever lost. The interior stairway there is not included in any of the large-scale maps of the Central Acropolis published in any guidebook, though surely it is in the notes of H. Stanley Loten or Peter Harrison. No interior stairways are yet known for Nakum, but the Main Palace Acropolis has not yet been excavated. Even allowing for an occasional example at Tikal which has not yet been published, the obvious conclusion is that formal interior stairways are rare, practically unique when found. That a single building at Xtampak has two such stairways, and both in virtually totally preserved condition their entire three flights high, will perhaps allow the reader to share in the enthusiasm of an architectural historian.

It is crucial to define formal interior stairway and distinguish them from tower access interior stairways, or secretive interior stairways (often both the latter are the same). These are new words necessary to introduce to the literature on Maya architecture to clarify the essential differences between the Tikal-¬Uaxactun-Manos Rojas-Xtampak formal interior stairways and the informal ones of Becan Str. IV, Xpuhil, Payan, and elsewhere. The stairways at Payan and Xpuhil are to allow discrete access to the doorless rooms hidden in the tower. I have always imagined these rooms were used for oracles, or for hidden mystical music, or generally for messages from the gods to be inflicted upon the superstitious public quivering in fear below in the courtyard or

plaza. There was a hidden oracle in a Maya temple at Cozumel Island.

Since Becan Str. IV does not have any towers, its stairways might be thought of as "secretive" stairways, to allow unseen access to an upper area, unseen as opposed to parading up the main front steps. Such secretive and tower access steps are informal in the sense of being somewhat meandering, and are certainly informal when compared to the steps down to the crypt of the Temple of the Inscriptions at Palenque, the steps within Yaxchilan's Labyrinth (Str. 19), or even the unpublished steps recently excavated on the mid-level of the acropolis of Tonina. References and drawings from colleagues of other stairways which my survey has overlooked would be appreciated.

One of the· only complete interior stairways that could be listed for the Puuc area is that of the labyrinth of Oxkintok, Structure 3B1 (Pollock 1970: Fig. 501).

The rarity of such interior stairways, and that both are totally preserved at Xtampak evidently did not energize other workers into recording the sta1rways adequately, thus they receive a scant three paragraphs by Stamps and a meager single paragraph by Pollock (1970: 47). Andrews' most recent monograph is not available for consultation but it is more a series of measurements of

walls and doorways, one room after the other and no special section stands out in my mind as having been dedicated to the remarkable inner stairways.

All following comment is based on the southern interior stairway.

A Preliminary Walk-through

Six wide steps from the first-floor lead to a rectangular landing (which is in effect the 7th step). Then you climb up 3 steps, turn 90 degrees, climb 4 more, then 2 and you are on the second-floor level, with the possibility to walk outside or else stay inside and continue up to the third floor. There is only a single place where almost the entire run from floor 1 to floor 2 can be included in a single photograph, and that is from above (standing on about Step 16), looking down, with a 15mm non-fisheye lens. Such a view reveals the almost stairwell type height above steps 12 through 16, and shows all the L-shaped steps. These L-shaped steps help the climber go around a corner, and saved the architect considerable space and engineering problems. The deep well at this point means that one never has to worry about bumping one’s head as you go up.

Without numbering the steps it is hard for anyone to figure out the actual progress from standard drawings. Without an overlay

drawing it is not possible to see where the stair goes back over itself at a higher level. And without 30 drawings the engineer's ingenious solutions are not noticeable. Considering the complexity of the stairway I can hardly blame visiting architects from forgoing the task of producing such overlay or 3D drawings. There is not a single three-dimensional drawing of any interior Maya stairway other than that of the Caracol at Chichen Itza.

Over the first landing (step 7 actually) the two ceiling stones are a wide lintel-type; thereafter partial vaults rise from varying parts of the wall, topped by a stone the approximate width of a normal capstone. It will require a dozen profile drawings to record all the proper measurements and to show how the ceiling rises in relationship to the steps and landings.

Engineering of the Interior stairs at Xtampak

The Tikal Str. 5D-54 stair begins in an almost identical manner to that of 5D-46 in the same Central Acropolis, namely, with an initial step the entire width of the chamber, then a support mass blocking the left half of the chamber and thereby the stair immediately having to be half width of the room. After two 90 degree turns the steps will by then be on top of the mass.

Figure 8

Figure 8. Tikal, Central Acropolis, Early Classic, structure 50-46 first floor, looking at stairway leading to the second story.

Figure 9

Figure 9. Tikal, Structure 50-54 elsewhere in the Central Acropolis, seemingly Late Classic (based on masonry size and shape), yet the beginning of stairway to second floor appears essentially the same as Str. 50-46, beginning at full room width, then changing to half width with the rest of the space taken up by a solid pier.

The Xtampak stair has a much further run, continues forward and up at least four times before needing to return back on top of any lower steps. Thus less support mass is needed. No pillars or columns are used in any Peten, Chiapas, or Chenes stairwell; all support is solid masonry.

The Santa Rosa stairway starts as half room width, though immediately, not with any initial full width steps. After four steps the support mass edges in about 19 cm. The following rise of the steps is best followed in the drawings of Stamps' (1970: Fig. 7). Both he and Andrews seek different manners to illustrate the rise around 90 degree turns of the steps. Both are hopelessly confusing between the second and third floors, even with the directional arrows of stamps. Only in three-dimensional, cut-away, see-through wire-frame drawings can the fascinating engineering of these stairways be transmitted to the reader. Such a drawing could also simultaneously present the engineering of the Xtampak stairways, sometimes with low corbelling, other times with wide stone lintels. Whereas such drawings can be presented manually, in fact such drawings are best produced with today's 3D CAD technology, since the ideal view of the stairway is that seen by the climber, especially by means of sequential views known as "walk-throughs." The potential alone of automatically generating walk-through views of such a stairway make use of 3D technology worth installing at Xtampak.

Figure 10

Figure 10. Xtampak, Main Palace, North Interior Stair, first floor. Hole in wall at left is possibly where decorated stone was ripped out by looters (possibly reused mosaic or sculpted). Maler mentions such stones. Two are still present elsewhere in the interior stairways, but not attractive enough to have enticed looters to steal them.

Figure 11

Figure 11. Xtampak, Main Palace, South Interior stair, first floor, showing deterioration of this stairway. Notice stepped lintel, and compare with that of North Interior stair in previous photograph. Position of photography is about mirror image of the two systems.

About Steps 2 and 3 a special set of stones step out from the wall almost as a corbel, but they are not angled as a regular vault stone. As they are still covered with most of their original plaster it is not possible to ascertain how the stones are arranged.

At Step 5 the wall steps out about 15 cm, so something above must have required a special support.

Elsewhere between the first and second story the capstone-like roof (though here without any actual vault or pre-capstone course) has an unusual diagonal angle. Again, there must be some engineering reason for such an unusual angle. Our presumed knowledge of Maya engineering and design is not equal to the capabilities of the Maya themselves. No complex structure such as this has ever been analyzed by an outside engineer. Typical articles and books on the Maya tend to discuss basic room vaults and other standard features.

On the right (main) wall alongside approximately Step 12-16 there is a low course; on top of this begins on of the slight pseudo-¬vaults, which here springs out over Step 10.

The Ceiling Masonry

Over approximately Steps 2 and 3 is a wide lintel-like stone, followed by another squarish lintel-sized ceiling stone. Over the first landing two lintel-like stones form the ceiling. Then begins a narrower ceiling where the stones are more the width of a normal capstone, though in most instances the walls themselves do not incline as a vault. When a support is needed then a special support sticks out from the wall just under the ceiling stone.

The Wall Masonry

The stair stones themselves tend to be regular wall stones, though on at least one landing, wider stones are employed. On at least one corner, the stone is upright, as is at least one next to it. Otherwise, such stone placement is rare Elsewhere in the stairwell wall are stretcher stones—stones laid horizontally instead of the normal Chenes, indeed Puuc stone, which is approximately square.

The Step Masonry

Most steps consist of basic wall stones. In some steps there are double-width stones. Step 3 has one "half stone."

Plaster

The wall plaster was in several layers and is still well preserved in places. Along the right wall above steps 2-5 the marks of a wide brush are visible in the plaster when light is applied at the correct angle. This plaster is a light coffee-with-milk color, more the color of the stone rather than the sheer white of normal Xtampak plaster.

The steps seem to be covered with a thick layer of plaster, especially the first landing.

THE EXTERIOR STAIRS

Each of the three Rio Bec towers most likely has its own front stairway. That of the wide central tower is still preserved and in view. That of the two flanking towers may be surmised from collapse patterns, as well as from the type of fill retaining wall visible on the front of the "upper zone" of the "first floor level" of the towers. The wall now visible is because the rubble fill of the presumed stairway has long ago collapsed. The wall now there is identical to that which identifies the equally fallen four stairs on the back of palace, but there at least one of the stairs has three steps still preserved in situ.

Stamps does not even suggest stairways leading up to the two front towers at all. The first rendering by Gendrop's crew (by Villalobos?) has stairs only on the better-preserved tower, the northern one. But all indications are that each tower had an identical appearance. The identical basal molding stones (fat colonnettes) are in the collapse of the southern tower and still in situ on the northern tower.

Andrews also found two flanking stairs against the second story level of the main front central stairway.

And I found the remains of what may have been side stairways on the first level, around each of the back corners. Each set of stairways will be handled under its own subheading: those of the central tower under that main heading.

The Four or possibly Six Back and Side Exterior Stairs

Andrews was the first visitor to Xtampak to fully understand and therefore to add to the plan the four back stairways of the Main Palace. These features are totally missing on Stamps', on Gendrop's, and even on Andrew's drawings up to 1988 (even his 1987 drawings do not show these back steps). Stamps specifically reports that he could not notice any steps on the west side even though he was familiar with Pollock's report (1970: 42). Evi-

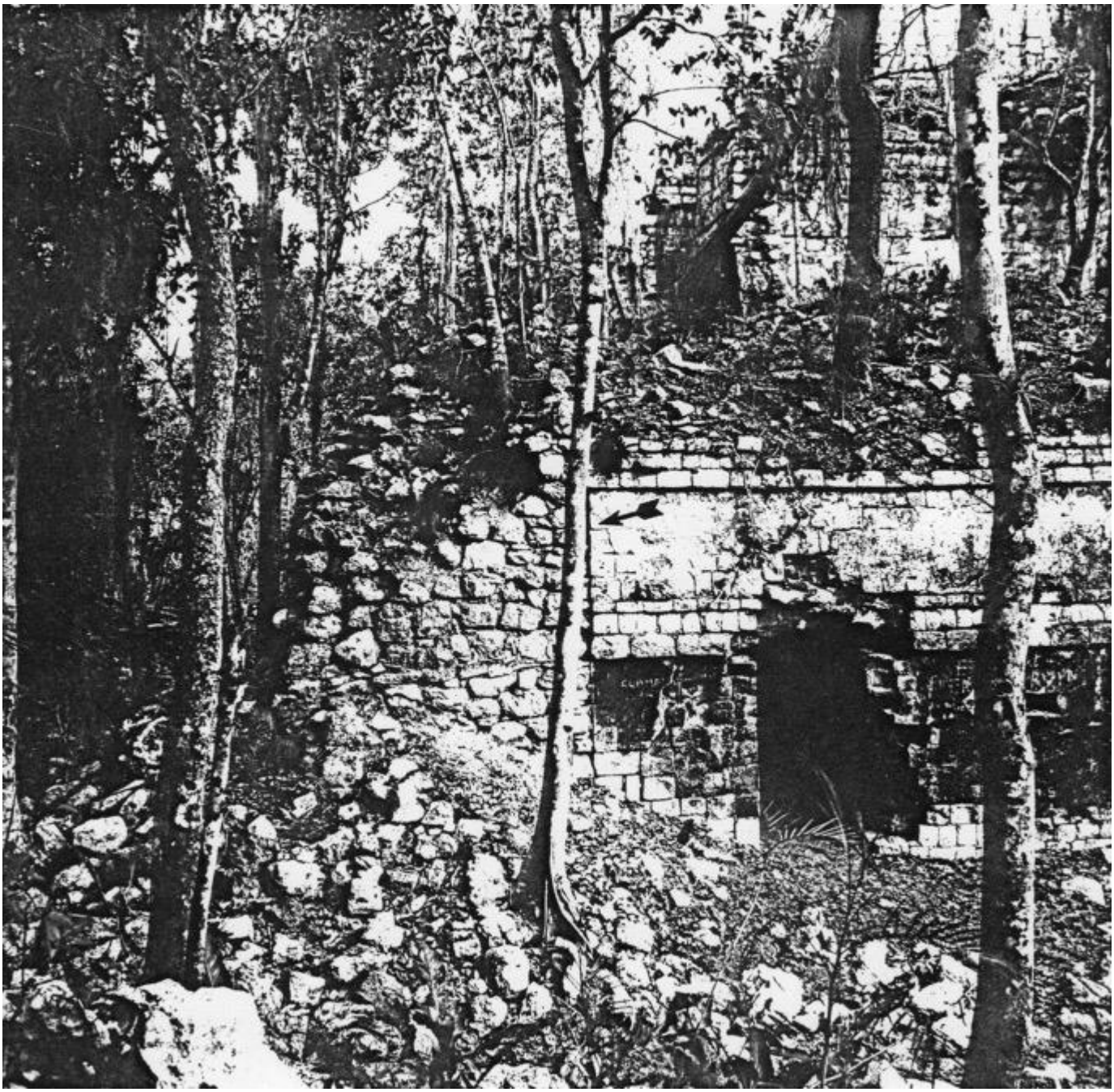

Figure 12

Figure 12. Xtampak, Main Palace, back (west). Note crisp vertical line of the definite end of the facing masonry and continuation of rough core wall to the left. The core wall was once covered with an exterior stairway. Three steps are still in place, to the left of middle.

Figure 13

Figure 13. Xtampak, Main Palace, back (west) showing all three stories (recessed panels show up well on the third floor). At right of the photograph is the exterior stairway, with the same kind of core wall replacing the finish masonry. If this same type of core wall always had a stairway over it, then you can estimate how many stairways existed on the sides of the Main Palace and also on the flanking towers of the front.

dently Pollock had the kindness to send a pre-publication copy of his 1970 article. It is pure coincidence that both reports were published in the same year, 1970. Actually, both Ruppert and Pollock seem to have noticed the stairways ("My notes indicate two stairways to second floor on west side of building immediately outside of winding interior stairways." p. 47) but neither recorded them adequately, which I can certainly understand given the conditions under which they worked in the 1930's. Ruppert neglected to indicate where on the building he noticed such false steps. Andrews recognized that there were four such stairways, and even specifically recorded where their remains could in fact easily be observed by visitors (1988). From his comment it was possible to find and photograph the remains (Hellmuth **449951-19-Neg.4).** There is a possibility that an additional exterior stairway existed on the sides of the back corners, so that the platform on the second level had stairs on each of its two exposed sides.

Three stones are still in place on the southernmost of the east (back) first floor stairways. Tread depth is 6 to 7 cm, riser height is 31 cm. with that shallow a tread they should be classified as pseudo-stairs though certainly an agile person would be able to climb up, since they are only one story high, not the three-story equivalent of the Xpuhil variety. The risers are at a normal angle, not like the ones in the Rio Bec area itself.

Possibility of Side Corner Stairways

Andrews has identified what the fill retaining walls look like which are telltale for walls-behind-stairway-fill, it has been possible to justifiably propose steps for the two front towers and an extra set of steps against the back side corners. The same non-finish (that is, interior fill walls) occur around each corner as also on the back; on the back we know there are stairs; I now propose we check to see if there were also ·stairs around the side at the corner. Andrews has already documented the four stairways against the back (east). Two of those stairways are next to the corner, along the back. But immediately adjacent around the corner is the collapsed mass approximately equal to the mass of the NE and SE (back) steps. And on the upper zone the fill retaining wall which was behind the NE and SE stairs continues around the corner, especially where preserved and visible on the south side of the SE corner. I propose that there is another stair here, leading up to a low platform that is likewise not on any earlier ground plan or three-dimensional reconstruction.

If so then each back corner of the palace would have had a pseudo-pyramidal appearance topped with a low platform rather than a Rio Bec temple. The only other possibility is some form of

a buttress against the corner, or less likely a narrow room, though then there should be fill of a vault and not of a straight retaining wall. Only excavation will tell. All earlier visitors have noticed at least that something is present on the corner, though they have allowed it only about 30 cm. In actuality it must have stuck out at least two meters if not more. No other Maya palace has such a feature--but then no other palace has been so scrutinized before excavation. The two corners of the Main Palace are the ideal loci to demonstrate the validity of total recording of all collapsed material, as it is only from the col-lapse that we will ever know what was intended. There is no other Maya palace to show us what the corners looked like. These overlooked details should be a warning not to remove collapsed building rubble without photographing and drawing every detail.

Maler's original ground plan of the palace (1902) shows a several meter addition to the SE corner. He interpreted the feature as two rooms but was obviously unsure, as he left the ground plan here in faint line, not the solid black that he reserved for standing architecture or an obviously reconstructable plan. Only Spinden (1913: Fig. 142) kept Maler's addition. All other renderings of the palace ground plan removed Maler's unsure east "wall" (which Andrews has demonstrated is really the collapsed mass of a stairway) and reduced the size of "the south "room." I am proposing that the south "room" of Maler may have been the remains of a

corner stairway to match the one just around the corner to form two sides of a pseudo-pyramid with a stairway on each side (though of course the other two sides of the "pyramid" consisted of the palace itself, so there could be no third or fourth stairway).

THE CENTRAL RIO BEC TOWER

Second Floor Side Steps against the Main Central stairway

Andrews was the only person observant enough to notice the stair-ways which rise up the second story sides of the main front stairway. Embarrassingly for all earlier visitors, myself included, these side steps are perfectly preserved in one section. There is no question as to their size, shape, or reality. Actually, even Andrews himself seems not to have noticed them until one of his later visits, as there is no mention of them in his major 1987 article seemingly based on a 1978 visit (Andrews' revised 1988 drawings are based on subsequent trips up to 1988).

The question remains of where a person would stand were he able to tip toe up this steep side stairway. In essence it is a "false" stairway, yet an agile person would be able to negotiate it as it is only 15 steps high.

Figure 14

Figure 14. Xtampak, Main Palace, front (east), second floor, view of the remaining steps of special stairway with balustrade, first noticed and published by George Andrews (1988). The facing masonry in foreground is of the main front central stairway.

The remains of at least parts of nine steps are still in place on the north side of the front central stairway. The balustrade is 33 cm wide. Steps have a 13-16 cm tread, a 29-31 cm riser. Such a tread makes the stair twice the width of the first-floor back steps, and thus decidedly negotiable.

If one were to step out on anywhere at the top of the stairs much more space would be required on the platform in front of the Chenes monster-mouth entrance. The plan of Andrews neatly allows at least two feet on all three sides of the dragon mouth entrance for a landing. But if this whole middle tower area stuck out that far the preserved· 2nd stage front stairway could not have served such a top landing (as explained in the next section). The present restored plan, and indeed the preserved evidence, does call for some landing directly in front of the dragon-mouth. This problem is discussed in the following section because it has to do with the evidence that this central dragon mouth might be a secondary construction, the only such major addition to the original palace concept (since the other secondary features of the palace are merely buttressing walls inside rooms 20 and 36-35 [Stamps' Rooms 29 and 30]). The portal as secondary would certainly explain its totally unique nature, the only such portal outside of Becan Str. IV.

The Front Middle Stairway

All Puuc palace stairways of multi-storied edifices have half-vaulted tunnel-like passageways underneath them (usually allowing access to otherwise hidden doorways of the first floor). Although such half-vaulted steps may well turn up in quadrangles elsewhere at Xtampak, there is no suggestion yet that the final stage of the palace had such a passageway. None was needed because their presence occurred mainly when an originally one story building later needed a stairway to provide access to a second floor which was subsequently added. All evidence supports the undisputed observation that all three stories of the palace were conceived and actually constructed in a single continuous enterprise. The two interior stairways could not have been added--they fit only into an original design for all three stories together.

But no one has ever presumed that this fact of sequential three- story design means that absolutely no other minor additions, units, wings, buildings were added or subtracted from this original three level concept. The evidence speaks for at least two finished stages of the front center stairway as well as an even earlier constructional stage. Two of these stairs are still preserved for a large enough sample to be visible. All that is missing is a detailed profile, carefully drawn, to document precisely where the 2nd-stage stairway would have ended relative

to the dragon portal. Eyeball calculations suggest that the 2nd -stage steps could have served only the patio in front of the third-floor range of rooms and that the Chenes portal would have covered the top of this 2nd-stage. That means that the portal would have been hanging over empty space when the 2nd-stage stairway was in use. Since that is not possible it means that the portal did not (could not) have been in place when the 2nd-stage stairs were in use. The evidence is as follows.

The entire bottom of the main stairway is covered by about two tons of collapse. This material could easily be removed in one week's work, and at that time all the uncertainties of this present section will be answered--possibly to my eventual embarrassment, but that should not keep from reporting the present state of knowledge as none of the previous descriptions of the palace have been directed towards any of the front stairways.

The entire top section of the main stairway is disarranged due to 80% collapse, but at least there is no debris on top of the remains. Everything falling down from the portal continues to tumble down the entire front down to the bottom, in fact remains of the fangs of the Chenes dragon-mouth facade can be seen even without excavation at the bottom of the palace front.

The collapse of the top and the covering thereof of the bottom leaves only the middle of the stairway available for immediate study, with no excavation required for preliminary analysis. Also, only the middle sector can be approached or photographed as any attempt to climb further up would result in a catastrophic landslide. We have asked INAH that tourists be restricted from attempting to climb up this front stairway. This front stairway is the most delicate part of the entire building and the part most likely to immediately collapse. And, unlike the dozen splitting door lintels whose collapse will bring down at most a dozen stones, when the next stairway bit crumbles, it will bring down up to a ton of the palace, indeed it could cause the total collapse of the entire Chenes dragon facade. Thus, it would not be a good idea to climb up either to take photographs or even to take a peek at the top. Besides causing irreplaceable damage such a move would have buried the investigator under a veritable burial mound of rocky rubble.

The front middle stairway is the widest even remotely related to a Rio Bee-like tower, if one can extend this concept to the unique Xtampak Chenes portal. What has not previously been reported in any article on Xtampak is that two stages of the front steps can clearly be seen, a lower set of steps that go up no further than the top of the first floor (that is, they served the floor of the 2nd floor); then a 2nd stage of steps which

Figure 15

Figure 15. Half way up the main front central stairway, Main Palace, looking west. The top five steps are of the nicely hewn "2nd stage." Several steps of the "first stage" are in the shadow to the left, lower than those of the 2nd stage. Underneath the 2nd stage steps is loose rubble fill (fill with no mortar). Note that the 2nd stage steps start all of a sudden and have not yet been found directly covering the first stage steps. Santa Rosa Xtampak. **451608-4-Neg.14.**

began immediately from the lower steps. This 2nd stage rose all the way to the top of the second story, bringing one to the patio in front of the third floor. Fifteen steps of this 2nd stage are still in place to one degree or another across the 7.95 m width of the stairway at this middle point. These steps clearly stop about half a meter short of even the inside of the stair side wall, either because it was an earlier and hence narrower stage or to allow space for a balustrade.

Tread varied among 12-18 cm deep, risers were about 30 cm high, seemingly a standard for the palace. Such a tread would allow ascent, albeit somewhat difficult. Was it deliberate that the visitor would have to ascend diagonally?

Since this 2nd stage stairway rested totteringly on a fill of loose rubble, I did not wish to venture up to de any drawings or measurements of its upper reach. Thus, only with my eyes could I calculate where this stair would be when it reached the top floor. It seems it would have been underneath the Chenes portal. This means that the portal is secondary, at least to the 2nd stage stairway. That leaves the question of whether the 2nd stage stairway was merely a mason's (constructional) stairway for workers during the construction phase of the third floor. If so then the portal could still be original, as it would have been served by a 3rd stage stair. In fact, the rubble fill of this

final stairway is still in place, precariously, just in front of the portal. At first, I considered whether this mass of masonry might not be the remains of a stair block or stair decoration such as on Xpuhil's Rio Bec towers. But this Xtampak fill covers the entire width (over) the 2nd stage stair, and thus can only be the fill of whatever stairway once served the portal. I can only wonder how the facing stone steps of this final stage would have blended in with the terraced stair side walls which are still in situ.

The only stairway which is fully understandable is the 1st stage. About 5 steps of such a stage are still visible at the same level on both sides of the overall stair width about halfway up, actually just about the level of the top of the first level. These steps go all the way over to the inside of both stair side walls. I did not have any surveying instrument with me, nor was there time to take readings in any event, but my eyes roughly calculated that the first stage steps would have allowed masons access to carry up material with which to build the second story.

If the 2nd stage steps were also mason's stairs, then that means the portal does not have to be secondary, since constructional features are continuous. But the 2nd stage steps appear to be so well cut that they must have been final exterior steps at their stage. Why, though, do the 2nd stage steps not cover up the 1st

stage? Is that because the lower tread of the 2nd stage steps was toppled over by tree roots? It looks suspiciously as though the 2nd stage steps do not start until the top (the end, that is) of the run of the 1st stage steps. But that could be explained if the first level of 2nd stage steps had a landing at this level, all of which could easily have been torn away during 1100 years of tree fall. The answer will be at the bottom of the steps, since there the excavator will find at least the initial steps of every stage in perfect condition.

This discussion has considerable ramifications in the analysis of Puuc versus Chenes versus Rio Bec, because of whether the Chenes portal is an original design feature of the palace or a secondary addition at some later time. For the two flanking towers all indications are that they are definitely original features of the overall palace. Is it possible this was originally a "Rio Bec style palace, a la Manos Rojas" or a mixture of Puuc and Rio Bec and then received a Chenes dragon-entrance thereafter. After all the Chenes facade is not a room at all--there are no Chenes corner masks on the palace. All it takes is stratigraphic facts and then the entire Puuc, Chenes, Rio Bec history can be rewritten--especially when we know more about palaces in the Rio Bec region and why there are no other multi-story antecedents of Xtampak in the geographical Chenes region. Or are there?

Since most of Gendrop's studies are area-wide he rarely presents a total comparative analysis of any single building. His goals are to present a larger overall picture. Therefore, it is not possible from his published articles to ascertain on what basis he separates the Chenes portal as being later than the main palace, but in one paragraph he definitely excludes the portal from consideration with the Main Palace itself. He lists the Main Palace as "Early Chenes" (1987: 45).

Was the Main Front Stairway Functional?

It is generally considered that Rio Bec towers automatically have false steps which are too steep to climb. The general rule is that false steps led to a false temple, a dummy with blank (sealed) door. This standardized concept of Rio Bec architecture is based on Xpuhil and Rio Bec itself. These steps are of such narrow treads (and the overall stairway so high, such as on Xpuhil's three towers) that it is not actually possible to climb up. Thus the tower stairs are non-functional as steps--but symbolically they are hardly non-functional. Their function is iconographic and cosmologic, part of a stage setting, a concept not generally considered. Pageantry was a major feature of the mumbo-jumbo nature of the elite's control of Maya society.

Despite false steps on illusory temples being a standard trait of the Rio Bec geographical region, in fact several Rio Bec towers of the Chenes region--about 100 km north of Rio Bec--have steps which are perfectly functional, most notably Hochob and Dzibilnocac, among others. Indeed, these sites have towers with functional doors leading into normal temple rooms. The Rio Bec heritage shows though when one tower has a false door on two sides, a real door on the other two sides.

The middle front stairway of Xtampak was indeed functional, though certainly so steep you would have almost to climb up diagonally.

THE FLANKING TOWERS

Santa Rosa Xtampak is geographically in the Hochob-Dzibilnocac area, so functional stairways would be expected. The Xtampak palace has three towers. The two essentially identical, matching flanking towers are rather thoroughly collapsed and only a few facts will ever be ascertainable. First, the sole remaining tower fragments (Room 38, left tower) suggest a room of definitely potentially functional dimensions. The room is presently filled with stones, as would be expected considering that it was either originally filled in any event (if it were a false room) or the collapse of the vault and upper wall would have filled the room

if Room 38 had been functional. I suspect that the room was designed to be functional; the final answer will only come from excavation, especially of the front doorway. If blocked with a wall the room was a southern Rio Bec type; if open the room was a typical Chenes variant of Rio Bec, as would be expected here. It is important to photograph and study the collapsed remains before attempting to excavate.

Presumably these two flanking tower temples had ornate monster facades; Stephens' description can be interpreted in this manner.

> "On the platform of the second terrace, at each end, stood a high square building like a tower, with the remains of rich ornaments in stucco." (Stephens 1843:109).

If Catherwood had not been ill that day he probably would have done a rendering of the front of the palace--thus preserving details that have long since collapsed. The forest was so thick in the 1840's that they did not realize they had drawn the back of the palace by mistake, until they had finished the rendering.

Stamps' original drawings place no stairs whatsoever on the front of the towers. The early Andrews-Gendrop drawings (it is hard to keep track whose drawings are actually used in the various publications) had steps on the left tower but not on the right. The final Andrews drawing (1988) suggests steps on both (without

facing the question of whether they were functional or not). I agree with Andrews' last edition.

Details of the two Flanking Towers

The south or west (left) temple tower is considerably better preserved than the east (right) tower. 90 percent of the core masonry fill retaining wall, actually the core facing wall, of the east face remains on the upper zone where it would have been covered by its front stairway. The lower half is covered over with collapsed rubble. No steps are actually visible.

Since the same type of core wall masonry is on the side of the tower as well as on the front does this mean that there were stairways up one or both sides as well as the front? Here only future excavation will answer this question.

The tower consists of Room 4 at ground level and Room 38 as the temple room itself. If this tower had been freestanding in Peten style it never would have had a room such as 4 on the ground level, behind the stair. Such an area in an actual pyramid would have been solid fill of the pyramid, or at least a burial. Room 4 is open and never had a burial. This room (along with its counterpart in the other matching tower) is the tallest in the palace, and possibly at the whole site.

The fill of the vault of Room 4 appears to be continuous with the fill of the vault of Room 1 adjacent to it. Thus, here there is no obvious evidence whatsoever that Room 4 was added to the palace secondarily. On the other tower the fill of the vault of Room 12 definitely looks continuous with vault fill of Room 9.

Round basal molding stones in the collapse in front of the NE tower demonstrate that it also had the same basal molding on its second floor outside wall as that still preserved in two places in situ on the south tower. The south temple has over a meter of its back basal molding still in place, and two stones left on the northern basal molding. The back temple wall stands to 2 courses over the medial molding. Four stones next to one another horizontally are still in place. The inside room walls are nicely faced, leading me to conclude that the room was functional. Nothing remains of the front or southwest walls.

Of the NE tower temple virtually, no walls are still standing, but a careful study of the collapse all over the plaza in front reveals the same size and specialized shape of facing stones as still in pi ace on the south temple. It will take an excruciatingly careful excavation of the entire collapsed mass to ascertain whether a roof comb was ever present.

The Stamps and the pre-'89 Andrew's drawings show the upper zone of each tower (in side [south] elevation) as having a continuous upper zone. That is unlikely on any number of grounds. First, a continuous upper zone means that the "tower" aspect is nullified, since a continuous upper zone emphasizes the horizontal continuity of the entire south elevation. The corner functions as a vertical mass only when the horizontal lines are broken. The corner functions as a tower or pseudo pyramid only when the lower and upper zone have a vertical emphasis in moldings and a step-¬out in some manner in the ground plan. Since there is no other comparable tower-palace arrangement it is understandable that the drawings are imprecise, as we also cannot do much better until the base is completely excavated. There is also the slim possibility that stairways existed on the side of the tower as well as the front. This unexpected possibility arises from the core retaining wall, the same on the sides as on the front, where a stair was almost certainly present.

Stephens provides the only available information on the towers. It is a stroke of bad luck that Catherwood was ill that day and did not do a drawing of the front. Since the back of the palace is so impressive, and as it 1s the back that you see the first when you ascend the hill, Catherwood started on this face. Only later did they realize this was the back. By then he was evi-

dently too weak to do any more illustrations. At least Stephens says a few words about the front.

> "In front was a grand courtyard, with ranges of ruined buildings, forming a hollow square, and in the centre a gigantic staircase rose from the courtyard to the platform of the third story. On the platform of the second terrace, at each end, stood a high square building like a tower, with the remains of rich ornaments in stucco; and on the platform of the third, at the head of the grand staircase, one on each side of it, stood two oblong buildings, their facades adorned with colossal figures and ornaments in stucco, seemingly intended as a portal to the structure on the top. In ascending the grand staircase, cacique, priest, or stranger had before him this gorgeously ornamented portal, and passed through it to enter "the centre apartment of the upper story." (Stephens 1843:109).

This suggests that the flanking towers also had a Chenes decoration, at least on their front. That means that the remains of this fragile stucco are buried under the collapse. Only when every stone is measured in "place will it be possible to rescue at least a partial understanding of what this may have looked like. Fortunately we have the towers of Hochob and Dzibilnocac as models.

LOOTING

All benches have been torn out years ago by local people seeking treasure. In at least one or two rooms the floors have been broken through and dug down to an undetermined depth (the rubble was later thrown back in). All the complete painted capstones and

most of the sculptured wall panels of each end were removed. But even the structural damage is minimal, and seemingly no tombs were reached.

Seeing the gaping holes in the walls where the sculpture was perfectly well preserved certainly leaves no excuse that Maya art deserves to be stolen and removed to foreign countries where it will be better cared for. First, several of the looted pieces were evidently simply moved into living rooms still in Mexico; Mayer records at least one object from Xtampak in an unnamed private collection in Merida (1984a). Second, in tearing out the panels the sculptures were damaged. And, if the individuals concerned were so interested in preserving the Maya sculpture they might wish to consider donating for the consolidation of the palace an amount equivalent to what the sculpture cost. Naturally that is wholly unrealistic, but perhaps the point is made. Ironically, Maya aficionados who have actually had the opportunity to work on a scientific archaeological project have enjoyed the experience far more than collectors with the same pieces in their living room. There is a lot more to Maya archaeology than counting sherds--studying monumental architecture for one. And there ought to be other means to satisfy a collector's desire to be close to Maya culture without needing to pay for looting.

THE ONGOING COLLAPSE OF THE PALACE

It is not a question of when the palace will collapse but rather how much will fall before emergency shoring up is initiated. The palace is actually tottering right now, and major sections have fallen off the front central main stairway just in the last rainy season. A single storm could topple the trees which are strangling the north Rio Bec tower; when anyone of these trees is blown over in a wind storm it will take the entire tower with it. The south tower has already toppled over.

Other than (1) tree collapse the following problems are bringing the palace down one room at a time:

2nd, when the lintels break, that brings down everything that is above, even the next floor up.

3rd, even when the lintels do not break the sheer weight of hundreds of tons of fill is sheering off the door jambs along a line under the butt end of the lintels. So, even with the lintels still strong the mass of the palace is simply crushing the very walls of the lower floor. This sheer damage is visible on almost every door, some of the jambs are getting ready to give way.

4th, a related danger is that of water soaking into the fill; the added weight of tons of water, 62.5 pounds per sq ft, is

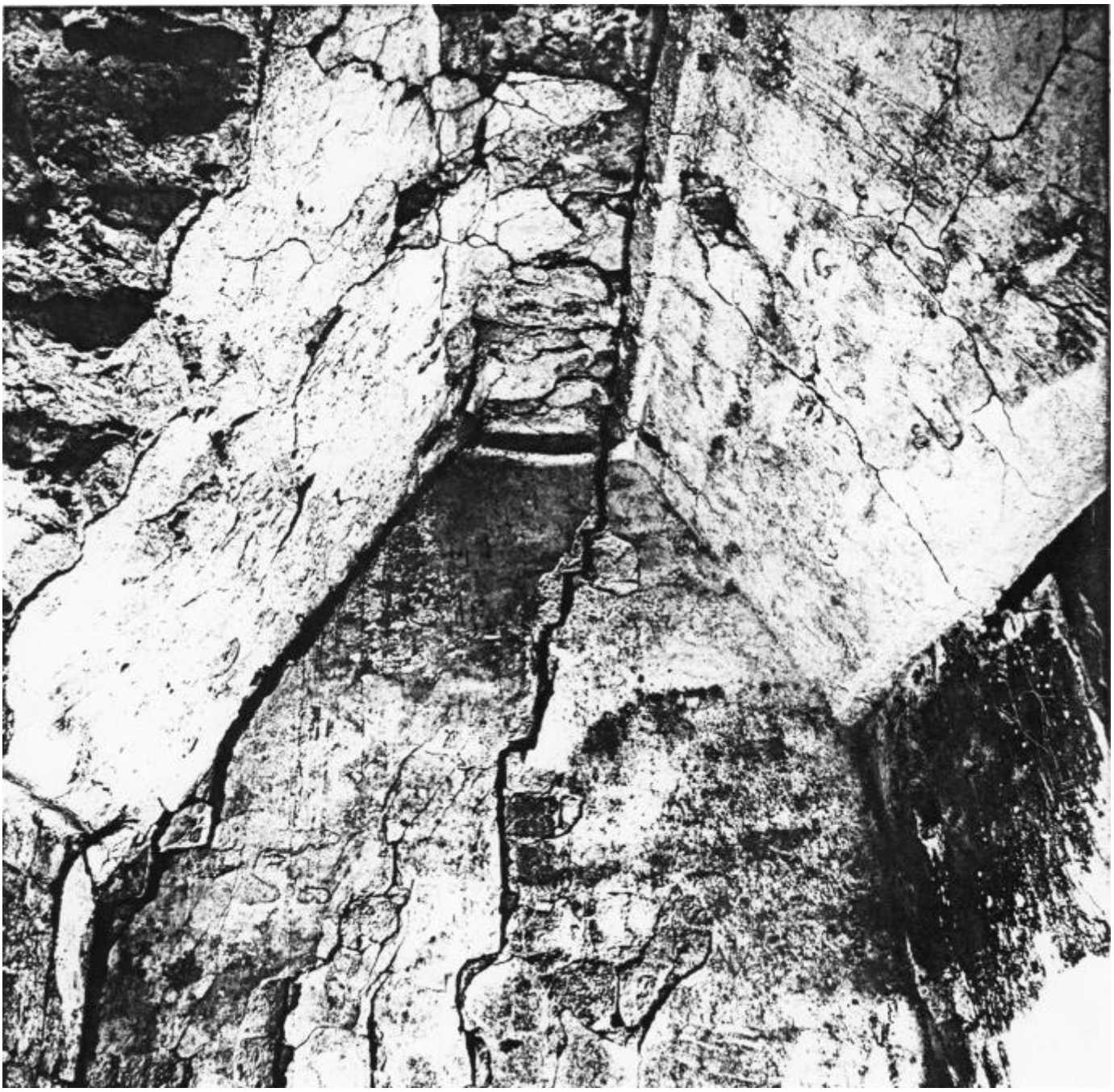

Figure 16

Figure 16. Inside the Main Palace, west side, looking north, outer room, showing how the entire structure is fractured as various walls sink at different rates, other walls are buckling out as they are crushed by the weight above, other walls are beginning to sheer off.

enough to cause entire palaces to crush their walls and collapse down to their foundations, as happened to the principal palace of the Peten Maya ruins of Tzikin Tzakan by 1982. These buildings were never designed to hold up their rubble with the added weight of all that water. The rubble acts as a wick soaking up rain water from the monsoon season cloudbursts. As originally built the palaces had plaster and mortar layers covering their roofs. But over the centuries the roof has been torn away by tree fall, vault fronts have collapsed exposing raw rubble, and now the entire palace is open to rainfall. Today rain storms blow tons of water inside upper rooms that were never intended to withstand such an onslaught. To protect the palace, it would be well to restore enough of certain rooms to shield the core and especially to shield all inner rooms and the various stairway entrances.

COMPARISON OF THE VARIOUS DRAWINGS

For a work at the Masters Thesis level Stamps' drawings are professionally rendered, especially considering that he was not an architect. The only serious omission are the four stairways on the 'back side, which were not fully understood evidently until Andrews' i988 visit (since his immediately earlier drawings do not include the back four stairs either). I would add the following changes in addition to that in the earlier section recommended for the end elevation side of the towers:

A. show the actual orientation of the rooms, rather than leaving them idealized with 90-degree corners as on all earlier drawings.

B, add the extension of the building at the back-end corners. There may be a corner stairway at this point, but there is definitely a structural feature against the first-floor side corner (in addition to that of the second floor).

C, at each back corner, on the second floor, is missing a low platform.

D, since all recent drawings are derived from that of Stamps', his omission of at least three inset panels (including one in the upper zone) has been repeated in all subsequent published drawings, demonstrating their origin despite changed proportions and improvements.

E, revise the oversight on the back elevation (Andrews 1987: Fig. 47, middle) which presents the two outermost third floor panels as doors (shaded solid black). The only doors on the third floor back are those of the stairways.

F, a comparative survey to ascertain a more likely decoration for the two Rio Bec towers on the front. None of the present drawings offers an acceptable solution to their exterior appearance, especially of the sides of the bottom story, as they should appear more pyramidal rather than as an undistinguished extension of the side of the palace.

G, add the occasional missing tenons on the upper zone.

H, add the occasional missing vertical zones at the corners.

I, revise the upper and lower zones so they are not all identical (as pictured by Stamps).

J, add a basal molding to the second floor (no molding is included by Stamps).

K, render a 3D perspective reconstruction of the back of the palace (all present views show only the front).

L, and overall, the moldings must be accurately measured. Cur-rent drawings are idealized.

M, add a basal or supplementary platform at least to the north end of the palace.

No two maps of the Main Palace have been identical. The source of the problem is quite easy to judge: no one has yet had the opportunity to stay long enough at the site, no one has yet had the proper surveying instruments, there were too many fallen trees obscuring details and hindering passage around the palace, and the goals of earlier projects were different. It was a major achievement for earlier visitors to get even a basic drawing. Nonetheless it is about time to employ the proper scientific instruments--transits have been available since the 19th century.

It was not possible to have a copy of Stamps, or of the then recently appeared Andrews monograph, in the field, but the 1988 monograph of Andrews indeed is an improvement over his 1987 published article. The proportions of the ends of the palace in particular differ between Stamps (wider overall) and Andrews. Considering how well done both reconstruction drawings were, it was surprising to find three missing recessed panels on the northwest corner alone (presumably the same are missing in the drawings of the other end of the building).

Furthermore, the following drawings of Stamps need to be redone from scratch with surveying and leveling instruments.

1, both his north-south and his east-west profiles need realistic angles, as no Maya floor level is ever precisely level. I also suspect that the rooms on the first floor of each tower need to be deeper.

2, an additional north-south section is needed at least of each tower.

3, it would help to have a full north-south section more towards the east to lock the stairway firmly onto both plan and elevation.

4, a second east-west section is needed, over the other Rio Bec tower. That is precisely the source of error in the current drawings; they presume the overall building is absolutely bilaterally symmetrical.

5, Stamp's Fig. 13 is actually a composite east-west section, as it shows the middle "tower" as well as the flanking tower. Needed are three more east-west sections: one actually down the building's central axis, as such a central axial drawing should be the main control; than two sections (bilaterally symmetrical relative to the central stairway) that go through each inner stairway. None of the data of these missing sections is on the lone Fig. 13 of stamps other than the Chenes portal.

6, a 3D exploded view of each of the three floors, with each floor as a unit raised off the next floor so that the ground plan is seen. This can be easily generated with CAD.

7, isometric views, in see-through wire-frame manner, of each preserved room in the palace. It is easier to create isometric drawings than perspective. The CAD software can turn such true measurements into any angle of perspective that we later select.

8, isometric drawing of each entire inner stairway, showing not only the steps but also the varying ceiling types (vaults and lintels).

The goal is to take enough measurements in the field so that an AutoCAD series can be made. It is easier if all the data is fed into a computer in the already organized setup of our consultant in St. Louis, the data processed there, and then have AutoCAD brought down and installed at Xtampak, whereby missing angles or overlooked measurements can be gathered on the spot. But we wish at least one set of drawings to be finished on the computer before we leave Campeche at the end of the summer. We also need one set of reserve measurements on paper in case anything happens to the computer or its hard disk.

The ultimate goal is to prepare a walk-through, in effect pseudo-animation, of the view of a person walking up the stairway, to reveal the clever engineering solutions. None of the drawings produced by any earlier visitor to Xtampak has the data to produce even a single three-dimensional rendering of even one full level of the stairway.

BUILDING WITH SERPENT-MOUTH FACADE

Considering how few serpent-mouth facades exist which have not had all their details carted away by excavation this particular facade is a good candidate for careful salvage of the collapsed stones. Since there is no other building nearby, that means that all the fallen stones in the pile belong to the mask decoration and its backing.

The Main Palace devoured all the time we had at Xtampak and photography of the details of the Serpent-Mouth structure will need to wait for a later season. Only then can augmentations be made to the observations of Pollock and of Andrews. The secondary addition inside the room to buttress the back wall should be of interest to engineers. Comparable buttresses are known from Yaxchilan and elsewhere. The vault springs of Early Classic Uaxactun Str. B-XVIII were reinforced by a complete secondary wall (Smith 1937).

The Serpent-Mouth facade is situated approximately in the middle of a range structure which delimits a plaza space. But in this case, if there ever was a second floor, its stairway must have

been on the back (north) side. That would make this range-center building different from those of the nearby Cuartel and the Southeast Quadrangle.

CUARTEL

The Cuartel is possibly the best-preserved quadrangle layout triple-unit facade in the entire Chenes area which is not of the monster-mask facade class. Other than the Main Palace, the Cuartel is the best preserved Chenes palace in this geographical area. For these reasons this area deserves thorough coverage in close-up photography. This will be initiated in upcoming field seasons.

THE TWO BUILDINGS NEXT TO EACH OTHER

The Red House backs directly against the rear of the "Adjacent Building." The Red House attempts to form a plaza with the Serpent-Mask Building, an extension of the Main Palace front plaza. The Adjacent Building creates a small courtyard which is ill- defined for being in the center of the ceremonial/elite

residential area. Through coincidence the backs of both buildings are well preserved.

Needed is analysis to determine the building style, Puuc or Chenes, especially of the mostly collapsed vaulted rooms. So far this area of the site is Chenes. The Puuc sector seems to be in the south.

SOUTHEAST QUADRANGLE

Not appearing in any Gendrop description of Xtampak (that I noticed) this remarkable palace layout was also the last found by Stamps, just shortly before his time was up. As typical with all investigators at the site, Leiter and I also missed this quadrangle on our initial visit--since our attention was held by the palace. The palace has held the attention of every researcher since Stephens and Catherwood. Although Stamps does provide a single description and one helpful photograph it is Andrews who improves upon what is available in Pollock. Nonetheless it was not until I actually visited the Quadrangle in person and saw each of the features that I realized its fascinating nature. For the architectural historian the Southeast Quadrangle is a prize.

Upon entering the Southeast Quadrangle, you are greeted by a monumental projecting cornice (Stamps Fig. 23) on the west range. The sharply triangular cornice stone sticks out about half a meter. The top molding is likewise triangular in cross-section and also stands out prominently. Overall, considering that no mosaic decoration is present, the sharp triangular angles makes it the most forceful upper zone facade that I know.

According to the Stamps map this west range consists of two buildings divided by an open space. If this is accurate the open space would be unique at Santa Rosa. Some form of Uxmal-like entry portal would be expected so this sector of the site warrants more detailed investigation in the next season.

Across the quadrangle are several lovely palace rooms still standing (FLAAR Photo Archive **449951-17).** One interior wall was poked away by clumsy grave robbers. Fortunately, they failed to find a tomb (it seems they missed a tomb in every attempt throughout the entire site). But they did expose a perfectly preserved buried palace wall, directly behind (at the same level as) the present wall of the room. This was the exterior (?) wall of an earlier phase of the Quadrangle. This find demonstrates that earlier stages of Puuc, or Chenes, or possibly even elsewhere even earlier forms of Rio Bec architecture will reward the patient excavator. Since scientific knowledge of early Chenes architec-

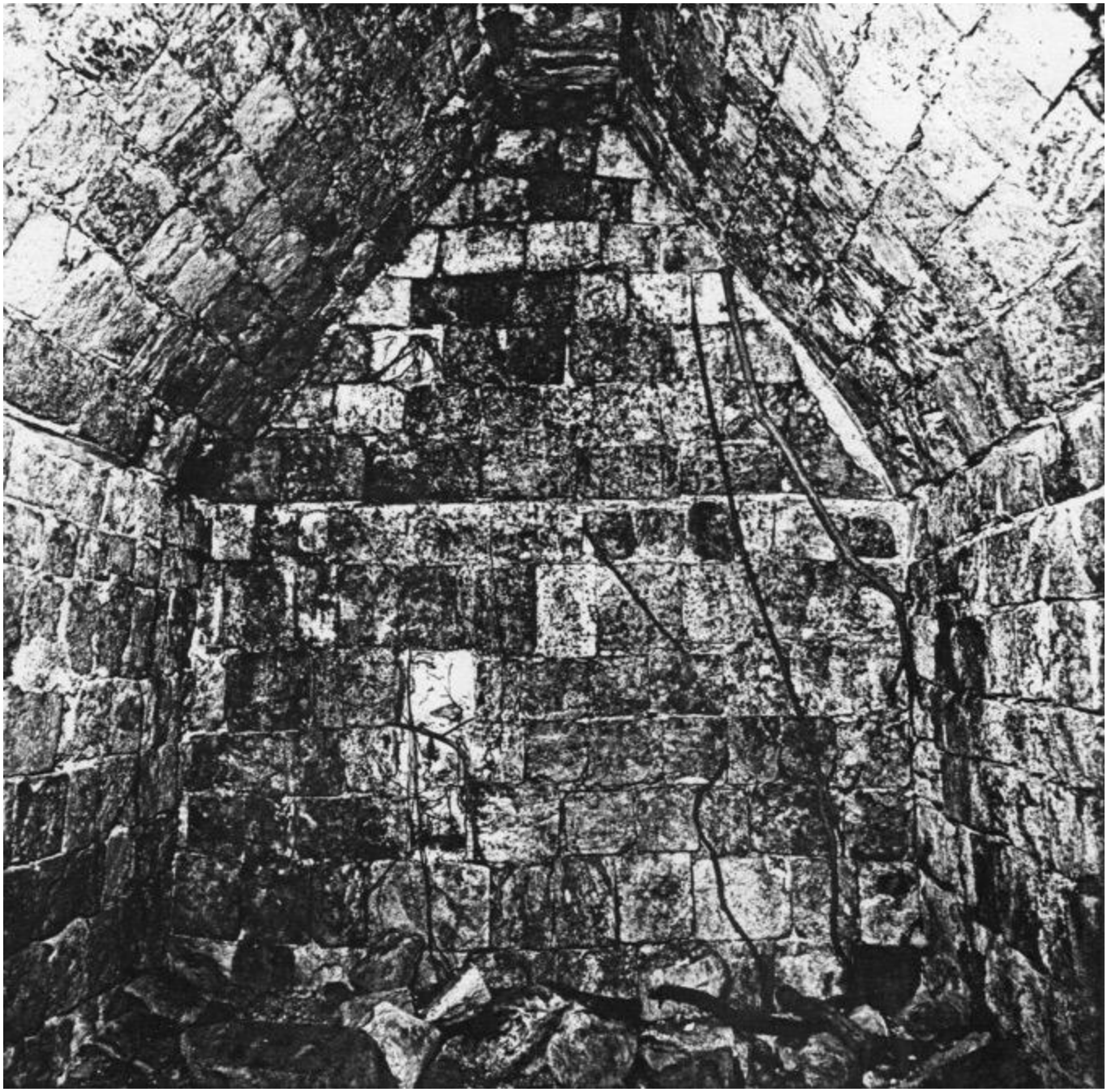

Figure 17

Figure 17. Southeast Quadrangle, East Range, looking at the north end wall of Room 2. Tree roots envelop the wall as an octopus grabs its prey. Whenever this particular tree is blown over in a storm then this entire wall will be yanked outward, causing the collapse of an otherwise perfectly preserved room. Although this room has the Puuc trait of a spring on the end wall its vault is relatively straight and the wall stones are not that different from those of Chenes buildings of the Cuartel or the Main Palace. Santa Rosa Xtampak.

ture is virtually zero any single such find at Xtampak would immediately represent a 100% increase in our total knowledge of this genre.

Further down this wing of the Quadrangle is a "bound column" motif (Hellmuth **449951-17-Neg.3),** a molding style popular at Xtampak on pilasters (Gendrop 1983: Fig. 46, b). Comparable fat columns/pilasters are illustrated by Gendrop (ibid.: Fig.37a) for the Rio Bec area. Related decorations are known from Puuc ruins to the north, which leaves the question, did Xtampak transfer this feature from south to north? Xtampak is an absolutely ideal locus to analyze diffusion. Xtampak is geographically in the middle of what was going on in the central peninsula for over two centuries. Thus knowledge from Xtampak will reveal information about the Puuc region to the north as well as the Chenes-Rio Bec to the south.

Counting the Puuc-related features which are present at Xtampak is only one side of the coin. So far it has been forgotten to count which Puuc features are not present, namely early Puuc facade medial molding step-ups (unless the Cuartel is a follow-up on that rather than being a simplified Chenes facade such as on the Nunnery Annex at Chichen Itza. Also not yet noticed at Xtampak is any of the complex mosaic facades such as on Uxmal

etc., and no "Chac" masks. Is that because the Puuc at Xtampak is a different time period than those classical features?

90 Degree Vaults

In the corner formed where two ranges join each other is the most unusual feature of the entire site, a passageway that turns an angle. The vaulted passageway is one of the more unexpected architectural features that I have seen at a Maya site. Otherwise and elsewhere Maya buildings are remarkably standardized and predictable. Rare passageways at other sites (Puuc Sayil, Pollock 1970: Fig. 198) are at least regular. The Xtampak passageway was first illustrated simultaneously by Pollock as a drawing (1970: Fig. 83) and by Stamps as a photograph (1970: Fig. 28a). Pollock selects a point around the corner and presents a regularized drawing. That is typical of all these sketches--none are measured, none are accurate, irregularities are simply airbrushed away. The proportions of the published drawing are likewise off; the photograph of Stamps is much better.

The ceiling of this tunnel is hardly a vault but instead a single beginning of a vault immediately capped by a capstone. The profile is also not bilaterally symmetrical in reality; only the right side really has a projecting corbel-like stone; the right side is more an overall leaning wall.

Figure 18

Figure 18. Southeast Quadrangle, southeast corner, with the Entrance Passageway in the middle, Room 3 of the East Range to the left, a room of the South Range to the right. If this passageway is secondary this does not show up in the cross-section revealed by the collapse of the front facade which exposes the core. Santa Rosa Xtampak. **451608-15-Neg.25.**

What is even harder to understand is the triangularly projecting molding, approximately in the position of a spring (was this an inner room) or the position of a medial molding (was this an outside wall). without seeing the ground plan of the overall quadrangle and also knowing the building sequence, it is not yet possible to know whether this molded wall was ever intended to be an inside, or an outside, wall. Or equally well this could have been a passageway from original concept, though the differing profiles of the facing walls remains to be explained.

One of the few other published-drawings which shows something similar is from the Puuc site of Yakalmai, North Group, West Building, Room 3, where the curious one-course molding is the sole remaining course of what was once a normal three-member molding which was mostly dismantled in order to erect a new room (Pollock 1980: Fig. 826, b). since the "leftover" molding is precisely where I would have expected the original end of the building to be, perhaps the molding was originally outside (Andrews' idea also), along the end of the building of an open ¬cornered courtyard. At a later date it was decided to close the corner with a vaulted passageway. This scenario can be accepted only when either excavation or careful scrutiny of the remains documents it as a fact--or not as the case may be.

Ruppert provides a good introductory drawing of the ground plan of the two vaulted passages each which turns 90 degrees (in Pollock 1970: Fig. 83). The broken lines in the middle indicate the capstones. Actually, few if any of the angles are precise 90 degree turns and the capstones are not always neatly down the middle, and they turn the corners in a wedge shape, not so neatly, but nonetheless his drawings are a good field sketch. It is unfortunate that the actual irregular angles are not reproduced more often in drawings, as it is precisely the irregular angle which is so unexpected here.

The Entrance Passageway

Looking from the floor directly up at the capstones as they go around the corner one sees that the capstones turn the corner in a manner and at an angle somewhat independent of the walls. The wall corners are beautifully squared for the entire height that is plumb. Then comes the one course "semi-vault" and as typical allover Classic Yucatan the pre-capstone spring course, then the capstone itself. The single course vault along with the pre-¬capstone spring turn an approximately 90-degree angle on one side, but the capstone row widens precisely at the corner and is wedge-shaped on the other side (see tracing from a slide). Under the work conditions it was difficult to get the heavy camera precisely parallel to the capstones, especially since the immense

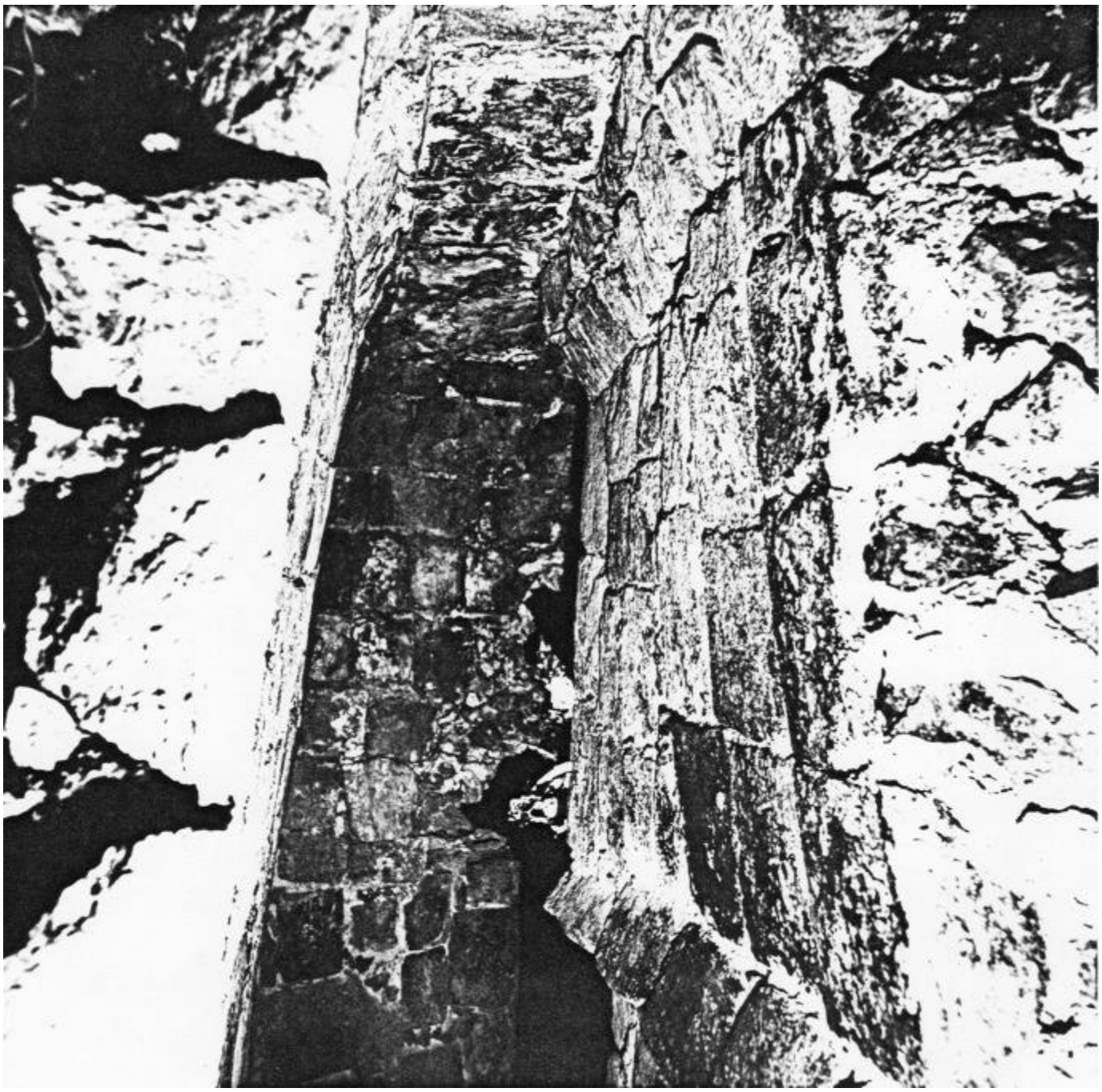

Figure 19

Figure 19. Xtampak, Southeast Quadrangle, The Entrance Passageway, looking easterly. On the right is the "incomplete" medial molding. In far background is light streaming in from the far end of the final exit. Note differing slant of both walls, and the last minute "corbel vault" consisting of only one course, with a sub-capstone framing course also serving as corbel.

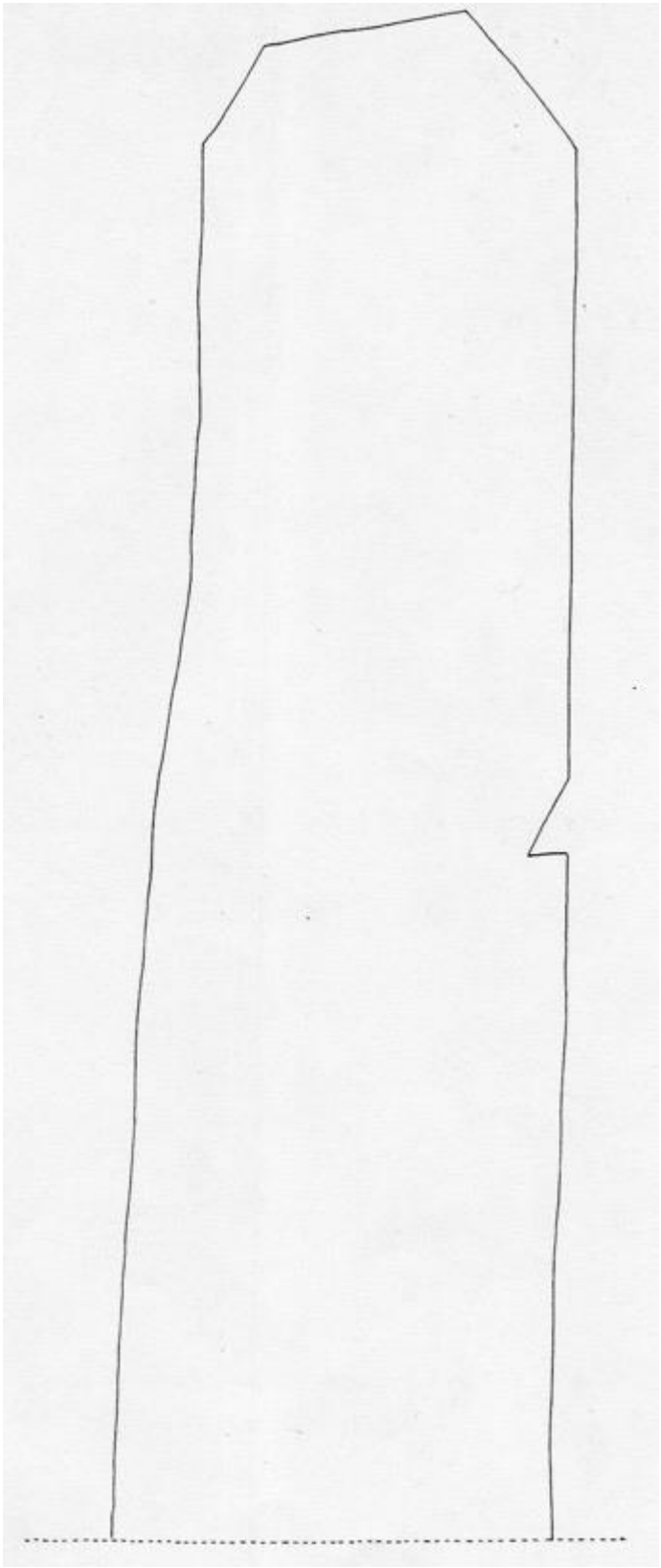

Figure 20

Figure 20. North-south profile of entrance passageway. Tracing by Susanna Reisinger from 35rnrn slide taken with a 28mm lens. Southeast Quadrangle, south corner, Santa Rosa Xtampak.

Figure 21

Figure 21. Xtampak, Southeast Quadrangle, capstones of Entrance Passageway turning corner into the narrower arm of the inner passageway. Note the widening of the capstone span at the turn, a highly unusual feature of Maya architecture, present also in the exit passageway.

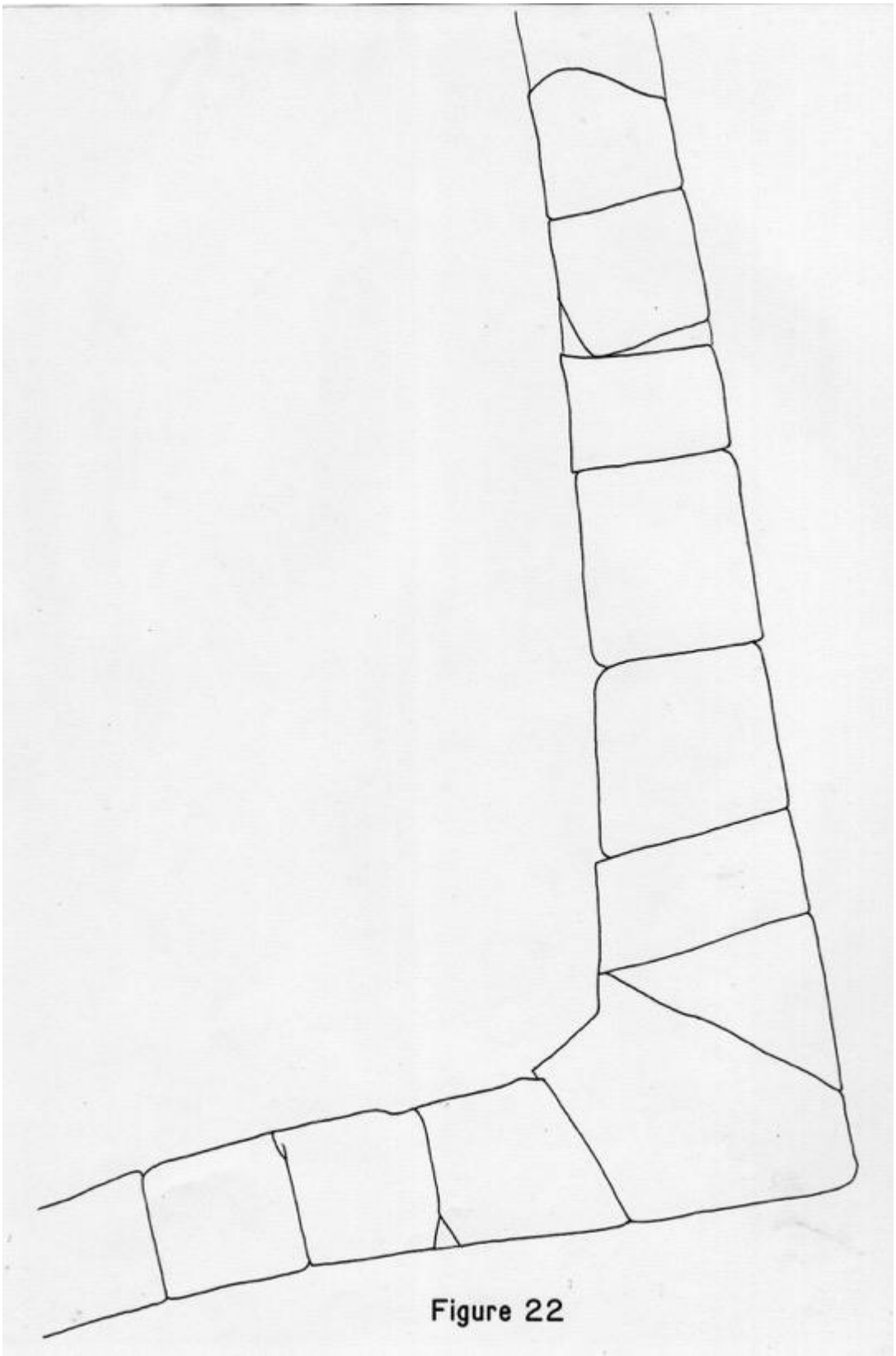

Figure 22. Line drawing of the capstones of the Entrance Passageway turning the corner into narrower arm; this view is oriented at a different angle from that of Figure 21. Tracing by Susanna Reisinger from 35rnrn slide from 28 or possibly 15mm lens.

Figure 23

Figure 23. Looking south down the dead-end passageway. The end wall is of the South Range as is the wall to the right with the higher "partial" medial molding. Southeast Quadrangle, Santa Rosa Xtampak.

Glass surface of the 15mm super-wide-angle lens would be ruined with a layer of dust if we tried to make any movement during photography--even moving our feet raised a cloud of limestone powder dust--the worst kind for grinding down lens surfaces and camera interiors. This provisional sketch at least gives a more accurate view than previously available.

The stones on the upper zone of the right wall (that with the molding) appear to be larger than those of the other walls of the passageway.

The single vault course on the right wall (that with the molding further down) are angled out much further than those of the opposing wall, and are also actually two courses, not a single course as elsewhere, since the “Second (upper) course (around the corner in the inner arm) sticks out as the pre-capstone spring. In the entrance passageway a pre-capstone spring is barely noticeable. The vault course on the left wall is made of a specialized vault stone, almost boot-shaped.

Ruppert (Pollock, Fig. 83, b) gives only a cross-section of the inner arm. We provide the reader additionally with the entrance section, as it is somewhat narrower.

The left wall at first glance appears to be absolutely plumb from floor to the semi-vault course at the top, but in fact the wall begins to lean out at approximately the level of the molding on its opposing wall. Only with a plumb bob will the precise angle of ascent be measurable.

The masonry on the left wall is of well hewn rectangular faces laid in regular courses. From the elevation the stones look as though they would be complete blocks, fully rectangular, but not one appears to be fully worked on another other side than their front. The shape behind the face varies considerably from stone to stone. Nonetheless the quarry workers or masons expended considerable effort in neatly squaring the faces.

The Narrower Passageway, Inner Arm

The inner arm is that section of the passageway which goes north south. There is an entrance to the left into the main room (where one can exit at the other end through the "wide passageway"). A narrower doorway to the right enters into a small dead-end room. The passageway itself keeps on going about a meter further (south) until it dead ends at a wall. Why the passageway bothered to keep going, and what is on the other side of the wall is not known. The end wall is to some degree a back wall of the south wing of the overall quadrangle except that according to the plan

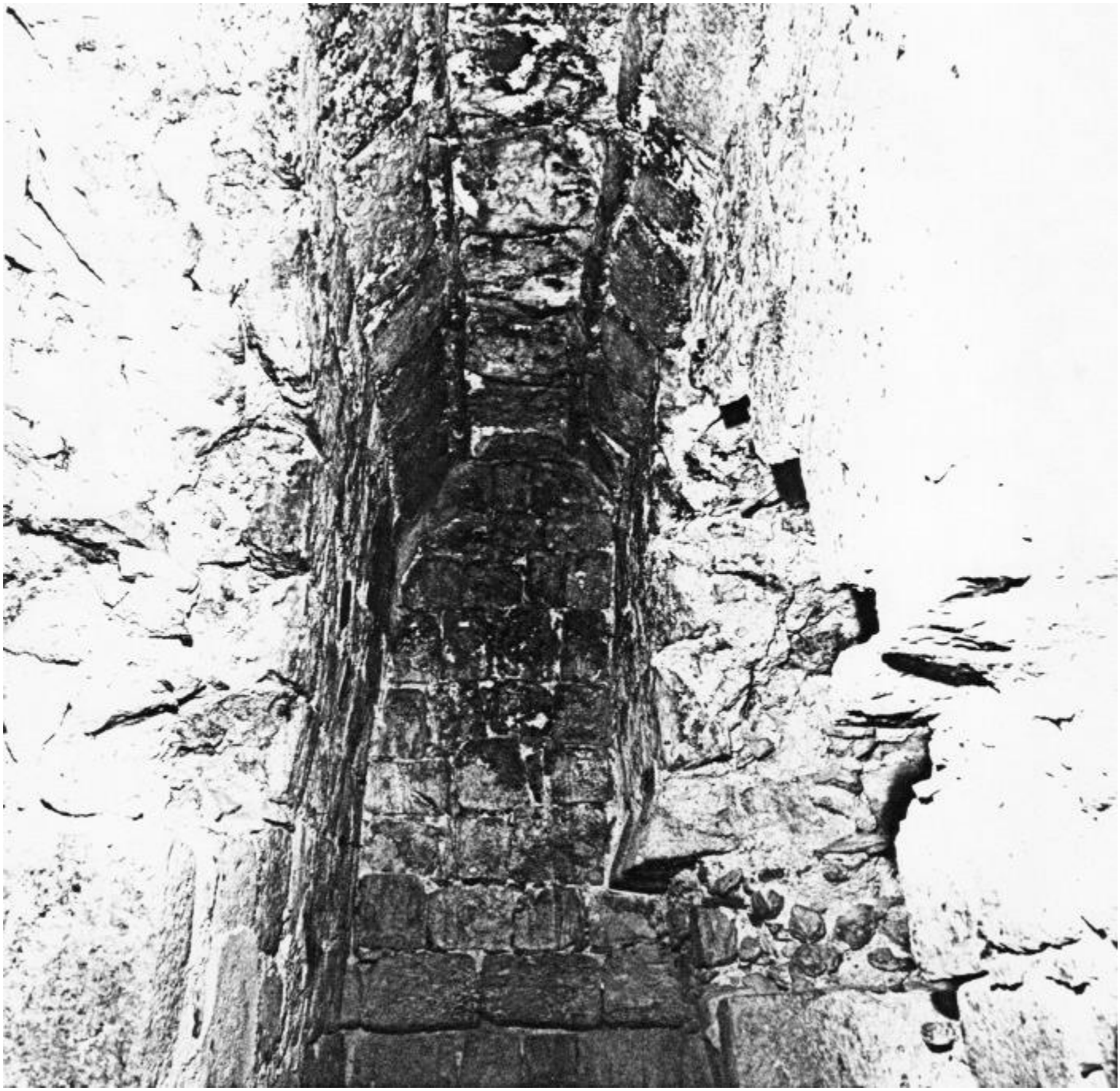

Figure 24

Figure 24. View looking up at the wobbly wall on the left and the incomplete medial molding on the right. The "vault" is only one course high, but on both sides a different height. This is slightly different than the partial vault course arrangement of the entrance passageway that leads into this. Looking south down the dead-end passageway. Southeast Quadrangle, Santa Rosa Xtampak.

Figure 25

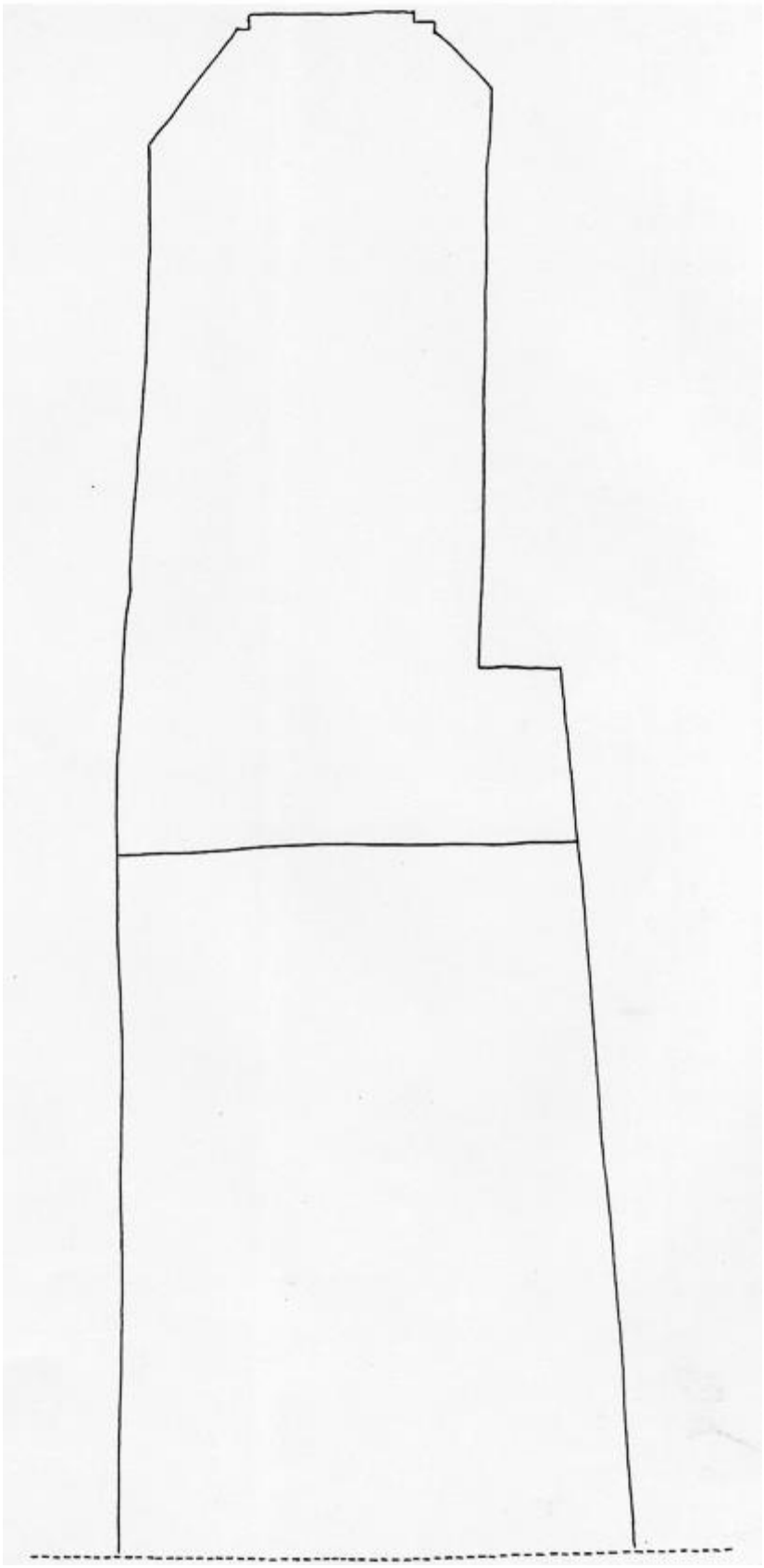

Figure 25. Line drawing looking south down dead-end passageway. The line across the center is the bottom of the pseudo-medial molding of the end wall. Since the floor is covered by collapsed debris and maize crib (of modern farmers) floor position is unknown but no higher than the broken line. Tracing by Susanna Reisinger from wide angle 35mm slide.

the wing does not extend that far east. The end wall has a wide overhang that is 20-30 cm lower than a vault spring or medial molding would be expected. And the stones above continue perpendicular as a wall, not angled as a vault soffit. It will be important to ascertain whether there is anything on the other side of this wall. The ground plan of this corner is better in stamps than in Pollock (site map) where this corner is totally inaccurate. In stamps the main room in the corner is nowhere near long enough, another victim of not using a surveying instrument.

The east side of the passageway's inner arm has no normal spring, indeed no molding at all. Only the last course near the capstone is suddenly tilted, with no spring. Then comes the normal Yucatan pre-capstone spring, and a capstone of normal width. Again, the proportions of the CIW drawing are misleading; the attached is traced from a slide. Notice the lean of the lower west wall and the mistaken molding angle in the published drawing. Just as soon as all the rooms of the Main Palace have been totally recorded will we send a team to the Southeast Quadrangle to draw this entire corner area properly, to accurate scale, with true dimensions.

On the passageway's inner arm both sides of the one course "vault" are almost the same (as opposed to the entrance tunnel

area). The east vault appears to begin five centimeters or so lower than that of the west.

The west side of the passageway has a molding that sticks out at about the height one would expect a spring (if this were a room) or a medial molding (if this were an outside wall). It has more of a medial molding type stone but then the angle retreats and immediately continues straight up as a normal wall (until the unusual one-course high semi-vault). This molding continues around the corner to decorate the right-side wall of the entrance passageway.

This passage leads from the inner courtyard into the end of the east range. By turning various inner corners and passing through a room one can exit out the other side. All is under various corbel ceilings. At Tikal a courtyard corner such as this would all be open. With so many hundreds of complex Puuc and Rio Bec palaces somewhere there must be a comparable series of vaulted corridors but not even in Palenque or Yaxchilan do I myself know of one. Not even at Tikal is there an architectural challenge such as this. Yet the Xtampak architect built this so well that it has remained standing even when the wooden lintel in the central room rotted long ago.

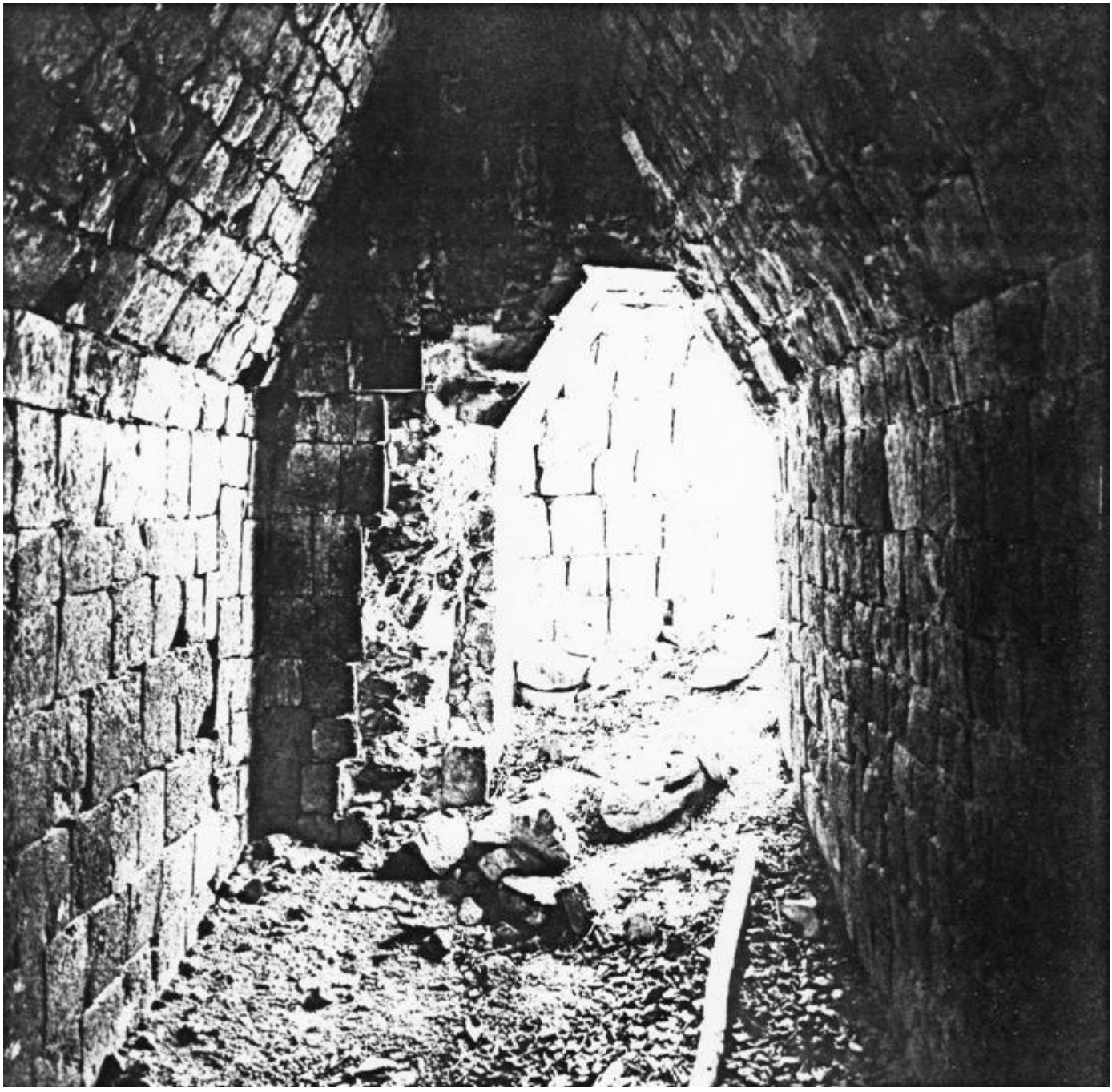

Figure 26

Figure 26. Xtampak, Southeast Quadrangle, the room at the corner. Two passageway links provide entrance; the wider passageway exists at far right. Note complete difference in size of masonry, large on north wall, normal on right wall. The difference in vault/capstone height at the end wall is highly unusual--as is the passageway system overall.

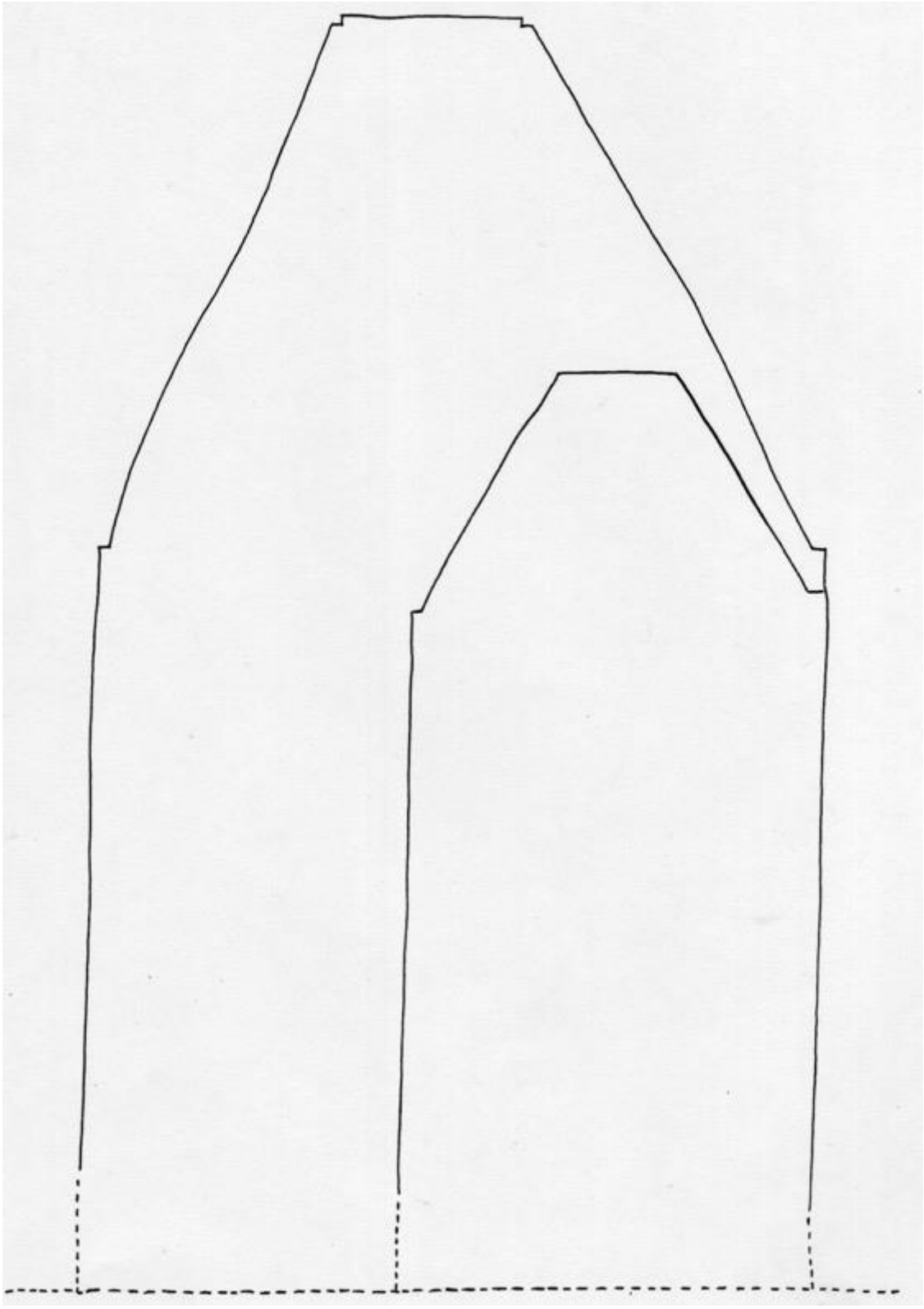

Figure 27

Figure 27. Room 5 at the south corner of the Southeast Quadrangle, the room between the narrow entrance passageway and the wider exit passageway (seen here as the lower corbel vault). Such a vaulted exit at a lower capstone level from a room is unique in Maya architecture and is more a trait of Xtampak than of Puuc or Chenes.

Figure 28

Figure 28. Entrance to the wider passageway going east before it turns 90 degrees and runs south. The diagonal capstone at the 90 -degree turn can be seen in the upper background. Southeast Quadrangle, Santa Rosa Xtampak.

Figure 29

Figure 29. Xtampak, Southeast Quadrangle, capstones of the wider passageway that exits out the back of the quadrangle corner. Note diagonal placement at the corner, and that this "vault" lacks the framing course immediately under the capstone.

The Wider Passageway

This unusual construction is a form of possible exit out the back corner of the overall quadrangle. It seems too narrow, and the vault-which-turns-a-corner too much effort for a normal room. Obviously if an exit it could equally well be used as an entrance, though the same quadrangle already has several formal entrances elsewhere. The map ends at this corner of the site so it is not known what other building complexes might have been related to this particular corner of the quadrangle. Since only the inner portion of the passageway was preserved, I do not know how the outside ends or how it blends in with the ground plan of the rest of the quadrangle at this point. That part of the site was still overgrown; indeed, we had to cut trails even to get our camera equipment near the building. Then it took an hour to get rid of the wasp nests, an hour admiring the palace somewhat stunned by the architectural and engineering implications of such a remarkable construction, then another hour to set up for photography--all this on our last day at Xtampak.

The main room is entered by a low doorway in a west wall. The wooden lintel has long ago rotted and fallen, bringing down a dozen stones above it. Since all these stones lie directly on the floor, they should be photographed, recorded, and then reset above a replacement lintel. The room itself is normal in all respects (other than the east end where the wide passageway

begins). Other than the stones from above the aforementioned lintel and the left jamb of the east passageway the room is perfectly preserved. Even the painted capstone is still in place (it is too faded and chipped for the looters to bother having stolen it).

The masonry is of the typical outstanding quality as found throughout most of Xtampak. The stones on the north (long) side are larger (8 courses) and more perfectly squared than those of the south (long) side (10 courses). Whether the difference in masonry results from each room wall being the end wall of a different wing of the palace, or because two different masons's groups worked, is not known. The two vault soffits are essentially identical, 8 courses plus smaller spring corbel before the wide capstone.

The masonry of the west wall (with the door and fallen wooden lintel) is not as neat courses and the stone size is practically haphazard. These end stones appear different than those of either long wall. The door is off center, as the wall is two stones wide on the north, three stones wide on the south.

Both vaults are coursed their entire length, so are both long walls until one or two stones away from the east wall.

The passageway through the east end of the room is set entirely on the south side. The south room wall continues about one stone's distance to form the south wall of this exit doorway, then immediately turns a corner. I do not yet have any photographs to ascertain whether the masonry around the corner is the same size. The masonry on the east side of the passageway at that outer point is of the larger stones of the north wall of the room.

Ruppert's drawing Fig. 83, b can in no way have been a measured drawing, leading me to suspect that all the others of his expedition were also just sketches. Although Andrew's are idealized (corners generally squared off, walls straight, floors perfectly flat) at least I presume his distances are measured). Our drawing was done by tracing a projected slide.

Ruppert's drawing shows the east passageway capstones as going at a sharp 90-degree angle, but the capstones themselves are laid in a wedge pattern as they go around the corner. The masons did not bother to cut actual wedge-shaped stones; instead, they laid regular capstones diagonally. Thus far more of the individual stone's length is visible from below, in fact they barely rest on the vault top. The reminder of the wedge shape is filled with mortar. At this point the vault soffit is three courses high, of large stones, far larger than in any of the quadrangle rooms. After two

diagonal capstones the rest of the passageway is totally collapsed.

The capstones also begin to widen out even before they go around the corner. An area such as this can really only be explained to the reader with 3-D drawings and photographs from all sides, as well as photographs from the floor up looking at the capstones as they turn the corner. F.L.A.A.R. has 35mm color (the only time 35mm is appropriate is for use with slide projector in those static situations where video is not necessary; a 35mm slide is worth a dozen pages of notes). I do not have Andrew's monograph to see what drawings he has of this area. This entire area warrants more intensive photography.

If this many educational features are notable in the few rooms that are still standing, how many surprises will archaeologists. of the future will find when they dig into the rooms where vault collapse has obscured the facade details?

This single palace quadrangle demonstrates what is also apparent in the two interior stairs of the Main Palace. The architects and engineers at Xtampak were innovative, almost daring, and certainly confident. So far everything found at the site is of good, often even superior, quality. Stones tend to be neatly squared, the walls are relatively plumb, corners are perfectly

formed (even when, as typically Maya, they are hardly ever 90 degree). Walls are flawlessly plastered.

Elsewhere the typical Maya builder counted on gross mass to impress the viewer and paid little heed to detail. Indeed, such normal construction sloppiness will also be found at Xtampak. Still, the overall impression is a pride in fineness, quality, almost a delicateness, yet monumentally expressed in stone. Aside from the scientific potential is the potential of Xtampak's standing buildings for providing tourists with an educational visit--but first careful conservation must be immediately undertaken before the buildings collapse on the archaeologists.

SOUTHWEST BUILDING

The names for these complexes probably derive from the map of Stamps who evidently spent 10 weeks here working on his M.A. thesis. So far, no sequential numeration system has been instigated. Such a system will be up to the Folan part of the project to institute as they see fit. I suspect that when this area is accurately mapped with an instrument it will be possible to have a better idea of the layout. It does not appear to be a typical quadrangle arrangement at all.

Figure 30

Figure 30. Inside the Southwest Building showing the inner doorway between two rooms. Such stone lintels are (in this part of Mexico) exclusively a Puuc architectural trait.

The buildings on the map are recognizable as being the two wide rooms, wider than most other rooms at the site. These rooms are approximately square and have a spring on each wall, end as well as side walls; thus, we are faced here with a Puuc style spring system. Chenes type rooms have a spring only along the long side, not at the ends.

And Puuc walls support a rounded almost barrel-like vault, getting rounder as it approaches the capstone. Peten vault soffits maintain a straight angle or are stepped. Thus, the two squarish rooms in the Southwest Building(s) have Puuc jamb masonry, Puuc stone lintels, a Puuc set of four springs, and a Puuc increasing ¬curve to the vault profile. Nonetheless the vault stones themselves do not appear to be boot-shaped as in the Puuc heartland.

It should be pointed out that "Puuc" at Santa Rosa may not always be identical with that of the Puuc corridor. The Xtampak designers were adapting, interpreting, altering pure Puuc into a special Xtampak variant. It is still not been ascertained whether Xtampak represents Puuc influence or Puuc occupation. Answering this question is a major goal of each individual who has worked at Xtampak. Ultimately it will be ceramics that provide an answer, but masonry style and technique will reveal whether it was

Puuc masons or Chenes masons who erected the Puuc style rooms. Thus, ultimately Xtampak is an architectural project.

All surviving buildings in this area have stone lintels. stone lintels are more typical of Puuc sites than of Chenes-Rio Bee, though lintels of either stone or wood can be found mixed throughout the Maya area. It is the size and shape of the lintels, and for the Puuc, especially the size of the stones which form the jamb which identify the style. Pure Puuc jamb stones are often the largest stones in the building besides the lintel or corner cornice stone. Such monolithic Puuc jamb stones occupy the entire width of a door jamb. Xtampak, true to its position between several different regions, has several door types, but there are no Puuc jamb stones in the Main Palace.

STELAE

Xtampak is one of the few Chenes sites to have any stelae at all--this alone is already indication of a high status, but it even has not just one, but at least eight sculpted monuments. Most, however, have been battered, sawn, or otherwise ruthlessly removed illegally from the site and are distributed throughout the world. Only a few portions of monuments remain at the site.

Karl Herbert Mayer has ascertained the present location of most of the looted fragments of these as well as the painted capstones and sculpted fragments of the Main Palace. If there are any additional monuments to be found on the surface they will most likely be located by the surveying crews.

Xtampak stela 1 is in the Museo Nacional de Antropologia (Proskouriakoff 19S0: Fig. 86, b; p. 103; Cardos de Mendez 1987: 134). Those individuals who need more information on the monuments should contact Mayer, as he has already invested so much time in their analysis.

The eight stelae date to around 9.15.0.0.0 and 9.16.0.0.0 in the Maya Long Count. Proskouriakoff illustrates all the monuments except Stela 6.

BALLCOURT

Since Leiter and Hellmuth are both interested in the various native ballgames of Mesoamerica they immediately macheted their way through the thick bramble forest to inspect the ballcourt. Whereas virtually all Classic period Peten sites have one or more courts, ballcourts are rare in Campeche outside Edzna, Tzum,

Sayil, and Uxmal. For example, neither Becan nor Xpuhil have courts. Nelson suggests that Dzibilnocac has a possible ballcourt in Area B (1973:15). If so that raises Dzibilnocac to the level and status of a potentially competing regional center, especially in light of the considerable size of that site. Dzibilnocac has stelae and is suspected to have monumental architecture as early as the Preclassic (ibid.). The incessant looting of Dzibilnocac has stripped virtually all the buildings of any standing facades. The modern town has obliterated other sections of the site. If seen in its original size and extent, then this ancient city would be a potential rival to Xtampak, a factor to be considered in Folan's developing model for Santa Rosa.

The ballcourt at Xtampak, as its Solstice-Equinox Observatory Group, is a further indication of its elite international status within the hierarchy of Maya sites. It would be interesting to test a hypothesis that a regional capital would tend to have a court especially in an area otherwise without such specialized buildings. Scrutinizing the political rank of Xtampak will be handled by Folan.

The ballcourt at Xtampak requires no excavation to recognize its form and function. It would be best to spend more time perusing the remains before making premature commentary on the court form, as our immediate responsibility were walls elsewhere that are in

imminent danger of collapsing. Since the ballcourt is likely to have markers buried under humus and debris or at least rings which might be decorated (since Xtampak is in Campeche the court would be expected to have rings) excavation would be appropriate here by some future project.

THE REST OF THE SITE

Scores of large and exquisitely formed chultuns may be seen in all parts of Xtampak (DeBloois 1970). These chultuns are by no means limited to residential areas. These are Yucatec chultuns, made to hold runoff water; not Peten chultuns for storing food. But once chultuns of either sort were in one way or another "out of. service," they were usually used as garbage containers. That means that at least some of the chultuns hold many of the artifacts that a traditional archaeological project needs for standard studies. The chultuns at Xtampak certainly warrant excavation.

The mapping crew will surely find all kinds of features not noticed by previous visitors, but these will be reported by Abel Morales and the cartographer Rogerio Cohou Munoz. Hellmuth and Leiter are responsible for standing architecture.

The buildings were evidently in much better condition in 1843 than today. Stephens observed:

> " ••• proceeding upon it a short distance, we saw through the trees the corner of a large building, which proved to be a great parallelogram, enclosing a hollow square. In the centre of the front range a grand but ruined staircase ascended from the ground to the top of the building, and, crossing the flat roof, we found a corresponding staircase leading down into the courtyard. The richest ornaments were on the side facing the courtyard, being of stucco, and on each side of the staircase were some of new and curious design, but, unfortunately, they were all in a ruinous condition. The whole courtyard was overgrown, so that the buildings facing it were but indistinctly visible, and in some places not at all." (Stephens 1843: 113-114).

This incomplete description of a staircase flanked by curious designs shows what will reward further exploration at Xtampak. We have at the moment no idea which quadrangle at Xtampak Stephens is referring to. Some writers have suggested it was the Cuartel.

In future reports it will be possible to relate our observations with those of Andrew's 1988 report. As of the time of this writing (June 1989) it is not only unpublished but also unavailable for reference. I have only perused the copy in Folan's library in Campeche. It gives idealized profiles of most of the rooms throughout the site as well as basic measurements of most of the still standing rooms in the whole site. As such it is useful appendix to earlier studies. The Andrews photographs are also a

definite improvement over the 35mm snapshots of most Puuc, Chenes, and Rio Bec monographs.

Our April 1989 goal was the initiation of a feasibility study for the subsequent preservation of the fragile remains of the Main Palace, the application of specialized photographic equipment, and to ascertain what equipment would best serve architectural recording in the upcoming decade. We had no need or intention to undertake any excavations since it is more important to rescue the palace from imminent collapse than to dig more holes in the ground. If I may be allowed a personal aside, it is a considerable relief not to be under pressure to produce treasure, to produce the goodies that are as much a lust of American academic archaeologists as of the looters they so love to blame.

It is all too easy to criticize Latin American archaeologists but one can certainly not level the accusation of them being grave robbers, either for the art market or feathering their own academic nest. Having seen one entire (non-Mexican) project dedicated seemingly exclusively to search for fancy tombs with their murals and another dedicated to making newspaper headlines and constant press conferences with ridiculous claims of being larger than everything else and academic models of Maya civilization never having collapsed it is certainly a pleasure to have watched the Calakmul Project develop over the years where the occasional

royal burials were found by coincidence and where instead settlement pattern and general knowledge were the order of the season, and where virtually everything which was touched with a trowel was consolidated--and solely preserved, not smothered with fresh stones and even fresher cement. For these reasons I considered both personally funding Xtampak as well as managing the fund-raising campaign, since the costs exceeded what I could provide on my own.

Xtampak is not the biggest site the Maya ever erected, is not the origin of everything great and good which the Maya developed, is neither the earliest nor the latest Maya site ever found. Nonetheless George Andrews, who has personally studied over more than several decades more Puuc and Chenes sites than most others of us have even heard about, observes:

> "It has been suggested earlier that Santa Rosa Xtampak is probably the largest and most important site in the Chenes region and should be considered as the "capital" city •.•. The central core area thus described is considerably larger than the core area at Becan, for example, and is nearly as large as the entire group of major structures at Uxmal, the largest known Puuc site." (Andrews 1987: 71).

One hundred and fifty years ago Stephens--who had visited hundreds of major Maya cities--nonetheless recognized the importance of Xtampak:

> "There is no place which we visited that we were so reluctant to leave unfinished, and none that better deserved a month's exploration. It remains a rich and almost unbroken field for

> the future explorer .... (Stephens 1843: 114).

Folan has indeed made a good choice to test a socio-political model. Xtampak is at last readily accessible by a highway, the ruins are compact, and in general it should be an efficiently cost-effective project.

ACKNOWLEDGMENTS

George Andrews kindly sent me the entire No. 10 issue of *Cuadernos de Arquitectura Mesoamericana* which has the longest article on Xtampak yet in print. As this journal is virtually impossible to buy anywhere, I especially appreciate his donation to the F.L.A.A.R. library. Just as this report went to press he said he was sending both his full Santa Rosa Xtampak manuscript as well as his paper on Rio Bec. Comments on these will be included in reports on the second session (July).

William and Lynda Folan provided hospitality over four years of visits to Campeche and Calakmul before the exchange of letters which resulted in proposal for the Xtampak Project. During the April 1989 visit use of the Folan library in their Centro de Investigaciones Historicas y Sociales, Universidad Autonoma del Sudeste, allowed us to peruse the monumental Andrews report on

Xtampak's architecture. Out of courtesy to the author, I did not xerox this unpublished opus. A recent letter from Andrew's (mid-June) kindly offered to donate a copy of his report, so it should be possible to improve observations in subsequent editions of the F.L.A.A.R. field reports. One advantage of not having the Andrews monograph at hand is it will be possible to distinguish between his contributions and the independent observations of the Hellmuth crews.

Architect Sergio Palacios Castro, Director, Centro Regional de Campeche, INAH, provided a welcome hospitality on both the initial visit of Hellmuth and Leiter, in August 1988 to ask for permission for photographing with a tripod the general Chenes area, and then in 1989 to do more intensive photography at Xtampak, though by this time through the overall program of Folan.

Archaeologist Antonio Benavides kindly provided the author with a xerox copy of his unpublished drawing of Edzna Stela 2 and generally made me welcome in Campeche.

Archaeologist Abel Morales Lopez shared his considerable field experience throughout Campeche. His enthusiasm over the solstice equinox group at Xtampak was very reassuring to me that we had a good team prepared for Xtampak. The professional quality of the

line drawings of Morales on his recent Calakmul field work was also a good sign for me, as I am an incurable workaholic and have a fixation for neat ink drawings.

Topographer Rogerio Cohou Munoz had been promised a surveying transit, which I was to have brought from Guatemala (remaining from the Yaxha Project of a decade ago) but Dr Fred Bove was using this F.L.A.A.R. instrument on loan for a third year, the second transit had disappeared five years ago, and Sr. Cohou was most patient when I showed up at Xtampak only with a leveling instrument. The surveying crew bears the brunt of the discomfort of first season field work, when the site is still overgrown with thorny brush (much of the site had been in milpa and is now in second growth vegetation).

Karl Herbert Mayer provided all the items in the Xtampak bibliography which were not readily available from Pollock. He also provided information on the painted capstones of Xtampak. In addition, the library of Mayer is one of the few in the world that has a copy of the Stamps M.A. thesis on Xtampak, as well as an even rarer manuscript on the site by DeBloois. Mayer additionally donated xerox copies of various manuscripts of his on the inscriptions of Santa Rosa. It is ironic that Graz, the second largest city in Austria, with the largest concentration of Maya scholars in Europe, has not a single university library or

an Austrian-supported institute with a Mesoamerican library. The available books are all in the private libraries of the resident Mayanists, which, despite being outside a university setting, are actually in their combined size and coverage, larger than many university libraries.

I thank professors Robert Lemon, Pedro Pequeno, and Dean Joan Straumanis of Rollins College for providing me a full-time office even though I teach only the January winter term (an arrangement that frees me to undertake field research as well as fulfill my teaching appointment in Graz). Mac MacDonald kindly provided access to the Kroy lettering system at Rollins as well as took care of getting certain photographs done for the printing deadline. He also arranged for the titles on the video being produced on the monumental standing architecture of Xtampak.

Professor David Browman has provided academic hospitality for me through an appointment (now in its second year) as Research Associate, Department of Anthropology, Washington University. As F.L.A.A.R. has a St. Louis, Missouri base, it is appropriate to have an appointment at the leading university in Missouri.

With all the good intentions in the world, with a capable staff and hard-working assistants, the Xtampak Project would not have been possible without one item, namely money. Thus I thank the

generous couple whose donation of $10,000 insured that the project could start, as that sum gave me the encouragement I needed to commit funds that were otherwise tied up in other projects, not to mention my own pension fund. However I had by then been to Xtampak at least three times and was hopelessly smitten by the scientific importance of this ancient city. I should be entirely scientific and pretend that my interests were solely academic. That would be false, since the site was quite simply beautiful and left a powerful impact on me, and that is considering I have been to over 100 Maya sites (all of which are equally crying for salvage labor).

A second kind individual donated $2000 which helped pay the odds and ends expenses of the first season. Several donations of $100 were also crucial in making ends meet, but it is the $500, $1000, $2000, and $10,000 checks that make archaeology a reality. Thus I especially thank the couple who donated $3000 in June to keep our 10-man Mexican mapping crew in the field.

A check for $100,000 alone would salvage the entire palace and leave for Mexico a monumental museum to its Maya past. Up to now, though, we have simply made up with sweat and blood with the $12,000 that was available in the initial month. Hopefully this blood can be replaced by a transfusion from future donations. In

the meantime F.L.A.A.R. has taken money from its emergency fund to cover finishing the map and the entire palace.

The first season team consisted of Folan, director, Morales, archaeologist, Rogerio Cohou Munoz, cartographer and eight workers plus cook, the author, Leiter, and Jean Moore. The latter was in charge of making a list of bird species inhabiting the area. Leiter was project photographer and recorded the condition of the lintels, especially which lintels were cracking and about ready to split, threatening to bring down whole sections of the palace unless rescue funds could be raised. His report will be published later this year

Figure 31

Figure 31. Main Palace, Room 26 looking north showing the various cord holders, including an unusual one in the end wall. These photographs are among the first every taken with artificial illumination inside a Chenes building. A goal of the Foundation for Latin American Anthropological Research is to apply its considerable photography experience and equipment to salvage a record of the architectural history of ancient Mexico.

BOOKS AND ARTICLES WHICH PICTURE OR DESCRIBE XTAMPAK

(citations are solicited to
articles or monographs which I have overlooked)

No accents are included since the laser printer did not accept them without more modification of the software than I was prepared to undertake.

ANDREWS, George
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1988 Architectural Survey. Santa Rosa Xtampak. University of Oregon. (Unpublished mss, provides measurements of all rooms, includes idealized architectural drawings for most of the standing architecture at the site. First corrected drawings of the palace with most of its stairways included. These drawings are better than those of Andrews 1987, though see Hellmuth first annual report for list of improvements still needed.)

CARDOS DE MENDEZ, Amalia
1987 Estudio de la colección de escultura maya del Museo Nacional de Antropología. INAH, Mexico City. (Page 159 illustrates a section of Xtampak's curious carved half column of the Main Palace. The museum itself did not recognize that it came from Xtampak, an identification made only by Karl Herbert Mayer. The national museum had it labeled as of unknown origin, probably Yucatan.)

DeBLOOIS, Evan I.
1970 Archaeological Researches in Northern Campeche, Mexico. Department of Sociology and Anthropology, Weber State College, Ogden. (119 pp report mostly on Santa Rosa Xtampak. This and the M.A. thesis of Stamps are two of the rarest publications on Campeche. DeBloois' is actually the only report on Xtampak which describes the entire site. Most of this report covers the 67 chultuns at Xtampak. Part II treats Dzibilnocac, which he spells Dzibilnohac.)

GENDROP, Paul
1983 Los estilos Rio Bec, Chenes, y Puuc. UNAM, México City.

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(This is a redesigned large format paperback edition of the Abrams edition by the same authors. Among the several additions is a three-dimensional reconstruction drawing of the Main Palace of Santa Rosa Xtampac, Fig. 179. In some ways this is one of the nicest available books on the architecture of greater Mesoamerica).

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1989b Wood that has lasted one thousand Years: Lintels and Vault Beams in Maya Temples and Palaces, the Example of the Main Palace, Santa Rosa Xtampak, Campeche. Foundation for Latin American Anthropological Research, Winter Park and St. Louis.

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(Fettweis has worked at Xtampak as part of a larger project on Maya murals, but we do not yet have any information on any published report that includes the capstones).

FOLAN, William

1989 Santa Rosa Ixtampak, Campeche, Mexico: A Proposal for Investigation. Typewritten mss.

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1902 Yukatekische Forschungen. Globus, Band 82, pp. 197-230. Braunschweig. (Globus is a German newspaper in which Maler published most of his Yucatec archaeological expeditions. The Peabody Museum, Harvard, published only MaIers photographic/mapping trips in Peten and adjacent sites, especially the central Peten and the Rio Usumacinta area. Only in the 1970's was there major interest in Maler's years of research and irreplaceable photographs of sites throughout Campeche and Mexico. Ian Graham, Prem, Mayer, Springhorn, Doris Bonacorsi Hild, are among the many working mostly independently on Maler. Prem and Mayer have returned to visit all the remote sites; Bonacorsi has worked mainly on the social milieu as her work is interested in Maler as a person, an individual, as much as in his contribution to Maya knowledge.)

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1937- The Inscriptions of Peten. Carnegie Institution of Washington, Pub. No 437, 5 vols. Washington, D.C.
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(Although not on Xtampak itself this monograph results from the same greater Campeche project of the NWAF as Stamps on Xtampak.)

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(Pictures the collapsed lintel of the southern portico propped up in a flimsy manner and asks for donations to help restore the palace.)

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(She includes Xtampak Stela 8 in her stylistic analysis (her p.159).)

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1970 A Study of Late Classic Maya Architecture at Santa Rosa Xtampak: An Archaeological site in the Chenes Region of the Yucatan Peninsula. MA Thesis, Dept. of Anthropology and Archaeology, Brigham Young University.
(104 pages and 6 additional pages of grouped photographs. This is one of the most exhaustive theses at a MA level that I know. The photographs and drawings are excellent, especially considering the conditions of the site in the 1960's, difficult access and totally overgrown. All subsequent reports by Gendrop and Andrews are based heavily on Stamps' drawings. Andrews adds details which were not noticed in earlier studies, but Stamps is nonetheless the basic resource for all architectural studies of the ruins. Stamps covers all the standing architecture at the site, not just the Main Palace.)

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Illustration captions for FIRST SEASON PHOTOGRAPHY

Front Cover. Southeast Quadrangle, Room 5 of East Range at the corner with South Range. Sunlight streams through the wider passageway that leads out to unmapped groups to the east and south. Santa Rosa Xtampak. Hasselblad ELX, 50mm Zeiss--this lens was used for virtually every illustration of this report.

Figure 1. Main Palace, west side near the south end, inner room, 26, with a rare cord holder in the lower end wall. Santa Rosa Xtampak. Although the wooden lintel is still preserved the vault mass has separated from the rest of the soffit and is just waiting to collapse. Hasselblad ELX, 50mm Zeiss lens, Metz 60 CT 4 set at automatic TTL. **449951-5.**

Figure 2. Two planks have already given way; the fragile remainder is sagging. This condition has already occasioned collapse of the vault. Wooden lintels over interior entrance into Room 14 or 17, west side, first floor, Santa Rosa Xtampak. Since the TTL meter reads in the center, it reads the far back wall, thus overexposing everything in the foreground.

Figure 3. Three-dimensional line drawings of the supra-lintel recessed soffit show the details more realistically than any elevation or profile, which are hard for non-architects to

understand. Rooms 6 and 8, Main Palace, drawn by Susanne Habisch from 35mm slides taken with a 28mm lens. Santa Rosa Xtampak.

Figure 4, a. Front of Room 6 showing stepped recessed area over the lintel.

Figure 4, b. Front of Room 8 showing the same situation as in Room 6, with double spring along the wall changing into stepped recessed panel over the lintel. Santa Rosa Xtampak.

Figure 5. Tzikin Tzakan, Peten, Guatemala, Main Palace, close up of stepped recessed decoration over the doorway. These may be the only close up photographs taken which records this detail for future study.

Figure 6. Tzikin Tzakan, two thirds of the length of this room (there is one more doorway out of view to the right). This is the longest single room yet recorded for the Peten, and possibly the longest single undivided Maya palace room outside of Palenque. According to reports this entire palace collapsed in a single moment due to excessive weight of water which soaked into the vault mass. I do not know whether this is the inner room (in which case the outer room fell long ago) or whether this is a single range structure, which I would find unlikely for such a long edifice.

Figure 7. Pilasters are the rule on the Main Palace. The vertical flutes are always and only on the front. The pilasters of Rooms 1 and 9 had an angled geometric bound motif as capital; those of the second story had horizontal bands. **449951-11.**

Figure 8. Tikal, Central Acropolis, Early Classic, structure 50-46 first floor, looking at stairway leading to second story.

Figure 9. Tikal, Structure 50-54 elsewhere in the Central Acropolis, seemingly Late Classic (based on masonry size and shape), yet the beginning of stairway to second floor appears essentially the same as Str. 50-46, beginning at full room width, then changing to half width with the rest of the space taken up by a solid pier.

Figure 10. Xtampak, Main Palace, North Interior Stair, first floor. Hole in wall at left is possibly where decorated stone was ripped out by looters (possibly reused mosaic or sculpted). Maler mentions such stones. Two are still present elsewhere in the interior stairways, but not attractive enough to have enticed looters to steal them.

Figure 11. Xtampak, Main Palace, South Interior stair, first floor, showing deterioration of this stairway. Notice stepped lintel, and compare with that of North Interior stair in previous photograph. Position of photography is about mirror image of the two systems.

Figure 12. Xtampak, Main Palace, back (west). Note crisp vertical line of the definite end of the facing masonry and continuation of rough core wall to the left. The core wall was once covered with an exterior stairway. Three steps are still in place, to the left of middle.

Figure 13. Xtampak, Main Palace, back (west) showing all three stories (recessed panels show up well on the third floor). At right of the photograph is the exterior stairway, with the same kind of core wall replacing the finish masonry. If this same type of core wall always had a stairway over it, then you can estimate how many stairways existed on the sides of the Main Palace and also on the flanking towers of the front.

Figure 14~ Xtampak, Main Palace, front (east), second floor, view of the remaining steps of special stairway with balustrade, first noticed and published by George Andrews (1988). The facing masonry in foreground is of the main front central stairway.

Figure 15. Half way up the main front central stairway, Main Palace, looking west. The top five steps are of the nicely hewn "2nd stage." Several steps of the "first stage" are in the shadow to the left, lower than those of the 2nd stage. Underneath the 2nd stage steps is loose rubble fill (fill with no mortar). Note that the 2nd stage steps start all of a sudden and have not yet

been found directly covering the first stage steps. Santa Rosa Xtampak. **451608-4-Neg.14.**

Figure 16. Inside the Main Palace, west side, looking north, outer room, showing how the entire structure is fractured as various walls sink at different rates, other walls are buckling out as they are crushed by the weight above, other walls are beginning to sheer off.

Figure 17. Southeast Quadrangle, East Range, looking at the north end wall of Room 2. Tree roots envelop the wall as an octopus grabs its prey. Whenever this particular tree is blown over in a storm then this entire wall will be yanked outward, causing the collapse of an otherwise perfectly preserved room. Although this room has the Puuc trait of a spring on the end wall its vault is relatively straight and the wall stones are not that different from those of Chenes buildings of the Cuartel or the Main Palace. Santa Rosa Xtampak.

Figure 18. Southeast Quadrangle, southeast corner, with the Entrance Passageway in the middle, Room 3 of the East Range to the left, a room of the South Range to the right. If this passageway is secondary this does not show up in the cross-section revealed by the collapse of the front facade which exposes the core. Santa Rosa Xtampak. **451608-15-Neg.25.**

Figure 19. Xtampak, Southeast Quadrangle, The Entrance Passageway, looking easterly. On the right is the "incomplete" medial molding. In far background is light streaming in from the far end of the final exit. Note differing slant of both walls, and the last minute "corbel vault" consisting of only one course, with a sub-capstone framing course also serving as corbel.

Figure 20. North-south profile of entrance passageway. Tracing by Susanna Reisinger from 35rnrn slide taken with a 28mm lens. Southeast Quadrangle, south corner, Santa Rosa Xtampak.

Figure 21. Xtampak, Southeast Quadrangle, capstones of Entrance Passageway turning corner into the narrower arm of the inner passageway. Note the widening of the capstone span at the turn, a highly unusual feature of Maya architecture, present also in the exit passageway.

Figure 22. Line drawing of the capstones of the Entrance Passageway turning the corner into narrower arm; this view is oriented at a different angle from that of Figure 21. Tracing by Susanna Reisinger from 35rnrn slide from 28 or possibly 15mm lens.

Figure 23. Looking south down the dead-end passageway. The end wall is of the South Range as is the wall to the right with the higher "partial" medial molding. Southeast Quadrangle, Santa Rosa Xtampak.

Figure 24. View looking up at the wobbly wall on the left and the incomplete medial molding on the right. The "vault" is only one course high, but on both sides a different height. This is slightly different than the partial vault course arrangement of the entrance passageway that leads into this. Looking south down the dead-end passageway. Southeast Quadrangle, Santa Rosa Xtampak.

Figure 25. Line drawing looking south down dead-end passageway. The line across the center is the bottom of the pseudo-medial molding of the end wall. Since the floor is covered by collapsed debris and maize crib (of modern farmers) floor position is unknown but no higher than the broken line. Tracing by Susanna Reisinger from wide angle 35mm slide.

Figure 26. Xtampak, Southeast Quadrangle, the room at the corner. Two passageway links provide entrance; the wider passageway exists at far right. Note complete difference in size of masonry, large on north wall, normal on right wall. The difference in vault/capstone height at the end wall is highly unusual--as is the passageway system overall.

Figure 27. Room 5 at the south corner of the Southeast Quadrangle, the room between the narrow entrance passageway and the wider exit passageway (seen here as the lower corbel vault). Such a vaulted exit at a lower capstone level from a room is unique in

Maya architecture and is more a trait of Xtampak than of Puuc or Chenes.

Figure 28. Entrance to the wider passageway going east before it turns 90 degrees and runs south. The diagonal capstone at the 90 -degree turn can be seen in the upper background. Southeast Quadrangle, Santa Rosa Xtampak.

Figure 29. Xtampak, Southeast Quadrangle, capstones of the wider passageway that exits out the back of the quadrangle corner. Note diagonal placement at the corner, and that this "vault" lacks the framing course immediately under the capstone.

Figure 30. Inside the Southwest Building showing the inner doorway between two rooms. Such stone lintels are (in this part of Mexico) exclusively a Puuc architectural trait.

Figure 31. Main Palace, Room 26 looking north showing the various cord holders, including an unusual one in the end wall. These photographs are among the first every taken with artificial illumination inside a Chenes building. A goal of the Foundation for Latin American Anthropological Research is to apply its considerable photography experience and equipment to salvage a record of the architectural history of ancient Mexico.